NAU Journal of Technology and Vocational Education
Volume 11, No. 2, April 2026

INFLUENCE OF ENTREPRENEURSHIP EDUCATION ON ENTREPRENEURIAL INTENTION AMONG BUSINESS EDUCATION STUDENTS OF FEDERAL COLLEGES OF EDUCATION IN NORTH EASTERN NIGERIA

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Abstract
This study examined the influence of entrepreneurship education on entrepreneurial intention among business education students in federal colleges of education in North Eastern Nigeria. The study has two objectives, two research questions and two hypotheses. A descriptive survey research design was adopted, with a population of 524 NCE II business education students from three federal colleges of education. A sample of 217 respondents were selected using proportionate sampling technique based on Krejcie and Morgan's formula. Data were collected using a structured questionnaire comprising 40 items across four clusters, validated by three experts and achieving a reliability coefficient of 0.881 using Cronbach's Alpha. Data were analyzed using mean, standard deviation, and simple linear regression at 0.05 significance level. Findings revealed that entrepreneurship education significantly influences students perceived risk-taking ability ($R^2 = 0.711$, $p < .05$), perceived innovation ability ($R^2 = 0.763$, $p < .05$), with innovation exerting the strongest influence. The study concluded that entrepreneurship education is a critical determinant of entrepreneurial intention among business education students. Recommendations include strengthening practical risk management components, establishing innovation hubs, and providing post-graduation support systems to translate entrepreneurial intentions into viable ventures.

Keywords: *Entrepreneurship education, entrepreneurial intention, risk-taking ability, innovation ability, business education students*

Introduction

Entrepreneurship involves launching ventures and accepting financial risks for potential profit, aiming to generate economic value that extends beyond conventional business models (Sandoval, 2022). According to Hitt, Ireland, and Hoskisson (2018), entrepreneurship encompasses establishing, developing, and expanding new businesses, including opportunity identification, resource management, and risk navigation. Entrepreneurship education seeks to provide students with knowledge, skills, and motivation to encourage entrepreneurial success across various settings. Fayolle (2017) describes entrepreneurship education as encompassing all activities aimed at fostering entrepreneurial mindsets, attitudes, and skills, including idea generation, venture setup, growth, and innovation. Steenekamp (2013) emphasizes that entrepreneurship education extends beyond business creation to incorporate rich learning experiences that promote self-reliance, opportunity awareness, adaptability, and risk tolerance.

In Nigerian Colleges of Education, entrepreneurship education was introduced following National Commission for Colleges of Education (NCCE) directives. The curriculum now includes GSE 224 (entrepreneurship) as compulsory for all NCE students, with vocational programs offering two entrepreneurship courses. However, the directive requiring students to attain four entrepreneurship credits before graduation remains partially unrealized (Junaid, 2024).

Business education, as an integral part of vocational and technical education, promotes skills, knowledge, and understanding for business world performance. Ezenwafor and Olaniyi (2017) describe business education as vocational education concerned with exposing recipients to workplace foundations and functioning. Business education prepares individuals for business roles while equipping graduates with skills, knowledge, and values that sustain the entrepreneurship ecosystem.

Entrepreneurial intention refers to developing motivation to initiate business ventures before actual establishment. Bae, Qian, Miao, and Fiet (2021) define entrepreneurial intention as one's desire to start a business the essential first step toward entrepreneurial behavior. Entrepreneurship education positively influences students perceived risk-taking ability, perceived innovation ability, and perceived desire for autonomy (Basu & Virick, 2018).

Perceived risk-taking is the extent to which a student believes they can confidently make decisions involving uncertain or potentially negative financial outcomes. It reflects their self-assessment of tolerance for failure and willingness to act despite incomplete information. It's also serves as an ability involves an individual's subjective assessment of their capacity to handle risky behaviors. Entrepreneurs are often perceived as risk-takers, linked to their willingness to venture into unknown territories.

Perceived innovation ability is the degree to which a student views themselves as capable of generating novel ideas, identifying unique solutions to problems, or improving existing products and processes. It includes self-evaluated creativity and adaptability in entrepreneurial contexts. It is also encompassing belief in one's capacity to generate, develop, and implement new ideas within business contexts.

Perceived desire for autonomy is the strength of a student's preference to work independently, control their own schedule, and make key decisions without external supervision. It reflects their intrinsic motivation to avoid hierarchical constraints and pursue self-directed goals. Perceived desire for autonomy represents a significant motivator individual seeking business ownership often cite the ability to be their own boss as a key reason.

Statement of the Problem

Unemployment has become a major problem affecting Nigerian youth, causing increased militancy, violent crimes, kidnappings, restiveness, and socially delinquent behavior. Nigeria's population reached an estimated 217 million in 2023, with youth accounting for 70 percent (151 million youths). The International Labour Organization estimates 12.6 percent of global youth are unemployed (approximately 74.6 million), while Nigeria's National Bureau of Statistics (2022) reports 53.4 percent youth unemployment.

Despite high youth unemployment (53.4%) in Nigeria and substantial investments in entrepreneurship education, it remains unclear whether and how such education influences entrepreneurial intention among business education students in federal colleges of education in North Eastern Nigeria. Specifically, the relationships between entrepreneurship education, students perceived risk-taking ability, perceived innovation ability, perceived desire for autonomy, and subsequent entrepreneurial intentions have not been adequately investigated. Therefore, this study addresses the gap by examining the direct influence of entrepreneurship education on entrepreneurial intention within this under-researched context.

Purpose of the Study

The main purpose was to determine the influence of entrepreneurship education on entrepreneurial intention among business education students of federal colleges of education in North Eastern Nigeria. Specifically, the study sought to:

1. Determine the influence of entrepreneurship education on perceived risk-taking ability among business education students
2. Determine the influence of entrepreneurship education on perceived innovation ability among business education students

Research Questions

The following research questions guided the study:

1. What is the influence of entrepreneurship education on perceived risk-taking ability among business education students?
2. What is the influence of entrepreneurship education on perceived innovation ability among business education students?

Hypotheses

The following hypotheses were tested at 0.05 significance level:

$H0_1$: Entrepreneurship education has no significant influence on perceived risk-taking ability among business education students

$H0_2$: Entrepreneurship education has no significant influence on perceived innovation ability among business education students

Methodology

A descriptive survey research design was adopted. The descriptive survey design was adopted to allowed the study to describe the current influence of entrepreneurship education on students' perceived risk-taking and innovation abilities without manipulating variables, aligning with the objective of assessing existing perceptions rather than establishing causation. Second, the design enabled data collection from a representative sample (217 students drawn from a target population of 524), permitting generalization of findings to the broader population of business education students in federal colleges of education across North Eastern Nigeria (Agwazie ,2025). According to Osuala (2022), survey research studies populations by selecting and studying samples to discover relative incidence, distribution, and interrelations of variables. This design enabled drawing representative samples for generalization. The study was conducted in North Eastern Nigeria, comprising Adamawa, Bauchi, Borno, Gombe, Taraba, and Yobe states. The region occupies approximately 33% of Nigeria's total area with an estimated 2016 population of 26,263,866 (13.5% of national population). Youth constitute 42% of the regional population, with unemployment estimated at 33.3%. The target population comprised 524 NCE II business education students offering entrepreneurial courses from three federal colleges of education: FCE Potiskum (54 students), FCE Gombe (366 students), and FCE Yola (104 students) during the 2024/2025 academic session. The sample consisted of 217 NCE II business education students determined using Krejcie and Morgan's sample size formula. Proportionate sampling technique was used to select respondents based on institutional populations. A structured researcher-developed questionnaire titled "Influence of Entrepreneurship Education on Entrepreneurial Intention among Business Education Students Questionnaire (IEEIBESQ)" comprised 40 items rated on a four-point scale: Strongly Agree (4), Agree (3), Disagree (2), and Strongly Disagree (1). The instrument had five clusters: entrepreneurship education (10 items), perceived risk-taking ability (10 items), perceived innovation ability (10 items), perceived desire for autonomy (10 items), and composite influence (40 items). The instrument underwent face validation by three experts from the Faculty of Education, Modibbo Adama University, Yola. Experts checked clarity, relevance, and completeness, with their suggestions incorporated in the final version. Reliability was determined through internal consistency by administering the questionnaire to 30 NCE II students of Federal College of Education (Technical), Potiskum (not part of the main study). Cronbach's Alpha analysis yielded a reliability coefficient of 0.881, indicating high internal consistency.

Two trained research assistants administered and retrieved questionnaires over three weeks. Of 217 questionnaires distributed, 210 were returned. Data were analyzed using descriptive statistics (mean and standard deviation). Items with weighted mean of 2.50 and above were considered "Agreed," while those below 2.50 were "Disagreed." Simple linear regression analysis tested hypotheses at 0.05 significance level, with rejection occurring when p-values were less than alpha level.

Results

Research Question One: Influence on Perceived Risk-Taking Ability

Table 1: *Mean and Standard Deviation of Students' Responses on Perceived Risk-Taking Ability*

S/N	Item/Statement (n = 210)	$\bar{x}_1$	σ_1	Remark
1	Entrepreneurship education positively influences my risk-taking ability.	3.27	0.88	Agree

2	Entrepreneurship education positively influences my perceived ability to take calculated risk	3.40	0.79	Agree
3	Entrepreneurship education positively influences my willingness to seek external support to mitigate risk	3.40	0.64	Agree
4	Entrepreneurship education positively influences my perceived ability to make informed decisions	3.32	0.90	Agree
5	Entrepreneurship education positively influences my perceived ability to make informed decision	3.38	0.79	Agree
6	Entrepreneurship positively influences my perceived ability to adaptability in my desired entrepreneurial endeavors.	3.30	0.79	Agree
7	Entrepreneurship education positively influences my perceived ability to resilience	3.40	0.74	Agree
8	Entrepreneurship education positively influences my perceived ability to take risk that could lead to better rewards of my desired ventures.	3.23	0.92	Agree
9	Entrepreneurship education positively influences my perceived ability for better opportunities for growth.	3.43	0.71	Agree
10	Entrepreneurship education positively influences my perceived ability in enhancing my desired comfort level in taking risks in business venture	3.20	0.84	Agree
	Cluster Mean	**3.33**	**0.80**	**Agree**

Results show mean scores ranging from 3.20 to 3.43 with standard deviations of 0.64 to 0.92, indicating students agreed that entrepreneurship education enhances risk-taking abilities, informed decision-making, resilience, and opportunity exploration.

Research Question Two: Influence on Perceived Innovation Ability

Table 2: *Mean and Standard Deviation of Students' Responses on the Influence of Entrepreneurship Education on Perceived Innovation Ability*

S/N	Item/Statement (n = 210)	$\bar{x}_1$	σ_1	Remark
1	Entrepreneurship education sharpen my innovative thinking.	3.34	0.93	Agree
2	Entrepreneurship education enhances my innovative problem-solving abilities.	3.30	0.81	Agree
3	Entrepreneurship education increases my creativity in my desired careers.	3.13	0.89	Agree
4	Entrepreneurship education makes me considered as important contributors of my innovative capabilities.	3.38	0.91	Agree
5	Entrepreneurship education provide me with innovative ideas in my desired professional endeavors.	3.34	0.83	Agree
6	Entrepreneurship education increases my ability to identify and capitalize on new business opportunities.	3.39	0.93	Agree
7	Entrepreneurship education inculcate my spirit of decision making process and the ability to be creative.	3.21	0.93	Agree
8	Entrepreneurship education provide me with the skills in implementing innovative ideas in my desired business.	3.00	1.03	Agree
9	Entrepreneurship education has play a crucial roles in enhancing my entrepreneurial mindset.	3.49	0.69	Agree
10	Entrepreneurship education enables me to identify opportunities to improve existing business processes.	3.29	0.91	Agree
	Cluster Mean	**3.29**	**0.88**	**Agree**

Mean scores ranged from 3.00 to 3.49 with standard deviations of 0.69 to 1.03, indicating students consistently agreed that entrepreneurship education improves innovative thinking, problem-solving, creativity, and entrepreneurial mindset.

Hypothesis Testing
Two hypotheses were raised and tested at 0.05 level of significance.

Hypothesis One Testing
$H0_1$: Entrepreneurship education has no significant influence on perceived risk-taking ability.
Table 3: *Model Summary of Influence of Entrepreneurship Education on Perceived Risk-Taking Ability*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.843[a]	.711	.710	.41532

a. Predictors: (Constant), Entrepreneurship Education
The model summary in Table 3a shows a correlation coefficient (R) of 0.843, indicating a very strong positive relationship between entrepreneurship education and perceived risk-taking ability. The R Square value of 0.711 means that 71.1% of the variance in students' risk-taking ability is explained by entrepreneurship education. The adjusted R Square (.710) confirms the model's reliability, while the standard error of estimate (0.41532) shows that the prediction error is relatively low.

Table 3b: *ANOVA from Regression Analysis of Influence of Entrepreneurship Education on Perceived Risk-Taking Ability*

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	88.238	1	88.238	511.549	.000[b]
	Residual	35.878	208	.172		
	Total	124.116	209			

a. Dependent Variable: Perceived Risk-Taking Ability
b. Predictors: (Constant), Entrepreneurship Education

The ANOVA results in Table 3b indicate that the regression model is statistically significant, $F(1,208) = 511.549$, $p = .000$. This implies that entrepreneurship education significantly influences students' perceived risk-taking ability, and the null hypothesis ($H0_1$) which states otherwise is rejected.

Hypothesis Two Testing
$H0_2$: Entrepreneurship education has no significant influence on perceived innovation ability.
Table 4a: *Model Summary of Influence of Entrepreneurship Education on Perceived Innovation Ability*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate

1	.874[a]	.763	.762	.41275

a. Predictors: (Constant), Entrepreneurship Education

The model summary presented in Table 4a reveals a very strong relationship between entrepreneurship education and perceived innovation ability with an R value of 0.874. The R Square of 0.763 shows that entrepreneurship education explains 76.3% of the variation in innovation ability. The adjusted R Square (.762) confirms the model's consistency, while the standard error of estimate (0.41275) indicates good prediction accuracy.

Table 4b: ANOVA from Regression Analysis of Influence of Entrepreneurship Education on Perceived Innovation Ability

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	114.155	1	114.155	670.075	.000[b]
	Residual	35.435	208	.170		
	Total	149.590	209			

a. Dependent Variable: Perceived Innovation Ability
b. Predictors: (Constant), Entrepreneurship Education

The ANOVA results presented in Table 4b show that the regression model is statistically significant, F (1,208) = 670.075, p = .000. This result confirms that entrepreneurship education has a significant influence on students' perceived innovation ability, leading to the rejection of the null hypothesis ($H0_2$).

Discussion

The finding that entrepreneurship education significantly influences perceived risk-taking ability (Grand Mean = 3.33, R^2 = 0.711) aligns with Slima, Prakash, Iqbal, and Saad (2020), who emphasized that entrepreneurial skills are fundamental to students' willingness to participate in entrepreneurship. Akande (2021) and Nanang and Rila (2023) similarly reported that entrepreneurship education strongly influences entrepreneurial intention, inherently linked to risk-taking since business opportunities require venturing into uncertain outcomes.

Shuwa and Ahmed (2023) found that entrepreneurship education promotes self-reliance in Adamawa State, which demands courage to take risks in starting ventures. Fatoki and Oni (2014) demonstrated that entrepreneurship education significantly improved South African students' attitudes toward risk-taking and opportunity recognition, reinforcing that this positive effect resonates across contexts.

However, contrasting evidence exists. Popoola (2025) argued that while entrepreneurship education improves theoretical knowledge, its influence on risk-taking behavior may be limited in environments with structural barriers lack of credit access, unstable economic policies, and poor institutional support. This echoes Shuwa and Ahmed's (2023) concern that educational influence alone may not translate perception into behavior without enabling conditions.

The strong explanatory power (71.1%) suggests that entrepreneurship education in federal colleges of education effectively builds students' confidence for calculated risk-taking, decision-making, and resilience, essential entrepreneurial competencies.

The finding that entrepreneurship education significantly influences perceived innovation ability (Grand Mean = 3.29, R^2 = 0.763) strongly supports Madugu and Kawu Jimoh (2023), who reported significant positive relationships between entrepreneurship education and students' innovation and creativity in Nigerian universities. Students exposed to entrepreneurial training develop higher creative thinking levels, translating into practical solutions for local problems. The

finding aligns with Jacobs, Ezeokafor, and Ekwere (2021) and Tambari and Popnwin (2017), who observed that skill acquisition through entrepreneurship education fosters empowerment, job creation, and unemployment reduction outcomes traceable to innovative capabilities. Abubakar (2025) and Bashiru (2024) reported that entrepreneurship education enhances employability self-efficacy and entrepreneurial intention, both strongly tied to innovation. International research supports this finding. Fayolle and Gailly (2015) found that entrepreneurship education fosters attitudes conducive to creativity and innovation. Blenker et al. (2011) argued that entrepreneurship education must become innovation-oriented pedagogy encouraging critical reflection and value creation. O'Connor (2013) emphasized that entrepreneurship education contributes to innovation ecosystems by cultivating students engaged in disruptive thinking. The high explanatory power (76.3%) indicates innovation as the strongest outcome dimension. This resonates with Zhao, Seibert, and Hills (2005), who reported that entrepreneurial self-efficacy in creative problem-solving strongly predicts entrepreneurial intention.

Conclusion

This study established that entrepreneurship education significantly influences entrepreneurial intention among business education students in federal colleges of education in North Eastern Nigeria through enhanced perceived risk-taking ability and perceived innovation ability. Entrepreneurship education explains 71.1% of variance in risk-taking ability and 76.3% of variance in innovation ability, with innovation exerting the strongest influence. These findings confirm that entrepreneurship education effectively develops students' entrepreneurial mindset, preparing them for venture creation and self-reliance in contexts of high graduate unemployment. The study validates theoretical propositions of the Theory of Planned Behavior and Human Capital Theory, demonstrating that structured entrepreneurial learning builds human capital and shapes psychological readiness for entrepreneurship.

Implications of the Study

The study implies that entrepreneurship education in federal colleges of education is a powerful, statistically significant lever for building the risk-taking and innovation mindsets essential for entrepreneurship. However, its full potential is realized only when combined with institutional investments in experiential learning and supportive economic policies. As summarize below:

1. The study validates the Theory of Planned Behavior and Human Capital Theory, confirming entrepreneurship education builds psychological and cognitive capital for risk-taking and innovation.
2. It reframes perceived risk-taking and innovation as measurable, teachable outcomes rather than abstract traits, providing validated dimensions for future research.

Recommendations

Based on the findings, the following recommendations are made:

1. Curriculum developers and educators should strengthen risk-taking components by integrating practical, real-world risk management scenarios simulations, case studies of successful entrepreneurs, and projects requiring decisions with uncertain outcomes. This will translate positive perceptions into practical skills for navigating business uncertainties.
2. Federal colleges of education should prioritize and invest in pedagogies fostering creativity and innovative thinking by establishing innovation hubs, organizing business plan competitions, and incorporating design thinking and problem-based learning into the curriculum. The high explanatory power (76.3%) should position innovation as a hallmark of entrepreneurship programs.

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