

Entrepreneurial Skills for Work Readiness among Students of Building Technology Education in Tertiary Institutions in Rivers State

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Abstract: *The study was conducted to investigate the entrepreneurial skills for work readiness among students of building technology education in tertiary institutions in Rivers State. The study was guided by one specific objectives, one research question and one corresponding hypothesis. The study adopted a descriptive survey research design with a population of 105 final year building technology education students from the three tertiary institutions in Rivers State. Because of the manageable size of the population, census sampling was employed. Therefore, the entire population of 105 final year building technology education students will be recruited for the study. The instrument for data collection was a questionnaire titled, Entrepreneurial Skills for Work Readiness among Building Technology Students Questionnaire (ESWRBTQ) which was validated by three experts and with an overall internal consistency reliability coefficient of 0.92. A total of 105 copies of the instrument were administered and a total of 103 copies retrieved and used for data analysis. Data collected were analysed using a criterion mean of 2.50 for the research questions and Z-test for the hypotheses. Result of the study revealed that students possessed entrepreneurial competences to a high extent. Based on the findings, it was recommended among others that Tertiary institutions should increase hands-on training in site setting out, project management, cost estimation, walling, roofing, and electrical installations.*

Keywords: *Entrepreneurship, Work readiness, entrepreneurship skills for work readiness.*

Introduction

Entrepreneurship is a dynamic process that involves the identification, creation, and pursuit of opportunities to develop new products, services, or processes. It is characterized by innovation, risk-taking, and proactive problem-solving, which are crucial for economic development and job creation (Osuala cited in Binuomote & Okoli, 2015). In Nigeria, the concept of building technology encompasses the study of construction practices, management, and the application of technical skills necessary for the development and maintenance of the built environment. This programme of study is pivotal for students as it equips them with both theoretical knowledge and practical skills essential for addressing the challenges in the construction industry. Building technology education not only enhances students' competencies but also fosters a sense of

responsibility towards sustainable development and infrastructural advancement in their communities (Anaele & Okoro, 2014).

The importance of entrepreneurship for students of building technology cannot be overstated. As the construction industry evolves, there is a growing demand for graduates who are not only skilled in technical aspects but also possess entrepreneurial competences. Entrepreneurship education empowers building technology students to innovate, adapt to market changes, and ultimately contribute to the economic growth of their communities (Akaninwor in Ochogba, Johnwest, Isiodu & Igwe, 2017). In Rivers State, where the construction sector is experiencing rapid growth, it is imperative for students to be adequately prepared for entrepreneurship. This preparation will not only enhance their employability but also enable them to create job opportunities, thus contributing to the reduction of unemployment rates in the region.

A review of existing literature reveals a significant interest in the preparedness for entrepreneurship among students in various fields, including engineering and technology. Studies have shown that entrepreneurship education positively influences students' intentions to start their own ventures (Chinasa & Ekemezie, 2015). However, there is a notable gap in research specifically addressing the preparedness for entrepreneurship among students of building technology in Nigeria, particularly in Rivers State. Most studies focus on generic entrepreneurship education without delving into the unique challenges and opportunities faced by building technology students. This gap highlights the need for focused research that examines the specific entrepreneurial skills required for success in the construction industry.

This study aims to fill the identified gap by exploring the entrepreneurial skills necessary for work readiness among students of building technology education in tertiary institutions in Rivers State. By understanding these skills, educational institutions can tailor their curricula to better prepare students for the demands of the labor market and foster a culture of entrepreneurship within the building technology sector. The findings of this research will not only contribute to academic discourse but also provide practical recommendations for policy makers and educators to enhance the entrepreneurial readiness of students.

Entrepreneurship competencies are essential for building technology education students to thrive in the construction industry. Competencies such as opportunity recognition, financial literacy, risk management, business planning, marketing, leadership, and legal awareness equip students to navigate the complex challenges of the industry and establish successful businesses. As the construction sector continues to evolve, it is crucial for educational programs to integrate entrepreneurship training that prepares students not only to become employees but also to become job creators and innovators within the field (Chinasa & Ekemezie, 2015).

One of the core entrepreneurship competencies is the ability to recognize business opportunities and innovate solutions. Opportunity recognition involves identifying gaps in the market or inefficiencies in current construction practices, which can be leveraged for business creation or improvement (Agada, 2014). For building technology students, this

could mean recognizing trends such as the growing demand for sustainable construction practices or the integration of smart technologies into building designs. Innovation in entrepreneurship goes hand-in-hand with opportunity recognition, as students must develop creative solutions to meet industry needs and maintain a competitive edge (Agada, 2014). For example, students could innovate by introducing eco-friendly materials or leveraging technology to improve building efficiency.

Understanding financial concepts and managing resources effectively is crucial for any aspiring entrepreneur. Financial literacy enables building technology students to assess the viability of business ideas, prepare budgets, and manage project costs efficiently. Studies indicate that financial management skills are critical in the construction sector, where budgeting, cost control, and financial decision-making directly impact project success (Glaub et al., 2014). These competencies help students not only in managing their businesses but also in understanding how to source funding, manage cash flow, and ensure profitability. Proper financial planning and resource allocation are fundamental to ensuring the sustainability of a business venture in the construction industry.

Entrepreneurial activities inherently involve risk, and the ability to manage these risks effectively is an essential competence for building technology students. Risk management involves identifying potential risks, evaluating their impact, and developing mitigation strategies. In the context of the building construction industry, risks can range from financial losses, project delays, supply chain disruptions, or legal issues (Isa, Salihu, Shuaibu & Cledumas, 2023). Building technology students need to be adept at managing these risks by employing strategic planning, insurance policies, and contingency measures. Entrepreneurs who are skilled at managing risk are more likely to succeed in an unpredictable and volatile market.

Entrepreneurship requires the ability to create comprehensive business plans and develop long-term strategies. A well-structured business plan outlines the vision, mission, goals, and operational strategies of a business, as well as market analysis and financial projections (Burns, 2016). Building technology students must be able to develop business models that align with the realities of the construction sector, accounting for competitive analysis, customer needs, and regulatory requirements. Additionally, strategy development is critical for navigating the complexities of the market and ensuring that the business adapts to changing conditions. Strategic planning helps students set realistic objectives, forecast industry trends, and create action plans for achieving growth.

Marketing is another essential entrepreneurship competency for building technology students. The ability to market construction services and products, build strong customer relationships, and create brand loyalty is key to business success. Students need to understand market segmentation, target customers effectively, and communicate value propositions that differentiate their services from competitors. In the construction sector, personal relationships and trust play a significant role in client acquisition and retention. Effective customer relationship management (CRM) practices can enhance customer satisfaction and lead to repeat business and referrals, both of which are critical for a new entrepreneur in the construction industry (Agada, 2014).

Leadership skills are crucial for entrepreneurship, especially in an industry that involves coordinating teams of architects, engineers, laborers, and other stakeholders. Building technology students must learn how to lead teams, manage conflicts, and foster collaboration to ensure the smooth execution of construction projects (Agada, 2014). Leadership competencies involve not only managing people but also inspiring and motivating employees to work toward a common goal. In the entrepreneurial context, effective leadership is often the difference between a business that thrives and one that fails, as it drives innovation, fosters a positive work culture, and ensures that projects are completed on time and within budget.

The construction industry is highly regulated, and building technology students need to be familiar with the legal frameworks that govern construction projects. Entrepreneurship in the construction sector requires an understanding of building codes, safety regulations, environmental laws, and contract law. Legal and regulatory awareness ensures that business owners comply with industry standards and avoid costly legal disputes. Additionally, knowledge of intellectual property laws can help protect innovative building designs or construction methods that entrepreneurs may develop (Agundu, 2021).

Effective instructional delivery is critical for the success of students and the overall educational process. Teacher education students, who are future educators, must develop a wide range of teaching skills to facilitate learning, engage students, and foster a productive classroom environment. These teaching skills include content knowledge, pedagogical strategies, communication skills, classroom management, assessment techniques, and adaptability. Each of these competencies contributes to the effectiveness of instructional delivery and the learning outcomes of students.

Purpose of the Study

The purpose of the study is to ascertain the extent entrepreneurial competences are possessed by students of building technology education in tertiary institutions in Rivers State.

Research Question

The study will provide answer to the following research questions.

To what extent are entrepreneurial competences possessed by students of building technology education in tertiary institutions in Rivers State?

Hypothesis

The study will test the following hypotheses which will be tested at 0.05 alpha level of significance.

There is no significant difference in the extent entrepreneurial competences are possessed by of building technology education students from college of education and universities in Rivers State.

Methodology

The study adopted a descriptive comparative survey research design. The target population of the study is 105 final year building technology education students from the three tertiary institutions in Rivers State. The number comprise a total of 41 (5 from Rivers State University (RSU) and 36 from Ignatius Ajuru University of Education (IAUOE) final year students from

universities and 64 final year students from Federal College of Education Technical (FCET) Omoku (Source: Departmental Office of the different institutions). Because of the manageable size of the population, census sampling was employed. Therefore, the entire population of 105 final year building technology education students will be recruited for the study. The instrument for data collection for the study is a questionnaire titled, "Entrepreneurial Skills for Work Readiness among Building Technology Students Questionnaire (ESWRBTQ)" which was developed by the researcher. The instrument was subjected to face and content validity by three experts. The instrument had an overall reliability coefficient of 0.92. A total of 105 copies of the instrument after validation and reliability was administered to the respondents. This was achieved with the help of three trained research assistants. A total of 103 copies of instrument was retrieved and used for data analysis. This number comprised. The number comprised a total of 41 (5 from Rivers State University (RSU) and 36 from Ignatius Ajuru University of Education (IAUOE) final year students from universities and 62 final year students from Federal College of Education Technical (FCET) Omoku (Source: Departmental Office of the different institutions). Data gathered were analysed using mean and z-test.

Result

Research Question: To what extent are entrepreneurial competences possessed by students of building technology education in tertiary institutions in Rivers State?

Table 1: Mean on Extent Students Possess Entrepreneurial Competences

S/N	Entrepreneurship Skill	FCET (n = 62)			University (n = 41)		
		M	S.D.	RMK	M	S.D.	RMK
1	Ability to develop a business plan for building business venture.	3.29	1.01	HE	2.98	1.11	HE
2	Ability to identify suitable business location.	3.31	1.05	HE	2.90	1.11	HE
3	Ability to carry out market survey for business venture in building.	3.23	1.05	HE	2.78	1.19	HE
4	Ability to advertise building business activities.	3.34	0.96	HE	3.20	1.03	HE
5	Ability to keep business records.	3.15	1.07	HE	2.95	1.14	HE
6	Ability to explore business opportunities in building activities.	3.24	0.99	HE	2.95	1.09	HE
7	Skill in time management for building business ventures.	3.37	0.94	HE	3.10	1.04	HE
8	Ability to coordinate staff in a building business venture.	2.97	1.06	HE	2.76	1.09	HE
9	Ability to take financial risk in building business ventures.	3.23	1.14	HE	3.00	1.14	HE
10	Knowledge of policies to guide business in building ventures.	2.98	1.06	HE	2.71	1.12	HE
11	Ability to incorporate innovation in building business ventures.	3.23	1.11	HE	2.88	1.12	HE
12	Resourcefulness in building business activities.	3.32	0.99	HE	2.88	1.10	HE
13	Ability to keep financial records for building business.	3.26	1.12	HE	2.95	1.07	HE

S/N	Entrepreneurship Skill	FCET (n = 62)			University (n = 41)		
		M	S.D.	RMK	M	S.D.	RMK
14	Ability to work in teams.	3.35	1.01	HE	3.56	0.71	HE
15	Decision making ability.	2.98	1.08	HE	2.88	1.03	HE
16	Customer relation ability.	3.19	0.99	HE	3.20	0.95	HE
17	Ability to use ICT for building business enhancement.	3.34	0.97	HE	3.24	0.92	HE
	Grand Mean	3.22	1.03	HE	2.99	1.06	HE

Field Data, 2024 (HE = High Extent; LE = Low Extent)

Table 1 shows the result on entrepreneurial competences possessed by students of building technology education in tertiary institutions in Rivers State. As shown, the students possessed entrepreneurial competences to a high extent. This is evident by mean responses being greater than 2.50 for all items in the table show that students from Federal College of Education (Technical) and universities possessed these entrepreneurial competences to a great extent. Furthermore, grand mean values of 3.22 for students of FCET and 2.99 for students of universities indicate that they possessed the skills to a very high extent.

Hypothesis: There is no significant difference in the extent entrepreneurial competences are possessed by of building technology education students from college of education and universities in Rivers State.

Table 2: Z-test for Extent Students Possess Entrepreneurial Competences

Groups	N	M	S.D.	Z-cal	Z-crit	Decision
FCET	62	3.22	1.03	1.09	1.96	Accepted
Universities	41	2.99	1.06			

Result in Table 2 shows the result for z-test for the extent students who possessed entrepreneurial competences in tertiary institutions in Rivers State. As shown, calculated value of z (z-cal) = 1.09 while the critical value of z (z-crit) = 1.96. Since calculated value is less than critical value, the hypothesis is accepted. This implies that there is no significant difference in the extent entrepreneurial competences are possessed by of building technology education students from college of education and universities in Rivers State.

Discussion of Finding

Research question three sought to find out the extent students of building technology in tertiary institutions in Rivers State possess building entrepreneurial competences. The result showed that they possessed the required skills to a high extent. Specifically they possessed ability to develop a business plan for building business venture, ability to identify suitable business location, ability to carry out market survey for business venture in building, ability to advertise building business activities, ability to keep business records, ability to explore business opportunities in building activities, skill in time management for building business ventures, ability to coordinate staff in a building business venture, ability to take financial risk in building business ventures, knowledge of policies to guide business in building ventures, ability to incorporate innovation in building business ventures, resourcefulness in building business activities, ability to keep financial records

for building business, ability to work in teams, decision making ability, customer relation ability and ability to use ICT for building business enhancement to high extent. This result suggests that the students had some level of work readiness in entrepreneurial competences. This result also agrees with the result obtained by Obaju, Fagbenle, Amusan and Musa (2022) who found an encouraging level of work readiness among graduates for the construction industry.

Conclusions

In conclusion, this study reveals that students of building technology in tertiary institutions in Rivers State possess a high level of entrepreneurial competencies necessary for the construction industry. Specifically, the findings indicate that students demonstrate strong abilities in developing business plans, identifying suitable business locations, conducting market surveys, advertising, and maintaining both business and financial records. They also show skills in exploring business opportunities, managing time, coordinating staff, taking financial risks, understanding relevant business policies, and incorporating innovation within building ventures. Additionally, students exhibit resourcefulness, effective customer relations, team collaboration, decision-making abilities, and ICT skills for enhancing building business operations. These findings suggest that building technology students are well-prepared with entrepreneurial skills, which are essential for navigating and thriving in the business aspects of the construction industry.

Recommendations

1. Tertiary institutions should include more practical entrepreneurial training in the building technology curriculum to further strengthen students' business skills.
2. Building technology programs should offer workshops on business innovation and ICT tools to help students manage and grow building ventures effectively.

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