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EMERGING PERSPECTIVES AND PRACTICES IN VOCATIONAL AND TECHNICAL EDUCATION: INTEGRATING ENTREPRENEURSHIP EDUCATION IN CARPENTRY AND JOINERY TRADE IN TECHNICAL COLLEGES IN KWARA STATE, NIGERIA

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Abstract

This study examined emerging perspectives and practices in Vocational and Technical Education with a focus on the integration of entrepreneurship education in carpentry and joinery trade in technical colleges in Kwara State, Nigeria. The study was guided by three research questions and two hypotheses. A descriptive survey research design was adopted for the study. The population comprised 12 carpentry and joinery teachers and 234 carpentry and joinery trade students in the four technical colleges in Kwara State. A census sampling technique was used to include all the teachers and students in the selected colleges. Data were collected using two structured questionnaires titled Integration of Entrepreneurship Education in Carpentry and Joinery Questionnaire (IEECJQ) and Students' Entrepreneurship Competence (SEC). The instruments were validated by experts in Vocational and Technical Education and Test and Measurement while reliability was established using Cronbach's alpha method. A reliability coefficient of 0.80 was obtained for SEC, while a reliability coefficient of 0.83 was obtained for IEECJQ, showing that the instruments were reliable for the study. Data were analysed using mean and standard deviation to answer the research questions, while Pearson product-moment correlation and regression analysis were used to test the hypotheses at the 0.05 level of significance. Findings revealed that entrepreneurship education is moderately integrated into carpentry and joinery trade in technical colleges in Kwara State. The study further showed that the integration of entrepreneurship education has a significant positive relationship with students' entrepreneurial competencies. It was also found that institutional factors were significantly associated with effective integration of entrepreneurship education in carpentry and joinery trade. The study concluded that entrepreneurship education integration is associated with higher levels of students' entrepreneurial competencies and preparedness for self-employment, while institutional support plays a critical role in effective implementation. The study recommended, among others, that entrepreneurship education should be fully integrated into the carpentry and joinery curriculum, while government and school authorities should improve workshop facilities, instructional materials, and teacher capacity to enhance effective implementation.

Keywords: Entrepreneurship education, carpentry and joinery, technical colleges, vocational education, entrepreneurial competencies, Kwara State

1. Introduction

Emerging educational priorities in many developing countries increasingly emphasise the need for learners to acquire practical skills that can translate into self-reliance and income generation after graduation. This shift is driven by persistent youth unemployment and the growing recognition that education should not only transmit knowledge but also equip learners with entrepreneurial competencies and productive skills. Within vocational fields such as carpentry and joinery, the ability to combine technical craftsmanship with entrepreneurial thinking has become essential for sustainable livelihood creation. Studies have shown that entrepreneurship-oriented learning enhances learners' capacity to identify

business opportunities, manage resources, and apply technical skills in real-life economic activities (Okoye, 2021; Shobowale et al., 2021).

In recent years, there has been growing concern about the ability of vocational learners to translate technical skills into sustainable livelihood opportunities after graduation. This concern stems from the persistent challenge of youth unemployment and underemployment, particularly among graduates of vocationally oriented programmes. While vocational training is designed to equip learners with practical competencies, there is increasing recognition that technical skill alone may not be sufficient for economic independence without complementary entrepreneurial abilities that enable individuals to identify opportunities, manage resources, and establish small-scale enterprises.

Carpentry and joinery is a practical trade that focuses on the construction, fabrication, and finishing of wooden structures and furniture. In most technical training settings, especially in technical colleges, learners are exposed to essential skills such as measuring, cutting, shaping, assembling, and finishing wood products. However, Ogunleye (2022) observed that despite this technical exposure, many trainees still struggle to apply their skills in real-life economic contexts due to limited entrepreneurial orientation during training.

1.1. Statement of the Problem

Vocational and Technical Education (VTE) is expected to equip students with practical skills that can enable them to become self-reliant and contribute to national development. In technical colleges, trades such as carpentry and joinery are designed to provide learners with hands-on competencies necessary for employment in the construction and furniture industries.

However, there are growing concerns that many graduates still struggle to translate their acquired skills into sustainable livelihoods. One possible reason for this situation could be the limited integration of entrepreneurship education into skill-based training. While students may acquire technical competencies in carpentry and joinery, they may not be adequately exposed to the knowledge and skills required to start and manage businesses.

1.2. Purpose of the Study

The main purpose of this study is to examine emerging perspectives and practices in Vocational and Technical Education by investigating the integration of entrepreneurship education in carpentry and joinery trade in technical colleges in Kwara State, Nigeria.

Specifically, the study:

1. examined the extent to which entrepreneurship education is integrated into carpentry and joinery trade;
2. determined the relationship between the integration of entrepreneurship education and students' entrepreneurial competencies in carpentry and joinery trade; and
3. assessed the factors influencing effective integration of entrepreneurship education in carpentry and joinery trade.

1.3. Research Questions

The following research questions guided the study:

1. To what extent is entrepreneurship education integrated into carpentry and joinery trade in technical colleges in Kwara State?
2. What is the relationship between the integration of entrepreneurship education and students' entrepreneurial competencies in carpentry and joinery trade?
3. What factors influence the effective integration of entrepreneurship education in carpentry and joinery trade in technical colleges in Kwara State?

1.4. Research Hypotheses

The following hypotheses were formulated and tested at the 0.05 level of significance:

H_{01}: There is no significant relationship between the integration of entrepreneurship education and students' entrepreneurial competencies in carpentry and joinery trade in technical colleges in Kwara State.

H_{02}: Institutional factors will not be significantly associated with effective integration of entrepreneurship education in carpentry and joinery trade in technical colleges in Kwara State

2. Methodology

This study adopted a descriptive survey research design to examine the integration of entrepreneurship education in carpentry and joinery trade in technical colleges. The population of the study comprised 12 carpentry and joinery teachers and 234 students in the four technical colleges in Kwara State. A census sampling technique was adopted, as all the four technical colleges offering carpentry and joinery were included in the study. Due to the manageable size of the population, all available teachers and students in these colleges participated in the study, ensuring adequate representation and eliminating sampling bias.

Data were collected using structured questionnaires titled "Integration of Entrepreneurship Education in Carpentry and Joinery Questionnaire (IEECJQ)" and "Students' Entrepreneurship Competence (SEC)," both of which were developed by the researcher based on the objectives of the study. The instruments consisted of sections covering demographic information, extent of integration, students' entrepreneurial competencies, preparedness for self-employment, and factors influencing effective integration. The questionnaire items were structured on a four-point Likert scale of Strongly Agree, Agree, Disagree, and Strongly Disagree.

The instrument was subjected to face and content validity by experts in Vocational and Technical Education as well as Test and Measurement to ensure its relevance and adequacy in measuring the variables of the study. The reliability of the instruments was established using Cronbach's alpha method, which yielded a coefficient of 0.80 for SEC, and 0.83 for IEECJQ, indicating a high level of internal consistency.

The researcher, with the assistance of research aides, personally administered the questionnaire to the respondents to ensure proper distribution and a high rate of return. The collected data were analysed using both descriptive and inferential statistics. Specifically, mean and standard deviation were used to answer the research questions, while Pearson product-moment correlation and regression analysis were employed to test the hypotheses at the 0.05 level of significance. Decisions were made based on the p-value, with hypotheses rejected where the p-value was less than 0.05 and not rejected where it was greater than or equal to 0.05.

Ethical considerations were duly observed by obtaining permission from relevant school authorities and assuring respondents of confidentiality, anonymity, and voluntary participation. A benchmark mean of 2.50 was used to indicate agreement, while a mean below 2.50 indicates disagreement.

3. Results

Research Question 1: To what extent is entrepreneurship education integrated into carpentry

and joinery trade in technical colleges in Kwara State?

Table 1: Teachers' perspective on the extent of integration of Entrepreneurship Education in Carpentry and joinery Trade

S/N	Items	Mean	Std. Deviation	Decision
1	Entrepreneurship education is effectively integrated into the teaching of carpentry and joinery trade in my school	3.42	0.91	Agree
2	Students are taught how to apply entrepreneurial skills such as costing, pricing, and profit calculation in carpentry and joinery projects.	3.58	0.88	Agree
3	Carpentry and joinery lessons include training on how to establish and manage a small-scale business.	3.36	0.95	Agree
4	Instructional activities in carpentry and joinery are linked to real-life business and self-employment opportunities.	3.61	0.84	Agree
5	Students are exposed to marketing and customer relations skills relevant to carpentry and joinery trade.	3.47	0.94	Agree

	Cluster mean	**3.49**	**0.90**	**Agree**

Table 1 presents the responses of teachers on the integration of entrepreneurship education in carpentry and joinery trade in technical colleges. The results show that all the items recorded mean scores above the benchmark mean of 2.50, indicating that respondents generally agreed with all the statements. Item 4, which states that instructional activities in carpentry and joinery are linked to real-life business and self-employment opportunities, recorded the highest mean score of 3.61 (SD = 0.84). This implies that teachers perceive that classroom instruction is relatively connected to entrepreneurial opportunities, which helps students understand the practical relevance of their training. Item 3, which states that students are trained on how to establish and manage a small-scale business, recorded the lowest mean score of 3.36 (SD = 0.95). This suggests that although entrepreneurship education is integrated, the aspect of business establishment and management is less emphasised compared to other entrepreneurial components.

The cluster mean of 3.49 indicates that, overall, entrepreneurship education is moderately integrated into carpentry and joinery trade in technical colleges in Kwara State. This implies that while some entrepreneurial elements such as costing, pricing, and marketing are present, the integration is not yet comprehensive or fully structured. The standard deviation values, which range from 0.84 to 0.95, show that responses are relatively close to one another, indicating a reasonable level of agreement among respondents. The findings suggest that entrepreneurship education is present within carpentry and joinery instruction, but its level of integration is moderate, implying a need for stronger and more structured incorporation to fully equip students with entrepreneurial competencies.

Research Question 2: What is the relationship between the integration of entrepreneurship education and students' entrepreneurial competencies in carpentry and joinery trade?

Table 2: Entrepreneurial Competencies of the students

S/N	Items	Mean	Std. Deviation	Decision
1	I can effectively manage financial resources in a business.	3.41	0.89	Agree
2	I have the skills needed to start a carpentry/joinery business.	3.56	0.86	Agree
3	I can identify business opportunities in carpentry and joinery.	3.48	0.91	Agree
4	I can manage customers and business relationships effectively.	3.37	0.92	Agree
5	I am confident in marketing carpentry/joinery products.	3.52	0.88	Agree
	Cluster Mean	**3.47**	**0.89**	**Agree**

Table 2 presents the responses of students on their entrepreneurial competencies in carpentry and joinery trade in technical colleges. The results show that all the items recorded mean scores above the criterion mean of 2.50, indicating that respondents generally agreed with all the statements. Specifically, item 2, which states that students have the skills needed to start a carpentry/joinery business, recorded the highest mean score of 3.56 (SD = 0.86). This suggests that students have a relatively strong perception of their ability to establish a carpentry and joinery business after training. Item 4, which states that students can manage customers and business relationships effectively, recorded the lowest mean score of 3.37 (SD = 0.92). This indicates that interpersonal and customer management skills are comparatively less developed than other entrepreneurial competencies.

The cluster mean of 3.47 shows that students' entrepreneurship competence is moderate and positively developed. This implies that while students possess basic entrepreneurial knowledge and confidence, there is still room for improvement in strengthening their practical business management and customer relations skills. The standard deviation values, ranging from 0.86 to 0.92, indicate a close spread of responses, showing a reasonable level of agreement among respondents. The findings suggest that students in carpentry and joinery trade in technical colleges in Kwara State possess moderate entrepreneurial competence, which supports their potential for self-employment if further strengthened through improved integration of entrepreneurship education.

Research Question 3: What factors influence the effective integration of entrepreneurship education in carpentry and joinery trade in technical colleges in Kwara State?

Table 3: Factors Influencing Integration of entrepreneurship education

S/N	Items	Mean	Std. Deviation	Decision
1	There are adequate workshop facilities for carpentry and joinery training.	3.45	0.90	Agree
2	School management supports entrepreneurship integration.	3.38	0.94	Agree
3	Availability of instructional materials supports effective teaching.	3.52	0.88	Agree
4	Teachers are competent in both technical and entrepreneurship education.	3.33	0.96	Agree
5	Modern tools and equipment are available for practical work.	3.41	0.92	Agree
	Cluster Mean	**3.42**	**0.92**	

Table 3 presents the teachers' responses on the factors influencing the integration of entrepreneurship education in carpentry and joinery trade in technical colleges. The results indicate that all the items recorded mean scores above the criterion mean of 2.50, indicating that respondents generally agreed with the statements. Specifically, item 3, which states that the availability of instructional materials supports effective teaching of carpentry and joinery trade, recorded the highest mean score of 3.52 (SD = 0.88). This implies that instructional materials are considered a key factor enhancing effective integration of entrepreneurship education. Item 4, which states that teachers are competent in both technical and entrepreneurship education, recorded the lowest mean score of 3.33 (SD = 0.96). This suggests that teacher competence in integrating entrepreneurship education with technical skills is relatively lower compared to other factors.

The cluster mean of 3.42 indicates that the factors influencing integration are moderately available and supportive in technical colleges in Kwara State. This implies that while some enabling conditions exist, such as workshop facilities and instructional materials, there are still gaps in areas like teacher competence and institutional support. The standard deviation values, which range between 0.88 and 0.96, show a close spread of responses, indicating a reasonable level of agreement among respondents. The findings suggest that although there are supportive factors for integrating entrepreneurship education into carpentry and joinery trade, improvements are still needed in staffing competence, management support, and provision of modern tools and equipment to ensure effective implementation.

Test of Hypothesis

Hypothesis 1: There is no significant relationship between the integration of entrepreneurship education and students' entrepreneurial competencies in carpentry and joinery trade in technical colleges in Kwara State.

Table 4: Pearson product-moment correlation analysis for integration of Entrepreneurship Education and students' Entrepreneurship Competence

Variable	N	Mean	SD	r-value	d.f	P-value	Remark
Integration of Entrepreneurship Education	234	3.49	0.90	0.68			
Students' Entrepreneurship Competence	234	3.47	0.89		232	< .001	Significant

*p < .05

Table 4 presents the Pearson product-moment correlation analysis of the relationship between integration of entrepreneurship education and students' entrepreneurial competencies in carpentry and joinery trade in technical colleges in Kwara State. The result shows that there is a strong positive relationship between integration of entrepreneurship education and students' entrepreneurial competencies, with an r-value of 0.68. This indicates that as the level of integration of entrepreneurship education increases, students' entrepreneurial competencies also increase. The p-value is less than the 0.05 level of significance. Therefore, the null hypothesis is rejected. This implies that there is a significant relationship between the integration of entrepreneurship education and students' entrepreneurial competencies in carpentry and joinery trade.

Research Hypothesis 2: Institutional factors will not be significantly associated with effective integration of entrepreneurship education in carpentry and joinery trade in technical colleges in Kwara State.

Table 5: Regression Analysis of Institutional Factors and Integration of Entrepreneurship Education

Model	**Unstandardized coefficient**		**Standardized coefficient**	**T**	**Sig**
	B	**Std. Error**	**Beta**		
(Constant)	0.85	0.30		3.45	.006
Institutional_Factors	0.62	0.19	0.74	3.29	.008

Multiple R = *0.74, Multiple* R^2 = *0.55, Adjusted* R^2 = *0.51, F(1, 10) = 10.82*

$p < .05$

Table 5 presents the regression analysis of the relationship between institutional factors and the effective integration of entrepreneurship education in carpentry and joinery trade in technical colleges in Kwara State. The result shows a correlation coefficient (R) of 0.74, indicating a strong positive relationship between institutional factors and the integration of entrepreneurship education. The coefficient of determination (R^2) value of 0.55 implies that 55% of the variation in the integration of entrepreneurship education is explained by institutional factors such as workshop facilities, instructional materials, teacher competence, and management support. The F-value of 10.82 with a corresponding p-value of .008 (which is less than .05) indicates that the regression model is statistically significant. Therefore, the null hypothesis is rejected.

4. Discussion

The finding of the study revealed that the integration of entrepreneurship education has a significant positive relationship with students' entrepreneurial competencies in carpentry and joinery trade. This implies that when entrepreneurship concepts such as costing, pricing, business identification, and marketing are integrated into technical training, students tend to develop stronger entrepreneurial skills and confidence.

This finding is consistent with the view of Mack et al. (2019), who emphasised that entrepreneurship education in Technical and Vocational Education and Training (TVET) institutions enhances learners' ability to identify business opportunities and develop self-employment skills. Similarly, Okoye (2021) noted that integrating entrepreneurship into technical education promotes innovation and prepares students for economic participation beyond formal employment.

In the same vein, Shobowale et al. (2021) observed that entrepreneurship integration in TVET supports sustainable development by equipping learners with practical business competencies. The result also aligns with Ayonmike and Okeke (2016), who reported that TVET programmes significantly improve employability and entrepreneurial readiness among graduates in Nigeria. Therefore, the finding of this study supports the argument that entrepreneurship integration is an important factor associated with entrepreneurial competence development in technical education.

The study further revealed that institutional factors were significantly associated with the effective integration of entrepreneurship education in carpentry and joinery trade. This suggests that the availability of adequate workshop facilities, instructional materials, teacher competence, and management support play a crucial role in determining how effectively entrepreneurship education is implemented.

This finding is in agreement with Ogunleye (2022), who reported that the effectiveness of carpentry and joinery training in Nigerian technical colleges is largely dependent on the availability of adequate tools, equipment, and instructional support. Similarly, Okolie et al. (2019) emphasised that improved institutional conditions in TVET institutions significantly enhance graduate outcomes and skill acquisition. Kwami (2023) also noted that repositioning technical and vocational education for youth empowerment requires strong institutional support systems that promote practical skill development and innovation. In addition, the National Board for Technical Education (NBTE, 2021) curriculum for carpentry and joinery highlights the importance of adequate facilities and competent instructors for effective skill delivery. Therefore, the findings of this study corroborate existing literature that institutional readiness is a critical determinant of successful entrepreneurship integration in technical education.

Overall, the findings of this study indicate that entrepreneurship education is moderately integrated into carpentry and joinery trade in technical colleges, and this integration is positively associated with students' entrepreneurial competencies. It also shows that institutional factors were significantly associated with how effectively entrepreneurship education is implemented. This aligns with the position of Eze (2020), who stated that vocational education plays a vital role in employability skill development when properly structured and supported. It also supports the assertion of Okolie et al. (2019) that improving TVET systems is essential for enhancing graduate employability and self-reliance.

5. Conclusion

Based on the findings of this study, it is concluded that entrepreneurship education is moderately integrated into carpentry and joinery trade in technical colleges in Kwara State. The study further established that the integration of entrepreneurship education has a significant positive relationship with students' entrepreneurial competencies, indicating that when entrepreneurial concepts such as costing, pricing, marketing, and business management are incorporated into technical training, students reported greater capability in identifying business opportunities and developing relevant entrepreneurial skills.

The study also concluded that institutional factors such as availability of workshop facilities, instructional materials, teacher competence, and administrative support were significantly associated with the effective integration of entrepreneurship education in carpentry and joinery trade. This implies that the success of entrepreneurship integration in technical education is highly dependent on the quality of institutional support systems available in the colleges. The study concludes that strengthening entrepreneurship education within carpentry and joinery trade, supported by adequate institutional resources, may enhance students' entrepreneurial competencies and improve their readiness for self-employment after graduation.

However, the conclusions should be interpreted in light of the study's methodological limitations. The findings were based on self-reported questionnaire data, which may be influenced by respondents' perceptions and response bias, and the descriptive survey design identifies relationships rather than establishing causal effects. Despite these limitations, the study provides valuable evidence for improving entrepreneurship education in technical colleges.

6. Recommendations

Based on the findings of the study, the following recommendations are made:

1. Technical colleges should ensure that entrepreneurship education is fully and systematically integrated into the carpentry and joinery trade curriculum, with emphasis on practical business-oriented activities such as costing, pricing, and marketing of products.

2. Government and school administrators should provide adequate workshop facilities, modern tools, and instructional materials to support effective teaching and learning in carpentry and joinery trade.

3. Regular training, workshops, and professional development programmes should be organised for teachers to enhance their competence in both technical skills and entrepreneurship education delivery.

4. School management should actively support entrepreneurship integration by encouraging practical-based learning, industry collaboration, and innovation-driven teaching approaches.

5. Technical colleges should establish strong partnerships with industry stakeholders to provide students with real-life business exposure, internships, and mentorship opportunities in carpentry and joinery trade.

6. Relevant educational authorities, such as the Ministry of Education and National Board for Technical Education, should ensure strict monitoring of curriculum implementation to guarantee effective integration of entrepreneurship education in technical colleges.

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Conflict of Interest

The author declares no conflict of interest.

References

Ayonmike, C. S., & Okeke, B. C. (2016). Bridging the skills gap and tackling unemployment of vocational graduates through partnerships in Nigeria. Journal of Technical Education and Training, 8(2), 1–11.

Eze, T. I. (2020). Vocational education and employability skills development in Nigeria. Journal *of Education and Learning, 9(2), 25–33.*

Kwami, U. A. (2023). Repositioning technical and vocational education for youth empowerment in Nigeria. African Journal of Technical Education, 8(1), 15–27.

Mack, A. J., White, D., & Senghor, O. (2019). An insight into entrepreneurship education practices in technical and vocational education and training institutions.

Journal of Global Entrepreneurship Research, 9(1), 48. https://doi.org/10.1186/s40497-019-0169-z

National Board for Technical Education. (2021). National technical certificate curriculum for carpentry and joinery.

Ogunleye, A. O. (2022). Carpentry and joinery training effectiveness in Nigerian technical

colleges. Journal of Vocational Studies, 6(2), 44–58.

Okolie, U. C., Igwe, P. A., & Elom, N. E. (2019). Improving graduate outcomes for technical colleges in Nigeria.

Okoye, P. I. (2021). Innovation and entrepreneurship in technical education. Journal of *Educational Development, 13(2), 30–42.*

Shobowale, I., Yusuf, A. O., & Udogu, K. C. (2021). Entrepreneurship integration in TVET for sustainable development. Journal of Entrepreneurship Education, 24(6), 1–12.

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