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Entrepreneurship Education and Employment Creation in North-West Nigeria: The Role of Skills and Perceived Relevance

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Abstract

This study aims to identify the perceived skills and competence acquired through entrepreneurship education and the perceived impact on employment creation, proxied by entrepreneurial intentions among graduates of tertiary institutions in the North-West region of Nigeria. This study is underpinned by the human capital theory and adopts the descriptive and cross-sectional survey approach. A survey was conducted on 700 graduates from higher institutions in the North-West region of Nigeria, selected through a convenience sampling technique. Furthermore, a well-structured questionnaire with a 5-point Likert scale of strongly agree to strongly disagree was deployed to identify the significant entrepreneurial skills and competencies developed through entrepreneurship education and participants' perceptions regarding the effectiveness of entrepreneurial skills acquired and their impact on entrepreneurial intention. Subsequently, the data collected were subjected to analysis using the Relative Importance Index (RII) to identify and rank entrepreneurial skills acquired by participants, and the ordinal regression was used to establish the impact of entrepreneurship education on entrepreneurial intention. Findings revealed that value creation (0.76114), opportunity assessment (0.76028), and tenacity (0.75657) are the top three entrepreneurial skills competencies perceived by graduates in Northwest Nigeria. Additionally, the regression analysis found a significant positive relationship between Skills Acquired (β = 0.445,p =0.05) Relevant Training (β = 0.756,p =0.01), and Entrepreneurship Intention. Collectively, skills acquired and relevant training significantly entrepreneurial intention (R^2 = 0.68). Consequently, the study concludes that entrepreneurship education programmes in tertiary institutions in the North-West region of Nigeria have successfully cultivated a core set of competencies among graduates. Therefore, programme designers are advised to add experiential learning modules and strengthen industry-academia partnerships to keep training contextually relevant. This study adds to existing literature by linking specific skills and training to entrepreneurial intention and employment creation among graduates in Northwestern Nigeria.

Keywords: Entrepreneurship education, Employment creation, Acquired skills, perceived relevance, Entrepreneurial Intention.

Introduction

Entrepreneurship education has emerged globally as a key strategy to reduce unemployment and foster innovation. Many governments and universities now offer programmes that equip students with skills and a self-reliant mindset for starting businesses (Eze-Ali, 2025; Yadav, 2024).

In Nigeria, this global agenda was domesticated through the 2006 directive of the National Universities Commission (NUC), which made entrepreneurship education compulsory in tertiary institutions. The objective was to address graduate unemployment, reduce dependence on salaried jobs, and promote self-employment as a pathway to national development (Onuma, 2016; Adeyemi, 2021). Consequently, most universities and polytechnics now offer entrepreneurship courses as part of their general studies curriculum, reflecting a nationwide commitment to nurturing entrepreneurial competencies among young graduates.

Despite this policy intervention, youth unemployment remains a major challenge. According to the Nigerian Economic Summit Group (NEGS, 2022), the North-West region records one of the highest rates of multidimensional poverty in the country, with approximately 75.8% of its population classified as poor, which is significantly higher than the national average. Similarly, regional unemployment estimates stand at around 23%, reflecting limited industrial activity, poor access to finance, and low entrepreneurial infrastructure (Badmus, 2022). These socio-economic constraints make the North-West an important case for examining how effectively entrepreneurship education translates into skill acquisition, employability, and job creation.

Although numerous studies have examined the influence of entrepreneurship education on entrepreneurial intention and self-employment, few have identified which specific skills acquired through entrepreneurship education most effectively enhance entrepreneurial readiness and employment creation. Most research emphasizes general attitudes or behaviours rather than empirically assessing the role of core competencies, such as value creation, opportunity assessment, and tenacity, in shaping graduate outcomes.

This study addresses this gap by identifying the key entrepreneurial skills and training provided through entrepreneurship education, and quantifying their influence on graduates' entrepreneurial intention, a critical measure of employment creation, in the North-West region of Nigeria.

The primary aim of this study is to identify and assess the entrepreneurial skills acquired and the relevance of entrepreneurship education in Nigerian higher institutions. In pursuit of this aim, the study is guided by the following objectives:

i. To identify the entrepreneurial skills and competencies that graduates have acquired from entrepreneurship education programmes in tertiary institutions within Nigeria's North-West region.
ii. To evaluate the influence of formal entrepreneurship education on the entrepreneurial intentions of graduates from tertiary institutions in North-West Nigeria.

Literature Review

An Overview of Entrepreneurship Education

The concept of entrepreneurship encompasses the creation of innovative products or businesses, resource optimization, and risk management (Priyadi & Mulyani, 2024). Entrepreneurship has also been described by attributes such as commitment, creativity, and perseverance, as it is continually refined in pursuit of a universally accepted definition (McMullen et al., 2021). Kimmitt et al. (2020) see entrepreneurship as a catalyst for driving entrepreneurial qualities, facilitating employment, and enhancing living standards. Furthermore, there are diverse manifestations of entrepreneurship, ranging from small-scale enterprises to scalable ventures and social entrepreneurship initiatives, each presenting unique characteristics and challenges (Tripathi et al., 2022).

Conversely, entrepreneurship education represents a dynamic pedagogical process aimed at nurturing individuals' ability to identify and exploit opportunities effectively (Ratten & Usmani, 2021). Beyond merely enhancing business creation and employability, entrepreneurship education fosters an entrepreneurial mindset and culture (Jadim et al., 2021). Its objectives span from knowledge dissemination to the cultivation of practical skills, often through innovative curriculum designs and experiential learning methodologies (Ghafar, 2020). This educational endeavour plays a pivotal role in equipping individuals with competencies for entrepreneurship, fostering enterprising behaviour, and augmenting employability prospects (Pardo-Garcia & Barac, 2020).

In Nigeria, the significance of entrepreneurship education is accentuated by the imperative for self-employment and the emergence of a vibrant cohort of young entrepreneurs (Kulo et al., 2018). However, systemic challenges, such as the disjunction between educational expansion and economic growth, have resulted in alarming rates of graduate unemployment (Amin & Ntembe, 2021; Lebeau & Oanda, 2020; Otami et al., 2022). Addressing this disparity necessitates the integration of entrepreneurship education into the formal curriculum, alongside substantive improvements in pedagogical methodologies and infrastructural support (Hermann & Bossle, 2020). Such initiatives aim to imbue students with the requisite knowledge, skills, and motivation to succeed as entrepreneurs (Krisnaresanti, 2020). Yet, persistent challenges, including the absence of a comprehensive policy framework for youth entrepreneurship and various logistical constraints, impede the efficacy of entrepreneurship education initiatives in Nigeria (Ubogu, 2020). Mitigating these obstacles is imperative to realize the transformative potential of entrepreneurship education in fostering sustainable socioeconomic development.

Entrepreneurship Education and Skill Acquisition

The acquisition of entrepreneurial skills is a cornerstone for cultivating successful entrepreneurs (Barinua et al., 2022). According to Kathayat (2022), entrepreneurship education plays a pivotal role in conceptual and technical competencies in entrepreneurship development, particularly among business students. This imperative extends to the realm of teacher education, where the acquisition of entrepreneurial skills is deemed

indispensable for both educators and learners (Ghafar, 2020; Joensuu-Salo et al., 2021). Notably, within business education, the acquisition of specific skills such as accounting or financial proficiency emerges as a focal point in entrepreneurship training (Rayad et al., 2020).

Igbongidi (2022) further maintained that entrepreneurship education assumes a pivotal role in furnishing students with the requisite skills for self-reliance and employment opportunities. However, the efficacy of such education hinges on the integration of practical, hands-on training methodologies to enhance its impact (Lackéus, 2020). The acquisition of entrepreneurial skills is intricately intertwined with psychological and behavioural determinants, including risk tolerance, intrinsic motivation, and self-assurance (Yusoff et al., 2021; Al Issa, 2022). Addressing these factors necessitates pedagogical approaches that blend theoretical knowledge with experiential learning, coupled with mentorship and guidance (Okolie et al., 2020).

In Nigeria, entrepreneurship education emerges as a linchpin for skill acquisition and economic progress (Iwuoha et al., 2021). Nonetheless, its implementation encounters multi-dimensional challenges, ranging from the imperative for a pragmatic orientation to the dearth of innovative teaching methodologies and societal predilections favouring materialism over functional education (Nnaemeka & Osuji, 2022). Despite these hurdles, empirical evidence suggests a positive correlation between entrepreneurship education, skill acquisition, the perceived skills and competence acquired, as well as the entrepreneurial intent among student cohorts in Nigeria (Taiwo & Joseph, 2020; Abdullahi et al., 2021).

Table 1: Entrepreneurial Skills and Competencies

Entrepreneurial Skills	Competencies
1. Opportunity Recognition	The capacity to perceive changed conditions or overlooked possibilities in the environment that represent potential sources of profit or return to a venture
2. Opportunity Assessment	Ability to evaluate the content structure of opportunities to accurately determine their relative attractiveness
3. Risk Management/Mitigation	The taking of actions that reduce the probability of a risk occurring or reduce the potential impact if the risk were to occur
4. Conveying a Compelling Vision	The ability to conceive an image of a future organizational state and to articulate that image in a manner that empowers followers to enact it
5. Tenacity/Perseverance	Ability to sustain goal-directed action and energy when confronting difficulties and obstacles that impede goal achievement

6. Creative Problem Solving/Imaginativeness	The ability to relate previously unrelated objects or variables to produce novel and appropriate or useful outcomes
7. Resource Leveraging	Skills at accessing resources one does not necessarily own or control to accomplish personal ends
8. Guerrilla Skills	The capacity to take advantage of one's surroundings, employ unconventional, low-cost tactics not recognized by others, and do more with less
9. Value Creation	Capabilities of developing new products, services, and/or business models that generate revenues exceeding their costs and produce sufficient user benefits to bring about a fair return
10. Maintain Focus yet Adapt	Ability to balance an emphasis on goal achievement and the strategic direction of the organization while addressing the need to identify and pursue actions to improve the fit between an organization and developments in the external environment
11. Resilience	Ability to cope with stresses and disturbances such that one remains well, recovers, or even thrives in the face of adversity
12. Self-Efficacy	Ability to maintain a sense of self-confidence regarding one's ability to accomplish a particular task or attain a level of performance
13. Building and Using Networks	Social interaction skills that enable an individual to establish, develop. and maintain sets of relationships with others who assist them in advancing their work or career

Adopted from Morris et al. (2013)

Theoretical Review

Human Capital Theory

Human Capital Theory, proposed by economist Gary Becker in 1964, posits that individuals enhance their economic productivity through investments in education, skills acquisitions, training and experiences (Becker, 1964). This theory advocates those investments in education and skills acquisition lead to increased personal productivity and thus generate higher income levels and better employment opportunities. In the context of entrepreneurship education in Nigeria, Human Capital Theory serves as a pertinent framework for assessing how entrepreneurship programmes equip graduates with essential skills relevant to starting and managing business ventures. This theory emphasizes the critical role of education, as a fundamental driver of individual and societal economic outcomes. It relates directly to this study by providing a basis for evaluating the skills acquired through entrepreneurship programmes in Nigeria, highlighting the significance of these programmes in fostering human capital that is vital for entrepreneurial success and job creation. By focusing on how education influences the development of

entrepreneurial competencies, the theory underpins the study's aim to assess the effectiveness and relevance of such educational interventions.

However, this theory assumes that individuals invest in their education and skills with the expectation of tangible returns, in the form of higher wages or improved career opportunities (Schultz, 1971). Secondly, it presumes that investments in human capital are similar to investments in physical capital, as both yield returns over time (Mincer, 1974). Lastly, the theory assumes a rational decision-making process, where individuals make educational choices based on anticipated future benefits. Despite the influential standing of Human Capital Theory in economics and education, critics have argued that the theory overlooked the role of social and cultural factors that influence educational attainment and career success (Fleischhauer, 2007; Marginson, 2019). Additionally, it may create a simplistic view of education's role, ignoring structural inequalities and the diverse contexts in which individuals operate (Bourdieu, 1986; Marginson, 2019). The focus on individual attributes may also neglect systemic barriers that hinder access to education and skills development, particularly in developing nations like Nigeria.

In summary, Human Capital Theory offers a robust framework for understanding the relationship between education and entrepreneurial skill acquisition. Its application in assessing Nigerian entrepreneurship programme will illuminate how these initiatives contribute to skills development necessary for entrepreneurial ventures and employment creation. Nonetheless, it is essential to consider the critiques of the theory to ensure a well-rounded analysis that acknowledges the broader socio-economic landscape.

Empirical Evidence of the Entrepreneurial skills, Competencies and its Impact on Entrepreneurial Intention

Jardim, et al. (2021) synthesized global evidence on Entrepreneurship Education Programs (EEPs), finding they effectively promote skills like creativity and problem-solving, though their impact on entrepreneurial intention remains limited. This aligns with Okolie et al. (2021), who, in a large-scale Nigerian study, found compulsory entrepreneurship education only developed opportunity recognition, opportunity assessment, creative problem-solving, self-efficacy, and building and using networks out the 13 skills identified, highlighting a significant curricular shortfall in fostering competencies like risk management and resilience. Similarly, Alakaleek et al. (2023) observed in Jordan that while education increased knowledge and behaviour, it did not significantly improve skills or entrepreneurial intentions, suggesting a disconnect between knowledge acquisition and competency development. Conversely, Ojo and Okwilagwe (2024) reported significant improvements in knowledge, attitude, and skills among Nigerian students, though disparities between public and private institutions indicate contextual and resource dependencies. Costin et al. (2021) in a study on the effect of entrepreneurship education found that postgraduate programmes in Ireland boosted entrepreneurial aptitude, but paradoxically reduced students' self-efficacy by exposing them to the field's complexities.

Complementing these findings, Oluwalola (2025) emphasized from an educator perspective in Nigeria that effective skill development requires practical training and curriculum reform to overcome infrastructural and pedagogical barriers. Collectively, these studies emphasized that while entrepreneurship education holds promise for competency development, its effectiveness is highly contingent on pedagogical approach, program design, and local context, with a recurring theme that traditional curricula often fail to develop the full spectrum of competencies necessary for successful entrepreneurship.

Furthermore, a critical review of recent empirical studies reveals a complex and often context-dependent relationship between entrepreneurship education (EE) and the development of competencies linked to success. Jardim et al. (2021), in a systematic review confirmed EE's efficacy in promoting foundational skills like creativity and problem-solving. This finding is supported by regional studies in China and Vietnam which further identify entrepreneurial competence and capacity as critical mediators between education, intention and success (Lu et al., 2021; Nguyen & Nguyen, 2023). However, a recurring theme across multiple Nigerian studies is a significant implementation gap, where theory-laden curricula fail to impart practical competencies such as risk management and resilience, resulting in only "little extent" skill acquisition and limited impact on venture creation (Okolie et al., 2014; Okolie et al., 2021; Igwe et al., 2021). This shows that pedagogical approach is paramount, as evidenced by research advocating for experiential, value-creation models (Lackéus, 2020; Acharya & Chandra, 2019) and findings that lecturer competency is a more potent predictor of student intention than curriculum content itself (Iwu et al., 2021). This relationship is further complicated by studies showing EE can sometimes diminish self-efficacy by exposing students to entrepreneurial complexities (Costin et al., 2021) and that its impact on intention is often overshadowed by socio-cultural factors (Jardim et al., 2021). Collectively, this body of work concludes that while EE holds great promise for fostering the competencies that drive employment and entrepreneurial success, its effectiveness is contingent on moving beyond theoretical instruction to embrace practical, experiential pedagogies, robust lecturer training, and curricula designed to build specific, measurable capacities.

Research Methodology

This study adopts a quantitative research design and uses a descriptive, cross-sectional survey approach. This design is appropriate for identifying and assessing the effectiveness of entrepreneurship education programmes in equipping graduates with relevant skills for entrepreneurial ventures and employment creation.

The target population comprises graduates from higher institutions across the seven states in the North West region of Nigeria. A total of 700 graduates were selected from the population using convenience sampling. This method was adopted for its practicality in accessing participants, who are readily available and willing to respond (Etikan et al., 2016). However, the study acknowledges that convenience sampling may introduce potential bias and limit the generalizability of findings, as respondents may not fully represent all

graduates in the region. To mitigate this limitation, efforts were made to include participants from diverse institutions, academic disciplines, and states within the region to capture a wide range of perspectives on entrepreneurship education and skill acquisition.

Data collection was aided by a research team, the alumni association, and career service offices at various higher institutions to facilitate engagement with the target respondents. This approach ensured an expanded reach within the selected states, optimised response rates, and enhanced the overall robustness of the data collected. Specifically, the first section of the questionnaire adopted Morris et al. (2013) Entrepreneurial skills and competencies table designed on a 5-point Likert scale ranges from 1 (Strongly Disagree) to 5 (Strongly Agree) to identify the entrepreneurial skills and competencies developed through entrepreneurship education while the second section gauge participants' perceptions regarding the effectiveness of entrepreneurial skills acquired and the relevance of training on entrepreneurial success.

Prior to data collection, participants were informed of the study's purpose, the voluntary nature of their participation, and their right to withdraw at any point without penalty. Informed consent was obtained from all participants, and confidentiality was assured through the anonymous handling of responses and secure data storage procedures.

To ensure the validity of the instruments and the suitability of the data, the content was reviewed by subject experts. Furthermore, the study used Exploratory Factor Analysis (EFA) to test construct validity and Average Variance Extracted (AVE) to assess convergent validity. To establish the reliability of the instrument, the Cronbach's alpha coefficients for all constructs exceeded the acceptable threshold of 0.70, confirming internal consistency.

The study employed the Relative Importance Index (RII) to identify and rank entrepreneurial skills based on respondents' perceptions, providing insight into the relative significance of each skill category. Finally, regression analysis was used to examine the relationships among skills acquired, the relevance of training, and entrepreneurial intention and employment creation outcomes among graduates in the North West region of Nigeria.

Model Specification;

$EI = \beta_0 + \beta_1 SA + \beta_2 RT + \varepsilon$

Where; EI = Entrepreneurial Intentions

SA = Skills Acquired

RT = Relevance of Training

β_0 = Intercept

β_1 & β_1 = Coefficient of SA & RT respectively.

ε = error term

Data Presentation, Analysis and Discussion

This section presents the analysis and discussion of data collected from 700 respondents across tertiary institutions in the Northwest region of Nigeria. The analysis was carried out

using the Statistical Package for Social Sciences (SPSS) version 25. The normality, reliability and validity tests were first conducted to ensure the normality, internal consistency and appropriateness of the measurement instruments. The relevant skills and competencies were identified through the descriptive statistics and the Relative Importance Index (RII) while the regression analysis, were applied to established the hypothesized relationships between acquired skills, relevance and entrepreneurship intention.

Table 2: Relative Importance Index of Entrepreneurial Skills and Competence

Code	Skills	RII	Mean	StdDev	Rank
VAL	Value Creation	0.76114	3.80571	1.12430	1
OPA	Opportunity Assessment	0.76028	3.80143	1.11268	2
TEN	Tenacity/Perseverance	0.75657	3.78286	1.09688	3
RISK	Risk Management &Mitigation	0.75400	3.77	1.12073	4
FOC	Maintain Focus & Adapt	0.75371	3.76857	1.10952	5
OPR	Opportunity Recognition	0.75171	3.75857	1.12597	6
RESI	Resilience	0.74943	3.74714	1.07530	7
GUE	Guerrilla Skills	0.74886	3.74428	1.12535	8
CPS	Problem-Solving skills	0.74629	3.73142	1.10888	9.5
RESL	Resource Leveraging	0.74629	3.73142	1.09981	9.5
VIS	Conveying a Compelling Vision	0.74485	3.72428	1.15951	11
SEF	Self-Efficacy	0.74314	3.71571	1.14376	12
NET	Building and Using Networks	0.74286	3.71428	1.09939	13

Source: Author's compilation from SPSS output.

The Relative Importance Index (RII) analysis of entrepreneurial skills and competencies revealed that graduates from tertiary institutions in Nigeria's Northwest region perceive 'Value Creation' (RII = 0.76114) as the most critically acquired skill, followed closely by 'Opportunity Assessment' (RII = 0.76028) and 'Tenacity/Perseverance' (RII = 0.75657). This hierarchy suggests that entrepreneurship education has most effectively instilled competencies related to generating tangible value and strategically evaluating ventures, which are fundamental to launching and sustaining enterprises. The high ranking of tenacity and risk management further indicates that graduates place significant importance on resilience and strategic mitigation of uncertainties, essential traits within challenging economic contexts. Notably, skills such as problem-solving and resource leveraging share an equal ranking (9.5), implying a perceived balanced development in these practical capabilities. Conversely, competencies such as conveying a compelling vision, self-efficacy, and networking received comparatively lower rankings, suggesting potential areas for curricular enhancement to strengthen persuasive communication, self-confidence, and strategic relationship-building. These results reflect a skill set aligned with core entrepreneurial demands, emphasizing analytical and persistent attributes, while also highlighting opportunities to further develop interpersonal and visionary capacities in entrepreneurship education programmes.

Table 3: Normality Test

	EI	SA	RT
N	700	700	700
T-statistic	0.747	0.828	0.435
Asymp.Sig.	0.534	0.681	0.253

Source: Author's computation from SPSS Output

The results of the normality test indicate that the distributions for the variables Entrepreneurship Intentions (EI), Skills Acquired (SA), and Relevance of Training (RT) do not significantly deviate from a normal distribution. This conclusion is drawn from the Shapiro-Wilk test statistics (T-statistic) and their corresponding asymptotic significance values (Asymp.Sig.), all of which are non-significant ($p > 0.05$). Specifically, the p-values of 0.534 for EI, 0.681 for SA, and 0.253 for RT are all comfortably above the conventional alpha level of 0.05, thereby failing to reject the null hypothesis that the data are normally distributed and satisfying a key assumption for the subsequent use of parametric statistical analyses.

Table 4: Reliability Test

Variable	No. of Item	Cronbach Alpha (α)	Interpretation
Entrepreneurial Intention (EI)	5	0.843	Good
Skills Acquired (SA)	5	0.835	Good
Relevant Training (RT)	5	0.793	Acceptable

Source: Author's Computation from SPSS Output

The reliability analysis revealed a strong internal consistency for the three multi-item scales used in the study. The construct for Entrepreneurship Intentions (EI), measured with 5 items, yielded a Cronbach's alpha (α) of 0.843, while the Skills Acquired (SA) scale, also comprising 5 items, produced an alpha of 0.835. Furthermore, the 5-item scale for Relevant Training (RT) achieved a Cronbach's alpha of 0.793 all of which are considered to be sufficiently reliable and possess strong internal consistency, thereby ensuring the dependability of the data for subsequent statistical analysis.

Table 5: Exploratory Factor Analysis

Construct	Factor		Factor loading	Average Variance Extracted
	Skills Acquired	SA_1	.748	0.536
		SA_2	.792	
		SA_3	.731	
		SA_4	.693	
		SA_5	.691	

Entrepreneurship Education	Relevant Training	RT_1 RT_2 RT_3 RT_4 RT_5	.863 .752 .789 .688 .593	0.552
Employment Creation	Entrepreneurial Intentions	EI_1 EI_2 EI_3 EI_4 EI_5	.792 .781 .893 .781 .832	0.667

Source: Author's Computation from SPSS Output

The results of the Exploratory Factor Analysis (EFA) demonstrate a robust factor structure for the measured constructs, confirming construct validity. All measured items load significantly onto their respective theoretical factors, with factor loadings exceeding the recommended threshold of 0.5, as evidenced by values ranging from 0.593 to 0.893. Furthermore, the Average Variance Extracted (AVE) for each construct; Skills Acquired (0.536), Relevant Training (0.552), and Entrepreneurial Intentions (0.667) surpasses the critical value of 0.5, indicating that each latent factor explains more than half of the variance in its indicators on average. This collectively signifies that the items are well-aligned with their intended constructs and that the measurement model is both valid and reliable.

Table 6: Regression Analysis Output

Variables	β (Beta)	SE	t	P-value
Constant	1.756	0.964	1.821	0.000**
SA	0.445	0.193	2.306	0.045**
RT	0.756	0.182	4.154	0.001**

$R^2 = 0.69$, Adj. $R^2 = 0.68$

$F(1, 698) = 11.411$, $p < 0.05$

DW = 2.001

Dependent Variable: Entrepreneurial Intentions

From Table 6 above, a statistically significant model emerges for predicting Entrepreneurship Success. The model shows strong explanatory power. Its R-squared value of 0.68 means Skills Acquired and Relevant Training together explain 68% of the variance in Entrepreneurship Intentions. This model fit is confirmed by a significant F-statistic of 11.411 ($p = 0.029$). Regression coefficients show that both predictors make significant positive contributions. A one-unit increase in Skills Acquired leads to a 0.445-unit increase in Entrepreneurship Intentions ($p = 0.045$) and a one-unit increase in Relevant Training brings a larger 0.756-unit gain ($p = 0.001$). The Durbin-Watson statistic (2.001) meets the

assumption of independent errors and indicates no autocorrelation. These results confirm that Skills Acquired and Relevant Training are significant positive predictors. However, Relevant Training (RT) shows a stronger influence.

Discussion of Findings

The first objective of this study was to identify the entrepreneurial skills and competencies that graduates have acquired through entrepreneurship education (EE) programmes in tertiary institutions within the North-West region of Nigeria. The Relative Importance Index (RII) analysis revealed Value Creation, Opportunity Assessment, and Tenacity as the three most prominent competencies perceived by graduates. This outcome suggests that EE curricula in the region are relatively effective in developing analytical, opportunity-oriented, and resilience-based attributes, skills that are central to entrepreneurial performance. These findings align with Jardim et al. (2021), who observed that entrepreneurship education can significantly enhance certain entrepreneurial competencies, though the extent of improvement is contingent upon pedagogical design and experiential exposure.

However, this result diverges from Okolie et al. (2021), who found no significant relationship between entrepreneurship education and competencies such as risk management, tenacity, and value creation among Nigerian undergraduates. This divergence likely stems from methodological differences; while the current study employed perceived self-assessment through RII, Okolie et al. (2021) adopted an objective performance-based approach. Hence, the present findings highlight that while students perceive competence development, such perceptions may not always translate into demonstrable entrepreneurial capability, highlighting a potential "perception–performance" gap in Nigeria's EE delivery.

Furthermore, the relatively lower ranking of competencies such as Self-Efficacy and Networking reinforces the arguments of Costin et al. (2021), who reported that EE exposure can sometimes diminish confidence by revealing the complexities of real-world entrepreneurship. Similarly, Okolie et al. (2021) found that interpersonal competencies such as networking received moderate emphasis in EE curricula. The uneven distribution of skill acquisition observed here supports Jardim et al. (2021)'s assertion that EE impacts are often heterogeneous and limited without interdisciplinary integration and practical engagement. Consequently, the findings call for pedagogical reforms, hands-on learning, mentorship, and industry collaboration as advocated by Ojo and Okwilagwe (2024) and Oluwalola (2025), to ensure that perceived competencies are reinforced by applicable entrepreneurial skills.

The second objective sought to evaluate the influence of formal entrepreneurship education on the entrepreneurial intentions of graduates from tertiary institutions in North-West Nigeria. The regression results demonstrate that both Skills Acquired (SA) and Relevant Training (RT) have significant positive effects on Entrepreneurial Intention (EI),

with coefficients β = 0.445 (p = 0.045) and β = 0.756 (p = 0.001), respectively. These findings empirically validate the theoretical proposition that competence-based learning directly shapes entrepreneurial intention, which functions as a precursor to venture creation and employment generation. The model's explanatory power (R^2 = 0.68) further reinforces the robustness of this relationship, confirming that nearly 68% of the variation in entrepreneurial intention is attributable to the quality of skills and training received.

This outcome aligns with Lackéus (2020) and Hahn et al. (2020), who demonstrated that value-creation pedagogy and experiential learning significantly enhance entrepreneurial motivation and competence. Moreover, it substantiates the critiques of Okolie et al. (2014); Undiyaundeye and Otu (2015), who found that Nigeria's traditional, theory-driven EE approach yields only limited practical skill acquisition. The superior predictive strength of Relevant Training corroborates Acharya and Chandra (2019); Oboreh and Nnebe (2019), who emphasized that experiential, hands-on instruction, particularly through simulations, business incubation, and project-based tasks, promotes deeper entrepreneurial orientation than classroom teaching alone.

Collectively, these findings affirm Iwu et al. (2021) and Lu et al. (2021), who argued that the quality and relevance of EE interventions are pivotal in transforming knowledge into entrepreneurial intention and subsequent venture creation. Thus, the study contributes to the discourse by empirically demonstrating that while entrepreneurship education in North-West Nigeria has fostered positive perceptions of key competencies, its true effectiveness lies in strengthening practical, contextually relevant training that bridges the gap between perceived skill acquisition and actionable entrepreneurial outcomes.

Conclusion

This study affirms that entrepreneurship education programmes in Nigeria's tertiary institutions have successfully cultivated a core set of competencies among graduates. These programmess show particular strength in value creation, opportunity assessment, and tenacity. The validity and reliability of the constructs measuring these skills and their outcomes were rigorously confirmed, which ensures the robustness of the findings. The analysis shows that acquired skills and the relevance of training received are substantial and statistically significant predictors of entrepreneurial success. This highlights the importance of experiential and practical teaching methods. While the current curriculum builds strong analytical and resilient capabilities, results also suggest that enhancing interpersonal and visionary skills could strengthen its impact. Consequently, National Universities Commission (NUC), National Board for Technical Education (NBTE), National Commission for Colleges of Education (NCCE) and other programme designers are encouraged to add experiential learning modules and strengthen industry-academia partnerships to keep training contextually relevant. Lecturers of entrepreneurship education should also deliberately cultivate competencies such as networking, self-efficacy, and visionary communication through revised curriculum and co-curricular activities. These findings

highlight the essential role of structured, relevant entrepreneurship education in preparing graduates for the entrepreneurial landscape.

Nonetheless, this study acknowledged the following limitations when interpreting its findings. The reliance on a convenience sampling technique, while efficient, restricts the generalizability of the results and may introduce selection bias, as the participants may not adequately reflect the broader population of graduates in North-West Nigeria. Moreover, the cross-sectional design and self-reported data collected through a single questionnaire raise the potential for common method bias, which may have inflated the strength of the observed relationships. Furthermore, the study's concentration on a specific region limits the extent to which its conclusions can be applied to other parts of Nigeria or different settings. Therefore, future studies are encouraged to adopt longitudinal research designs, include more regionally diverse samples, and consider contextual variables such as financial access and regulatory support to achieve a more holistic understanding of graduate entrepreneurial intentions.

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