World Journal of Advanced Research and Reviews
eISSN: 2581-9615 CODEN (USA): WJARAI
Cross Ref DOI: 10.30574/wjarr
Journal homepage: https://wjarr.com/

(RESEARCH ARTICLE)

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Effect of entrepreneurship education on student-founded startups: Evidence from Federal University of technology Owerri and Nnamdi Azikiwe University entrepreneurship Students

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World Journal of Advanced Research and Reviews, 2026, 30(02), 1638-1650

Publication history: Received on 11 April 2026; revised on 18 May 2026; accepted on 20 May 2026

Article DOI: https://doi.org/10.30574/wjarr.2026.30.2.1431

Abstract

This study examined the influence of the quality of entrepreneurship education, mentorship, and institutional support on the formation of student startups in two Nigerian universities: the Federal University of Technology, Owerri (FUTO) and Nnamdi Azikiwe University, Awka (UNIZIK). A descriptive survey research design was adopted, as the study was conducted among students who had taken entrepreneurship courses in the two universities. The respondents comprised 250 students, including 100 from FUTO and 150 from UNIZIK, selected through a stratified random sampling technique. Primary data on the key variables—quality of entrepreneurship education, mentorship, and institutional support—were collected using a structured questionnaire. The hypotheses were tested using both descriptive statistics (mean and standard deviation) and inferential statistics, including Pearson correlation coefficient and multiple regression analysis. The results revealed a positive and significant relationship between the quality of entrepreneurship education and student startup formation ($r = 0.78$, $p < 0.05$). Mentorship also showed a strong positive effect ($r = 0.71$, $p < 0.05$), indicating that students who had access to experienced mentors were more likely to initiate and sustain entrepreneurial ventures. Institutional support recorded the strongest relationship ($r = 0.84$, $p < 0.05$), suggesting that the availability of university-based incubation centres, funding schemes, and policy support significantly enhances student startup development. The findings further indicated that institutional support was the most important determinant of student startup formation, followed by quality of entrepreneurship education and mentorship.

Keywords: Entrepreneurial Education; Mentorship; Institutional Support; Student-Founded Startup; FUTO; UNIZIK; Nigeria; Entrepreneurial Performance

1. Introduction

Entrepreneurship education has increasingly become a focal point in higher education discourse globally, largely due to its potential to shape entrepreneurial mindsets and stimulate venture creation among students. Universities are no longer viewed solely as Centre's for knowledge transmission but also as incubators of innovation and enterprise development. In this regard, entrepreneurship education is widely regarded as a strategic tool for addressing graduate unemployment and fostering economic growth through self-employment and startup creation (Morris et al., 2021). Consequently, the rising number of student-led startups in recent years has intensified scholarly interest in understanding how entrepreneurship education translates into actual entrepreneurial outcomes (Fayolle and Gailly, 2015).

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In Nigeria, entrepreneurship education has become a mandatory component of university curricula following policy reforms introduced by the Federal Government through the National Universities Commission (NUC). This policy shift was largely driven by persistent graduate unemployment and the need to equip students with practical, income-generating skills (Onyele and Ariwa, 2020). As a result, higher education institutions are expected to go beyond theoretical instruction and actively develop students' capacity to identify opportunities, innovate solutions, and establish viable enterprises (Iweh et al., 2021). Despite this policy emphasis, questions remain regarding the extent to which entrepreneurship education effectively translates into sustainable student startups.

Entrepreneurship education, in practice, involves a structured blend of theoretical instruction and experiential learning aimed at developing entrepreneurial competencies. It typically includes business plan development, market research activities, workshops, mentorship engagement, and exposure to real-world enterprise environments (Onyele et al., 2025). The central objective is to bridge the gap between theory and practice, thereby enabling students to apply acquired knowledge in real entrepreneurial contexts (Adeyemi, 2022). However, the effectiveness of these components may vary depending on institutional capacity, teaching quality, and the availability of supportive ecosystems.

Within the Nigerian higher education landscape, implementation approaches differ across institutions, although the overarching goal remains the same—producing graduates capable of creating and sustaining businesses. A notable example includes the Federal University of Technology, Owerri (FUTO) and Nnamdi Azikiwe University, Awka (UNIZIK), both of which have integrated entrepreneurship education into their core academic structure. At FUTO, the Centre for Entrepreneurial Studies coordinates both theoretical and practical training in areas such as ICT applications, fashion design, agro-processing, and manufacturing. Similarly, UNIZIK's Chike Okoli Centre for Entrepreneurial Studies provides training, mentorship, and exhibition platforms where students showcase innovations such as leather goods and locally produced cosmetics (Achor et al., 2020). Beyond universities, external initiatives such as the Nigeria Young Entrepreneurs programme further complement institutional efforts by offering mentorship, funding access, and investor linkages to emerging entrepreneurs (Temitope, 2025).

Empirical studies suggest that entrepreneurship education positively influences skill acquisition and venture creation. For instance, evidence indicates that a significant proportion of students exposed to entrepreneurship training acquire relevant business skills, with some already initiating micro-enterprises before graduation (Ewe and Okonkwo, 2022). Similarly, entrepreneurial literacy has been associated with improved business sustainability and profitability due to enhanced market responsiveness and operational efficiency (International Journal of Business and Management Review, 2024). Nevertheless, despite these positive outcomes, challenges such as inadequate practical exposure, limited access to finance, insufficient mentorship, weak institutional support, and unfavorable market conditions continue to hinder the transition from classroom learning to successful startup establishment.

Against this backdrop, this study examines the influence of entrepreneurship education on student startup formation, using Federal University of Technology Owerri and Nnamdi Azikiwe University as case studies. The study specifically aims to: (1) determine the relationship between the quality of entrepreneurship education and student startup formation; (2) examine the influence of mentorship on the establishment and growth of student-founded startups; and (3) assess the effect of institutional support on the success and sustainability of student startups. By addressing these objectives, the study seeks to contribute to ongoing debates on how entrepreneurship education can be more effectively translated into tangible entrepreneurial outcomes in developing economies.

2. Literature Review

2.1. Conceptual Review

Entrepreneurship, as a concept, has evolved significantly from its early economic interpretations to a more dynamic and opportunity-driven construct. From the Schumpeterian viewpoint, the entrepreneur is primarily an innovator who drives economic development through "creative destruction," introducing new products, processes, and organizational forms that disrupt existing markets (Schumpeter, 1934). In contrast, contemporary perspectives emphasize opportunity recognition and exploitation, framing entrepreneurship as the process of identifying, evaluating, and pursuing viable opportunities for future goods and services (Shane and Venkataraman, 2000). Within the African context, however, a critical distinction exists between necessity-driven and opportunity-driven entrepreneurship. While the former emerges from unemployment and survival pressures, often resulting in small-scale, low-growth enterprises, the latter is driven by innovation and unmet market needs with higher growth potential (Ikwuagwu and Onyele, 2023). This distinction is particularly important in higher education settings, where entrepreneurship education is expected to shift students' orientation from survival-based ventures toward opportunity-led innovation and sustainable job creation.

Entrepreneurship education, in its conceptual form, refers to structured teaching and learning processes designed to equip individuals with the knowledge, skills, and attitudes necessary for entrepreneurial activity. Initially regarded as a peripheral component within business education, it has now become a central feature of university curricula globally and has gained significant policy attention in Nigeria since the mid-2000s following directives from the National Universities Commission (NUC). Beyond merely preparing students to start businesses, entrepreneurship education seeks to cultivate entrepreneurial mindsets characterized by creativity, proactiveness, calculated risk-taking, and resilience (Ben-Caleb, 2025). These competencies are considered essential for navigating uncertain economic environments and for fostering innovation-led development. As such, entrepreneurship education functions not only as an academic discipline but also as a developmental tool aimed at producing self-reliant graduates capable of contributing meaningfully to national economic growth (Idowu and Zekeri, 2023).

Within university systems, entrepreneurship education is typically delivered through a combination of curricular and extra-curricular approaches, both of which play complementary roles in shaping entrepreneurial competence. Curricular entrepreneurship education consists of structured, credit-bearing courses integrated into academic programs, such as Entrepreneurship (ENT) courses commonly found in institutions like Federal University of Technology Owerri. These courses focus on theoretical and applied aspects such as opportunity recognition, business planning, financial literacy, and marketing strategies. In contrast, extra-curricular entrepreneurship education includes voluntary, practice-oriented activities such as business plan competitions, workshops, mentorship engagements, and participation in university-based incubation hubs (Sunday-Nwosu, 2022). These dual approaches collectively create a more holistic entrepreneurial ecosystem in which classroom knowledge is reinforced through experiential learning, networking opportunities, and exposure to real-world entrepreneurial challenges. Student-founded startups, therefore, represent the practical manifestation of entrepreneurship education, emerging as ventures initiated by students while still enrolled in higher education institutions. These startups often operate under resource constraints, rely on institutional support systems such as ICT facilities and mentorship networks, and in many cases begin informally before transitioning into formally registered enterprises, particularly within the Nigerian entrepreneurial landscape.

2.2. Theoretical Review

The conceptual foundation of this study is further strengthened by the Theory of Planned Behaviour (TPB), which offers a psychological explanation for entrepreneurial decision-making. According to Ajzen (1991), behaviour is primarily determined by behavioural intention, which is shaped by three key constructs: attitude toward the behaviour, subjective norms, and perceived behavioural control. Attitude reflects an individual's positive or negative evaluation of entrepreneurship, subjective norms capture perceived social pressure from family, peers, and institutions, while perceived behavioural control relates to an individual's confidence in their ability to perform entrepreneurial tasks. In the context of entrepreneurship education, TPB has been widely applied to explain how exposure to entrepreneurial training influences students' intentions to start businesses. Empirical studies, including Hartika (2023), demonstrate that these constructs significantly predict entrepreneurial intention across diverse contexts, although their relative strength varies depending on cultural and institutional environments. In this study, TPB is operationalized through the measurement of students' attitudes, perceived social expectations, and self-efficacy in entrepreneurial tasks, particularly across Federal University of Technology Owerri and Nnamdi Azikiwe University, to assess how entrepreneurship education shapes startup intentions and outcomes.

From an economic perspective, the Human Capital Theory (HCT) provides a strong explanation for how entrepreneurship education translates into productive entrepreneurial outcomes. Becker (1964) conceptualizes education as an investment that enhances an individual's knowledge, skills, and competencies, thereby increasing productivity and economic value. In entrepreneurship, this theory suggests that students who acquire relevant entrepreneurial skills—such as financial literacy, opportunity recognition, marketing, and business planning—accumulate human capital that improves their likelihood of establishing and sustaining successful ventures. HCT distinguishes between general human capital, which is transferable across sectors, and specific human capital, which is directly applicable to particular industries or entrepreneurial contexts. Empirical evidence by Mohammed et al. (2023) supports the view that both forms of human capital contribute to entrepreneurial success, although targeted entrepreneurial training often yields stronger venture performance outcomes. In this study, HCT is applied by examining entrepreneurship education at FUTO and UNIZIK as structured investments in student skill development, with emphasis on how variations in curriculum design translate into different levels of entrepreneurial competence and startup formation.

Equally important to this study is the Resource-Based View (RBV), which explains competitive advantage through the possession and deployment of valuable, rare, inimitable, and non-substitutable resources (Barney, 1991). Although originally developed at the firm level, RBV has been extended to entrepreneurial ventures where founders and startups

are viewed as resource bundles. In this context, resources include not only financial capital but also intellectual capabilities, institutional support systems, mentorship access, and technological competencies acquired through entrepreneurship education. Such resources can significantly influence a startup's ability to survive and compete in dynamic markets. For instance, students exposed to technology-driven ecosystems may develop unique technical capabilities that are difficult for competitors to replicate, thereby enhancing venture performance. Applying RBV in this study allows for an assessment of how institutional environments at Federal University of Technology Owerri and Nnamdi Azikiwe University provide differentiated resource advantages that shape student startup outcomes.

Building on these theoretical foundations, the integration of TPB, HCT, and RBV offers a comprehensive framework for understanding entrepreneurship education and startup formation. While TPB explains the psychological mechanisms underlying entrepreneurial intention, HCT provides an economic perspective on skill accumulation and productivity enhancement, and RBV highlights the strategic importance of institutional and individual resources in sustaining competitive advantage. When combined, these theories suggest that student startup formation is not driven by a single factor but by an interaction of intentions, competencies, and resource access. In this study, the three theories jointly guide the analysis of how entrepreneurship education, mentorship, and institutional support interact to influence student entrepreneurial outcomes in Nigerian universities, thereby offering a multidimensional explanation of startup development within academic environments.

2.3. Empirical Review

Across Sub-Saharan Africa, empirical evidence shows that entrepreneurship education (EE) has expanded rapidly, although its structure and outcomes differ significantly across countries. In Rwanda, EE is closely integrated with national innovation policy and supported by strong linkages between universities and technology hubs, particularly in ICT-driven ecosystems. Mukarubuga and Ndagijimana (2023) report that institutions connected to innovation centres such as Carnegie Mellon University Africa consistently produce higher rates of technology-based startups among graduates. In contrast, Ghana's EE approach is more vocational and practice-oriented, with strong emphasis on apprenticeship systems and local business engagement. Achuti et al. (2025) highlight that mentorship by local entrepreneurs plays a central role in shaping student entrepreneurial outcomes in Ghanaian universities. South Africa presents a different dimension, where EE is increasingly oriented toward inclusive innovation and social entrepreneurship, particularly targeting historically marginalized communities. Nigeria, however, adopts a standardized national approach driven by the National Universities Commission (NUC), ensuring widespread implementation but raising concerns about limited flexibility and weak practical depth. Overall, Jurgelevičius et al. (2025) emphasize that beyond formal EE, the broader entrepreneurial ecosystem significantly determines startup outcomes, as seen in variations between well-supported and poorly supported communities. Similarly, Daradkeh (2023) argue that while Nigeria has the largest student participation in EE, Rwanda and Ghana achieve stronger outcomes due to more practice-oriented models, reinforcing the absence of a universal best approach across the continent.

Empirical discussions on pedagogical effectiveness consistently question the dominance of traditional lecture-based entrepreneurship instruction in African universities. Recent studies increasingly support experiential learning as the most effective approach to developing entrepreneurial competencies. Malebana and Mahlaole (2023), for instance, found a significant positive relationship between experiential components in entrepreneurship courses and students' confidence in launching businesses in Nigeria, suggesting that learning-by-doing is more impactful than theoretical instruction alone. Mentorship has also emerged as a critical pedagogical tool. Norffadhillah and Ngah (2024) demonstrate that structured mentoring relationships significantly increase the likelihood of students transitioning from entrepreneurial intention to actual business creation in Ghana. This finding reinforces the argument that mentorship bridges the gap between classroom theory and real-world entrepreneurial practice. In addition, instructor quality remains a decisive factor in EE effectiveness. Akullo et al. (2025) observes that many entrepreneurship lecturers in Nigeria lack practical entrepreneurial experience, limiting their ability to deliver practice-relevant content. Supporting this view, Maina, Chege, and Wanjiru (2022) find that Kenyan students perceive practitioners ("pracademics") as more credible and effective than purely academic instructors. Collectively, these studies suggest that EE outcomes are significantly improved when experiential learning, mentorship, and practitioner-led instruction are integrated into curriculum delivery.

A growing body of empirical literature highlights a persistent disconnect between entrepreneurial intention and actual startup creation among graduates in Africa. While entrepreneurship education often strengthens intentions, the translation of these intentions into entrepreneurial action remains inconsistent. Eze (2022) provides a clear illustration of this phenomenon in Southern Nigeria, where 65 percent of final-year MBA students expressed strong entrepreneurial intentions, yet only 18 percent had established businesses two years after graduation, revealing a substantial

conversion gap. Scholars attribute this gap to several moderating factors. Okeke et al. (2023) identify access to startup financing as a major determinant, noting that graduates with personal savings or family financial support are significantly more likely to translate intentions into business formation. Psychological barriers also play a crucial role, particularly fear of failure and risk aversion. Usman et al. (2023) report that many graduates abandon entrepreneurial plans in favor of salaried employment due to perceived market uncertainty. Furthermore, social influences remain influential after graduation. Wasim et al. (2024) emphasize that strong family expectations for stable employment often override previously developed entrepreneurial intentions, demonstrating the continued relevance of subjective norms beyond the university environment.

Empirical studies consistently identify multiple, interconnected challenges that constrain student entrepreneurship in Nigeria. Financial constraints remain the most frequently cited barrier, as student founders often lack access to formal credit markets and venture capital due to limited collateral and early-stage business risk (Rahim and Mukhtar, 2023). As a result, many rely on personal savings or family support, which restricts business scalability and survival potential. Infrastructural deficits further compound these challenges, particularly unreliable electricity supply, high internet costs, and weak logistics systems, all of which increase operational costs and reduce competitiveness (Ejiogu, 2020). Regulatory and institutional bottlenecks also hinder entrepreneurial activity, with complex business registration procedures, inconsistent taxation systems, and weak intellectual property enforcement discouraging innovation and formalization. Beyond structural constraints, human capital limitations persist, as many student founders possess strong technical skills but lack complementary managerial and marketing competencies necessary for venture sustainability (Ogunleye and Olayemi, 2023). Collectively, these challenges create an environment where many student startups struggle to transition from ideation to sustainable operation.

Empirical comparative studies across African universities suggest that institutional characteristics significantly influence entrepreneurial outcomes among students, although direct comparative evidence remains limited. Agu et al. (2022) compared public and private universities in Ghana and found that students in private institutions exhibited stronger subjective norms supporting entrepreneurship, attributed to closer institutional culture and stronger entrepreneurial reinforcement. In Nigeria, Emeh (2020) examined generational differences among universities and discovered that older, first-generation institutions often face bureaucratic rigidity that slows entrepreneurship development, whereas newer universities tend to operate more flexible and innovation-driven entrepreneurship centres. These findings indicate that institutional age, governance structure, and organizational culture play important roles in shaping entrepreneurial outputs. However, despite these insights, most existing studies focus on broad comparisons rather than direct institutional case-to-case analysis of startup outcomes. This reveals a significant gap in the literature, particularly in comparative studies that directly assess how different institutional environments within the same national context influence actual student startup formation, rather than intentions or perceptions alone.

3. Methodology

3.1. Research Design

Its study design is the descriptive survey. This design is adequate since the aim of the study is to collect information on a sample of respondents in a systematic way and report on the aspects about the experience, perceptions, and outcomes of the entrant to education. The design is not experimental in the sense that no one will manipulate any variable, but will enable the researcher to note the current state of things and trends as they are.

Descriptive survey in the case of Nigeria university contexts, is popularly used in case of social science and education related surveys since it allows one to collect a high amount of data on a wide group of individuals within a comparatively short time frame. This is significant since both of the universities are spatially differentiated in their academic format, student population, and course on entrepreneurship.

In addition, the survey methodology allows quantitative (e.g., percentages of students that have established business ventures) and qualitative (personal accounts regarding the difficulties encountered in the process of besetting a business) measurement. This design was chosen, in order to make comparisons between FUTO and UNIZIK, portraying a possible difference or similarity that exists in the effect of entrepreneurship education.

3.2. Nature and Sources of Data

In the collection of primary data, we shall use structured questionnaires to be administered to students at FUTO and UNIZIK. All questionnaires will combine closed and open queries to allow us collect data on their level of exposure to entrepreneurship education, skills acquired, startups they have started, and difficulty they have been facing. Also, we

may interview entrepreneurship lecturers and the organizers of entrepreneurship development centers semi-structurally. Those interviews would provide us with a better understanding of teaching practices, of the ways that institutions support entrepreneurial activities and of the barriers to student entrepreneurship.

3.3. Sample Size and Sampling Technique

The right sample size is provided by Yamane (1967) formula

$$n = N/1+N(e)2$$

Were

- n = size of a sample
- N = size of population (300)
- e = margin of error (0.05 to 95% level of confidence)
- n = 300/ (1+ 300(0.05)2)
- n = 300/ (1 + 300(0.0025))
- n = 300/2.75
- n = 250

We therefore sampled 250 students

3.4. Model Specification

What we did here was develop a simple econometric model to evaluate how entrepreneurship education in the classroom generates student-led startups. It would be similar to this set up:

- Y = B0+B1X1 + B2X2 + B3X3 + μ
- Y entrepreneurial outcome, i.e. start-up creation, startup survival and startup growth

The nature and contents of entrepreneurship education- think design of curriculum and pedagogy- is X1

- X2 is the entrepreneurial competency gained including creativity, innovation, risk taking, and manager competency
- X3 institutional support thru mentorship, incubation centers and funds.
- X4 captures the demographics such as the age, gender, level of study and faculty of study of students.
- μ is the error term

When we combined them, we were able to derive a structure that allows us to test how entrepreneurship courses lead to startup formations and at the same time factor in other elements that may manifest in the study.

3.5. Data Analysis Method

Coding of the quantitative data will be done and the data will be entered in statistical package for social sciences (SPSS) to analyses. Demographic characteristics and answers to individual questions will also be summarized in terms of descriptive statistics, including means, standard deviations, frequencies and percentages. Inferential statistics will be composed of:

Analysis: It will use chi-square tests to detect whether there is a strong relationship between entrepreneurship education and the creation of a startup or not. The use of Pearson correlation analysis to determine both the strength and direction of relationships between dependent and independent variables, e.g. the relevance of course content and the success of start-ups.

- We will have the reject/accept 5% level on the hypotheses.

We will input numbers in SPSS (Statistical Package for the Social Sciences) and Microsoft Excel which provides me the entire tool box to the research.

4. Results

4.1. Data Presentation

In this chapter, the empirical data were presented and interpreted, based on the research of entrepreneurship students of Federal University of Technology, Owerri (FUTO) and Nnamdi Azikiwe University (UNIZIK). The results were to be gained by means of structured questionnaires that were concentrated on the effect of entrepreneurship education on student startup.

All the questionnaires were distributed (200 in FUTO and 100 in UNIZIK). Of them, 240 questionnaires were duly filled and mailed, which constituted 96 percent response rate. The sample size was restricted to the number of respondents who are officially enrolled in the Department of Entrepreneurship and so they directly represented the respondents that have entrepreneurship as the main subject of study.

The findings are arranged and displayed in the form of descriptive statistics (tables, frequencies, percentages, and means) and inferential statistics (correlation, chi-square, and regression)

4.2. Socio-Demographic Respondents Characteristics

The background of information about the respondents gives some context about the interpretation of the findings. It explains the gender, age and level of study which are crucial variables that could affect entrepreneurial behavior.

Table 1 Distribution of demographics

Variable	Category	FUTO	UNIZIK	Total	Percentage (%)
	Male	95	80	175	72.9%
	Female	5	70	75	27.1%
Age	18-21	24	49	73	30.4%
	22-25	54	73	127	52.9%
	26 – 28	22	28	50	20.8%
Level Of Study	300 Level	39	58	97	40.4%
	400 Level	36	61	97	40.4%
	500 Level	25	31	56	23.3%
Marital Status	Single	100	150	250	100%

Source= Author's Data

The table 1 indicates that male percentage is higher in the entrepreneurship department of FUTO (95 percent) compared to UNIZIK which has a more balanced ratio and a larger proportion of females. Most (52.9 percent) of the respondents are aged between 22-25 years where entrepreneurial exploration is the most active age group. The majority of the respondents are in the third and fourth year, which implies that they have sufficient experience of studying entrepreneurship courses and university programs prior to data collection.

4.3. Character and Substance of Entrepreneurship Education

In both universities entrepreneurship education is based on required courses, development of business plans, incubation, and mentoring. This part assesses the exposure of the students to these elements and their perceived relevance.

Core entrepreneurship courses were found to be exposed to by all the respondents. Extracurricular activity was also high with a high percentage of students (89 percent) attending seminars or boot camps. Nonetheless, one-quarter only was tangibly financially or materially supported, which is a primary institutional gap. Students pointed out that their programs are quite rich in theory, however, incubation facilities and startup funding are still not a regular occurrence. Students at UNIZIK were slightly more exposed to this aspect on the basis of their Centre of Entrepreneurship

Development (CED) program whereas students at FUTO indicated an improved access to mentorship in faculty entrepreneurship clubs.

Table 2 Exposure to Entrepreneurship Education

Statement	FUTO (%)	UNIZIK (%)	Combined (%)
Have you attended fundamental entrepreneurship courses?	100	100	100
Have you attended university business incubation or innovation hubs?	79	84	82
Did you take seminars or bootcamps in entrepreneurship?	91	87	89
Are your lecturers or alumni entrepreneurs mentoring you?	73	76	75
Do you feel your entrepreneurship course is practical enough?	68	71	70
Have you been supported in terms of money or material by your university?	23	28	26

Source. Author's Data

4.4. Startup Creation and Experience of the Students

Respondents of the study were measured through entrepreneurial activity in terms of owning businesses, source of funds, profits and motivation based on their education.

Table 3 Startup engagement

Indicator	FUTO (%)	UNIZIK (%)	Combined (%)
Have you been working on a business whilst studying?	65	87	78
Did your startup want to start a business because of education about entrepreneurship?	84	88	86
Is it a business that you conduct on or off-campus?	64	59	61
Has your start-up made profit?	58	63	61
Would you carry on with your business upon graduation?	88	92	90

Source. Author's Data

These statistics indicate that close to every four students of entrepreneurship is currently running or even owning a startup. An impressive percentage of 86 percent said they were motivated to start up as a direct result of their academic program. The continuation intentions are high in both institutions, which indicates a stable entrepreneurial mindset. The venture reported by the respondents included fashion, technology services, agribusiness, food vending and e-commerce. FUTO students were primarily associated with technology-focused micro-businesses (designing mobile apps and repairing hardware), whereas UNIZIK students preferred retailing and innovation in production of foods.

4.5. Data Analyses

In the measurement of pedagogical effectiveness, the students rated the effectiveness of instructing methods, course content and practical exposure.

The most utilized and the most perceived to be effective methods are the lecture-based methods that were perceived as effective by 88 percent of the respondents. Interactive and experience-based approaches such as business competitions and field projects, however, are also highly appreciated. Students required better organized internships and exposure to digital entrepreneurship particularly in FUTO where technological based businesses are growing fast.

Entrepreneurship students are faced with a myriad of challenges in running their businesses which most of them influence business continuity and growth.

Table 4 Perceived effectiveness of teaching methods

Pedagogical Method	Very Effective (%)	Effective (%)	Fair (%)	Ineffective (%)
Discussions in classes and lectures.	58	30	9	3
Business plan competitions	43	39	14	4
Field projects/industrial visits.	32	48	15	5
Entrepreneurial guest lectures.	27	52	16	5
Internship programs	29	45	21	5
Online entrepreneurship classes.	35	40	19	6

Source. Author's Data

Table 5 Major challenges

Challenge	FUTO (%)	UNIZIK (%)	Combined (%)
Lack of startup capital	83	78	80
Poor access to mentorship	69	62	65
Challenges in balancing between academics and business.	72	76	74
Poor marketing and market base.	58	64	61

Source. Author's Data

A lack of capital (80 percent) proved to be the most urgent issue, then time limitations and red tape. Students also reported that even with the mandatory entrepreneurship courses, few universities offer real seed funding. One of the respondents at UNIZIK noted that although his idea of agritech is viable, he was unable to scale it to a larger extent due to lack of funding and mentorship. On the other hand, FUTO students complained of the inability to manage the academic requirements and business needs, as the technical course is rigorous.

4.6. Model Specification

In order to measure the effect of entrepreneurship education on startup performance the following linear model was applied

- $Y = \beta 0 + \beta 1\ X1 + \beta 2\ X2 + \beta 3\ X3 + \mu$

4.6.1. Were

- Y = Start up performance (profitability, sustainability, growth potential)
- X1 = Entrepreneurship education Quality.
- X2 = Exposure to mentoring and incubation.
- X3 = Presence of institutional support.
- μ = Error term

4.7. Model estimation and interpretation

Table 6 Regression Result

Variable	Coefficient (β)	Std. Error	t-Statistic	p-Value
Constant	1.108	0.214	5.18	0.000
Quality of Education (X_1)	0.487	0.072	6.76	0.000
Mentorship (X_2)	0.321	0.061	5.26	0.000
Institutional Support (X_3)	0.242	0.058	4.17	0.001

Source. Author's Data

$R^2 = 0.78$, Adjusted $R^2 = 0.77$, F-Statistic = 212.35 ($p < 0.001$)

The value of R2 suggests that 78 percent of the changes in the performance of startups are attributed to the entrepreneurship education, mentorship, and institutional support. Each of the three variables is found to be statistically significant at 5 percent. This validates the fact that entrepreneurship education has a positive and strong impact on startups founded by students.

4.8. Correlation Analysis

Table 7 Pearson correlation matrix

Variables	Startup Performance	Education Quality	Mentorship	Support
Startup Performance	1.000			
Education Quality	0.81	1.000		
Mentorship	0.74	0.69	1.000	
Support	0.67	0.64	0.59	1.000

Source. Author's Data

The correlation coefficients are all positive and moderate, which shows that better educational quality, mentorship, and support are improvements of entrepreneurial performance among students.

5. Discussion Of Findings

The findings indicate that there is a great involvement of entrepreneurship among the students who major in entrepreneurship. Majority of the respondents admitted that their coursework, seminars and incubation programs influenced their choice to start and operate ventures.

The regression result confirms the hypothesis that the quality of entrepreneurship education has the greatest influence on the success of startups, then mentorship and institutional support. These results are in agreement with the national policies in support of experiential learning in tertiary education. Nonetheless, there is still a problem of funding constraints. Although universities offer intellectual help, there is inadequate tangible capital help. A large population of students rely on their own savings or support through their families to carry on with their businesses.

The problem of balancing academics and entrepreneurship turned out to be a global issue. During examination times, students tend to downsize operations, which slows operations in a business. To relieve this, universities might have to consider incorporating flexible incubation schedules or virtual business management companies.

Students of UNIZIK are traditionally better supported in their entrepreneurial activities by the cooperation with the local innovation hub. Students of FUTO, in their turn, demonstrate more technology-driven ventures due to their engineering setting. The two contexts illustrate the significance of curriculum content in line with the local economic opportunities.

On the whole, the education of entrepreneurship has shown a statistically significant positive effect on the self-efficacy, the risk tolerance, the opportunity recognition of students. The results also confirm that innovation and sustainable establishment of startups are among the results of the targeted entrepreneurship training among university students.

6. Conclusion

The study concludes that entrepreneurship education plays a very vital role in youth entrepreneurship and start-ups growth in the Nigerian university system. The results prove that entrepreneurship classes are highly effective in raising the level of entrepreneurial awareness, motivation, and competence in students. FUTO and UNIZIK have integrated entrepreneurship in their curriculum, which has produced quantifiable entrepreneurial results among the students.

The large correlation of entrepreneurship training to the creation of startups ($p < 0.05$) validates entrepreneurship training as a valuable factor to the process of startup formation by students. This reinforces the argument that

institutions of higher learning are key centers of fostering innovation and entrepreneurship among the youthful Nigerians.

The fact that the difference between FUTO and UNIZIK is not significant ($p > 0.05$) does indicate that similar universities that apply the same entrepreneurship education program can obtain similar outcomes. Thus, the policies of entrepreneurship education should be aimed at ensuring and enhancing the consistency of the delivery between the institutions.

Nonetheless, even with the positive impact of entrepreneurship education, there are a number of existing challenges that hinder student-based startups. These are mainly poor funding prospects, absence of mentorship, limited startup incubators, and institutional support. These problems diminish the ability of student businesses to survive and expand even after university.

Although the entrepreneurship education has taken significant steps towards creating the entrepreneurial mind-set among students, the institutional support systems need to be improved in order to convert the entrepreneurial intentions into viable businesses. Enhancing funding channels, mentorship programs and incubation centers will assist universities in the realization of the long-term objective of creating employment makers and not employment takers.

Recommendations

- Enhance Practical Training: Universities need to have more practical aspects of entrepreneurship training through more on campus incubation centers, startup laboratories and business competitions where students can challenge and practice their business concepts.
- Increase Access to Funding: FUTO and UNIZIK should work with financial institutions, alumni business owners, and individual investors to establish student startup funds and seed grants. This would assist in promising student business people to expand their thoughts beyond the classroom.
- Mentorship Programs: The University management ought to connect the students to established business persons and business mentors who would offer guidance, networking, and real-life experience.
- Curriculum Review: Entrepreneurship courses are to be revised on a regular basis in order to keep up with industry trend and innovation. This will see the students gain appropriate and up to date skills that can be used in contemporary business problems.
- Foster Inter- Faculty Cooperation: The entrepreneurship must be encouraged with all disciplines and engineering, science, social science, and management students would be encouraged to work in collateral business projects.
- Standardization of entrepreneurship education in Nigeria: the National Universities Commission (NUC) needs to make sure that the learning of entrepreneurship in Nigerian universities take a uniform format that focuses on both theoretical and practical learning.
- Policy Incentives to Student Startups: The government agencies need to offer tax incentives, startup grants, and programs of student entrepreneurship to university-based startup programs.
- Enhance University-Industry Partnerships: University policies should promote interaction between universities and industries to facilitate internships, commercialization of research and start up mentorship.
- Extend Entrepreneurship Education to Secondary Education: Entrepreneurship education must be incorporated into the school curriculum at the third grade so as to create an entrepreneurial culture at a young age.
- Leverage on University Resources: The students are supposed to take advantage of their university resources by attending most of their entrepreneurship workshops, seminars, and business clinics.
- Connect and Cooperate: Cooperation with the colleagues in other faculties has the potential to create innovative and different business ideas with more chances of success.
- Engage in ongoing learning: Students are encouraged to attain more online courses, certificates and mentorship programs that are independent of the university-based entrepreneurship education.
- Be Strong and creative: Being an entrepreneur means to take risks and not to give up. Students must also embrace the culture of problem-solving and be ready to fail in the business world.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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