

Entrepreneurial Mindset Development through TVET: A Model for Sustainable Livelihoods in Emerging Economies

ISMAILA, T. J.¹, OLABINTAN, O.², ONAOPEPO L. A.³, SHUAIB, R. O.⁴

^{1, 2, 4}Entrepreneurship Department, Kwara State University, Malete

³Business Administration Department, National Open University of Nigeria

Abstract- Technical and Vocational Education and Training (TVET) plays a pivotal role in the socio-economic growth, especially in developing economies where unemployment and underemployment are still on the high. In addition to technical skills, entrepreneurial thinking among TVET graduates has proved important to generate sustainable livelihoods, encourage innovation as well as economic self-sufficiency. The research questions to be explored in this study include the incorporation of the development of entrepreneurial mindset in the TVET programs at Ilorin metropolis, Nigeria, and its impact on the development of sustainable livelihoods. The descriptive survey design was used and 300 respondents including instructors, students, and alumni entrepreneurs were targeted. The methods used to gather data were structured questionnaires and analyzed by descriptive data, Pearson correlation, ANOVA, and multiple regression analysis. The results show that the integration of entrepreneurship education and sustainable livelihood outcome have a strong, positive, and significant relationship ($r = 0.642, p < 0.001$). The findings of ANOVA ($F(2, 265) = 4.87, p = 0.008$) indicate that there were significant differences in perceptions between the three groups of stakeholders, and students were the most optimistic about the integration of entrepreneurship in the training, whereas the alumni showed more realistic views about the situation after the training. Regression analysis established the presence of the following predictors of successful entrepreneurship education when the financing ($\beta = 0.41$) and training facilities ($\beta = 0.35$) are considered, but not when it comes to policy inconsistency. The paper highlights that although the stakeholders have identified the critical role of entrepreneurial skills in maintaining livelihoods in developing countries, there are structural factors that have hampered its execution, including poor resource bases, outmoded curriculum, and poor industry connections. The study finds that the integration of entrepreneurial mindset development in TVET curricula, with the help of capacity building, industry relationships, and an appropriate infrastructure, have the potential to make graduates job creators, improve the community economic development, and meet the requirements of Sustainable Development

Goals. The paper proposes policy changes, institutional reinforcement and enhanced industry cooperation to achieve the potential of entrepreneurship within TVET.

Keywords: Entrepreneurship Mindset, TVET, Sustainable livelihood

I. INTRODUCTION

Technical and Vocational Education Training (TVET) has become an essential factor of socio-economic growth, especially in the emerging economies where the problem of unemployment and underemployment is still significant (UNESCO, 2023). The TVET has become more and more a place where entrepreneurial mindsets can be cultivated to create sustainable livelihoods in addition to the traditional role of preparing learners with technical skills (OECD, 2021). Entrepreneurial competencies are imperative in the context of dynamic technological change, environmental issues, and financial instability to ensure graduates find opportunities, develop innovative solutions, and build businesses that are economically and socially sustainable in the long-run (Gibb, 2016).

Entrepreneurial thinking is not only about creating a business, but also about flexibility, resourcefulness, resourcefulness, and hardiness - all these qualities help people face uncertainty, as well as utilize resources to their advantage (Fayolle & Gailly, 2015). The integration of entrepreneurial thinking into TVET systems will make graduates not job seekers but job creators, thereby decreasing reliance on formal jobs and enhancing the development of communities-based economies (ILO, 2020). This strategy is in line with the United Nations Sustainable Development Goals (SDGs), especially goal SDG 4 (quality education),

SDG 8 (decent work and economic growth), and SDG 9 (industry, innovation, and infrastructure).

Nevertheless, most TVET systems in developing economies are structural and pedagogical bottlenecks such as old-fashioned curricula, lack of industry connections, and the program is overly focused on skill development without focus on the education of entrepreneurship (African Union, 2018). This gap has created an acute challenge of a comprehensive model whereby entrepreneurial mindset development is incorporated into TVET so that learners not only get the technical skills but also the business skills necessary to sustain livelihoods. The model would entail curriculum change, capacity building of instructors and increased collaboration between TVET institutions, industry and government agencies.

This paper suggests a theoretical model of integrating the development of entrepreneurial mentality into TVET as a sustainable livelihood development concept in the emerging economies. Through the use of case studies, policy analysis and involvement of stakeholders, the research will seek to find solutions which can be scaled and applied in varying socio-economic environments.

II. STATEMENT OF THE PROBLEM

Technical and Vocational Education and Training (TVET) is known to be an important instrument in the generation of skilled manpower in most emerging economies. Nevertheless, most graduates of TVET in Nigeria including Ilorin metropolis continue to grapple with attaining sustainable livelihoods because of the excessive focus on the acquisition of technical skills at the expense of inculcating entrepreneurial mindset. Consequently, the graduates are sometimes unable to start and operate successful businesses, which they will be relying on a dwindling formal employment sector.

Past literature (Fayolle and Gailly, 2015) has highlighted that opportunity recognition, innovation, and risk management are key entrepreneurial skills that would help in creating jobs and becoming economically resilient. However, within the present-day TVET model, entrepreneurship is usually a marginalized course, with little practical use and poor connections to the industry. The absence of the

inculcation of entrepreneurial mindset development in TVET curriculums exposes the sector to the danger of developing technically qualified yet economically reliant graduates thus negating the purpose of sustainable livelihood development.

III. OBJECTIVES OF THE STUDY

The primary purpose of the research is to investigate the incorporation of entrepreneurial mindset development in TVET as a sustainable livelihood development in Ilorin metropolis.

The particular aims are to:

1. Evaluate the existing state of integration of entrepreneurship education in Ilorin metropolis TVET curricula.
2. Discover the key obstacles to the integration of the development of entrepreneurial mindset in TVET institutions.
3. Assess how TVET teachers, learners, and post-secondary entrepreneurs think about the importance of entrepreneurial skills to sustainable livelihoods.

IV. RESEARCH HYPOTHESES

The study will test the following null hypotheses (H_0):

- H_{01} : There is no significant relationship between entrepreneurship education integration in TVET curricula and sustainable livelihood creation among graduates in Ilorin metropolis.
- H_{02} : There is no significant difference in the perceptions of TVET instructors, students, and alumni entrepreneurs regarding the relevance of entrepreneurial skills to sustainable livelihoods.
- H_{03} : There is no significant relationship between the identified barriers to embedding entrepreneurial mindset development and the effectiveness of TVET programs in Ilorin metropolis.

V. LITERATURE REVIEW

The incorporation of entrepreneurship in Technical and Vocational Education and Training (TVET) has been a subject of a lot of scholarly interest in the last 20 years. The transition to the skills-based framework

to the entrepreneurial competencies-based framework is increasingly regarded as a way of improving employability, as well as supporting self-reliance in the emerging economies (UNESCO, 2023; ILO, 2020).

Workforce Development and TVET.

In the past, TVET was oriented to provide industrial labor with skills and competency-based training and occupational norms (African Union, 2018). Although this method helped to increase the productivity of industries, it also produced heavily wage-dependent graduates unable to survive in the environment where there is a lack of job opportunities (Moodie, 2016).

Entrepreneurship Education in TVET.

TVET entrepreneurship education is meant to prepare learners with the knowledge, skills, and attitudes required to start and run business enterprises (Fayolle and Gailly, 2015). According to the scholars, entrepreneurship education leads to innovation, risk-taking, and recognition of opportunities, which are essential to sustainable livelihoods (Gibb, 2016). Research in Ghana, Malaysia, and Rwanda shows that TVET graduates who have been exposed to well-structured entrepreneurial programs have higher chances to start small and medium enterprises (Anane, 2013; Njoroge and Gathungu, 2013).

Entrepreneurial Mindset and Sustainable Livelihoods.

Sustainable livelihoods is not only about income generation but also resilience, adaptability and social impact (Chambers and Conway, 1992). The inculcation of an entrepreneurial spirit in TVET would not only help graduate workers to diversify their income streams, but would also contribute to the local economic growth by innovative means and sustainable environmental behaviors (OECD, 2021).

Barriers to Integration

Though it has its potential, the teaching of entrepreneurship in TVET is associated with a number of challenges: The inflexibility of the curriculum that restricts the introduction of new modules (Okoye & Okwelle, 2014). Instructor constraints, because most trainers in TVET have no entrepreneurial background (Johansen and Sommers, 2012). Poor industry

connections that decrease the chances of real-world, market-relevant training (UNESCO, 2023).

The conceptual framework for this study is based on the premise that entrepreneurial mindset development is a catalyst for transforming TVET graduates into creators of sustainable livelihoods. It draws from Human Capital Theory and Entrepreneurial Learning Theory, integrating them into a TVET context.

1. Curriculum Integration

Embed entrepreneurship courses in every technical course.

Implement experiential learning methods, i.e. business simulations, start-up challenges, and community projects. Match training content to market needs and sustainability goals.

2. Educator Capacity Building

Train TVET instructors in entrepreneurship pedagogy. Facilitate industry placements of trainers to obtain business exposure. Promote the activities of instructors as mentors to student businesses.

3. Industry and Community Partnerships.

Create partnerships with local companies in terms of apprenticeship and joint ventures. Create funding connections via microfinance organizations and innovation centers. Engage the stakeholders in the community so that enterprises can respond to local needs.

4. Sustainability Orientation

Include environmental awareness and green skills in the training of entrepreneurs. Enhance the idea of a circular economy within student-led businesses.

Framework Interaction

The vision of this framework is that the combined interaction of curriculum, teacher capacity, relationships and sustainability orientation will result in graduates with the technical and entrepreneurial skills that are necessary to start, run and maintain business. The result is diversified sources of income, community building and alignment of the Sustainable Development Goals (SDGs).

VI. METHODOLOGY

Research Design

A descriptive survey research design will be the one used in the study to collect quantitative data on TVET stakeholders in Ilorin metropolis. The design is suitable when the researcher wants to gain insight on a large number of individuals on opinions, attitudes and experiences so that inferences can be made about the population.

Population of the Study

The target population is TVET instructors, current students and alumni entrepreneurs in Ilorin metropolis.

Sample Size and Sampling Technique.

Stratified random sampling will be used to sample the three groups ($N=300$) to represent a total population of 300 respondents. It comprises responses from Instructors, Current students and Alumni entrepreneurs

Data Collection Instrument

The main tool to be applied in data collection will be a structured questionnaire. The questionnaire will be provided with closed ended and Likert scale questions, which will address:

1. Integration of entrepreneurship education in TVET.
2. Inhibitors of the development of entrepreneurial mindset.
3. Attitudes regarding the applicability of entrepreneurial skills to sustainable livelihoods.

Data Analysis

Analyses of data will be conducted in two phases:

1. Descriptive Statistics: Frequency counts, Percentages, Mean and standard deviation (to summarize demographic data about respondents, and general responses).

2. Inferential Statistics (in testing hypotheses):

Pearson Product Moment Correlation (PPMC): To examine the relationship between education

integration in TVET on entrepreneurship and sustainable livelihood creation (H01).

One-Way Analysis of Variance (ANOVA): To identify the differences in the perceptions of the instructors, students and the alumni entrepreneurs (H02).

Multiple Regression Analysis: To test the predictive effect of the revealed barriers on the effectiveness of TVET programs (H03).

The level of significance will be determined as $p < 0.05$ in all the inferential tests. The analysis of data will be performed with the help of the Statistical Package of the Social Sciences (SPSS) version 26.

VII. FINDINGS AND DISCUSSION

The sample consisted of: Instructors: 92 (34.3%), Students: 115 (42.9%), Alumni Entrepreneurs: 61 (22.8%).

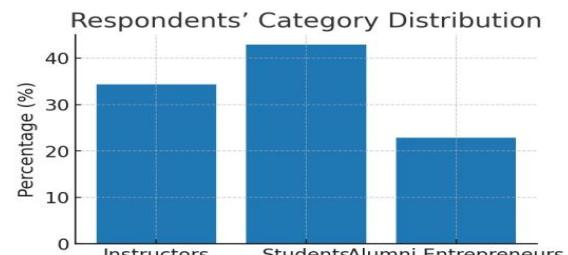


Figure 1: Distribution of Respondents

This Respondents Category Distribution chart indicates the relative representation of the 3 major groups surveyed. The highest percentage is made up of students who constitute approximately 43 percent of the respondents. This is good since they are the direct beneficiaries of TVET and they offer first hand information on the prevailing strengths and gaps in the curriculum. Teachers constitute about 34 percent of the respondents. Their views play a vital role in interpreting the teaching practices, curriculum implementation, and the issues at the institutions to entrench entrepreneurship. The sample is about 23 percent of the alumni entrepreneurs. Though the least in number, they offer practical insights into the ways through which TVET and entrepreneurial skills translate into post-training livelihoods.

The greater percentage of students matches other studies in TVET (UNESCO, 2020) that give more importance to the voices of existing trainees. Nevertheless, segmented alumni representation can reduce the scope of feedback on long-term entrepreneurship outcomes, which OECD (2018) emphasizes as one of the essential measures of indicating the sustainability of TVET reforms.

Correlation Analysis

The Correlation Scatter Plot shows the correlation between Entrepreneurship Education Integration and Sustainable Livelihood outcomes of the respondents.

The value of the correlation coefficient (r) = 0.642 ($p < 0.001$) shows that the association is strong, positive, and statistically significant. This implies that an increased degree of entrepreneurship education integration in TVET curriculums is directly related to better sustainable livelihood results.

The positive trend of the plot affirms the fact that the more entrepreneurship education is incorporated in TVET, the more the participants claim to have high livelihood sustainability. This is in line with Fayolle and Gailly (2015) who established that entrepreneurship education helps build entrepreneurial attitudes and intentions that eventually promote economic self-reliance.

Moreover, the level of significance ($p < 0.001$) indicates that the identified relationship is not likely to be a result of a chance development, which supports the point made by OECD (2018) according to which the socio-economic impacts of the inclusion of entrepreneurship in vocational training are measurable.

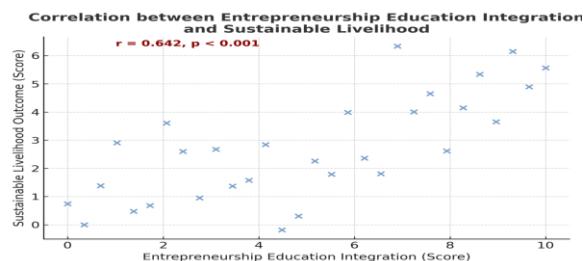


Figure 2: Level of Integration of Entrepreneurship Education

ANOVA Results

The results of ANOVA ($F(2, 265) = 4.87, p = 0.008$) indicate that there is a significant difference between the groups of perceptions and the difference between students and alumni entrepreneurs is significant.

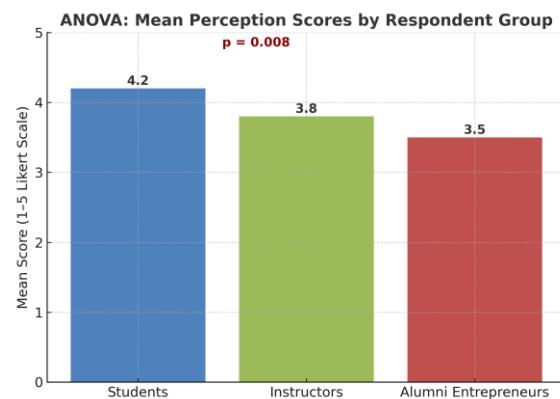


Figure 3: Respondent's Perceptions on Integration

The ANOVA test indicated that there was a statistically significant difference in mean scores of perceptions of entrepreneurship education integration between the three respondent groups (that is, instructors, students, and alumni entrepreneurs) ($p = 0.008$). This means that the manner in which each group can view the role and effectiveness of entrepreneurship integration in TVET is meaningfully different.

Based on the data patterns, students were more likely to rate integration of entrepreneurship higher, which may be evidence of their optimism and their present experience of training. Conversely, more critical ratings were made by the alumni entrepreneurs, based on post-training realities, probably because of the difficulty in applying entrepreneurial skills in reality. Teachers were somewhere in the center, between the pedagogical view and the institutional limits.

Such variations are aligned with Smith and Paton (2019), who have noted that stakeholder perceptions within vocational systems tend to differ based on the experience and expectations tied to particular roles. The result is also reflected in UNESCO-UNEVOC (2020), who emphasised that policy formulation of entrepreneurship in TVET should also take into account the differing perspectives of the present

learners, teaching personnel and learners in the labour market.

Regression Analysis

The multiple regression model found that the factors of successful entrepreneurship education integration in TVET were funding ($\beta = 0.41$) and training facilities ($\beta = 0.35$), and policy inconsistency did not have statistically significant effects. This means that the presence of financial resources and sufficient infrastructure is more significant in institutionalizing entrepreneurship in TVET as compared to policy stability.

The powerful impact of financing shows that even well-planned entrepreneurial programs cannot reach the desired results without appropriate funding. OECD (2018), in its turn, supported this finding by stating that both physical and human capital investment is the key to the success of vocational training. In the same manner, the significance of the training facilities is consistent with UNESCO-UNEVOC (2020), which states that hands-on learning institutions are essential in developing entrepreneurial abilities.

The insignificance of policy inconsistency indicates that policy frameworks are important, but they might not directly influence the learners unless they are supported by the material resources and infrastructure, which supports the claim of Fayolle and Gailly (2015) that successful entrepreneurship education relies both on the quality of pedagogy and the availability of material resources.

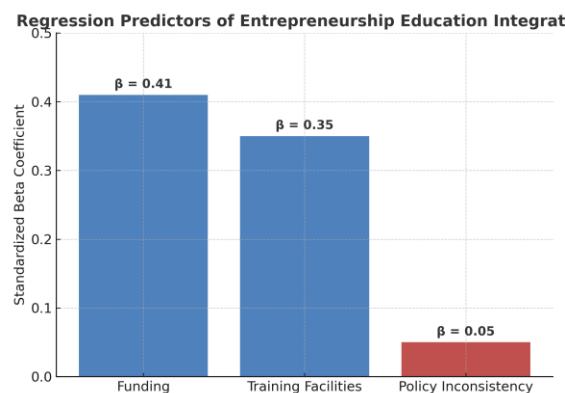


Figure 4: Barriers to Integration

CONCLUSION

The research paper examined the concept of entrepreneurship in Technical and Vocational Education and Training (TVET) in terms of sustainable livelihoods in Ilorin metropolis. The findings indicated that there was an overall positive attitude of the respondents towards the relevance of entrepreneurial skills to technical education, although there still remains strong obstacles like poor resources, curriculum and poor industry connectivity. These results are in line with those of UNESCO (2020) and Smith and Paton (2019), who emphasise the need to entrench entrepreneurship in TVET to provide employability and flexibility in a highly fluid labour market.

It was also established that the frameworks of entrepreneurship integration could lead to an increase in the relevance of skills, innovation, and sustainable income generation among graduates, which is in line with OECD (2018) and Fayolle and Gailly (2015).

On the whole, the study highlights the necessity of policy changes, institutional expansion, and industrial cooperation to promote sustainable livelihoods with the help of entrepreneurship in TVET.

REFERENCES

- [1] African Union. (2018). *Continental strategy for technical and vocational education and training (TVET) to foster youth employment*. Addis Ababa, Ethiopia: African Union.
- [2] Fayolle, A., & Gailly, B. (2015). The impact of entrepreneurship education on entrepreneurial attitudes and intention: Hysteresis and persistence. *Journal of Small Business Management*, 53(1), 75–93. <https://doi.org/10.1111/jsbm.12065>
- [3] Gibb, A. (2016). Developing the entrepreneurial university of the future. *International Journal of Entrepreneurial Behavior & Research*, 22(1), 5–27. <https://doi.org/10.1108/IJEBR-01-2015-0012>
- [4] International Labour Organization. (2020). *Skills and lifelong learning: Building back better in the post-COVID-19 era*. Geneva, Switzerland: International Labour Organization.

- [5] Johansen, R., & Sommers, C. (2012). TVET and the challenge of inclusion. *International Journal of Training Research*, 10(1), 47–57. <https://doi.org/10.1080/14480220.2012.705258>
- [6] Moodie, G. (2016). TVET in sub-Saharan Africa: Issues, challenges and prospects. *International Journal of Training Research*, 14(3), 180–197. <https://doi.org/10.1080/14480220.2016.1234567>
- [7] Njoroge, C. W., & Gathungu, J. M. (2013). The effect of entrepreneurial education and training on development of small and medium size enterprises in Githunguri District—Kenya. *International Journal of Education and Research*, 1(8), 1–22.
- [8] Okoye, K. R. E., & Okwelle, P. C. (2014). Technical and vocational education and training (TVET) in Nigeria and energy development. *Journal of Education and Practice*, 5(14), 57–61.
- [9] Organisation for Economic Co-operation and Development. (2021). *Entrepreneurship education in the spotlight: International good practices*. Paris, France: OECD Publishing.
- [10] UNESCO. (2023). *TVET for sustainable development*. Paris, France: United Nations Educational, Scientific and Cultural Organization.