



Business Attitude and Innovation in Enhancing Apprentices' Growth and Commitment

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Abstract

This study explored how entrepreneurial mindset and innovation contribute to students' growth and engagement within Nigeria's higher education system. Employing a qualitative content analysis of 25 peer-reviewed articles published between 2015 and 2025, and guided by the PRISMA framework, the research ensured methodological rigor and relevance. The findings indicated that an entrepreneurial mindset enhances students' self-efficacy, motivation, and resilience, while innovation promotes creativity, critical thinking, and active participation in learning. Notably, the integration of both elements yielded synergistic benefits, significantly improving students' overall development and readiness for post-graduation opportunities. The study concludes that embedding entrepreneurship and innovation into university curricula is vital for bridging educational and socio-economic gaps in Nigeria. Consequently, it recommends mandatory entrepreneurship-innovation modules, curriculum restructuring, and adequate institutional funding to sustain student engagement and drive national development.

Keywords: Business attitude, Apprentices, commitment, innovation, growth.

Introduction

Entrepreneurial mindset and innovation are vital to fostering student growth, engagement, and employability in the 21st century. Globally, countries such as Finland, Singapore, China, and South Korea have successfully integrated entrepreneurship education into higher education, leading to enhanced creativity, problem-solving, and innovation-driven economies. In contrast, Nigeria faces persistent challenges including underfunded programs, weak institutional support, and outdated pedagogies, resulting in low student engagement and poor entrepreneurial outcomes. Empirical evidence from Nigeria shows that while students often express interest in entrepreneurship, their self-efficacy, readiness, and innovative capacity remain low due to inadequate institutional frameworks and limited exposure to practical learning. Consequently, graduate unemployment and dependency on government jobs persist. Comparative studies from Malaysia and Indonesia demonstrate that effective entrepreneurship education can strengthen innovation behavior and engagement, offering reform models for Nigeria, Malathi (2025). Despite growing recognition of entrepreneurship's importance, research in Nigeria has largely focused on entrepreneurial intentions rather than on how mindset and innovation directly enhance student engagement and personal development. This study, therefore, addresses this gap by examining how

entrepreneurial mindset and innovation can strengthen student growth and engagement within Nigerian higher education. It aims to generate empirical insights that inform curriculum reforms, institutional strategies, and policy initiatives to produce innovative, self-reliant, and globally competitive graduates capable of driving socio-economic transformation.

Problem Statement

Entrepreneurship and innovation are widely recognized as key drivers of student growth, engagement, and employability; however, Nigeria's higher education system continues to struggle in these areas. With graduate unemployment reaching 40.1% (NBS, 2023), many Nigerian graduates lack the entrepreneurial and innovative skills needed for success in a competitive, knowledge-driven economy. Despite the inclusion of entrepreneurship courses in universities and polytechnics, their impact remains minimal due to inadequate funding, theoretical teaching methods, and weak innovation ecosystems. In contrast, nations like South Korea and Singapore have successfully embedded entrepreneurship education into their curricula, producing more employable and engaged graduates. The persistence of disengaged and underprepared graduates in Nigeria reflects deep systemic gaps between curriculum intentions and actual outcomes. While existing research has examined entrepreneurial intentions and institutional challenges,

little attention has been paid to how entrepreneurial mindset and innovation directly influence student engagement and personal development. Since engagement serves as a key mediator between entrepreneurship education and meaningful learning outcomes, this oversight is significant. To address this gap, the present study investigates how entrepreneurial mindset and innovation can enhance student growth and engagement in Nigerian higher education, offering empirical insights to guide effective curriculum reforms and policy interventions.

Research Questions

1. How does entrepreneurial mindset influence students' growth and engagement?
2. In what ways does innovation contribute to enhancing students' growth and engagement?
3. What combined effect do entrepreneurial mindset and innovation have on students' growth and engagement?

Research Objectives

1. To assess the influence of entrepreneurial mindset on students' growth and engagement.
2. To evaluate the contribution of innovation in enhancing students' growth and engagement.
3. To determine the combined effect of entrepreneurial mindset and innovation on students' growth and engagement.

Literature review

Conceptual Review

Conceptualizing the Entrepreneurial Mindset in Higher Education

The entrepreneurial mindset refers to a set of cognitive, emotional, and behavioral orientations that enable individuals to identify opportunities, take calculated risks, and create value in dynamic environments (Daspit, D'Souza, & Ambos, 2023). In higher education, entrepreneurial mindset has been associated with problem-solving, adaptability, and creativity, skills that are crucial for student development and long-term employability (Wardana et al., 2020). Research indicates that this mindset not only shapes entrepreneurial intentions but also strengthens students' learning engagement and resilience (Jiang, Ning, & Wang, 2021). For example, Nigerian students with stronger entrepreneurial self-efficacy tend to set ambitious career goals and are more inclined to pursue innovative ventures after graduation (Osadolor et al., 2021). Achieving conceptual clarity on entrepreneurial mindset, therefore, lays the groundwork for exploring how it can transform student engagement in Nigerian universities.

Within Nigeria, however, limited emphasis on entrepreneurial orientation has weakened graduates' ability to navigate economic instability and persistent unemployment (Adeniyi, 2022). This stands in sharp contrast to global best practices, as seen in countries such as Finland and Singapore, where entrepreneurial thinking is woven into mainstream curricula to foster innovation and adaptability (Korhonen, Ketonen, & Toom, 2024). Scholars argue that embedding entrepreneurial mindset into Nigeria's higher education system could shift learning away from rote knowledge acquisition toward creativity, initiative, and employability (Oyinlola et al., 2024). Thus, defining entrepreneurial mindset in this study is both a

conceptual and contextual necessity, representing a key step toward reshaping Nigerian education to meet the demands of the 21st century.

Innovation as a Driver of Student Growth and Engagement

Innovation in education has been increasingly recognized as a driver of student growth, learning outcomes, and long-term adaptability. It refers not only to technological tools but also to pedagogical models, curricula, and institutional practices that foster creativity and problem-solving (Shadiev, Hwang, & Huang, 2022). Globally, innovative entrepreneurship pedagogy has been associated with opportunity discovery and improved study engagement among nascent entrepreneurs (Lyu, 2024). Liu et al. (2023) further highlighted that entrepreneurship programs that integrate innovation through project-based learning increased both study engagement and entrepreneurial competence. These findings affirm that innovation in higher education transcends technological integration—it fundamentally reshapes student learning experiences.

However, in Nigeria, innovation in entrepreneurship education has been largely underexplored, leaving students less prepared for real-world challenges (Oyinlola et al., 2024). Unlike Asian economies such as China, where entrepreneurial pedagogy has consistently raised entrepreneurial intentions among university students (Sun, 2023), Nigerian universities still face barriers of outdated curricula, limited resources, and poor alignment with labor market realities. Adelowo (2025) emphasized that without embedding innovation in Nigerian entrepreneurship education, graduate entrepreneurship propensity remains unsustainable. Therefore, focusing on innovation as a catalyst for growth and engagement highlights the urgent need to re-engineer Nigerian higher education to align with global standards.

Linking Entrepreneurial Mindset, Engagement, and Self-Efficacy

Student engagement has been described as the extent of students' involvement in their academic, social, and emotional learning processes, which significantly influences academic success and personal development (Amerstorfer, Huber, & Gasteiger-Klicpera, 2021). Research has consistently shown that entrepreneurial mindset enhances student engagement by fostering proactive learning, resilience, and creativity (Knox, 2022; Korhonen, Ketonen, & Toom, 2024). Jiang, Ning, and Wang (2021) demonstrated that entrepreneurial self-efficacy plays a mediating role between entrepreneurship education and entrepreneurial mindset, linking classroom experiences directly to entrepreneurial intentions. Thus, the combination of

entrepreneurial mindset and self-efficacy serves as a motivational framework for enhancing engagement. In Nigeria, however, most entrepreneurship education initiatives have not adequately emphasized self-efficacy and its role in sustaining engagement (Nwibe & Ogbuanya, 2024). Students often report disengagement due to poor curriculum relevance and inadequate institutional support, which reduces their motivation to translate entrepreneurial education into practical outcomes (Adeniyi, 2022). Comparatively, in Europe and Asia, entrepreneurial mindset development has been integrated into study engagement strategies with measurable outcomes in student creativity and entrepreneurial activity (Pham, 2023; Lyu, 2024). Addressing this gap in Nigeria is essential, as enhanced student engagement through entrepreneurial mindset and self-efficacy can directly influence graduate employability and long-term social impact.

The Nigerian Higher Education Context and the Need for Reform

Nigeria's higher education system is confronted with persistent challenges such as high graduate unemployment, weak innovation capacity, and low student participation in entrepreneurial activities (Adelowo, 2025; Oyinlola et al., 2024). Although entrepreneurship education has been mandated by the government, its implementation has often been fragmented and poorly aligned with labor market needs (Adeniyi, 2022). Oyinlola et al. (2024) observed that while several universities have established entrepreneurship centers, their effectiveness remains limited due to resource shortages and weak student engagement. This has contributed to the widening gap between educational outcomes and graduate employability, further deepening the unemployment crisis.

By contrast, countries such as Finland, South Korea, and Singapore have successfully integrated entrepreneurship and innovation into their education systems, resulting in stronger graduate employability and increased startup creation (Korhonen, Ketonen, & Toom, 2024; Malathi, 2025). Nigeria, however, risks widening its developmental gap if reforms are not prioritized. A major research gap exists in the limited empirical work linking entrepreneurial mindset, innovation, and student engagement in the Nigerian higher education landscape. Addressing this gap is essential to ensure that universities produce not only graduates with theoretical knowledge but also individuals equipped with creativity, resilience, and an entrepreneurial orientation capable of driving socio-economic transformation.

Theoretical Foundation

Theories provide the conceptual lens for analysing how entrepreneurial mindset and innovation influence student development and engagement. While existing studies on entrepreneurship education in Nigeria have often been descriptive, the use of robust theoretical perspectives helps uncover the mechanisms that shape student outcomes. This study adopts two frameworks—Human Capital Theory and the Job Demands–Resources (JD-R) Theory to explain how entrepreneurship education and innovation promote student engagement, resilience, and employability.

Human Capital Theory

Proposed by Gary Becker in 1964, Human Capital Theory emphasizes that education and skills acquisition represent investments that yield returns in the form of enhanced productivity, innovation, and broader economic growth. It argues that the knowledge, competencies, and experiences gained through education strengthen both individual and societal outcomes (Becker, 1964). Within this study, Human Capital Theory highlights how entrepreneurial mindset and innovation-oriented education prepare students for self-employment while also enabling them to contribute creatively within organisations. For example, Adeniyi (2022) found that Nigerian TVET students with higher entrepreneurial readiness and self-efficacy were more likely to pursue viable ventures, illustrating the tangible returns of investing in entrepreneurial education.

In Nigeria, the relevance of this theory is clear. Universities have historically emphasized theoretical knowledge while neglecting practical entrepreneurial competencies, creating a disconnect between graduate skills and labor market expectations (Adelowo, 2025). By framing entrepreneurial mindset and innovation as key forms of human capital, this study reinforces the need for innovative pedagogies in Nigerian higher education that can produce adaptive, resilient graduates equipped to drive socio-economic transformation.

Job Demands–Resources (JD-R) Theory

The Job Demands–Resources (JD-R) Theory, developed by Demerouti, Bakker, Nachreiner, and Schaufeli in 2001, explains how job demands (such as workload and academic challenges) interact with resources (such as support, autonomy, and opportunities for skill-building) to influence motivation, engagement, and performance (Demerouti et al., 2001). The theory argues that resources not only buffer the negative impact of high demands but also foster long-term motivation and growth. Applied to education, entrepreneurship programs that provide access to innovation hubs, mentorship, and project-based learning have been shown to enhance engagement and

entrepreneurial competence, even in demanding academic contexts (Liu et al., 2023).

This theory is particularly relevant in Nigeria, where many students operate in resource-constrained environments with limited exposure to entrepreneurial ecosystems. The absence of adequate resources contributes to disengagement and low levels of innovation (Oyinlola et al., 2024). By applying the JD-R framework, this study underscores the importance of creating supportive educational environments that can sustain student motivation and foster entrepreneurial outcomes. For example, Khodor et al. (2024) found that student engagement increased significantly when family, institutional, and peer support were present, aligning with the JD-R emphasis on resources as enablers of motivation. Therefore, this theory highlights the need for Nigerian higher education institutions to strategically provide entrepreneurial resources that enhance growth, engagement, and resilience, particularly in resource-scarce environments.

Empirical Review

Daspit, D'Souza, and Ambos (2023) identified the lack of definitional clarity as a key problem in entrepreneurial mindset scholarship, noting that fragmented conceptualizations hindered progress in research and practice. Their purpose was to propose an integrated definition and set a future research agenda. Drawing on institutional and cognitive perspectives, they applied a systematic review method to synthesize over 180 articles. Findings revealed that entrepreneurial mindset encompasses opportunity recognition, resilience, and adaptability, but only 27% of the reviewed studies employed a longitudinal approach, limiting understanding of mindset development. The implication was that without a coherent framework, entrepreneurship education struggles to deliver measurable outcomes. The gap lies in the absence of contextual applications of their integrated framework in African higher education settings, particularly Nigeria, where entrepreneurship has been mandated into the curriculum since 2007.

De la Gala-Velásquez and colleagues (2024) investigated the misalignment between entrepreneurship curricula and the real-world needs of university students, highlighting that outdated course structures undermined mindset development. The study aimed to analyse how curriculum relevance and adequacy influence entrepreneurial orientation. Using human capital theory, they conducted surveys across multiple Spanish universities. Results showed that 62% of students perceived entrepreneurship courses as outdated, and only 18% felt the curriculum adequately prepared them for entrepreneurial ventures. The implication was that curriculum reform directly impacts student engagement and entrepreneurial

readiness. However, the research gap is that their study was limited to European contexts, neglecting Nigeria where curriculum reform is ongoing but understudied in terms of entrepreneurial mindset outcomes.

Jiang, Ning, and Wang (2021) examined the problem of weak translation of entrepreneurship education into actual entrepreneurial intentions. Their purpose was to test whether entrepreneurial self-efficacy mediated the relationship between entrepreneurship education, entrepreneurial mindset, and entrepreneurial intention. Using Bandura's social cognitive theory, they applied a structural equation modeling (SEM) approach with 1,046 Chinese university students. Findings showed that entrepreneurial education significantly influenced mindset ($\beta = 0.52, p < 0.001$), which in turn impacted intention, with self-efficacy serving as a full mediator. This highlighted that confidence in entrepreneurial ability is central to turning mindset into action. However, the gap is that the mediating role of self-efficacy has not been empirically tested among Nigerian students, where cultural and institutional barriers differ.

Khodor et al. (2024) addressed the challenge of declining entrepreneurial engagement among adolescents despite increased access to entrepreneurship programs. Their purpose was to explore how individual, family, and school-level factors shape entrepreneurial intentions. Grounded in the theory of planned behavior, they surveyed 2,143 adolescents across Lebanon. Findings showed that family support accounted for 39% of variance in intention, while school support accounted for 22%, with gender moderating the relationship. The implication was that multi-level support systems are critical in fostering engagement. Yet, the gap is that the role of institutional and socio-economic factors in Nigeria, where family obligations and economic instability are distinct, remains underexplored.

Malathi (2025) focused on the persistent gap between entrepreneurial education and actual entrepreneurial engagement among management students in India. The purpose was to test the mediating role of entrepreneurial education. Using the theory of planned behavior, SEM was applied to data from 738 respondents. Findings indicated that entrepreneurial education explained 48% of the variance in entrepreneurial intention, with engagement serving as a partial mediator. The implication was that curriculum design and delivery significantly shaped entrepreneurial participation. The gap lies in the absence of cross-country validation, particularly in Nigeria, where entrepreneurial engagement rates among graduates remain below 20%.

Nwibe and Ogbuanya (2024) addressed the lack of clarity on how emotional intelligence impacts entrepreneurial intention in Nigeria. Their study aimed

to explore the mediating role of self-efficacy domains. Using the social cognitive career theory, they surveyed 814 undergraduates. Findings showed that emotional intelligence predicted 29% of entrepreneurial intention variance through general and task-specific self-efficacy. The implication was that psychological attributes are critical for entrepreneurship education outcomes. The gap is that engagement factors were not integrated, leaving an incomplete picture of mindset formation.

Oyinlola et al. (2024) addressed systemic challenges in entrepreneurship and innovation in Nigerian universities, including underfunding, poor pedagogy, and low graduate entrepreneurial activity. Their study aimed to identify trends, challenges, and opportunities. Using qualitative case study methods across six Nigerian universities, findings showed that only 23% of students pursued entrepreneurship-related activities, while infrastructural deficiencies remained a major barrier. The implication was that Nigeria's higher education sector requires systemic reforms to achieve entrepreneurship education goals. The gap lies in the absence of micro-level analysis on how entrepreneurial mindset and student engagement can improve outcomes within this system.

Pham (2023) explored the problem of limited understanding of e-entrepreneurial intentions in digital economies. The study aimed to test how entrepreneurship knowledge and technological innovativeness impacted e-intentions. Using the resource-based view (RBV), SEM was applied to 476 Vietnamese undergraduates. Findings revealed that technological innovativeness explained 38% of e-intention variance, while knowledge accounted for 27%. The implication was that integrating digital innovation into entrepreneurship curricula is critical. The gap is that similar empirical tests are scarce in Nigeria, where digital entrepreneurship adoption among students is growing.

Methods and Materials

The study employed a qualitative research design based entirely on secondary data to examine the relationship

Table 1: Selection of Papers for Analysis

Stage of Review	Number of Papers	Description
Initially identified	302	Records identified through database search (2015–2025)
Screened after duplicates	150	Duplicates and irrelevant titles removed
Selected for eligibility	32	Full texts assessed against inclusion and exclusion criteria
Excluded at eligibility	7	Lacked empirical evidence or relevance to mindset/innovation
Final papers analysed	25	Used for full content analysis and answering research questions

The table demonstrates the systematic narrowing down of papers to ensure rigor and alignment. By focusing on 25 studies, the analysis retained sufficient breadth for comparative insights while maintaining depth to address the study's research questions effectively.

between entrepreneurial mindset and student engagement in Nigerian higher education. Guided by the PRISMA framework, the research ensured rigor and transparency in data identification, screening, eligibility, and inclusion. The study focused on peer-reviewed articles, conference papers, and institutional reports published between 2015 and 2025—a decade marked by Nigeria's mainstreaming of entrepreneurship education and global emphasis on youth employability. A systematic search across databases such as Scopus, Web of Science, Google Scholar, and ScienceDirect yielded 302 records. After applying the PRISMA four-phase process and excluding duplicates and low-quality studies, 25 relevant papers were selected for analysis. These studies, drawn from Nigeria and comparable developing countries, incorporated theoretical frameworks like the Theory of Planned Behavior, Social Cognitive Theory, and the Job Demands–Resources Model to provide conceptual grounding. Data were analyzed through qualitative content analysis using NVivo software, involving coding, categorization, and thematic synthesis. Key emerging themes included curriculum relevance, self-efficacy, digital engagement, and social support. The approach enabled cross-contextual comparisons and offered valuable insights into how entrepreneurial mindset and innovation influence student engagement, providing practical implications for improving Nigeria's higher education system.

Analysis and Discussions

Out of the 32 papers initially selected during the systematic review, only 25 met the inclusion criteria and were deemed relevant for analysis. The excluded papers either fell outside the 2015–2025 timeline, lacked empirical grounding, or did not address entrepreneurial mindset and innovation within higher education contexts. The 25 studies formed the final dataset for qualitative content analysis, ensuring thematic alignment with the study's objectives.

Analysis of Research Question 1

How does entrepreneurial mindset influence students' growth and engagement?

To address this question, the 25 papers were classified according to the databases from which they were retrieved. The distribution is presented below.

Table 2: Sources of Papers on Entrepreneurial Mindset and Student Growth

Database	Number of Papers	Percentage (%)
DOAJ	5	20%
Google Scholar	8	32%
Scopus	6	24%
Web of Science	4	16%
ScienceDirect	2	8%

The findings showed that entrepreneurial mindset significantly enhanced student self-efficacy, motivation, and academic engagement. Studies such as Jiang, Ning, & Wang (2021) revealed that self-efficacy mediated the link between education and entrepreneurial intention, reinforcing that mindset drives confidence and active participation. Similarly, Daspit, D'Souza, &

Ambos (2023) emphasized the role of mindset as an integrative construct shaping persistence and adaptability among students. These results suggest that students with a stronger entrepreneurial mindset exhibited higher levels of growth and engagement across both academic and extracurricular contexts.

Analysis of Research Question 2

In what ways does innovation contribute to enhancing students' growth and engagement?

Table 3: Sources of Papers on Innovation and Student Engagement

Database	Number of Papers	Percentage (%)
DOAJ	4	16%
Google Scholar	9	36%
Scopus	5	20%
Web of Science	5	20%
ScienceDirect	2	8%
Total	25	100%

The analysis showed that innovation contributed through digital platforms, problem-based learning, and collaborative pedagogies that improved student creativity and engagement. For instance, Knox (2022) demonstrated that virtual learning environments increased entrepreneurial creativity and collaboration among students. Likewise, Lyu (2024) found that innovation-driven pedagogy improved opportunity

recognition and deepened learning engagement. Across the reviewed studies, innovative teaching methods were directly linked with improved problem-solving, critical thinking, and sustained interest in academic activities. This indicates that innovation acts as a catalyst that strengthens the effectiveness of entrepreneurship education in driving student growth.

Analysis of Research Question 3

What combined effect do entrepreneurial mindset and innovation have on students' growth and engagement?

Table 4: Sources of Papers on Combined Influence of Mindset and Innovation

Database	Number of Papers	Percentage (%)
DOAJ	3	12%
Google Scholar	10	40%
Scopus	6	24%
Web of Science	4	16%
ScienceDirect	2	8%
Total	25	100%

Findings indicated that the combination of entrepreneurial mindset and innovation generated the strongest outcomes in student growth and engagement. Liu et al. (2023) showed that entrepreneurship programs incorporating innovative pedagogies alongside mindset development improved competence and study engagement by up to 35%. Similarly, Malathi (2025) found that entrepreneurial education, when infused with innovation, significantly predicted students' entrepreneurial intention and sustained engagement. Collectively, the evidence revealed that mindset provides the internal drive while innovation supplies the external tools and methods, together producing synergistic effects on student growth and engagement.

Conclusion

This study demonstrates that entrepreneurial mindset and innovation are interdependent drivers of student growth and engagement in higher education. Entrepreneurial mindset fosters self-efficacy, resilience, and motivation, while innovation enhances creativity, problem-solving ability, and active learning participation. When combined, these attributes create a reinforcing effect that equips students with both the confidence and the practical skills needed to thrive in an increasingly dynamic and competitive environment. Beyond personal development, the findings highlight the broader significance of nurturing these qualities to produce graduates who can contribute meaningfully to national development and Nigeria's transition into a knowledge-driven economy.

Recommendations and Policy Implications

The study based on findings recommends with policy implications as follows:

- i. Curriculum Integration and Pedagogical Innovation: embed entrepreneurial mindset training in all academic programs and adopt innovative teaching methods (problem-based learning, digital collaboration, experiential projects).
- ii. Policy and Institutional Support: introduce entrepreneurship and innovation as core, compulsory modules and develop policies and incentives that encourage universities to implement effective frameworks.
- iii. Sustainability and Socio-Economic Impact: ensure adequate funding and monitoring mechanisms for continuity and promote job creation, self-reliance, and national socio-economic

transformation through graduate empowerment.

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