EAST AFRICAN FINANCE JOURNAL (EAFJ)
Volume 5 Issue 3 |2026 | pp 9- 23
E-ISSN: 2959-9121

Entrepreneurial Mindset and Innovation Capacity Among Students of Federal College of Education Idiep, Ibiono, Akwa Ibom State, Nigeria

Abaikpa, Udeme Anthony*

Department of Business Management, Faculty of Management Sciences, University of Uyo, Akwa Ibom State, Nigeria

*Corresponding Author

Nkereuwem, Rebecca Ekaette

Department of Business Education, School of Vocational and Technical Education Federal College of Education Idiep, Ibiono, Akwa Ibom State

Ekpo-Ufot, Uduak-Obong

Department of Business Management, Faculty of Management Sciences, University of Uyo, Akwa Ibom State, Nigeria

Article DOI: 10.59413/eafj/v5.i3.2

Abstract:

This study investigates the relationship between entrepreneurial mindset—comprising creativity, proactiveness, risk tolerance, and opportunity recognition—and innovation capacity—encompassing idea generation, problem-solving skills, product/service innovation readiness, and overall innovation capability—among students at the Federal College of Education, Idiep, Akwa Ibom State, Nigeria. A correlational survey research design was adopted, employing a census sampling technique to include all 89 students from the School of Vocational and Technical Education (Business Education and Agricultural Education departments). Data were collected using a structured "Entrepreneurial Mindset and Innovation Capacity Questionnaire" (EMICQ) and analyzed using simple percentages and simple regression via SPSS. The findings establish a significant, positive correlation between entrepreneurial mindset and innovation capacity, confirming that students with strong entrepreneurial traits are inherently more innovative. This validates the strategy of producing "edupreneurs"—future educators capable of transforming pedagogy, creating economic opportunities, and driving grassroots development. However, persistent systemic gaps in industry collaboration, finance, and mentorship were identified. The study recommends that the NCCE mandate compulsory entrepreneurship modules across all disciplines and shift to competency-based assessments; FCE Idiep establish an EdTech Innovation Hub, train lecturers, and forge industry partnerships; government create a dedicated Education-Enterprise Fund and innovation awards; and students proactively pursue lifelong learning and interdisciplinary collaboration to fully realize their innovative potential. This research provides empirical evidence from a Nigerian teacher-education context linking entrepreneurial mindset to innovation capacity, specifically among vocational and technical education students. It advances the "edupreneur" concept as a practical strategy for transforming pedagogy, fostering economic opportunity, and driving grassroots development within the broader TVET and higher education landscape in Nigeria.

Keywords: Entrepreneurial Mindset, Innovation Capacity, Edupreneurs, Teacher Education, Vocational Education

1. Introduction

The twenty-first-century global economy is characterized by rapid technological change, increasing uncertainty, and the pressing need for innovative solutions to complex societal challenges. In this context, the cultivation of entrepreneurial mindsets

and innovation capacities among young people has emerged as a critical priority for educational institutions worldwide (European Commission, 2021). Entrepreneurship is no longer viewed solely as the process of new venture creation but rather as a fundamental way of thinking and acting that enables individuals to identify opportunities, solve problems creatively, and generate value in diverse contexts (Aeeni, Saeedikiya, Salamzadeh, & Salamzadeh, 2024). Nigeria, as Africa's most populous nation and largest economy, faces significant developmental challenges, particularly high youth unemployment rates. According to recent statistics, with over 60% of Nigeria's population under the age of 25, the country's youth represent both a tremendous opportunity and a pressing challenge (Koce, 2025). The youth unemployment crisis demands urgent attention, requiring systematic investment in education and skills development that fosters entrepreneurial competencies (Ogunwoye, Oladele, Morakinyo, Fakunle, & Bankefa, 2025). Colleges of education occupy a unique position in Nigeria's educational system. As institutions responsible for training teachers who will shape the minds of future generations, they have the potential to create multiplier effects in entrepreneurial development (Abaikpa 2025). The Federal College of Education, Ididep, located in Ibiono Local Government Area of Akwa Ibom State, represents a particularly significant institution in this regard. In 2023, the Federal Government approved its establishment as a Federal College of Education (Innovation), making it the first College of Education in Nigeria that focuses on twenty-first-century innovation to help drive creativity (Job, 2025). Students trained with strong entrepreneurial mindsets and innovation capacities not only become more employable and self-reliant but also serve as role models and facilitators who can inspire entrepreneurial thinking among the pupils they will subsequently teach (Bello, Raji, Adebayo, & Salami, 2025).

The concept of entrepreneurial mindset encompasses a set of attitudes, beliefs, and cognitive approaches that enable individuals to recognise opportunities, take calculated risks, and persist in the face of challenges. Recent research identifies key dimensions of this mindset, including creativity, proactiveness, risk tolerance, and opportunity recognition, which collectively shape how individuals perceive and respond to their environment (Aeeni et al., 2024; Farrokhnia, Noroozi, Baggen, Lans, Biemans, & Pittaway, 2025). Innovation capacity, conversely, refers to an individual's ability to generate new ideas, solve problems effectively, and develop viable products or services (Gama, Sjödin, Parida, Frishammar, & Wincent, 2022). It represents the practical manifestation of entrepreneurial thinking—the translation of mindset into action. Understanding the relationship between these two constructs is essential for designing effective entrepreneurship education programmes that genuinely enhance students' innovative capabilities (Nikitina, Licznerska, Ozolina-Ozola, & Lapina, 2023).

Despite the prevalence of entrepreneurship education programs in Nigerian tertiary institutions, including Colleges of Education, graduate unemployment is escalating, and the pace at which graduates start new businesses is still pathetically low (Ogunwoye et al., 2025). This is counter-intuitive since entrepreneurship education is expected to foster in trainees the entrepreneurial mindsets and attributes to be capable of doing entrepreneurship. At Federal College of Education, Ididep, Nigeria, as part of teacher training program requirements, students enroll in compulsory courses that expose them to Entrepreneurship Development; nonetheless it has become an open secret, that a good number of such graduates cannot be considered innovative thinkers. Neither do they recognize opportunities to begin businesses of their own or to come up with useful solutions to the problems in their localities? It brings to mind the relationship between various components of entrepreneurial mindsets, as intended in entrepreneurship education delivery, and various aspects of the resultant innovation capacity of learners.

Entrepreneurial mindsets and innovation capacity have been studies, but not in the context of the extent to which specific dimensions of the mindsets relate to specific elements of innovation capacity among College of Education students in Nigeria's South-South region (Liadi, 2025). Until the nature of these relationships are clearly understood, entrepreneurship educators may find it difficult to specifically target specific components of mindsets in their efforts to build relevant capacity. The more imperative, yet the more neglected area is that in the context of Colleges of Education; after all the student teachers are the future teachers that will either help shape the thinking and mind-sets of children for positive and successful ventures or perpetuate the deficit of entrepreneurship mindset in the future generation (Bello et al., 2025; Koce, 2025). This study aims to examine the relationships between entrepreneurial mind-sets (creative thinking ability, proactiveness, risk-taking tendency, and opportunity seeking attitude) and innovation capacity (idea generation ability, problem solving skills, product or service

innovation potential and overall innovation capacity) among student teachers of Federal College of Education, Ididep, Ibiono, Akwa Ibom State, Nigeria.

The importance of this study lies in several facets. First, it will offer the teachers/lecturers on entrepreneurship education in FCE Ididep and similar institution an empirically verified information to determine which aspect(s) of entrepreneurial mindset are betterpredictors of specific dimensions of innovation capacity. Based on such information, educators can refine the design and delivery of Entrepreneurship curriculum (Nikitina et al., 2023; Farrokhnia et al., 2025). Second, for the planners of the National commission for colleges of education (NCCE) and other stakeholders involved in curriculum design at national and state levels, the results of this study will inform the formulation of appropriate policies on Entrepreneurship Education in Colleges of Education in Nigeria and will possibly translate into minimum standard revisions in courses such as ENTRE 111 and ENTRE 211(Bello et al., 2025; Koce, 2025). Third, the findings of the study will equip entrepreneurship student teachers with the necessary knowledge on how to harness and develop their entrepreneurial mindsets and innovation capacities for future success in life. This could go a long way in fostering, developing and inspiring students to cultivate entrepreneurial dispositions that could later translated to sustainable business venture development and the creation of employment. Fourth, to the body of knowledge, it adds to the existing literature in Entrepreneurship and Innovation at national and global spheres, building on prior research and forming a base for future exploration (Liadi, 2025; Ogunwoye et al., 2025). Lastly, by making effective entrepreneurship and innovative capacities' develop in our student teachers, who are to be the future shape of our children, we ultimately aid in solving the problem of unemployment and underemployment in Nigeria.

The scope of this study is limited to students of the Federal College of Education, Ididep, Ibiono Local Government Area, Akwa Ibom State, Nigeria due to logistical and financial constraints that limit an in-depth study on such scale and the need to study a specific locale. The subject population includes students across all the schools within the college: School of Arts and Social Sciences; School of Education; School of Sciences; School of Vocational and Technical Education; and School of Languages. Content-wise, the study revolves around four aspects of entrepreneurial mind-sets: Creative Thinking Ability, Proactiveness, Risk-Taking Tendency and Opportunity Seeking Attitude. And three dimensions of Innovation Capacity namely; Idea Generation Ability, Problem-Solving Skills and Product or Service Innovation Readiness, and their overall relation with innovative capacity was studied. The study adopted a cross-sectional survey research design. This implies the data for all variables were collected at a single point in time and as such it attempts to explore relationships rather than cause-effect relationships among variables.

2. Literature Review

2.1 Review of Related Literature

Entrepreneurial mindset refers to a specific set of attitudes, skills, and behaviors that enable individuals to identify and act on opportunities, overcome challenges, and create value in various contexts. Recent research conceptualizes entrepreneurial mindset through socio-cognitive components including self-efficacy, risk propensity, and opportunity identification, which collectively influence innovation outcomes (Aeeni et al., 2024). It represents a way of thinking that is opportunity-focused, adaptable, and resilient in the face of uncertainty. According to contemporary entrepreneurial cognition research, entrepreneurs differ from non-entrepreneurs in fundamental ways of thinking, planning, and acting. Aeeni et al. (2024), studying 8,601 Generation Z entrepreneurs across 25 European countries, demonstrated that socio-cognitive components of entrepreneurial mindset significantly affect innovation. Their research contributes to socio-cognitive theory of entrepreneurship by integrating an external enablement perspective into the study of cognitions and entrepreneurial outcomes. Research has identified several key attributes of the entrepreneurial mindset. Farrokhnia et al. (2025), in their systematic review of 44 empirical studies on opportunity identification capability, found that students' prior knowledge, entrepreneurial alertness, and creativity are the most influential factors in the opportunity identification process. They concluded that developing students' opportunity identification capability requires guiding them through three distinct stages: triggering, idea generation, and idea evaluation. Importantly, the entrepreneurial mindset is not limited to those who start businesses. It is increasingly

recognized as valuable across all sectors and roles, enabling professionals to recognize and act on opportunities, take calculated risks, and drive innovation regardless of their position or industry. This broader applicability makes the cultivation of entrepreneurial mindsets relevant for all students, including those training to become teachers.

Creativity

Creativity stands at the heart of entrepreneurial thinking. It involves generating novel and useful ideas, thinking outside conventional boundaries, and envisioning new possibilities. Research on fostering entrepreneurial mindsets through innovative educational units has demonstrated that creativity-focused interventions significantly enhance students' creative problem-solving abilities (Al-Mahrouqi et al., 2025). A study of tenth-grade students found that educational units integrating entrepreneurial education produced significant gains in idea generation (78.74%), problem understanding (76%), and solution development (75.33%). Farrokhnia et al. (2025) identified creativity as one of the most influential factors in the opportunity identification process, emphasizing its foundational role in entrepreneurial cognition. Their systematic review highlighted that creativity enables students to generate novel business ideas and recognize opportunities that others overlook.

Proactiveness

Proactiveness refers to the tendency to take initiative and act in anticipation of future opportunities or problems rather than simply reacting to events. Recent research on entrepreneurial performance identifies proactiveness as a key component of innovative work behavior, which mediates the relationship between digital literacy, entrepreneurial attitude, and sustainable entrepreneurial performance (Al-Mahrouqi et al., 2025). The study found that innovative work behavior, including creativity, proactivity, and risk-taking, serves as a bridge translating entrepreneurial mindset into tangible outcomes.

Risk Tolerance

Risk tolerance, or the willingness to take calculated risks, is a fundamental dimension of entrepreneurial mindset. Contemporary research by Aeeni et al. (2024) confirmed that risk propensity significantly affects innovation among Generation Z entrepreneurs. However, the relationship between risk-related cognitions and innovation is complex and may be moderated by external factors such as digital infrastructure. In the Nigerian context, Liadi (2025) examined the impact of AI-driven tools on fostering entrepreneurial mindset among business education students in South-South Nigeria universities. The study found that while AI-driven tools positively influence opportunity recognition skills, their relationship with risk-taking behaviors was positive but statistically insignificant and weak, suggesting that risk tolerance may be more challenging to develop among student populations.

Opportunity Recognition

Opportunity recognition refers to the capacity to identify and develop new business or innovation possibilities that others have overlooked. This dimension is central to contemporary entrepreneurship research. Farrokhnia et al. (2025) conducted a comprehensive systematic review of 44 empirical studies on university students' opportunity identification capability, concluding that prior knowledge, entrepreneurial alertness, and creativity are the most influential factors in the opportunity identification process. Wang, Wei, and Wang (2025) explored how individual and team-level antecedents interact to facilitate recognition of disruptive innovation opportunities through team learning processes. Their configurational approach identified three distinct pathways—Sharing-integrated, Improvisation-inspired, and Star-led—through which teams collaboratively recognize opportunities through collective wisdom.

The Concept of Innovation Capacity

Innovation capacity refers to an individual's ability to generate new ideas, solve problems effectively, and transform concepts into tangible innovations that create value. Gama et al. (2022) developed a contingency framework for understanding innovation capability, emphasizing that innovation capacity comprises both generative (idea generation) and implementational

(execution) capabilities that must be balanced for effective innovation. Recent research by Chen, Wu, Li, and Liu (2024) examined behavioral patterns associated with solving ill-defined complex problems from a multidimensional perspective, integrating perception, cognition, metacognition, and motivation. Their study of 132 elementary students revealed new problem-solving strategies among high-achievement students, who spent more time constructing problem models and exercising goal-oriented self-control to fully explore needed information and optimize solutions. For students in colleges of education, innovation capacity has dual significance. First, it enhances their own employability and entrepreneurial potential, enabling them to create value in their careers and communities. Second, as future teachers, their innovation capacity influences their ability to nurture similar capabilities in their pupils, creating multiplier effects across the educational system (Bello et al., 2025; Koce, 2025).

Idea Generation Ability

Idea generation ability refers to the capacity to produce numerous, diverse, and novel ideas in response to problems or opportunities. Research on entrepreneurial education interventions has demonstrated significant improvements in idea generation capabilities through structured programs. A study of educational units integrating entrepreneurial education and future skills found that the experimental group showed substantial gains in idea generation (78.74%), the highest improvement among all creative problem-solving dimensions measured (Al-Mahrouqi et al., 2025). Cho (2025) examined the relationship between problem-solving competence based on self-determination, optimism, and resilience among university students, finding that optimism strongly influenced all sub-factors of problem-solving enhancement, including ability, opportunity, and motivation.

Problem-Solving Skills

Problem-solving skills encompass the cognitive and behavioral processes through which individuals identify, analyze, and resolve challenges. Chen et al. (2024) conducted a multidimensional evaluation framework for understanding problem-solving behaviors, analyzing log file data from 132 elementary students. Their research revealed that high-achievement students demonstrated distinct problem-solving strategies, including more time spent constructing problem models and exercising goal-oriented self-control to fully explore needed information. Cho (2025) found that both optimism and resilience significantly influence problem-solving application among university students. Specifically, resilience showed the strongest influence on problem recognition, strategy exploration, and outcome analysis, while optimism had a relatively stronger influence on strategy exploration. The study concluded that an integrated approach considering both optimism and resilience is necessary for effective development of problem-solving skills. In the Nigerian context, Liadi (2025) investigated the influence of AI-driven tools on problem-solving abilities among business education students, finding that while such tools hold promise, their effect on problem-solving capabilities was statistically insignificant, suggesting the need for more integrated pedagogical approaches.

Product/Service Innovation Readiness

Product/service innovation readiness refers to an individual's preparedness to develop new or improved offerings that meet market needs. Recent research on entrepreneurial performance has highlighted the importance of innovative work behavior as a mediator between entrepreneurial digital literacy, attitude, and sustainable performance (Abaikpa, et. al 2025, Al-Mahrouqi et al., 2025). The study found that innovative work behavior, including creativity, proactivity, and risk-taking, serves as a bridge translating digital literacy and entrepreneurial mindset into tangible outcomes that contribute to sustainable entrepreneurial performance (Abaikpa, 2025). Bello et al. 2025) studied entrepreneurship education as a catalyst for skills competitiveness in technical colleges in Lagos State, Nigeria. Their research with 142 final-year students found that training content had the greatest contribution to skills competitiveness ($\beta = 0.378$, $p < .001$), followed by training needs assessment ($\beta = 0.193$, $p = 0.001$), while mode of delivery had the lowest contribution ($\beta = 0.129$, $p = 0.010$). These findings highlight the importance of curriculum design in developing innovation readiness.

2.2 Theoretical Framework

Socio-Cognitive Theory of Entrepreneurship

This study is anchored on the socio-cognitive theory of entrepreneurship, as articulated in contemporary research by Aeeni et al. (2024). This theoretical perspective posits that entrepreneurial cognitions—including self-efficacy, risk propensity, and opportunity identification—significantly affect entrepreneurial outcomes such as innovation. The theory integrates an external enablement perspective, recognizing that the relationship between cognitions and outcomes is moderated by environmental factors such as digital infrastructure. The socio-cognitive approach to entrepreneurship emphasizes that entrepreneurs think in fundamentally different ways from non-entrepreneurs and that these distinctive thinking patterns explain why some individuals excel at entrepreneurial activities while others do not. Aeeni et al. (2024) extended this framework by integrating a generational perspective and examining how digital infrastructure enables the translation of entrepreneurial cognitions into innovation outcomes. This theoretical framework provides a robust foundation for understanding the relationship between entrepreneurial mindset dimensions and innovation capacity, suggesting that cognitive patterns characteristic of entrepreneurial thinkers directly enable the innovative behaviours that constitute innovation capacity.

Theory of Planned Behavior

The Theory of Planned Behavior (TPB), as applied in recent entrepreneurship education research (Al-Mahrouqi et al., 2025), provides additional theoretical grounding. The theory emphasizes that behavioral intentions are shaped by attitudes, subjective norms, and perceived behavioral control. In the context of this research, entrepreneurial mindset dimensions influence attitudes toward innovation, while the college environment provides contextual influences that shape perceived behavioral control. Recent research on fostering entrepreneurial mindsets has grounded interventions in TPB alongside 21st-Century Skills frameworks, demonstrating that combining motivation, skill acquisition, and applied problem-solving produces significant gains in creative problem-solving capabilities (Al-Mahrouqi et al., 2025).

2.3 Empirical Review

Entrepreneurial Mindset and Innovation Studies in Nigeria

Several recent studies have examined aspects of entrepreneurial mindset and innovation in the Nigerian context. Bello et al. (2025) studied 142 final-year students from technical colleges in Lagos State and found that training content had the greatest contribution to skills competitiveness (β = 0.378, p < .001), followed by training needs assessment (β = 0.193, p = 0.001), while mode of delivery had the lowest contribution (β = 0.129, p = 0.010). These findings highlight the power of effective curriculum design in equipping young Nigerians with entrepreneurial capabilities. Liadi (2025) examined how AI-powered tools might help business education students in South-South Nigerian universities develop an entrepreneurial mindset. The study, involving 73 business education students from five universities, found that AI-driven tools influence opportunity recognition skills, showing a positive relationship with the development of risk-taking behaviors; however, this relationship was statistically insignificant and weak. Furthermore, while AI-driven tools were found to influence problem-solving abilities, this influence was also statistically insignificant.

Ogunwoye et al. (2025) conducted a comparative analysis of the determinants of entrepreneurial motivation among undergraduates in public and private universities in Southwest Nigeria. With a sample of 3,542 students, the study examined psychological needs, socio-cultural influence, entrepreneurship education, and attitude as determinants of entrepreneurial motivation. The findings indicated no statistically significant difference in entrepreneurial motivation between public and private university students, though the study concluded there is a need to foster greater intrinsic motivation among undergraduates. Koce (2025) assessed the effectiveness of Nigeria's Technical and Vocational Education and Training (TVET) system in fostering youth empowerment, digital innovation, and entrepreneurship within the Industry 4.0 framework. The study, with 384 respondents comprising TVET students, instructors, and industry stakeholders, found strong support for digital integration (M = 3.86) and instructor capacity building (M = 3.57), but moderate perceptions of industry collaboration (M =

2.93) and limited access to finance and mentorship (M = 3.49). Policy and institutional alignment scored lowest (M = 2.94), revealing systemic gaps requiring attention.

International Studies on Entrepreneurial Mindset among Students

Aeeni et al. (2024) conducted a large-scale study of 8,601 Generation Z entrepreneurs operating in 25 European countries, examining the external enablement role of digital infrastructure in the interplay of entrepreneurial cognitions and innovation. Using hierarchical moderated regressions, they found that socio-cognitive components of entrepreneurial mindset (self-efficacy, risk propensity, opportunity identification) significantly affect innovation among Generation Z entrepreneurs. Importantly, digital infrastructure plays an external enablement role in the interplay of cognitions and innovation. Nikitina et al. (2023) compared individual entrepreneurial orientation between business and STEM students, finding significant differences in how these student groups approach entrepreneurial thinking. Their research emphasized that entrepreneurial orientation can be developed through targeted educational interventions. ScienceDirect (2025) documented a study of tenth-grade students in Muscat, Oman, examining the impact of innovative educational units integrating entrepreneurial education, creativity-focused thinking, and structured creative problem-solving methodologies including TRIZ. The quasi-experimental design revealed significant gains in the experimental group, particularly in idea generation (78.74%), followed by problem understanding (76%) and solution development (75.33%). Gender analysis showed that female students outperformed male students across all creative problem-solving dimensions.

Studies on Innovation Capacity in Educational Contexts

Gama et al. (2022) conducted a comprehensive review of innovation capability literature and developed a contingency framework linking exploration and exploitation capabilities to innovation outcomes. Their framework emphasises that innovation capacity comprises both generative (idea generation) and implementational (execution) capabilities that must be balanced for effective innovation. Chen et al. (2024) developed a multidimensional evaluation framework for understanding problem-solving behaviors, integrating perception, cognition, metacognition, and motivation. Their analysis of log file data from 132 elementary students revealed new problem-solving strategies among high-achievement students, who spent more time constructing problem models and exercising goal-oriented self-control. Cho (2025) examined the relationship between problem-solving competence based on self-determination, optimism, and resilience among 310 university students. The study found that for enhancing problem-solving skills, optimism strongly influenced all sub-factors (ability, opportunity, motivation), while resilience significantly influenced ability and motivation. For applying problem-solving skills, both optimism and resilience had significant influence, with resilience showing the strongest influence on problem recognition, strategy exploration, and outcome analysis. Wang et al. (2025) explored how individual and team-level antecedents interact to facilitate recognition of disruptive innovation opportunities through team learning processes. Using fuzzy-set Qualitative Comparative Analysis (fsQCA) with data from 65 teams, they identified three distinct configurations—Sharing-integrated, Improvisation-inspired, and Star-led—that enable teams to recognize disruptive innovation opportunities through collective wisdom. Farrokhnia et al. (2025) conducted a systematic review of 44 empirical studies on university students' opportunity identification capability, dating from 2000 through 2022. Their findings indicate that students' prior knowledge, entrepreneurial alertness, and creativity are the most influential factors in the opportunity identification process. They concluded that developing students' opportunity identification capability requires guiding them through three distinct stages—triggering, idea generation, and idea evaluation—within a constructively aligned learning environment. In one of the studies, Abaikpa, et. al (2026) opined that educational institutions and policymakers as well as government should update and align vocational and technical curricula to equip newly entrepreneurs with relevant skills, as well as designing accessible and flexible financing options – collateral free loans or credit guarantees to support new entrepreneurs.

3. Methodology

3.1 Research Design

This study adopts a correlational survey research design as the most appropriate approach for examining the relationships between entrepreneurial mindset dimensions (independent variable) and innovation capacity dimensions (dependent variable) without manipulating any variables. The correlational design is deemed suitable because it enables the researcher to determine both the degree and direction of relationships between the variables as they naturally exist among the student population. This design is particularly advantageous for this study as it allows for the examination of multiple dimensions of entrepreneurial mindset—including opportunity recognition, risk-taking propensity, proactiveness, and innovativeness—and their respective relationships with various aspects of innovation capacity, such as idea generation, creative problem-solving, and implementation capability. The survey approach facilitates efficient data collection from a representative sample using standardized instruments, thereby enabling statistical analysis of relationships and rigorous testing of the formulated hypotheses. The study employs a cross-sectional design, collecting data at a single point in time, which is appropriate given the research objectives and the practical constraints of the academic calendar. This design choice aligns with established methodological practices in entrepreneurial education research and permits the identification of patterns and associations that can inform pedagogical interventions.

3.2 Study Area

The study is conducted at the Federal College of Education, Ididep Ibiono, located in Ibiono Local Government Area of Akwa Ibom State, Nigeria. The college was established in May 2023 and admitted its pioneer students for the 2024/2025 academic session (Federal College of Education, Ididep, 2025). The choice of this institution as the research setting is strategically significant for several reasons. Being a newly established institution, the Federal College of Education, Ididep, presents a unique opportunity to examine the entrepreneurial mindset and innovation capacity of students who are pioneers in their academic programmes. The selection of the School of Vocational and Technical Education, in particular, is intentional as vocational and technical education students are expected to demonstrate higher levels of entrepreneurial thinking and innovative capabilities due to the practical nature of their training. Additionally, the institution's location in Akwa Ibom State, a region with growing entrepreneurial activities and economic diversification efforts, provides a relevant context for examining how educational institutions contribute to developing human capital with entrepreneurial competencies. The institution's recent establishment ensures that findings from this study could provide baseline data for future longitudinal research and inform policy development regarding entrepreneurial education in newly established Nigerian tertiary institutions.

3.3 Population of the Study

The population of this study consists of all students enrolled in the School of Vocational and Technical Education at the Federal College of Education, Ididep, during the 2024/2025 academic session. Specifically, the target population comprises 89 students, with 58 students from the Business Education Department and 31 students from the Agricultural Education Department. The selection of this population is justified by the nature of their academic programmes, which are inherently designed to foster practical skills, self-reliance, and entrepreneurial competencies. The Business Education Department equips students with knowledge and skills in commerce, accounting, and management, while the Agricultural Education Department prepares students for careers in agricultural production, agribusiness, and related fields—all domains where entrepreneurial mindset and innovation capacity are critical for professional success. The manageable size of the population makes it feasible to include all members in the study, thereby enhancing the validity and generalizability of the findings. This population is also considered homogeneous enough to provide reliable data while being diverse in terms of academic specialization to allow for meaningful comparisons between departments.

3.4 Sample and Sampling Technique

The sample size for this study comprises 89 students, representing the entire population of the School of Vocational and Technical Education at the Federal College of Education, Ididep. This sample includes all 58 students from the Business Education Department and all 31 students from the Agricultural Education Department. A census sampling technique is adopted for this study, given that the population is relatively small and manageable. The census approach is preferred as it ensures greater accuracy and representativeness by eliminating sampling errors that could arise from selecting a subset of the population. This technique allows the researcher to collect data from every member of the target population, thereby increasing the reliability of the findings and enabling comprehensive analysis without the risk of underrepresentation or overrepresentation of particular subgroups. The decision to employ census sampling is further justified by the feasibility of reaching all respondents given the institutional setting, the students' accessibility during the academic session, and the availability of resources for data collection. By including the entire population, the study enhances the statistical power of the analysis and ensures that the findings accurately reflect the characteristics, perceptions, and capabilities of the students in the School of Vocational and Technical Education.

3.5 Instrument for Data Collection

Data for this study are collected using a structured questionnaire titled "Entrepreneurial Mindset and Innovation Capacity Questionnaire" (EMICQ), developed by the researcher based on an extensive review of theoretical and empirical literature on entrepreneurial mindset and innovation capacity. The EMICQ is designed to capture both the independent variable (entrepreneurial mindset) and the dependent variable (innovation capacity) through carefully constructed items. The questionnaire comprises three main sections: Section A, which collects demographic and background information of respondents; Section B, which measures entrepreneurial mindset dimensions, including opportunity recognition (5 items), risk-taking propensity (5 items), proactiveness (5 items), and innovativeness (5 items); and Section C, which assesses innovation capacity dimensions, including idea generation (5 items), creative problem-solving (5 items), and implementation capability (5 items). All items are measured using a five-point Likert scale ranging from "Strongly Agree" (5) to "Strongly Disagree" (1). To ensure content and face validity, the questionnaire is subjected to expert review by three specialists in entrepreneurial education, research methodology, and measurement and evaluation. The experts are requested to assess the clarity, relevance, and appropriateness of the items in measuring the intended constructs. Their feedback is incorporated into the final version of the instrument. Additionally, a pilot test is conducted with 30 students from a similar institution that is not part of the main study sample to assess the reliability and clarity of the questionnaire. The pilot test results yield a Cronbach's alpha coefficient of .87 for entrepreneurial mindset items and .84 for innovation capacity items, indicating high internal consistency and reliability.

3.6 Method of Data Analysis

The statistical methods adopted for data analysis in this study are simple percentages and simple regression analysis. The data are analyzed with the help of the Statistical Package for Social Sciences (SPSS) version 26.0. Simple percentages are employed to describe the demographic characteristics of the respondents and to present the frequency distribution of responses to questionnaire items. This descriptive statistical technique facilitates a clear understanding of the respondents' profile and their perceptions regarding entrepreneurial mindset and innovation capacity. Simple regression analysis is utilized to test the hypotheses formulated for the study at 0.05 level of significance. The simple regression analysis is appropriate as it enables the researcher to examine the nature and strength of the relationship between each dimension of entrepreneurial mindset (predictor variables) and the dimensions of innovation capacity (criterion variables). Specifically, the analysis helps determine whether entrepreneurial mindset dimensions significantly predict innovation capacity dimensions among the students. Prior to conducting the regression analysis, the assumptions of normality, linearity, and homoscedasticity are tested to ensure the appropriateness of the statistical technique. The results of the regression analysis provide beta coefficients, R-squared values, t-statistics, and p-values, which are interpreted to determine the significance and magnitude of the relationships between the

variables. The choice of regression analysis is guided by the correlational nature of the study and the need to establish predictive relationships between entrepreneurial mindset dimensions and innovation capacity dimensions.

3.7 Ethical Considerations

Ethical considerations are meticulously observed throughout the research process to protect the rights and welfare of the participants. Prior to data collection, formal approval is obtained from the appropriate institutional authorities at the Federal College of Education, Idiep. Informed consent is secured from all participants after providing them with clear information about the purpose of the study, the voluntary nature of their participation, and their right to withdraw at any time without penalty. Participants are assured of the confidentiality and anonymity of their responses, and they are informed that data will be used solely for academic research purposes. No identifying information is collected on the questionnaire to ensure anonymity. The researcher also ensures that the data collection process does not interfere with the academic activities of the students and that participants are treated with respect and dignity throughout the research process. Furthermore, the researcher commits to reporting the findings accurately and transparently, without falsification or manipulation of data, in accordance with the ethical standards of academic research.

4. Data Analysis and Results

4.1 Demographic Data Analysis

Table 1 Analysis of Respondents' Department

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Business Education Department	58	65.2	65.2	65.2
	Agricultural Education Department	31	34.8	34.8	100.0
	Total	89	100.0	100.0	

Source: Field Data (2026)

The above table shows that 58 respondents representing 65.2% were from the Business Education Department, while 31 respondents representing 34.8% were from the Agricultural Education Department, School of Vocational and Technical Education, Federal College of Education, Idiep. The results show that majority of the respondents were from the Business Education Department.

4.2 Entrepreneurship Mindset

Table 2: Analysis of research constructs on Entrepreneurship Mindset

Research construct	SA	A	U	SD	D
I enjoy thinking about new ways to do things	14 (15.7%)	43 (48.3%)	15(16.9%)	14 (15.7%)	3 (3.4%)
I anticipate future problems and prepare for them	15 (16.9%)	19(21.3%)	30 (33.7%)	22 (24.7%)	3 (3.4%)
I am willing to take calculated risks to achieve my goals	16 (18.0%)	24(27.0%)	21(23.6%)	28 (31.5%)	0 (0.0%
I can easily identify unmet needs in my environment	48 (53.9%)	19(21.3%)	16(18.0%)	4 (4.5%)	2 (2.2%)
Overall, I believe I have the natural drive to identify resources and act on opportunities rather than just following existing routines.	16(18.0%)	47(52.8%)	18(20.2%)	5 (5.6%)	3 (3.4%)

Source: Field Survey, 2026

Table above shows that out of 89 respondents, 14 respondents (15.7%), strongly agreed and 43 respondents (48.3%) agreed and respectively that they enjoy thinking about new ways to do things. Also, 15 respondents (16.9%) strongly agreed, and 19 respondents representing 21.3% agreed respectively that they anticipate future problems and prepare for them. Additionally, 16 (18%) of the respondents strongly agreed, 24 respondents representing 27% agreed respectively that they are willing to take calculated risks to achieve their goals. It further showed that 48 (53.9%) of the respondents strongly agreed, 19 respondents representing 21.3% agreed respectively that they can easily identify unmet needs in their environment. 16(18.0%) of the respondents strongly agreed and 47(52.8%) agreed respectively that generally, they believe they have the natural drive to identify resources and act on opportunities rather than just following existing routines.

4.3 Innovation Capacity

Table 3: Analysis of research constructs on Innovation Capacity

Research construct	SA	A	U	SD	D
I can generate many ideas when faced with a problem	13 (14.6%)	17(19.1%)	35(39.3%)	20(22.5%)	4 (4.5%)
I can clearly define problems before trying to solve them	12(13.5%)	27(30.3%)	19 (21.3%)	20(22.5%)	11 (12.4%)
I am prepared to develop my ideas into real products or services	49 (55.1%)	13(14.6%)	13(14.6%)	8 (9.0%)	6 (6.7%
I am able to easily identify new entrepreneurial opportunities in my academic and social environments.	14 (15.7%)	50(56.2%)	11 (12.4%)	11 (12.4%)	3 (3.4%)
I have the confidence to test and refine a novel idea (academic or business-related) even without detailed instructions from others.	16 (18.0%)	27(30.3%)	27(30.3%)	13 (14.6%)	6 (6.7%

Source: Field Survey, 2026

Table above shows that out of 89 respondents, 13 respondents (14.6%), strongly agreed and 17 respondents (19.1%) agreed respectively that they can generate many ideas when faced with a problem. Also, 12 respondents (13.5%) strongly agreed, and 27 respondents representing 30.3% agreed respectively that they can clearly define problems before trying to solve them. Additionally, 49 (55.1%) of the respondents strongly agreed, 13(14.6%) of the respondents agreed respectively that they are prepared to develop their ideas into real products or services It further showed that 14 (15.7%) of the respondents strongly agreed, 50(56.2%) of the respondents agreed respectively that they are able to easily identify new entrepreneurial opportunities in their academic and social environments. 16(18.0%) of the respondents strongly agreed and 27(30.3%) of the respondents agreed respectively that they have the confidence to test and refine a novel idea (academic or business-related) even without detailed instructions from others.

4.4 Descriptive Statistics

Table 4: Descriptive Statistics

Table: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Entrepreneurial Mindset	89	1.8	4.6	3.472	.4817	-.705	.255	1.710	.506
Innovation Capacity	89	1.6	5.0	3.631	.7471	-.217	.255	-.543	.506
Valid N (listwise)	89								

EAST AFRICAN FINANCE JOURNAL (EAFJ)
Volume 5 Issue 3 |2026 | pp 9- 23
E-ISSN: 2959-9121

As depicted on a compilation of descriptive data for the characteristics shown in the above Table, the mean and standard deviation scores were minimal indicating that the dataset were clustered below the mean translating to a desired outcome that the dataset has low level of variability. This indicates that entrepreneurship mindset and innovation capacity were at low level leading to the mean score of 3.472.

4.5 Test of Research Hypothesis

There is no significant relationship between entrepreneurial mindset and innovation capacity among students of the Federal College of Education, Ididep, Ibiono, Akwa Ibom State, Nigeria. The regression technique was performed to test the hypothesis.

Table 5: Regression Analysis Results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.341[a]	.116	.106	.7063	2.101

a. Predictors: (Constant), Entrepreneurial Mindset
b. Dependent Variable: Innovation Capacity

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.711	1	5.711	11.447	.001[b]
	Residual	43.401	87	.499		
	Total	49.112	88			

a. Dependent Variable: Innovation Capacity
b. Predictors: (Constant), Entrepreneurial Mindset

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.795	.548		3.277	.002
	Entrepreneurial Mindset	.529	.156	.341	3.383	.001

a. Dependent Variable: Innovation Capacity

This hypothesis was tested using regression statistics and the results are presented in Table 4.5. The test of the null hypothesis (H0) against the alternate hypothesis (H1) is that H0 is rejected if the calculated p- value is less than the p-value of 0.05. From Table 5, since the calculated p-value of 0.001 is less than the p-value of 0.05, the researcher rejected the null hypothesis and accepts the alternative hypothesis, which states that there is a significant relationship between entrepreneurial mindset and innovation capacity among students of the Federal College of Education, Ididep, Ibiono, Akwa Ibom State, Nigeria. A coefficient of 0.529 implies that entrepreneurial mindset has positive relationship with innovation capacity among students of the Federal College of Education, Ididep, Ibiono, Akwa Ibom State, Nigeria. By implication, 1% increase in entrepreneurial mindset causes 0.53% changes in innovation capacity among students of FCE Ididep Ibiono.

4.6 Discussion of the Findings

The results showed that there is a significant relationship between entrepreneurial mindset and innovation capacity among students of the Federal College of Education, Ididep, Ibiono, Akwa Ibom State, Nigeria. This finding is consistent with the finding of Koce (2025) that the effectiveness of Nigeria's Technical and Vocational Education and Training (TVET) system in fostering youth empowerment, digital innovation, and entrepreneurship within the Industry 4.0 framework cannot be

overemphasized. The study found strong support for digital integration and instructor capacity building, but moderate perceptions of industry collaboration and limited access to finance and mentorship. A significant, positive relationship between entrepreneurial mindset and innovation capacity among students implies that cultivating entrepreneurial traits directly enhances their ability to design creative teaching methodologies, launch viable educational ventures, and solve critical local problems in Akwa Ibom State. The verified correlation yields critical implications for the Federal College of Education, Ididep, its students, and the broader Nigerian educational sector:

Since students are future educators, this finding implies that fostering an entrepreneurial mindset in the classroom will produce a new generation of teachers who act as "edupreneurs". Rather than relying on rote teaching methods, these graduates are better equipped to integrate experiential learning, resourcefulness, and practical vocational skills into their own teaching curriculums. The result serves as empirical evidence for the National Commission for Colleges of Education (NCCE) to mandate robust entrepreneurship and innovation modules across all academic disciplines at the college. It justifies a shift away from purely theoretical instruction toward project-based learning and technological integration to adequately prepare trainees for 21st-century economic realities. Graduating teachers with an innovative capacity are more likely to create supplementary streams of income, establish sustainable small and medium-sized enterprises (SMEs), and reduce over-reliance on public sector employment. This directly supports grassroots socio-economic development within Ibiono Ibom and the wider Niger Delta region. This finding perfectly aligns with the Federal College of Education, Ididep's core vision of building 4an innovation-driven culture. Furthermore, it complements Akwa Ibom State's broader youth and capacity development initiatives by ensuring graduates become proactive job creators rather than mere job seekers.

5 Summary, Conclusions and Recommendations

5.1 Summary of Findings

This study establishes a significant, positive correlation between an entrepreneurial mindset and innovation capacity among students at the Federal College of Education, Ididep. By validating that students who think entrepreneurially are better equipped to innovate, the research directly links psychological traits to practical, economic outcomes. The findings confirm that fostering this mindset is not merely an academic exercise but a foundational strategy for producing "edupreneurs"—educators who will transform pedagogy, create economic opportunities, and drive local development. The discussion highlights that while digital integration and instructor training are progressing, systemic gaps persist in industry collaboration, finance, and mentorship, which must be addressed to fully realize this potential.

5.2 Conclusion

The study concludes that an entrepreneurial mindset is a critical driver of innovation capacity within the teacher education context. For the Federal College of Education, Ididep, this means that its primary mandate of producing teachers can be synergistically aligned with Akwa Ibom State's and Nigeria's broader goals of economic diversification and youth empowerment. The evidence supports a paradigm shift: graduating students are not merely filling the role of teachers but are emerging as proactive agents of change. When equipped with entrepreneurial thinking, they are poised to challenge rote-learning traditions, design practical solutions to community problems, and create sustainable enterprises. This transforms the college from a simple training institution into a catalyst for grassroots socio-economic development.

5.3 Recommendations

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

For the National Commission for Colleges of Education (NCCE):

- Mandate Curriculum Integration: The NCCE should mandate the integration of robust "Entrepreneurship and Innovation" modules across all academic disciplines (not just Business Education). This should be a compulsory component of every teacher's certification.

- Shift to Competency-Based Assessment: Revise curriculum guidelines to emphasize project-based learning and technological integration over purely theoretical examinations.

For the Federal College of Education, Idiep (FCE Idiep):

- Establish an Innovation Hub: Create a dedicated on-campus "EdTech and Innovation Hub" where students can collaborate, access prototyping tools, and receive mentorship to test their teaching methodologies and business ideas.
- Instructor Development Programs: Launch continuous professional development programs aimed at training lecturers on how to effectively teach and assess entrepreneurial competencies and innovative thinking.
- Forge Strategic Industry Partnerships: Actively seek formal partnerships with local SMEs, tech startups, and alumni entrepreneurs to provide students with real-world exposure, financing pathways, and practical mentorship to bridge the gap identified regarding finance and industry collaboration.

For the Government (Federal and Akwa Ibom State):

- Establish a Special Education-Enterprise Fund: Government should allocate a specific grant or low-interest loan scheme dedicated to FCE students and recent graduates to commercialize their innovative educational projects.
- Incentivize Innovation: Create government-backed awards or grants to recognize and fund the most innovative student-led educational initiatives.

For Students and Graduates:

- Embrace Lifelong Learning: Actively seek out entrepreneurship workshops, online courses, and mentorship beyond the standard curriculum to supplement the formal training provided.
- Collaborate Across Disciplines: Form interdisciplinary teams (e.g., combining technical skills with creative education) to develop more comprehensive and scalable solutions for local problems.

References

Abaikpa, U. A., Enang, I. B., & Udom, E.-O. E. (2026). The role of vocational and technical education in promoting small business startups in Akwa Ibom State, Nigeria. African Journal of Commercial Studies, 7(3), 278–286. https://doi.org/10.59413/ajocs/v7.i3.34

Abaikpa, U. A. (2025). Green environmental management and community sustainability in Exonmobil, Eket, Akwa Ibom State, Nigeria. African Journal of Commercial Studies, 6(5), 117–129. https://doi.org/10.59413/ajocs/v6.i5.11

Abaikpa, U. A. (2025). Digital leadership and remote work management: A study of MTN, Akwa Ibom State, Nigeria. African Journal of Commercial Studies, 6(4), 1–14. https://doi.org/10.59413/ajocs/v6.i4.1

Aeeni, Z., Saeedikiya, M., Salamzadeh, A., & Salamzadeh, Y. (2024). Cognitions affecting innovation among generation Z entrepreneurs: The external enablement of digital infrastructure. International Journal of Entrepreneurial Behavior & Research. https://research.uok.ac.ir/~zaeeni/ViewResearchEn.aspx?ResearcherID=129934

Al-Mahrouqi, A., et al. (2025). Fostering entrepreneurial mindsets and future skills: Innovative educational units for enhancing creative problem-solving in tenth-grade students. International Journal of Educational Development, 112, 103–118.

Bello, A. A., Raji, F. A., Adebayo, A. A., & Salami, A. A. (2025). Entrepreneurship education as a catalyst for skills competitiveness in technical colleges in Lagos State, Nigeria. The Vocational and Applied Science Journal, 19(2), 41–46.

Chen, M., Wu, L., Li, B., & Liu, Y. (2024). Behavioral patterns associated with solving ill-defined complex problems from a multidimensional perspective: Perception, cognition, metacognition, and motivation. Educational Technology & Society, 27(4), 171–190. https://eric.ed.gov/?id=EJ1443413

Cho, Y. S. (2025). A study on the relationship between problem-solving competence based on self-determination, optimism, and resilience in university students. Asia-Pacific Journal of Convergent Research Interchange, 11(10), 929–940. http://apjcriweb.org/content/vol11no10/63.html

European Commission. (2021). EntreComp: The entrepreneurship competence framework. Publications Office of the European Union.

Farrokhnia, M., Noroozi, O., Baggen, Y., Lans, T., Biemans, H. J. A., & Pittaway, L. (2025). Fostering university students' entrepreneurial opportunity identification capability: A systematic literature review. Entrepreneurship Education and Pedagogy, 9(1), 45–91.

Gama, F., Sjödin, D., Parida, V., Frishammar, J., & Wincent, J. (2022). Exploratory and exploitative capability paths for innovation: A contingency framework for harnessing fuzziness in the front end. Technovation, 113, 102416.

Job, I. (2025, December 24). Akwa Ibom: Provost hails FG as Ididep COE matriculates 583 pioneer students. The Sun Nigeria. https://thesun.ng/akwa-ibom-provost-hails-fg-as-ididep-coe-matriculates-583-pioneer-students/

Koce, H. D. (2025). Industry 4.0 and youth empowerment: A TVET framework for fostering entrepreneurship and digital innovation in Nigeria. Proceedings of the International Conference on Sustainable Business and Entrepreneurship (ICSBE 2025), 278–291. Atlantis Press. https://doi.org/10.2991/978-94-6463-930-8_20

Liadi, H. O. (2025). Assessing the impact of AI-driven tools on fostering an entrepreneurial mindset among business education students in South-South Nigeria universities. International Journal of Entrepreneurship, Technology and Innovation, 3(1), 1–12.

Nikitina, T., Licznerska, M., Ozolina-Ozola, I., & Lapina, I. (2023). Individual entrepreneurial orientation: Comparison of business and STEM students. Education + Training, 65(3), 456–473.

Ogunwoye, A. A., Oladele, O. O., Morakinyo, D. A., Fakunle, I. O., & Bankefa, I. O. (2025). A comparative analysis of the determinants of entrepreneurial motivation among undergraduates in public and private universities in Southwest, Nigeria. Future Business Journal, 11(1). https://doi.org/10.1186/s43093-025-00611-w

Wang, Z., Wei, L., & Wang, S. (2025). Navigating disruptive innovation through opportunity recognition: A configurational approach to team learning. Technovation, 144, 103236. https://www.sciencedirect.com/science/article/abs/pii/S0166497225000689