Entrepreneurship Education as a Catalyst for Skills Competitiveness in Technical Colleges in Lagos State, Nigeria

[1]Bello, A. A., [2]Raji, F. A., [3]Adebayo A. A. and [4]Salami, A. A.
[1]Department of Industrial Technical Education, Tai Solarin University of Education, Ijagun, Nigeria
[2]Department of Educational Technology, Technical Education Unit, University of Ilorin, Ilorin, Nigeria
[3]Department of Engineering, Government Technical College, Ikorodu, Lagos State, Nigeria
[4]Department of Engineering, Government Technical College, Ado Soba, Lagos State, Nigeria
Corresponding email: *belashir@gmail.com*

Abstract
This study examines the way entrepreneurship education enhances students' competitiveness in skills within technical colleges in Lagos State, Nigeria, in terms of employability and economic contribution. The study examines the impact of Training Needs Assessment, Mode of Delivery, and Training Content on entrepreneurial capabilities like innovation, problem-solving, and confidence. Based on the Knowledge-Based View theory, where knowledge is highlighted as a source of competitive advantage, the study adopted a descriptive survey design. A census sampling technique was used, selecting 150 final year students from five technical colleges of the Lagos State Technical and Vocational Education Board and from which 142 valid responses were received through a standardized questionnaire. Regression analysis revealed that Training Content had the greatest contribution to skills competitiveness ($\beta = 0.378$, $p < .001$), followed by Training Needs Assessment ($\beta = 0.193$, $p = 0.001$), while Mode of Delivery had the lowest contribution ($\beta = 0.129$, $p = 0.010$). These findings highlight the power of an effective curriculum in equipping young Nigerians to succeed in competitive labour markets and Lagos's entrepreneurial economy. Periodic skills gap analysis, different pedagogies including apprenticeship, and improved curricula infused with cutting-edge skills like digital entrepreneurship are recommended in the research. Through the giving of knowledge on knowledge-based education practices, the research highlights the prophetic role of entrepreneurship education in building a powerful, resilient workforce, encouraging sustainable development in Nigeria's economic hub.

Keywords: Entrepreneurship education, skills competitiveness, technical colleges, Lagos State, Knowledge-Based View

1. Introduction

In the context of Technical and Vocational Education Training (TVET), skill competitiveness is an impetus of employability, innovation, and economic productivity in the 21st century workforce. In a period characterized by technological advancement and global competition, the ability of individuals to apply technical knowledge creatively and productively determines their usefulness in the labour market. Within the context of Technical and Vocational Education and Training (TVET), fostering competitive skills is essential for producing graduates who can contribute meaningfully to national development. In the framework of Technical and Vocational Education and Training (TVET), building competitive skills is necessary in generating graduates who will be useful in the industrial and national development.

Although technical competence is prioritized, other issues such as employability and sustainable livelihood

still persist among technical college graduates in Nigeria. This point reveals the importance of an educative solution that is not limited to technical knowledge but to entrepreneurial skills. Entrepreneurship education is thus a transformation instrument that provides learners with innovation, problem solving, self-efficacy, and business management skills that are needed to start and run the economic ventures.

Education is a pillar of human resource development that equips people with the competencies, skills, values, knowledge, and attitudes to transform communities, nations, and the world at large (Ozumba, 2003). In Nigeria, where youth unemployment has remained a burning issue at approximately 42.5% in 2024 (International Labour Organization, 2024), entrepreneurship education has emerged as a revolutionary strategy for constructing economic resilience and empowering young people to navigate competitive labour markets. Acquiring entrepreneurial competencies such as innovation, problem-solving, and self-efficacy, this form of education extends beyond the boundaries of academic study, enabling individuals to create economic value and societal growth (Sule,

2013).

In Lagos State, Nigeria's economic powerhouse contributing over 30% to the national GDP (Ogunlesi & Adedoyin, 2023), technical colleges under the Lagos State Technical and Vocational Education Board (LASTVEB) play a pivotal role in addressing skills gaps in industries such as manufacturing, construction, and technology. These institutions, located in Agidingbi (Ikeja), Ado-Soba (Badagry), Odomola (Epe), Ikorodu, and Ikotun, integrate entrepreneurship education into vocational training to prepare students for self-employment and economic contribution (LASTVEB, 2023). As Ozumba (2003) notes, entrepreneurship education facilitates wealth creation, poverty reduction, and socio-economic development, aligning with Nigeria's broader goals of sustainable national development.

The urgency of this approach is highlighted by Nigeria's socio-economic challenges. Despite its status as Africa's most populous nation and a leading producer of oil and agricultural products, Nigeria grapples with a poverty rate that has risen since 2015 and an unemployment rate that surged from 8% to 33% by 2022 (World Bank, 2022). These challenges highlight the need for education systems to prioritize functional, lifelong learning that fosters entrepreneurial dynamism. Entrepreneurship education, as defined by Sule (2013), involves acquiring skills, ideas, and management abilities essential for job creation, offering long-term benefits to both individuals and the economy. Research suggests that individuals exposed to such training are more likely to launch ventures later in life, contributing to the growth of small and medium enterprises (SMEs) (Obschonka et al., 2017).

This study investigates the role of entrepreneurship education in enhancing skills competitiveness among students in Lagos State's technical colleges, with a focus on three dimensions: Training Needs Assessment, Mode of Delivery, and Training Content. Grounded in the Knowledge-Based View (KBV) theory, which positions knowledge as a critical driver of competitive advantage (Grant, 1996), the research examines how these dimensions foster entrepreneurial competencies that enable students to thrive in competitive labour markets and contribute to Lagos's vibrant economy. Adapting insights from prior studies, such as those highlighting the impact of entrepreneurship education on SME growth in other Nigerian contexts (Adu et al., 2023), this research offers a nuanced understanding of its transformative potential in technical education settings.

1.1 Statement of the Problem
Entrepreneurship education is expected to enhance entrepreneurial self-efficacy, independence, and risk-taking, enabling students to establish sustainable ventures and contribute to economic growth. However, many technical college graduates in Lagos State struggle to translate their training into viable enterprises, reflecting gaps in the design and delivery of entrepreneurship education. Observations suggest that insufficient attention to assessing training needs, ineffective delivery methods, and outdated or irrelevant training content may hinder students' ability to develop competitive skills. If these elements are optimized, graduates could excel in creating and sustaining SMEs, thereby reducing unemployment and fostering economic development. This study seeks to address these gaps by examining the impact of Training Needs Assessment, Mode of Delivery, and Training Content on skills competitiveness in Lagos State's technical colleges.

1.2 Objectives of the Study
The primary objective of this study is to evaluate the effect of entrepreneurship education on skills competitiveness among students in technical colleges in Lagos State, Nigeria. The specific objectives are as follows:
1. To examine the effect of Training Needs Assessment on skills competitiveness among students in technical colleges in Lagos State, Nigeria.

2. To investigate the effect of Mode of Delivery on skills competitiveness among students in technical colleges in Lagos State, Nigeria.

3. To determine the effect of Training Content on skills competitiveness among students in technical colleges in Lagos State, Nigeria.

2. Methodology
2.1 Research Design
This study utilized a descriptive survey research design to investigate the influence of entrepreneurship education on skills competitiveness among students in technical colleges in Lagos State, Nigeria. The descriptive survey design was selected for its suitability in systematically collecting, analysing, and interpreting data to explore the relationships between Training Needs Assessment, Mode of Delivery, and Training Content and their effects on entrepreneurial competencies, such as innovation, problem-solving, and self-efficacy (Creswell & Creswell, 2018). This approach facilitated a comprehensive examination of the variables within the natural setting of technical colleges, ensuring robust insights into their impact on students' ability to compete in dynamic labour markets.

2.2 Population of the Study
The study population comprised 150 final-year students enrolled in the five government technical colleges under the Lagos State Technical and Vocational Education Board (LASTVEB): Government Technical Colleges at Agidingbi (Ikeja), Ado-Soba (Badagry), Odomola (Epe), Ikorodu, and Ikotun. These students were selected because they are at a critical stage of their training, poised to transition into the workforce or entrepreneurial ventures, making them ideal candidates for assessing the impact of

entrepreneurship education on skills competitiveness (LASTVEB, 2023).

2.3 Sample and Sampling Technique

Given the manageable size of the population, a census sampling technique was employed, including all 150 final-year students in the study. This approach ensured that the findings were comprehensive and representative of the entire population of final-year students in LASTVEB technical colleges, minimizing sampling bias and enhancing the generalizability of results within this context (Saunders, Lewis, & Thornhill, 2019). A total of 142 valid responses were retrieved, yielding a 94.67% response rate, which supports the robustness of the data collected.

2.4 Instrument of Data Collection

Primary data were collected using a structured questionnaire designed by the researcher, tailored to capture the dimensions of entrepreneurship education and their impact on skills competitiveness. The questionnaire was organized into sections addressing demographic characteristics, Training Needs Assessment (5 items), Mode of Delivery (5 items), Training Content (7 items), and Skills Competitiveness (9 items, measuring competencies such as innovation, problem-solving, and self-efficacy). Items were measured on a five-point Likert scale, ranging from Strongly Disagree (1) to Strongly Agree (5), to ensure consistency and ease of response.

The instrument was adapted from validated scales used in prior studies on entrepreneurship education and pre-tested with a pilot sample of 20 students from a non-participating technical college to assess reliability and validity. Cronbach's alpha coefficients were 0.87 for Training Needs Assessment, 0.82 for Mode of Delivery, 0.91 for Training Content, and 0.89 for Skills Competitiveness, indicating strong internal consistency (Field, 2018). The questionnaire was administered directly to participants by the researcher, with follow-up visits to ensure a high response rate. Of the 150 questionnaires distributed, 142 were successfully retrieved, reflecting a 94.67% response rate, attributed to diligent administration and participant engagement.

2.5 Data Analysis Technique

Data were analysed using multiple linear regression analysis, conducted with the Statistical Package for the Social Sciences (SPSS) version 27. This method was chosen to test the hypotheses regarding the effects of Training Needs Assessment, Mode of Delivery, and Training Content on skills competitiveness, allowing for the examination of their individual and combined contributions. The regression model was specified as:

Skills Competitiveness = β_0 + β_1(Training Needs Assessment) + β_2(Mode of Delivery) + β_3(Training Content) + ε

Hypotheses were tested at a 5% significance level (p < 0.05), with results informing the interpretation of findings. Descriptive statistics, including means and standard deviations, were computed to provide an overview of participants' perceptions, while regression outputs, including beta coefficients, t-values, and confidence intervals, guided the discussion of the relative impact of each variable. The analysis ensured alignment with the Knowledge-Based View framework, emphasizing knowledge as a driver of competitive advantage.

3. Results
3.1 Descriptive Statistics

Descriptive statistics were computed to provide an overview of participants' perceptions of the study variables. The mean score for Training Needs Assessment was 3.52 (SD = 0.78), indicating a moderate to high perception of its relevance among students. Mode of Delivery had a mean of 3.28 (SD = 0.89), suggesting slightly lower satisfaction with delivery methods, potentially due to reliance on traditional teaching approaches. Training Content recorded the highest mean score of 4.02 (SD = 0.71), reflecting strong student appreciation for the relevance and quality of the curriculum. Skills Competitiveness had a mean of 3.45 (SD = 0.82), indicating a moderate to high level of perceived entrepreneurial competency among participants as shown in Table 1. The results suggest that entrepreneurship education, particularly through robust Training Content, significantly enhances students' ability to innovate, solve problems, and exhibit self-efficacy, thereby preparing them for success in Lagos State's competitive economic landscape.

3.2 Regression Analysis

The analysis tested the effects of three independent variables Training Needs Assessment, Mode of Delivery, and Training Content on the dependent variable, Skills Competitiveness, which encompasses entrepreneurial competencies such as innovation, problem-solving, and self-efficacy.

Table 2 presents the overall fit of the regression model, indicating the extent to which Training Needs Assessment, Mode of Delivery, and Training Content explain variations in Skills Competitiveness among students in Lagos State technical colleges. The R-squared value of 0.732 suggests that approximately 73.2% of the variance in Skills Competitiveness can be attributed to the combined effect of the independent variables. The adjusted R-squared value of 0.722, which accounts for the number of predictors, confirms the model's robust explanatory power. The F-statistic $(F_{(3, 138)} = 45.36, p < .0001)$ indicates that the model is statistically significant at the 5% level, suggesting that the independent variables collectively have a substantial impact on Skills Competitiveness.

The regression coefficients (Table 3) provide detailed insights into the individual contributions of each predictor to Skills Competitiveness. Training Content exhibited the strongest effect ($\beta = 0.378$, t = 5.260, p <

Table 1: Descriptive Statistics for Study Variables

Variable	N	Mean	Standard Deviation	Minimum	Maximum
Training Needs Assessment	142	3.52	0.78	1.80	5.00
Mode of Delivery	142	3.28	0.89	1.60	5.00
Training Content	142	4.02	0.71	2.00	5.00
Skills Competitiveness	142	3.45	0.82	1.90	5.00

Source: Researchers' Computation using SPSS, 2025.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	F-Statistic	Sig. F Change
1	.704a	.732	.722	45.36	.0001

a. Dependent Variable: Skills Competitiveness
b. Predictors: (Constant), Training Content, Mode of Delivery, Training Needs Assessment
   Source: Researchers' Computation using SPSS, 2025

Table 3: Regression Coefficients

Predictor	β (Unstandardized)	Standard Error	t	p-value	95% CI Lower	95% CI Upper
Constant	0.346	0.402	0.860	0.391	-0.449	1.141
Training Needs Assessment	0.193	0.057	3.397	0.001	0.081	0.305
Mode of Delivery	0.129	0.049	2.628	0.010	0.032	0.225
Training Content	0.378	0.072	5.260	<0.001	0.236	0.520

c. Source: Researchers' Computation using SPSS, 2025.

.001), indicating that a one-unit increase in the quality and relevance of Training Content is associated with a 0.378-unit increase in Skills Competitiveness, holding other variables constant. This finding underscores the critical role of well-designed, industry-aligned curricula in fostering entrepreneurial competencies. Training Needs Assessment also showed a significant positive effect (β = 0.193, t = 3.397, p = 0.001), suggesting that tailored assessments of students' skill gaps enhance their ability to develop competitive skills. Mode of Delivery had the least, though still significant, impact (β = 0.129, t = 2.628, p = 0.010), indicating that the method of delivering entrepreneurship education contributes modestly to skills outcomes compared to content and needs assessment. The confidence intervals (95% CI) for all predictors exclude zero, reinforcing the statistical reliability of these effects. The non-significant constant (p = 0.391) suggests that, in the absence of the predictors, Skills Competitiveness would not differ significantly from zero, further highlighting the importance of the independent variables in the model.

4. Discussion

The findings of this study provide robust evidence that entrepreneurship education serves as a pivotal mechanism for enhancing skills competitiveness among students in technical colleges in Lagos State, Nigeria. The regression analysis revealed that Training Content, Training Needs Assessment, and Mode of Delivery collectively explain 73.2% of the variance in Skills Competitiveness (R^2 = 0.732, p < .0001), underscoring the transformative potential of well-structured entrepreneurship education in fostering entrepreneurial competencies such as innovation, problem-solving, and self-efficacy. These results align with the Knowledge-Based View (KBV) theory, which posits that knowledge acquisition and application are critical drivers of competitive advantage in resource-constrained environments (Grant, 1996). The discussion below interprets these findings in the context of existing literature, highlights their implications for technical education, and addresses the study's contributions to both theory and practice.

Training Content emerged as the most significant predictor of Skills Competitiveness (β = 0.378, p < .001), indicating that the quality and relevance of the curriculum are paramount in equipping students with entrepreneurial competencies. The high mean score for

Training Content (M = 4.02, SD = 0.71) suggests that students perceive the curriculum as well-aligned with industry needs, fostering skills such as innovation and problem-solving that are essential for navigating Lagos State's dynamic economic landscape. This finding corroborates prior research by Adu et al. (2023), which highlighted the role of industry-relevant curricula in enhancing entrepreneurial readiness among Nigerian students. The emphasis on practical, market-oriented content in technical colleges, such as business planning and financial literacy, enables students to translate vocational skills into viable enterprises, aligning with Schumpeter's (1934) concept of "creative destruction," where entrepreneurs drive economic progress through innovative ventures.

The strong influence of Training Content underscores the need for curricula that integrate emerging skills, such as digital entrepreneurship and technology-driven innovation, to prepare students for the knowledge economy (Ojeifo, 2023). For instance, programs in Lagos technical colleges that incorporate modules on computer craft and market analysis resonate with global trends in technical and vocational education and training (TVET), where curricula are designed to foster adaptability in competitive markets (UNESCO, 2022). However, the challenge of outdated curricula in some Nigerian institutions, as noted by Okolie et al. (2021), suggests that continuous curriculum updates are essential to sustain this impact.

Training Needs Assessment also demonstrated a significant positive effect on Skills Competitiveness (β = 0.193, p = 0.001), with a mean score of 3.52 (SD = 0.78) reflecting students' recognition of its value in identifying skill gaps. This finding aligns with the KBV's emphasis on knowledge customization as a precursor to competitive advantage (Foss et al., 2019). By tailoring training to students' specific needs, technical colleges can address deficiencies in entrepreneurial competencies, thereby enhancing students' ability to innovate and exhibit self-efficacy. This result is consistent with studies in other Nigerian contexts, such as Ogbu (2025), which found that targeted training programs significantly improve entrepreneurial outcomes by addressing individual skill deficiencies. The significance of Training Needs Assessment highlights the importance of diagnostic tools in educational planning, particularly in resource-scarce settings like Nigeria, where misalignment between training and market demands is a persistent challenge (World Bank, 2022). However, the moderate mean score suggests that current assessment practices may not be fully optimized, potentially due to limited resources or expertise in conducting comprehensive needs analyses. Strengthening these assessments through partnerships with industry stakeholders, as seen in successful models like Covenant University's entrepreneurship programs (Adebayo & Iweala, 2024), could further enhance their impact.

Mode of Delivery had the least pronounced effect on Skills Competitiveness (β = 0.129, p = 0.010), with a mean score of 3.28 (SD = 0.89), indicating moderate satisfaction among students. The higher standard deviation suggests variability in the effectiveness of delivery methods across the five LASTVEB technical colleges, possibly due to reliance on traditional lecture-based approaches in some institutions. These finding echoes research by Sule (2013), which noted that passive teaching methods often limit the development of practical entrepreneurial skills in Nigerian TVET settings. In contrast, experiential learning approaches, such as apprenticeships and simulations, have been shown to enhance entrepreneurial competencies by providing hands-on experience (Penaluna & Penaluna, 2019). The modest impact of Mode of Delivery suggests a need to diversify instructional methods to include interactive and technology-driven approaches, such as e-learning platforms and industry mentorship programs, which have proven effective in other contexts (UNESCO, 2022). For example, Lagos State's recent initiatives, such as the Graduate Vocational Employability Skill Training Programme (LASTVEB, 2023), incorporate practical training components that could be scaled to enhance delivery effectiveness. The variability in perceptions also points to the need for standardized training protocols across colleges to ensure equitable access to high-quality instruction.

Theoretically, this study extends the application of the KBV framework to the context of TVET in developing economies, demonstrating that knowledge acquisition through entrepreneurship education drives skills competitiveness. The findings reinforce Grant's (1996) assertion that knowledge, when tailored and effectively delivered, creates sustainable advantages, particularly in settings where economic challenges necessitate innovative solutions. The significant influence of Training Content and Training Needs Assessment aligns with KBV's emphasis on knowledge depth and customization, while the weaker effect of Mode of Delivery highlights the need for further research into optimizing knowledge transfer mechanisms in technical education.

Practically, the findings offer actionable insights for educators and policymakers in Lagos State. The strong effect of Training Content suggests that investments in curriculum development, particularly in aligning content with emerging industries like technology and renewable energy, could yield significant returns in student employability and entrepreneurial success. The role of Training Needs Assessment underscores the importance of regular skill gap analyses, which could be supported through collaborations with private sector partners to ensure relevance to market demands. The modest impact of Mode of Delivery calls for pedagogical innovations, such as integrating digital tools and experiential learning, to enhance engagement and skill acquisition.

5. Conclusion

This study demonstrates that entrepreneurship

education significantly enhances skills competitiveness among students in Lagos State technical colleges, with Training Content exerting the strongest influence, followed by Training Needs Assessment and Mode of Delivery. These findings, grounded in the Knowledge-Based View, highlight the transformative potential of well-designed curricula in fostering innovation, problem-solving, and self-efficacy, preparing students for success in Nigeria's competitive labour market and contributing to economic development.

6. Recommendations

1. Enhance Curriculum Content: Develop industry-aligned curricula incorporating emerging skills like digital entrepreneurship to boost competitiveness.

2. Strengthen Needs Assessments: Conduct regular Training Needs Assessments to tailor programs to students' skill gaps.

3. Diversify Delivery Methods: Adopt experiential learning, such as apprenticeships and digital tools, to enhance engagement.

4. Foster Partnerships: Collaborate with private sector stakeholders to align training with market demands.

5. Monitor Outcomes: Track graduate startup rates and employment to evaluate and refine program effectiveness.

References

Adu, E. O., et al. (2023). Exploring dimensions of entrepreneurship education for sustainable development in Nigeria. Journal of Vocational Education Studies, 6(2), 45-60.

Grant, R. M. (1996). Toward a knowledge-based theory of the firm. Strategic Management Journal, 17(S2), 109-122.

International Labour Organization. (2024). World Employment and Social Outlook: Trends 2024. ILO.

LASTVEB. (2023). Annual Report on Technical and Vocational Education in Lagos State. Lagos State Technical and Vocational Education Board.

Obschonka, M., et al. (2017). In the shadow of Schumpeter: Entrepreneurial personality and regional development. Entrepreneurship & Regional Development, 29(5-6), 487-510.

Ogunlesi, T., & Adedoyin, A. (2023). Lagos State's economic contributions to Nigeria: A sectoral analysis. African Economic Review, 15(3), 112-130.

Ozumba, G. O. (2003). Entrepreneurship education and wealth creation in Nigeria. Journal of Educational Development, 4(1), 25-34.

Schumpeter, J. A. (1934). The Theory of Economic Development. Harvard University Press.

Schumpeter, J. A. (1942). Capitalism, Socialism and Democracy. Harper & Brothers.

Sule, M. (2013). Entrepreneurship education and job creation in Nigeria. African Journal of Business Management, 7(12), 901-910.

World Bank. (2022). Nigeria Poverty Assessment 2022: A Better Future for All Nigerians. World Bank Group.

Creswell, J. W., & Creswell, J. D. (2018). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (5th ed.). SAGE Publications.

Field, A. (2018). Discovering Statistics Using IBM SPSS Statistics (5th ed.). SAGE Publications.

Saunders, M., Lewis, P., & Thornhill, A. (2019). Research Methods for Business Students (8th ed.). Pearson.

Adebayo, O., & Iweala, E. (2024). Public-private partnerships in entrepreneurship education: Lessons from Covenant University. Journal of African Education, 10(2), 78-95.

Foss, N. J., et al. (2019). Entrepreneurship, subjectivism, and the resource-based view. Strategic Entrepreneurship Journal, 13(3), 281-301.

Ogbu, C. C. (2025). The need for integrating entrepreneurial education in technical colleges. Journal of Technical Education Research, 12(1), 34-49.

Ojeifo, S. A. (2023). Entrepreneurship education in Nigeria: Progress and challenges. Journal of African Business Studies, 8(1), 23-38.

Okolie, U. C., et al. (2021). Challenges of technical and vocational education in Nigeria: A case for curriculum reform. International Journal of Vocational Education, 7(3), 102-118.

Penaluna, A., & Penaluna, K. (2019). Creative entrepreneurship education: A global perspective. Entrepreneurship Education Journal, 5(4), 321-340.

UNESCO. (2022). Transforming Technical and Vocational Education and Training for the 21st Century. UNESCO Publishing.