

Original Article

Beyond Business Creation: How Entrepreneurship Education Shapes Entrepreneurial Mindsets among University Students in Indonesia

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contributes to:



Abstract. Entrepreneurship education is increasingly expected to prepare university graduates for uncertain labor markets, yet much of the literature still evaluates its effectiveness through entrepreneurial intention rather than through deeper changes in how students think, interpret problems, and create value. This study aimed to explain how entrepreneurship education shapes entrepreneurial mindsets among university students in Indonesia. A qualitative interpretive design was used, drawing on semi-structured interviews with undergraduate students who had completed entrepreneurship courses involving project-based assignments, business simulations, mentoring, pitching, and reflection. The data were analyzed using thematic analysis and interpreted through Experiential Learning Theory. Five interrelated themes emerged: opportunity recognition through experiential tasks, confidence development through practice-based learning, failure as a trigger for resilience, social interaction as a catalyst for entrepreneurial thinking, and reflective learning as the mechanism of mindset transformation. The findings show that entrepreneurship education does not merely transmit business knowledge or increase startup intention; it gradually reframes how students perceive problems, uncertainty, feedback, and failure. The study contributes by positioning entrepreneurial mindset as an experiential, socially mediated, and reflective learning outcome, particularly in the context of higher education in an emerging economy. These findings suggest that universities should design entrepreneurship education as an integrated learning journey that combines authentic tasks, safe failure, mentoring, teamwork, and structured reflection.

Keywords: Entrepreneurship Education, Entrepreneurial Mindset, Experiential Learning, Higher Education.

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1. Introduction

Entrepreneurship has become a strategic concern for universities because it links higher education with innovation, employment creation, and social value creation. The entrepreneurial university is no longer expected only to transfer knowledge; it is also expected to cultivate graduates who can identify opportunities and act under uncertainty [1]. Entrepreneurship education has therefore expanded across higher education systems, but its impact is still debated. Meta-analytic and review studies show positive effects on entrepreneurial intention and human capital, yet they also reveal variation in program quality, pedagogy, and measurement strategy [2], [3].

A major limitation of this literature is the persistent dominance of intention-based outcome measures. Systematic reviews indicate that many studies ask whether students intend to start a business, while fewer studies explain how students make sense of

entrepreneurial learning experiences and translate them into enduring ways of thinking [4], [5]. This limitation matters because entrepreneurship education is increasingly framed as more than venture creation. It is expected to foster creativity, opportunity recognition, resilience, self-efficacy, collaboration, and value-creation orientation, even among students who may never launch a firm immediately after graduation [6], [7].

Consequently, entrepreneurship education scholars have called for richer qualitative evidence that can explain the mechanisms linking educational experience with mindset development. Such evidence is especially important because experiential and practice-based pedagogies may affect students through reflection, feedback, social learning, and identity work rather than through cognitive knowledge alone [8], [9]. The entrepreneurial mindset provides a useful lens for addressing this issue. Unlike entrepreneurial intention, which captures a planned behavioral orientation toward venture creation, entrepreneurial mindset refers to a broader cognitive and behavioral orientation toward uncertainty, opportunity, initiative, and adaptive action [10], [11].

In emerging economy contexts such as Indonesia, this distinction is highly relevant. Universities are increasingly encouraged to produce graduates who can contribute to micro, small, and medium enterprise development, local innovation, and graduate employability; however, students may experience entrepreneurship courses differently depending on disciplinary background, social support, and prior exposure to business activity [12], [13]. This study responds to that gap by exploring how university students interpret entrepreneurship education as a mindset-forming experience. Rather than treating education as an input and intention as the only output, the article examines the experiential mechanisms through which students learn to recognize opportunities, build confidence, reinterpret failure, collaborate with others, and reflect on action [14].

The study addresses the following research question: How does entrepreneurship education shape entrepreneurial mindsets among university students in Indonesia? The article contributes by explaining the process through which entrepreneurship education becomes transformative, thereby extending intention-based research toward a more processual understanding of mindset development [15], [16].

2. Literature Background

2.1 From Entrepreneurial Intention to Entrepreneurial Mindset

Entrepreneurial intention has been a dominant construct because it is grounded in behavioral theory and offers a measurable predictor of future entrepreneurial behavior. Foundational studies based on the theory of planned behavior show that intention is shaped by attitude, perceived behavioral control, and social norms [17], [18]. Nevertheless, intention is narrower than the educational aims of contemporary entrepreneurship education. Students may develop entrepreneurial ways of thinking even when they do not immediately plan to create a business, and this makes entrepreneurial mindset a more comprehensive educational outcome [19], [20]. Entrepreneurial mindset includes the capacity to identify opportunities, learn from action, mobilize resources, cope with uncertainty, and adapt to feedback. This broader framing aligns with research on entrepreneurial learning, which emphasizes experience, narrative meaning, and iterative experimentation [21], [22].

2.2 Failure, Confidence, and Reflective Learning

Failure is increasingly recognized as a formative learning event rather than merely a negative outcome. Entrepreneurship studies show that failure can generate learning when individuals are able to process emotion, extract meaning, and re-engage with future action [23], [24]. Confidence development is also central because entrepreneurial

action requires perceived capability under uncertain conditions. Self-efficacy theory explains why repeated practice, feedback, and mastery experiences can strengthen students' belief that they can perform entrepreneurial tasks [25]. Experiential Learning Theory provides the theoretical foundation for interpreting these processes. Learning occurs through a cycle of concrete experience, reflective observation, abstract conceptualization, and active experimentation, making reflection essential for converting activity into deeper learning [26], [27].

2.3 Experiential Entrepreneurship Education

Entrepreneurship education increasingly uses project-based learning, business simulations, mentoring, pitching, and incubation activities to move students beyond passive knowledge acquisition. Competency-based and action-based perspectives argue that such activities allow students to practice opportunity recognition, resource mobilization, risk assessment, communication, and adaptive problem solving [28], [29]. Empirical studies further show that entrepreneurship education can influence competencies and intention when it offers authentic action, feedback, and social support. However, the mechanisms remain underexplored when studies rely mainly on surveys rather than on students' narratives of learning [30], [31]. Recent debates therefore call for a change in research direction toward richer explanations of how entrepreneurship education works in practice. This study follows that call by treating students' narratives as evidence of how educational experiences become cognitive, emotional, and social transformations [32], [33].

3. Method

3.1 Research Design and Context

This study used a qualitative interpretive design to examine how students construct meaning from entrepreneurship education. The research was conducted in Indonesian higher education institutions where entrepreneurship courses include classroom learning, project-based assignments, business simulations, mentoring, pitching, and reflective activities. A qualitative design was appropriate because the purpose was not to quantify the magnitude of educational impact, but to explain the lived and interpreted process through which students develop entrepreneurial mindsets.

3.2 Participants and Data Collection

Participants were undergraduate students who had completed at least one entrepreneurship course and were therefore able to reflect on concrete learning experiences. Purposive sampling was used to recruit information-rich participants with relevant exposure to entrepreneurship education. Semi-structured interviews explored students' experiences of entrepreneurial tasks, confidence development, failure, teamwork, feedback, and reflection. Interviews were conducted conversationally, audio-recorded with consent, and transcribed verbatim for analysis.

3.3 Data Analysis and Trustworthiness

Data were analyzed using thematic analysis. The researchers repeatedly read interview transcripts, generated initial codes, grouped codes into candidate themes, reviewed theme coherence, defined theme meanings, and interpreted the findings using Experiential Learning Theory. Thematic analysis was selected because it provides a flexible yet rigorous procedure for identifying patterned meanings across qualitative data [34], [35]. Trustworthiness was strengthened through member checking, prolonged engagement with the data, peer discussion among the research team, and transparent

documentation of coding decisions. The analysis also followed qualitative quality principles related to credibility, resonance, transparency, and meaningful contribution [36], [37]. Table 1 summarizes the methodological design and quality safeguards.

Table 1.
Research
design, data
source, and
quality
safeguards.

Component	Implementation in this study	Purpose
Design	Qualitative interpretive study	To explain students' meaning-making processes rather than only measure educational outcomes.
Participants	Undergraduate students who had completed entrepreneurship courses	To ensure that participants had direct experience with entrepreneurship education.
Data collection	Semi-structured interviews	To elicit narratives about opportunity recognition, confidence, failure, teamwork, and reflection.
Analysis	Thematic analysis informed by Experiential Learning Theory	To identify patterned mechanisms through which education shaped mindset.
Trustworthiness	Member checking, peer discussion, and transparent coding documentation	To strengthen credibility and analytical dependability.

4. Results and Discussion

4.1 Result

The analysis generated five interrelated themes that explain how entrepreneurship education shaped students' entrepreneurial mindsets. These themes are presented in Table 2. Together, they show that mindset development occurred through experiential, reflective, and social learning processes.

Table 2. Theme
map linking
participant
evidence with
interpretive
meaning.

Theme	Illustrative evidence	Interpretive meaning
Opportunity recognition through experiential tasks	"I started to see opportunities everywhere."	Students learned to reinterpret everyday problems as potential sources of entrepreneurial value.
Confidence development through practice-based learning	"After doing it several times, I became more confident to speak and defend my ideas."	Repeated practice and feedback strengthened entrepreneurial self-efficacy.
Failure as a trigger for resilience	"That failure made us learn how to manage risk better next time."	Failure was reframed as feedback for risk management and future improvement.
Social interaction as a catalyst	"We learned from each other and improved the business concept together."	Peer discussion and mentoring expanded students' perspectives and adaptive thinking.
Reflective learning as mindset transformation	"Reflection made me think differently about business."	Structured reflection converted activity into deeper entrepreneurial understanding.

4.1.1 Opportunity Recognition through Experiential Tasks

Participants described entrepreneurship education as changing how they perceived ordinary problems. Tasks that required students to observe campus or community problems encouraged them to see their environment as a field of potential opportunities. This finding indicates that opportunity recognition was not absorbed as an abstract classroom concept; it emerged through guided observation, problem framing, and direct engagement with real situations.

4.1.2 Development of Entrepreneurial Confidence through Practice-Based Learning

Students reported that repeated entrepreneurial practice helped them overcome hesitation. Presenting business ideas, defending concepts, and receiving feedback gradually strengthened their confidence. The finding supports the idea that entrepreneurial confidence develops through mastery-like experiences rather than through motivational instruction alone.

4.1.3 Failure as a Trigger for Resilience Development

Failure was repeatedly mentioned as a turning point in learning. Students who experienced errors in business simulation, cost calculation, or project execution did not necessarily interpret these events as final defeat. Instead, when failure was followed by discussion and feedback, it became a resource for resilience, risk awareness, and improved decision-making.

4.1.4 Social Interaction as a Catalyst for Entrepreneurial Thinking

Peer collaboration and mentor feedback shaped how students evaluated their ideas. Teamwork helped students recognize that entrepreneurial ideas improve through dialogue, critique, and recombination of perspectives. This indicates that entrepreneurial mindset is socially mediated, not only individually constructed.

4.1.5 Reflective Learning as the Mechanism of Mindset Transformation

Reflection emerged as the mechanism that transformed activity into mindset development. Students emphasized that they understood entrepreneurship more deeply when lecturers asked them to examine what worked, what failed, and what could be improved. Without structured reflection, experiential activities risk remaining procedural; with reflection, they become transformative learning episodes.

4.2 Discussion

4.2.1 Entrepreneurship Education as an Experiential Cognitive Process

The findings indicate that entrepreneurship education shapes entrepreneurial mindset primarily when students are positioned as active interpreters of experience rather than passive recipients of business knowledge. This is important because the original problem in entrepreneurship education is not simply whether students can define entrepreneurship, prepare a business plan, or memorize venture-management concepts. The more critical issue is whether students begin to read their environment differently, evaluate uncertainty more constructively, and treat problems as possible sources of value creation. In this study, students did not describe mindset development as a single moment of inspiration. Instead, they described a sequence of learning experiences involving observation, practice, feedback, failure, discussion, and reflection. This supports process-oriented entrepreneurship learning scholarship, which argues that entrepreneurial learning is situated in action and shaped by how learners interpret what happens during that action [38], [39].

The first theme, opportunity recognition through experiential tasks, shows that entrepreneurial mindset begins with a change in perception. Students reported that entrepreneurship courses encouraged them to observe problems around campus and in their communities. This observation-based learning is meaningful because opportunity recognition is not only a technical skill; it is also a cognitive habit. When students are asked to identify everyday problems, they begin to develop a more entrepreneurial way of seeing. They learn that inconvenience, unmet needs, inefficient services, and routine social problems may become entry points for innovation. This finding strengthens the argument that entrepreneurship education should be designed around authentic

problem discovery, not only around classroom explanations of market opportunity. It also aligns with the view that entrepreneurial competence develops through repeated engagement with real or simulated entrepreneurial situations rather than through abstract instruction alone [40], [41].

Practice-based learning further explains why the students' confidence increased. The findings show that confidence was not presented by participants as an innate personality trait. Rather, it emerged gradually through repeated assignments, presentations, business simulations, and feedback cycles. This distinction is important for entrepreneurship educators because many students enter entrepreneurship courses with hesitation, fear of judgment, or limited belief in their ability to propose and defend ideas. When courses give students repeated opportunities to act, receive feedback, and improve, entrepreneurial self-efficacy becomes more likely to develop. The result is consistent with competency-based perspectives that view entrepreneurship education as a gradual accumulation of capability through action, repetition, and reflection [42], [43].

4.2.2 From Entrepreneurial Intention to Entrepreneurial Mindset

A major contribution of this study is the shift from entrepreneurial intention to entrepreneurial mindset as the primary interpretive lens. Entrepreneurial intention remains important because it helps explain whether students plan to start a business. However, intention alone is too narrow to capture the broader educational outcomes reported by the participants. Some students may not immediately intend to become entrepreneurs after graduation, but they may still become more confident, creative, adaptive, opportunity-oriented, and resilient. These changes matter because higher education should not only produce firm founders; it should also produce graduates who can think entrepreneurially in organizations, communities, public institutions, and informal economic settings.

The findings therefore suggest that entrepreneurship education should be evaluated not only by whether students express startup intention, but also by whether they develop durable ways of thinking and acting under uncertainty. In the interviews, students described changes in how they interpreted problems, failure, teamwork, and feedback. These are mindset-level changes. They are deeper than a short-term desire to start a business because they may influence future employability, innovation behavior, and value creation even when students do not immediately establish a venture. This point extends previous entrepreneurship education research by emphasizing educational transformation rather than only behavioral intention. It also explains why qualitative research is necessary: survey measures can identify whether an intention exists, but student narratives can reveal how learning experiences become personally meaningful [32], [33].

This does not mean that intention-based research should be abandoned. Rather, the present findings suggest that intention and mindset should be treated as complementary outcomes. Intention captures one possible behavioral direction, while mindset captures a broader readiness to recognize opportunities, mobilize resources, work with others, and persist despite uncertainty. In practice, a student may have a strong entrepreneurial mindset but delay business creation because of financial, family, academic, or institutional constraints. Conversely, a student may report startup intention but lack resilience, collaboration, or reflective capacity. For this reason, Q1-level entrepreneurship education research increasingly needs to move beyond single-outcome models and toward more layered explanations of learning outcomes.

4.2.3 Failure as a Pedagogical Resource for Resilience

The third theme demonstrates that failure plays a central role in entrepreneurial mindset development. Participants described failure in business simulations and project tasks as uncomfortable but productive. This finding is theoretically important because entrepreneurship is inherently uncertain, and students cannot fully understand entrepreneurial action if courses only reward correct answers and polished outputs. Failure becomes pedagogically valuable when it is followed by guided interpretation. In this study, students learned from miscalculated costs, weak ideas, and unsuccessful simulations because these experiences were processed through discussion and reflection. In other words, failure did not automatically produce learning; it became useful when students were helped to identify what went wrong and how they could respond differently.

This has direct implications for entrepreneurship curriculum design. If educators remove failure from entrepreneurship courses, students may develop an unrealistic view of business creation. They may assume that entrepreneurial success depends only on having a good idea, rather than on iterative testing, risk management, feedback, and adjustment. The findings show that controlled failure can help students develop resilience because it exposes them to uncertainty in a relatively safe educational environment. Instead of treating failure as a deficit, lecturers can use it as a structured learning event. For example, failed simulations can be followed by cost analysis, market feedback sessions, peer review, and reflective writing. Such practices help students transform emotional discomfort into analytical learning and adaptive persistence [23], [24].

The finding also adds nuance to the concept of resilience. Resilience in this study is not merely the ability to endure difficulty. It is the ability to reinterpret difficulty as information. Students became more resilient when they learned that a failed business simulation could reveal weak assumptions, inaccurate calculations, poor market understanding, or ineffective teamwork. This reframing is central to entrepreneurial mindset because entrepreneurs must repeatedly make decisions under incomplete information. Therefore, entrepreneurship education should not protect students from all mistakes. Instead, it should create learning environments where mistakes are ethically safe, analytically examined, and connected to future action.

4.2.4 Social Interaction and Entrepreneurial Identity Formation

The fourth theme emphasizes that entrepreneurial mindset is not developed in isolation. Students described teamwork, peer interaction, and mentor feedback as important sources of learning. This finding challenges overly individualistic interpretations of entrepreneurial mindset. While entrepreneurship is often associated with individual initiative, the development of entrepreneurial thinking in educational settings is deeply social. Students refine their ideas through dialogue, learn to defend or revise assumptions, and observe how peers approach the same problem from different perspectives. These interactions help students understand that entrepreneurial ideas are not fixed possessions of individuals but evolving concepts shaped through negotiation and feedback.

Social interaction also contributes to entrepreneurial identity formation. When students work in teams, present ideas, and receive mentor feedback, they begin to imagine themselves as people capable of entrepreneurial action. This identity shift may be subtle, but it is important. Students who initially feel that entrepreneurship is only for people with business family backgrounds or strong financial capital may begin to see entrepreneurship as a learnable mode of thinking. The course environment can therefore

function as a social space where students test new roles: problem observer, idea developer, presenter, team member, decision maker, and learner from failure. These roles gradually support the formation of an entrepreneurial self-concept.

In the Indonesian higher education context, the social dimension of learning is particularly relevant because students often navigate collective expectations from family, peers, lecturers, and institutions. Entrepreneurial learning does not occur in a vacuum; it is shaped by social norms, resource constraints, and perceived legitimacy. Team-based entrepreneurship education can help students reduce fear and increase confidence because responsibility is shared and feedback is distributed. However, social learning must be intentionally facilitated. If teamwork is poorly structured, some students may dominate while others become passive. Therefore, entrepreneurship courses should include clear roles, peer evaluation, mentoring checkpoints, and reflective discussion so that social interaction becomes a catalyst for mindset development rather than merely a group-task requirement.

4.2.5 Implications for Indonesian Higher Education

The findings have important implications for Indonesian universities. Entrepreneurship education in Indonesia is often positioned as a response to graduate unemployment, MSME development needs, and the demand for innovation-based economic growth. However, these goals cannot be achieved if entrepreneurship courses remain lecture-dominated or limited to formal business-plan assignments. The present study suggests that universities should prioritize learning designs that expose students to real problems, customer observation, prototype testing, iterative feedback, and structured reflection. Such designs are more likely to cultivate entrepreneurial mindsets because they require students to practice opportunity recognition and adaptive action.

Table 3 translates the empirical themes into practical curriculum implications. The table should be read not as a checklist of isolated activities, but as an integrated design logic. Opportunity recognition requires problem discovery; confidence requires repeated practice; resilience requires safe failure; social learning requires peer and mentor interaction; and mindset transformation requires reflection. If one component is missing, the learning process becomes weaker. For instance, a course with project work but no reflection may produce activity without deep learning. A course with reflection but no authentic task may produce abstract discussion without entrepreneurial practice. A course with teamwork but no feedback may reproduce unequal participation. Therefore, entrepreneurship education should be intentionally sequenced and pedagogically coherent.

The study also suggests that entrepreneurship education should serve broader educational purposes. Not every student will create a business immediately, but every student can benefit from learning how to identify problems, communicate ideas, work with others, manage uncertainty, and learn from failure. These capacities are valuable for entrepreneurship, employment, community development, and organizational innovation. In this sense, entrepreneurial mindset should be treated as a graduate attribute, not only as preparation for startup creation. This broader framing is especially important for universities that aim to connect learning with employability and social contribution. Finally, the study contributes to entrepreneurship education theory by emphasizing mindset as a socially mediated and reflective learning outcome. This perspective complements sustainable and competence-based approaches to entrepreneurship education, which argue that universities should cultivate broader value-creation capacities rather than only firm-startup behavior [44], [45].

5. Conclusion

This study explored how entrepreneurship education shapes entrepreneurial mindsets among university students in Indonesia. The findings show that entrepreneurship education becomes transformative when it engages students in concrete entrepreneurial tasks, exposes them to practice-based feedback, normalizes failure as learning, encourages social interaction, and requires structured reflection. Through these processes, students learn to interpret problems as opportunities, develop confidence, build resilience, and think more adaptively about value creation. The study contributes to the entrepreneurship education literature by moving beyond the dominant focus on entrepreneurial intention and explaining the experiential mechanisms of mindset formation. Practically, the findings suggest that universities should design entrepreneurship courses as integrated learning journeys that combine action, reflection, collaboration, mentoring, and safe failure. Future studies should expand this work through longitudinal and comparative designs that examine how entrepreneurial mindset develops across disciplines, institutions, and cultural contexts.

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7. Declaration

Author contributions and responsibilities - Conceptualization: Y.D.G.; methodology: Y.D.G. and A.A.; investigation: Y.D.G.; data analysis: Y.D.G., A.A., and Z.A.M.; writing - original draft: Y.D.G.; writing - review and editing: A.A. and Z.A.M.; supervision and project administration: Y.D.G. All authors have read and approved the final version of the manuscript. The authors read and approved the final manuscript.

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