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Interlinking Experiential Learning, Adaptability and Entrepreneurial Mindset in Higher Education: An Adaptive Experiential Learning Framework

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Abstract: Experiential pedagogies are increasingly used in entrepreneurship education to develop the entrepreneurial mindset. However, participation in entrepreneurial activities does not automatically result in meaningful entrepreneurial learning. This conceptual paper explores how entrepreneurial experiences may foster the development of an entrepreneurial mindset through processes of adaptability. This paper proposes an Adaptive Experiential Learning Framework for Entrepreneurial Mindset Development through an integrative review of the literature on entrepreneurial mindset, experiential learning, and adaptability. The framework proposes four dominant developmental associations based on Kolb's experiential-learning cycle: concrete experience with emotional adaptability, reflective observation with cognitive adaptability, abstract conceptualization with strategic adaptability, and active experimentation with behavioral adaptability. These associations are not presented as exclusive or sequential causal pathways; rather, emotional, cognitive, strategic and behavioral adaptability are conceptualized as interlinked processes operating recursively across repeated experiential-learning cycles. Five conceptual propositions are offered as guides for future empirical investigation. The framework advances entrepreneurship education by highlighting the role of adaptiveness as a developmental mechanism linking entrepreneurial experience with entrepreneurial mindset, and by differentiating among various types of adaptive change that take place during experiential learning. It also implies that experiential activities should be designed and assessed not just based on participation or successful entrepreneurial outputs but based on learners' ability to regulate responses to uncertainty, rethink assumptions, reframe strategies and change subsequent behavior. The framework is still conceptual and needs to be empirically validated through longitudinal, mixed-methods, and experimental research.

Keywords: *Entrepreneurial mindset; Experiential learning; Entrepreneurship education; Adaptability; Emotional adaptability; Cognitive adaptability; Strategic adaptability; Behavioral adaptability.*

1. Introduction

Higher education institutions are increasingly expected to prepare graduates for environments characterized by uncertainty, technological change, and evolving market conditions. Within this context, entrepreneurship education has expanded beyond preparing students to establish new ventures towards developing capabilities that enable individuals to recognize opportunities, solve problems, and act effectively under uncertain conditions. This shift has placed increasing emphasis on the development of an entrepreneurial mindset (EM) as an important educational outcome.

Entrepreneurial mindset influences how individuals interpret uncertain situations, recognize possibilities, and translate judgments into action. The concept extends beyond cognition alone. Kuratko, Fisher, and Audretsch (2021) identify three distinct aspects in the literature: entrepreneurial cognition, entrepreneurial behavior, and entrepreneurial emotion. Recent work also shows continuing conceptual diversity in entrepreneurial-mindset scholarship, reinforcing the need for integrative explanations of how such a mindset develops (Kuratko et al., 2021; Molaei et al., 2026).

Within higher education, entrepreneurial mindset development is increasingly considered in relation to the wider educational environment rather than as a simple outcome of exposure to entrepreneurship content. Recent diagnostic work treats entrepreneurial mindset across individual, institutional, and ecosystem levels and reports associations involving experiential-learning curricula and entrepreneurial outcomes. This reinforces the importance of examining not merely whether entrepreneurship education is offered, but how

educational experiences contribute to mindset development (Kosti et al., 2026).

Entrepreneurship education has consequently moved from predominantly didactic approaches towards experiential pedagogies that expose learners to problems, decisions, and uncertainties resembling entrepreneurial practice. Experiential approaches enable learners to participate actively in entrepreneurial processes and develop skills and mindsets through experience rather than merely learning about entrepreneurship. Educational theory further suggests that such learning depends on how experience is interpreted, reflected upon, and transformed (Bell & Bell, 2020).

Kolb's experiential learning theory provides an influential foundation for understanding this developmental process. Learning is conceptualized as a recurring cycle involving concrete experience, reflective observation, abstract conceptualization, and active experimentation. Experience provides material for reflection; reflection enables examination of what occurred; conceptualization transforms observations into revised understanding; and experimentation enables learners to test that understanding through subsequent action (Kolb, 1984).

However, participation in entrepreneurial experience does not necessarily produce entrepreneurial learning or mindset development. Students may participate in venture projects, simulations, pitching exercises, or customer-development activities without fundamentally changing how they interpret uncertainty or respond when assumptions prove inaccurate. Experience creates an opportunity for learning, but learners must still recognize feedback, reconsider assumptions, and modify their responses.

This problem is especially important because entrepreneurial activity frequently occurs under uncertainty and changing task conditions. Adaptability provides a useful psychological lens for examining responses to such circumstances. Martin et al. (2012) conceptualize adaptability as constructive regulation of psycho-behavioral functioning in response to novelty, change, and uncertainty, with cognitive-behavioral and affective components. Within entrepreneurship, Haynie and Shepherd (2009) describe cognitive adaptability as the capacity to remain dynamic, flexible, and self-regulating in cognition under uncertain task environments (Martin et al., 2012; Haynie & Shepherd, 2009).

Adaptation within entrepreneurship is not solely cognitive. Entrepreneurial learning also involves emotion and action. Negative experiences can create emotions that either stimulate higher-order learning or encourage retreat, while appropriate pedagogical scaffolding can support sensemaking, cognitive reframing, entrepreneurial mindset development, and resilient behavior. Behavioral entrepreneurial mindset research likewise demonstrates the importance of translating entrepreneurial learning into action (Crosina et al., 2024; Cui & Bell, 2022).

Existing frameworks provide important but incomplete explanations of this process. Bell and Bell (2020) integrate experiential learning with constructivism, reflection-in-action, and transformative learning to strengthen the pedagogical foundations of experiential entrepreneurship education. More recently, Nzembayie et al. (2026) develop Action Design Learning as an entrepreneurship-specific experiential pedagogy centred on action, design, entrepreneurial artefacts, reflection, and metacognitive development. These approaches demonstrate the importance of experiential pedagogy but leave room for a more differentiated explanation of the adaptive changes occurring within learners.

The theoretical problem is therefore not an absence of research on entrepreneurial mindset, experiential learning, or adaptability individually. Rather, these bodies of knowledge remain only partially integrated within entrepreneurship education. It remains insufficiently explained how different adaptive processes may operate across experiential-learning stages to facilitate entrepreneurial mindset development. An unexpected entrepreneurial outcome may trigger an emotional response; reflection may require cognitive reconsideration; interpretation of the experience may require formulation of an alternative strategy; and effective response ultimately requires behavioral change.

Against this background, this paper addresses the following conceptual research question: How can experiential learning develop entrepreneurial mindset through interconnected emotional, cognitive, strategic, and behavioral adaptability processes?

To address this question, the paper proposes an Adaptive Experiential Learning Framework for Entrepreneurial Mindset Development. Building upon Kolb's experiential-learning cycle, the framework integrates four interrelated adaptive processes: emotional adaptability, cognitive adaptability, strategic adaptability, and behavioral adaptability. Concrete experience is proposed to be predominantly associated with emotional adaptability, reflective observation with cognitive adaptability, abstract conceptualization with strategic adaptability, and active experimentation with behavioral adaptability. These are dominant developmental associations rather than exclusive causal pathways.

The contribution of the paper is threefold. First, it contributes to experiential-learning perspectives in entrepreneurship education by introducing adaptability as a mechanism through which entrepreneurial experiences may contribute to the development of an entrepreneurial mindset. Second, it identifies four types of adaptation and describes their prevailing relationships with stages of experiential learning, while allowing for interaction among them. Third, it offers a conceptual foundation for educators to design experiential activities that allow learners to experience entrepreneurial uncertainty but also to regulate emotional responses, reconsider assumptions, reformulate possible strategies and change subsequent behavior.

2. Literature Review

Entrepreneurial Mindset in Higher Education

Entrepreneurship education has moved from teaching knowledge of venture creation to creating people who can think and act entrepreneurially in uncertain environments. This shift has led to a greater emphasis on entrepreneurial mindset as an educational objective. The entrepreneurial mindset is a multidimensional concept that encompasses the way people think, behave and emotionally react to business circumstances (Kuratko et al., 2021).

The cognitive dimension is particularly important, as entrepreneurship involves decision-making under incomplete knowledge and uncertain outcomes. Therefore, entrepreneurial cognition is not only knowledge that is relevant, but also the ability to adapt that knowledge to changing circumstances. Cognitive adaptability is the ability to be dynamic, fluid, and self-regulating in cognition in uncertain and changing task settings (Haynie and Shepherd, 2009). Later research has shown that metacognitive abilities and feedback affect the adoption of entrepreneurial decision policies (Haynie et al., 2012).

Entrepreneurial mindset also has a behavioral dimension because entrepreneurial cognition ultimately requires translation into action. Within higher education, entrepreneurship education can encourage initiative, experimentation, and action in response to opportunities. Evidence among university students indicates positive relationships between entrepreneurship education activity, behavioral entrepreneurial mindset, and subsequent entrepreneurial intentions and behavior (Cui & Bell, 2022).

Emotional dimensions are equally important because entrepreneurial activity exposes individuals to uncertainty, rejection, setbacks, and discrepancies between expected and actual outcomes. Entrepreneurship education therefore creates opportunities not only for cognitive and behavioral learning but also for developing learners' capacity to respond constructively to adversity. Research on resilience and emotional resilience in entrepreneurial education emphasizes the relevance of affective regulation when learners are faced with uncertainty and challenge (González-López et al., 2019; Ávila & Davel, 2024).

Together, these perspectives suggest that the development of an entrepreneurial mindset involves interrelated changes in thinking, emotion, and action. Contemporary research into experiential entrepreneurship further indicates that metacognition, emotional sensemaking and behavioral adjustment are not stand-alone educational outcomes but may develop interactively during entrepreneurial activities (Crosina et al. 2024; Nzembyaie et al. 2026).

This multidimensional understanding is an important tie-in to adaptability. If entrepreneurial mindset is about how people think, feel, and act in uncertain entrepreneurial environments, then the ability to change these responses when circumstances change becomes central in explaining how entrepreneurial mindset develops.

Experiential Learning in Entrepreneurship Education

Experiential learning provides an appropriate pedagogical foundation for entrepreneurial mindset development because entrepreneurship itself involves action, uncertainty, feedback, and iterative adjustment. Rather than positioning students as passive recipients of entrepreneurial knowledge, experiential entrepreneurship education engages learners directly with entrepreneurial problems and decisions. Activities such as venture creation, customer interaction, simulations, prototyping, and pitching can provide opportunities for students to experience consequences arising from their decisions and subsequently learn from those consequences (Bell & Bell, 2020).

Kolb's experiential-learning theory conceptualizes learning as a recurring cycle of concrete experience, reflective observation, abstract conceptualization, and active experimentation. Learners encounter an experience, reflect upon its consequences, formulate or revise concepts based on that reflection, and subsequently test those concepts through further action. The resulting action generates new experience and continues the learning cycle (Kolb, 1984).

Experience alone, however, does not guarantee learning. Entrepreneurial experiences can reinforce existing assumptions just as easily as they can challenge them if learners do not critically interpret what has occurred. Reflection therefore plays an important role in transforming experience into learning. Bell and Bell (2020) show how reflection-in-action and related educational perspectives can enrich entrepreneurship education by enabling learners to question reasoning and adjust while activity is still unfolding.

Contemporary experiential entrepreneurship education extends this perspective by placing greater emphasis on interaction among action, reflection, social learning, and entrepreneurial artefacts. Action Design Learning, for example, integrates action learning and design learning into an entrepreneurship-specific pedagogy in which emergent entrepreneurial artefacts focus learning and reflection. Its application across university settings highlights metacognitive development as a central entrepreneurial-mindset outcome (Nzembayie et al., 2026).

The significance of experiential learning for the present study therefore lies not simply in exposing students to entrepreneurship. Its greater value lies in creating feedback loops in which learners encounter consequences, reconsider assumptions, and test revised responses. These feedback loops provide conditions within which adaptability can develop.

Adaptability as a Mechanism of Entrepreneurial Learning

Adaptability offers a more extensive psychological basis for comprehending reactions to entrepreneurial unpredictability. Martin et al. (2012) define adaptability as the ability of individuals to effectively manage their psychological and behavioral responses in the face of new experiences, alterations, and unpredictability. Their empirical framework differentiates between cognitive-behavioral and emotional elements within a superior adaptability construct. Despite being formulated outside the realm of entrepreneurship education, this differentiation offers a recognized foundation for perceiving adaptability as a multifaceted construct rather than a singular, uniform reaction to change (Martin et al., 2012).

When experiences create gaps between expectations and the emerging reality, the importance of adaptability in entrepreneurial learning is increased. Learners may find that customers do not value a proposed product, that an intended strategy cannot be implemented, or that assumptions underpinning a business idea are wrong. In such cases, effective learning requires more than gaining new information; the learner must be able to change emotional, cognitive, strategic and behavioral responses. Under such circumstances, effective learning requires more than acquiring additional information; learners must be capable of modifying emotional, cognitive, strategic, and behavioral responses.

Emotional Adaptability

Entrepreneurial learning can generate significant emotional demands because setbacks and uncertainty may produce disappointment, frustration, anxiety, or stress. Earlier entrepreneurship-education research emphasized the importance of helping learners manage emotions associated with entrepreneurial failure, while later research indicates that entrepreneurship education can foster resilience in responding to adversity

and uncertainty (Shepherd, 2004; González-López et al., 2019).

More recent research brings this issue directly into entrepreneurial education. Emotional resilience can be developed through educational practices that help learners engage with emotionally challenging situations, while longitudinal research on experiential entrepreneurship education shows that negative experiences and emotions can become inputs to sensemaking, cognitive reframing, entrepreneurial mindset development, and resilient behavior when supported by pedagogical scaffolds (Ávila & Davel, 2024; Crosina et al., 2024). In the present framework, emotional adaptability therefore refers to the learner's capacity to regulate and adjust affective responses so that uncertainty and setbacks remain available as material for learning rather than becoming barriers to continued engagement.

Cognitive Adaptability

Cognitive adaptability has a more established theoretical foundation within entrepreneurship research. Haynie and Shepherd (2009) position cognitive adaptability within entrepreneurial metacognition and emphasize an individual's ability to remain dynamic, flexible, and self-regulating when confronting uncertain tasks. Haynie et al. (2012) subsequently demonstrate that metacognitive ability and feedback influence individuals' capacity to adapt decision policies during entrepreneurial tasks (Haynie & Shepherd, 2009; Haynie et al., 2012). This process is highly compatible with experiential learning because experience generates feedback against which assumptions can be evaluated. Reflection enables learners to compare expectations with outcomes, identify discrepancies, and reconsider how they interpret entrepreneurial situations. Cognitive adaptability therefore provides a mechanism through which reflection becomes revised understanding rather than merely retrospective description.

Strategic Adaptability

Cognitive reconsideration does not necessarily determine what an individual should subsequently do. A learner may recognize that an existing interpretation is inaccurate but still needs to formulate an alternative course of action. This provides the basis for distinguishing strategic adaptability from cognitive adaptability.

Strategic adaptability concerns the capacity to reconsider and switch strategies when circumstances indicate that an existing approach is no longer appropriate. Research on strategic adaptability provides evidence that the capability can be developed through training, supporting its treatment as a potentially learnable capability rather than merely an organizational response to environmental change. Entrepreneurial adaptation research likewise conceptualizes adaptation as involving cognitively derived, action-oriented strategic choices that contribute to adaptive capabilities (Basu et al., 2022; Heunis et al., 2025).

Within entrepreneurial learning, strategic adaptability therefore concerns translating revised interpretation into alternative possibilities. The distinction is analytically useful: cognitive adaptability concerns revising how a situation is understood, whereas strategic adaptability concerns revising the course of action formulated in response to that understanding.

Behavioral Adaptability

Adaptation ultimately requires changes in action. For the present framework, behavioral adaptability refers to the learner's capacity to translate revised understanding and strategic alternatives into modified behavior. The term is used here as a conceptual label rather than implying that behavioral adaptability already constitutes a universally established construct within entrepreneurship-education literature.

Existing research nevertheless supports a behavioral component of entrepreneurial mindset. Entrepreneurship education activity has been associated with behavioral entrepreneurial mindset, entrepreneurial intentions, and behavior, while experiential pedagogies provide opportunities for learners to modify artefacts, decisions, and actions as evidence accumulates (Cui & Bell, 2022; Nzembayie et al., 2026). Behavioral adaptability therefore represents the point at which adaptive learning becomes observable through changed action. A learner may recognize that an assumption is incorrect and identify an alternative strategy, but adaptation remains incomplete until the revised response is enacted and exposed to further feedback.

Integrating Experiential Learning, Adaptability and Entrepreneurial Mindset

The preceding literature indicates considerable conceptual compatibility among experiential learning, adaptability, and entrepreneurial mindset. Experiential learning explains how learners engage with experience through reflection, conceptualization, and experimentation; adaptability explains how responses change when experience challenges existing assumptions; and entrepreneurial mindset describes cognitive, behavioral, and emotional orientations relevant to entrepreneurial action. Considered together, these perspectives suggest that adaptability may provide an explanatory mechanism connecting entrepreneurial experience with mindset development.

Existing experiential entrepreneurship frameworks nevertheless emphasize somewhat different aspects of this process. Bell and Bell (2020) integrate educational theories to explain the pedagogical foundations and facilitation of experiential entrepreneurship education, while Nzembayie et al. (2026) integrate action and design learning to provide an entrepreneurship-specific experiential pedagogy directed towards entrepreneurial mindset development. Both make important contributions, but neither is primarily organized around differentiating adaptive processes occurring within learners across stages of experiential learning.

The present study therefore occupies a complementary conceptual space. Rather than proposing that experiential learning automatically produces entrepreneurial mindset, it positions emotional, cognitive, strategic, and behavioral adaptability as interconnected developmental processes through which learners respond to entrepreneurial experience.

3. Conceptual Review Method

This study adopts an integrative conceptual review approach to develop a theoretical framework linking experiential learning, adaptability, and entrepreneurial mindset development within higher education. Integrative literature reviews are particularly appropriate when the objective is to synthesize established and emerging bodies of knowledge to generate new theoretical perspectives or conceptual frameworks rather than to estimate cumulative effects or exhaustively catalogue all published studies (Torraco, 2005, 2016; Snyder, 2019).

The review was organized around three principal bodies of literature: entrepreneurial mindset, experiential learning in entrepreneurship education, and adaptability. Kolb's experiential-learning theory provided the initial organizing structure because of its established four-stage learning cycle. Complementary perspectives concerning reflection, metacognition, resilience, strategic adaptation, behavioral entrepreneurial mindset, and contemporary experiential entrepreneurship pedagogy were incorporated where they contributed directly to explaining how learners respond to entrepreneurial uncertainty.

Literature identification was purposeful and iterative rather than exhaustive. Relevant literature was identified through academic search engines, publisher platforms, institutional repositories, and the reference lists of highly relevant studies. Searches were guided by combinations of terms relating to entrepreneurial mindset, entrepreneurship education, experiential learning, adaptability, cognitive adaptability, emotional adaptability, strategic adaptability, behavioral adaptability, resilience, metacognition, reflection, and entrepreneurial learning. Priority was given to peer-reviewed studies that contributed directly to conceptualizing the constructs or relationships under examination, while seminal theoretical works were retained where necessary to establish intellectual foundations. Consistent with an integrative-review approach, literature selection was driven by theoretical contribution to the synthesis rather than by an assumption of exhaustive coverage (Torraco, 2005; Snyder, 2019).

The synthesis proceeded by comparing the functional role of each experiential-learning stage with forms of adaptation identified in the literature. Relationships were retained where plausible theoretical correspondence could be established without claiming that prior studies had directly tested the proposed stage-to-adaptability association. This distinction is important because the framework is conceptual: existing studies establish the component constructs and adjacent relationships, whereas the specific mapping developed here represents the paper's theoretical synthesis.

4. Proposed Adaptive Experiential Learning Framework

The proposed Adaptive Experiential Learning Framework integrates Kolb's experiential-learning cycle with four adaptive processes: emotional, cognitive, strategic, and behavioral adaptability. It does not assume that each experiential-learning stage exclusively develops one form of adaptability. Instead, the proposed relationships are dominant developmental associations: each stage is linked to the adaptive process theoretically most salient at that point while allowing recursive interaction with the other processes.

Concrete Experience and Emotional Adaptability

Concrete experience exposes learners directly to entrepreneurial situations in which outcomes are not necessarily predetermined. Activities involving customers, venture projects, simulations, pitching, or collaborative problem solving may confront students with rejection, uncertainty, disagreement, or evidence contradicting expectations. Such encounters are not emotionally neutral and may generate disappointment, anxiety, frustration, or stress.

Entrepreneurship-education research provides support for treating emotional adaptation as an important developmental process. Work on failure, resilience, and emotional resilience indicates that challenging experiences can become learning opportunities when learners are able to process and regulate affective responses. Longitudinal evidence from experiential entrepreneurship education further shows that negative emotions can lead either to retreat or to higher-order learning depending on sensemaking and pedagogical support (Shepherd, 2004; González-López et al., 2019; Ávila & Davel, 2024; Crosina et al., 2024).

The proposed relationship does not imply that difficult entrepreneurial experiences automatically produce emotional adaptability. Exposure to setbacks could instead generate withdrawal or defensive persistence. The developmental opportunity arises when learners regulate their emotional response sufficiently to engage with feedback and continue the learning process.

Proposition 1 (P1): Concrete experience in experiential entrepreneurship education is positively associated with the development of emotional adaptability, particularly when learners encounter uncertainty, setbacks, and disconfirming feedback.

Reflective Observation and Cognitive Adaptability

Reflective observation provides us with a chance to compare expectations with results, to identify inconsistencies and to question the assumptions that underline previous decisions. Reflection, therefore, shifts the learner from merely experiencing an outcome to interpreting what that outcome means. This process corresponds closely with cognitive adaptability. Entrepreneurial metacognition research emphasizes the need to be dynamic, flexible and self-regulated in the face of uncertain task conditions. Empirical evidence suggests that metacognitive ability and feedback affect entrepreneurial decision policy adaptation (Haynie & Shepherd, 2009; Haynie et al., 2012).

This cognitive reappraisal can be done via an educational mechanism called reflection. Learners can examine why an expected outcome did not materialize, determine whether their assumptions remain defensible, and consider alternative interpretations. Cognitive adaptability therefore links reflective observation to revised understanding.

Proposition 2 (P2): Reflective observation in experiential entrepreneurship education is positively associated with the development of cognitive adaptability by encouraging learners to reassess assumptions, interpretations, and decision processes in response to experience and feedback.

Abstract Conceptualization and Strategic Adaptability

Recognizing that an existing interpretation is inadequate does not necessarily indicate what should be done instead. Abstract conceptualization enables learners to transform reflected experience into revised explanations, principles, and possible courses of action. In entrepreneurial learning, this stage creates an opportunity to move from recognizing a problem with an existing approach towards conceptualizing alternatives.

The present framework associates this process with strategic adaptability. Strategic adaptability concerns switching or reformulating strategies when circumstances require it, and research provides evidence that such adaptability can be developed through training. Entrepreneurial adaptation research also emphasizes cognitively derived, action-oriented strategic choices, providing a basis for distinguishing revised interpretation from revised strategic response (Basu et al., 2022; Heunis et al., 2025). Abstract conceptualization is therefore proposed as the stage at which strategic reformulation becomes especially salient. This does not imply that prior studies have directly tested an Abstract Conceptualization-to-Strategic Adaptability relationship. Rather, the mapping is the present paper's theoretical synthesis based on the established functions of the two constructs.

Proposition 3 (P3): Abstract conceptualization in experiential entrepreneurship education is positively associated with the development of strategic adaptability by enabling learners to translate reflected experience into revised strategic interpretations and alternative courses of action.

Active Experimentation and Behavioral Adaptability

The experiential-learning cycle ultimately returns revised understanding to action. Active experimentation enables learners to test concepts, strategies, and assumptions generated through previous experience, reflection, and conceptualization. Within entrepreneurship education, this may involve modifying a prototype, changing a customer segment, revising a value proposition, testing a different sales approach, or pivoting from an earlier idea.

For the present framework, behavioral adaptability refers to the learner's capacity to translate revised understanding into modified action. Existing research identifies a behavioral dimension of entrepreneurial mindset and reports positive relationships between entrepreneurship education activity, behavioral entrepreneurial mindset, and subsequent entrepreneurial intentions and behavior (Cui & Bell, 2022). Active experimentation provides the setting in which behavioral adaptation becomes observable. Experiential entrepreneurship research describes iterative modification of entrepreneurial artefacts and decisions as learners engage with feedback. Behavioral adaptability is therefore not an endpoint: changed action generates new concrete experience and feeds the next experiential cycle (Nzembayie et al., 2026).

Proposition 4 (P4): Active experimentation in experiential entrepreneurship education is positively associated with the development of behavioral adaptability by requiring learners to enact and test revised responses under changing entrepreneurial circumstances.

Adaptability as an Interconnected Developmental Process

The four propositions should not be interpreted as four independent linear relationships. Entrepreneurial learning rarely proceeds through psychologically isolated stages. A single episode of customer rejection, for example, may simultaneously generate disappointment, prompt reconsideration of assumptions, encourage development of another strategy, and produce an immediate behavioral response.

This recursive interpretation is compatible with contemporary experiential entrepreneurship research showing that metacognitive, emotional, and behavioral processes interact during entrepreneurial learning. It is also consistent with evidence that negative emotions can trigger sensemaking and cognitive reframing that subsequently influence resilient behavior. Adaptability should consequently be understood as a system of mutually influencing processes operating throughout repeated experiential-learning cycles (Crosina et al., 2024; Nzembayie et al., 2026).

Over repeated cycles, learners may progressively become better able to regulate emotional responses, reconsider interpretations, reformulate strategies, and alter behavior when circumstances change. The proposed contribution is therefore not simply the addition of four labels to Kolb's cycle, but the positioning of adaptive processes as mechanisms through which entrepreneurial experience may contribute to entrepreneurial mindset development.

Proposition 5 (P5): Emotional, cognitive, strategic, and behavioral adaptability operate as interconnected developmental processes through which repeated experiential learning contributes to entrepreneurial mindset development.

Positioning the Proposed Framework

The proposed framework is intended to complement rather than replace existing experiential entrepreneurship education frameworks. Bell and Bell (2020) integrate educational theories to explain how experiential entrepreneurship education can be theoretically structured and facilitated. Their primary contribution concerns pedagogical and learning architecture. Action Design Learning addresses a related but different problem by integrating action learning and design learning into an entrepreneurship-specific experiential pedagogy. It emphasizes first- and second-person learning, entrepreneurial artefacts, critical reflection, and metacognitive development. Its primary focus is how entrepreneurial experiential pedagogy can be designed to cultivate an entrepreneurial mindset (Nzembayie et al., 2026).

The Adaptive Experiential Learning Framework addresses a narrower developmental question: what adaptive processes may occur within learners as entrepreneurial experience is transformed into entrepreneurial mindset development? Its contribution therefore lies at the mechanism level rather than in proposing an alternative pedagogical system.

Table 1: Comparison of Experiential Entrepreneurship Education Frameworks

Framework	Primary focus	Principal question
Bell & Bell (2020)	Educational theory and experiential pedagogy	How can experiential entrepreneurship education be theoretically structured and facilitated?
Action Design Learning	Entrepreneurship-specific experiential pedagogy	How can action and design learning cultivate entrepreneurial mindset?
Adaptive Experiential Learning Framework	Adaptive developmental mechanisms	How can experience develop entrepreneurial mindset through emotional, cognitive, strategic, and behavioral adaptation?

Discussion

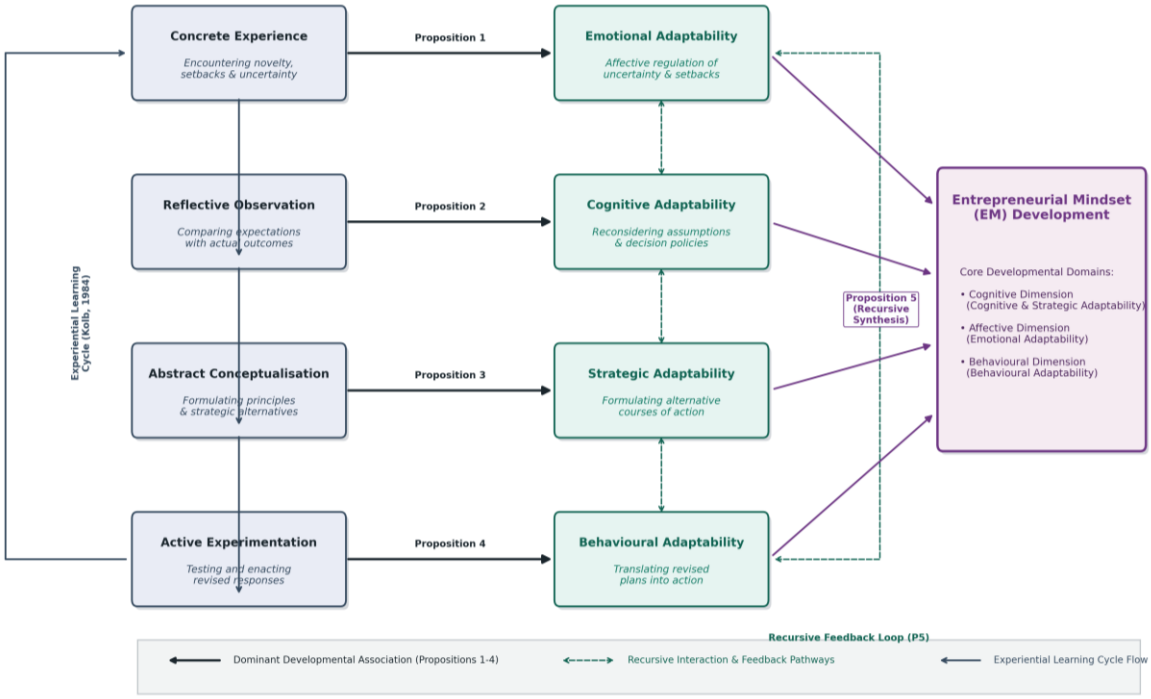
From Entrepreneurial Experience to Adaptive Learning

The framework changes the analytical focus of experiential entrepreneurship education from participation to response. The educational significance of an entrepreneurial activity lies not only in how authentic or action-oriented it is, but also in what learners do when experience challenges their expectations. This directs attention to the quality of their response to feedback, uncertainty, and discrepancy.

Two learners can therefore pass through much the same entrepreneurial experience and come away with different developmental outcomes. Customer rejection might lead one to defend the original assumption and another to question it, formulate an alternative, and try something different. From this perspective, variation in adaptive response is not noise around the learning process; it is part of what needs to be explained.

This interpretation is consistent with experiential-learning perspectives that emphasize transformation rather than experience alone and with entrepreneurship research showing that difficult experiences may be followed by either retreat or higher-order learning. The framework extends this reasoning by specifying adaptability as a developmental mechanism through which such divergent responses can be examined (Bell & Bell, 2020; Crosina et al., 2024).

Figure 1: The Adaptive Experiential Learning Framework for Entrepreneurial Mindset Development



Note: Solid arrows represent proposed dominant developmental associations (P1-P4). Dashed arrows represent mutual interaction among adaptive processes. The system of adaptive processes recursively contributes to final Mindset development (P5).

Extending Experiential-Learning Theory

Kolb's experiential-learning cycle provides a useful explanation of how experience can move through reflection, conceptualization, and experimentation. However, the four stages primarily describe a learning process and provide less differentiation concerning the types of adaptive change that may occur within learners as the process unfolds.

The proposed framework extends the cycle by associating its stages with dominant adaptive processes. Concrete experience is particularly salient for emotional adaptability; reflective observation provides a focal point for cognitive adaptability; abstract conceptualization creates opportunities for strategic adaptability; and active experimentation provides opportunities for behavioral adaptability. The principle of dominant association is important because the framework does not suggest four psychologically isolated processes. Reflection may regulate emotion as well as cognition; experimentation may prompt immediate strategic reconsideration; and behavioral change may generate new cognitive and emotional responses. The theoretical extension therefore lies not in modifying Kolb's stages themselves, but in specifying what forms of adaptive development may become particularly salient as learners move through and between those stages.

Theoretical Contributions

The first theoretical contribution is positioning adaptability as a developmental mechanism linking experiential learning and entrepreneurial mindset. Instead of a general Experiential Learning-to-Entrepreneurial Mindset relationship, the framework provides a more complex explanation: Experiential Learning-to-Adaptive Processes-to-Entrepreneurial Mindset Development. It is a conceptual mechanism, not an empirically based mediation model.

The second contribution is to distinguish adaptability into emotional, cognitive, strategic and behavioral processes. This distinction enables the framework to separate changes that would otherwise be considered jointly as learning from experience. Emotional adaptability refers to the regulation of response to uncertainty and setbacks; cognitive adaptability refers to the reconsideration of interpretations and assumptions; strategic

adaptability refers to the formulation of alternative courses of action; and behavioral adaptability refers to the enactment of revised responses.

This distinction between cognitive and strategic adaptability is especially relevant. Research on entrepreneurial cognition points to cognitive flexibility and metacognitive adaptation, while research on strategic adaptability emphasizes the ability to switch strategies when current strategies are no longer fitting. The proposed framework integrates these literatures by distinguishing between changing how a situation is understood and changing the strategy formulated in response to that understanding (Haynie & Shepherd, 2009; Haynie et al., 2012; Heunis et al., 2025).

The third contribution is the principle of dominant association of development. This allows for theoretically meaningful relations between experiential-learning stages and adaptability dimensions without assuming exclusive one-to-one correspondence. The framework is thus situated between the extremes of rigid stage-outcome mapping and the undifferentiated claim that all forms of adaptation are equally distributed across experiential learning.

Implications for Entrepreneurship Education

The framework suggests that entrepreneurship educators should evaluate experiential activities not merely according to whether students are doing something entrepreneurial, but according to whether those activities create opportunities for meaningful adaptation. A simulation or venture project may qualify as experiential pedagogy while producing relatively little adaptive learning if outcomes are predetermined, feedback is superficial, or students have no opportunity to reconsider and revise their responses.

Activities capable of supporting adaptive development should contain opportunities for learners to encounter manageable uncertainty, receive meaningful feedback, critically reconsider assumptions, formulate alternative responses, and subsequently test those alternatives. Failure and unexpected outcomes may possess educational value when they create discrepancies between expectation and reality that learners can productively examine (Shepherd, 2004; González-López et al., 2019; Crosina et al., 2024).

This does not imply that educators should manufacture unnecessary failure or deliberately expose learners to excessive emotional stress. The pedagogical objective is supported adaptation rather than adversity itself. Educators can facilitate this process through structured reflection, constructive feedback, opportunities for revision, and learning environments in which unsuccessful attempts can be examined without automatically being treated as educational failure.

Implications for Assessment

The framework also challenges entrepreneurship education assessment that focuses predominantly on final outputs such as business plans, prototypes, pitches, or venture performance. Such outcomes provide useful evidence of achievement but may not reveal how much entrepreneurial learning occurred during the process. From an adaptive-learning perspective, a learner who substantially revises an initially unsuccessful approach after engaging with credible evidence may demonstrate meaningful entrepreneurial development. Conversely, a successful outcome does not necessarily demonstrate adaptability if the learner encountered little uncertainty or had no reason to reconsider an initial approach.

Reflective journals, decision logs, iterative prototypes, records of stakeholder feedback, and documented justifications for pivots or strategic changes could provide evidence of learning trajectories. Assessment can therefore shift part of the question from whether the entrepreneurial idea succeeded towards how effectively the learner interpreted and adapted to evidence concerning the idea.

5. Limitations and Future Research

The suggested framework has several drawbacks. Of greatest importance is the conceptual rather than empirically established derivation of the relationships denoted by P1-P5. Previous research has shown the importance of emotional regulation, cognitive adaptability, strategic adjustment and behavior change for entrepreneurial learning but does not provide the proposed stage-to-adaptability relationships or their causal

direction.

A second limitation is the reliance on Kolb's experiential-learning cycle as the dominant organizing framework. Kolb provides a widely recognized basis for experiential education, but entrepreneurial learning can also be explained by reflection-in-action, transformative learning, action learning and design learning. Future research should examine the continued utility of the four adaptive processes when experiential entrepreneurship education is conceptualized through alternative learning frameworks (Bell & Bell, 2020; Nzembyaie et al., 2026).

Third, the conceptual difference between the four dimensions of adaptability needs empirical scrutiny. Cognitive and strategic flexibility may be particularly hard to distinguish, because strategic reformulation necessarily involves cognition. The willingness to change behavior may be affected by emotional regulation, and behavioral experimentation generates further cognitive and emotional responses. Fourth, the authenticity, uncertainty, emotional intensity, stakeholder interaction, and consequences of entrepreneurial experiences vary. The adaptive demands of a structured classroom simulation may differ from those of a live venture with real customers. As such, the framework does not assume that all experiential entrepreneurship activities lead to the same developmental effects.

Fifth, adaptive development can be significantly conditioned by educational facilitation. Not all difficult experiences result in constructive learning; learners may push back against feedback, rationalize failure or disengage. Structured reflection, psychological safety, and feedback and opportunities for revision from educators may therefore be important boundary conditions (Ávila & Davel, 2024; Crosina et al., 2024). Sixth, learners' individual characteristics may affect the perception of the same entrepreneurial experiences. Depending on an individual's prior entrepreneurial experience, self-efficacy, tolerance for ambiguity, and other individual differences, uncertainty can be perceived as a threat or an opportunity to learn. These antecedent conditions are beyond the scope of the present framework but may be important moderators.

Seventh, the framework has been mainly developed for entrepreneurship education in higher education. Its applicability to practicing entrepreneurs, vocational education, corporate entrepreneurship programs or community-based entrepreneurship training cannot be assumed. Finally, the literature to support the framework was found using a purposeful integrative conceptual review, not an exhaustive systematic review. There may be, therefore, relevant theoretical perspectives or empirical evidence outside the literature included in this paper. Future systematic reviews may provide an even more extensive coverage of adaptability in entrepreneurship education.

Future Empirical Examination

Due to the developmental nature of adaptability, longitudinal studies would be the most suitable. Researchers might observe students in an experiential entrepreneurship program and study reactions to critical incidents such as customer rejection, failed prototypes, team conflict, or unexpected market feedback. Mixed-method designs may be particularly helpful. Changes in adaptability and entrepreneurial mindset could be measured quantitatively, while adaptive processes could be understood through interviews, observations, reflective journals, and decision logs. Such designs would also provide evidence of whether learners meaningfully differentiate between cognitive reconsideration and strategic reformulation.

Experimental or quasi-experimental studies could compare experiential activities with structured reflection, feedback, and opportunities for revision to activities that do not include these mechanisms. This would give a better test of the main idea of the paper, which is that experience alone is not enough and that adaptive processing helps turn experience into entrepreneurial growth. Future studies could also examine whether adaptability serves as a mechanism mediating between experiential entrepreneurship education and entrepreneurial mindset. This test could either model the four dimensions of adaptability separately or test whether they were part of a broader multidimensional adaptive capability. The five propositions developed here constitute an initial grounding for this empirical program.

Conclusion

This paper develops an Adaptive Experiential Learning Framework to explain how entrepreneurial experience

may contribute to entrepreneurial mindset development in higher education. The framework responds to a conceptual gap between experiential-learning theory, entrepreneurial-mindset scholarship, and adaptability research by positioning adaptability as a developmental mechanism connecting experience with changes in how learners feel, interpret, strategize and act.

Building on Kolb's experiential-learning cycle, the framework proposes dominant associations between its four stages and emotional, cognitive, strategic, and behavioral adaptability. These associations are not treated as exclusive; the adaptive processes are conceptualized as interconnected and recursive across repeated experiential cycles. The framework therefore shifts attention from whether students merely participate in entrepreneurial activities towards whether those activities produce meaningful adaptive demands. For educators, this implies designing experiences that generate credible feedback, supporting learners as they process uncertainty, and assessing how learners revise assumptions, strategies, and actions. For researchers, the framework offers five propositions that can be examined through longitudinal, mixed-method, experimental, and cross-context research.

The framework remains conceptual and should not be interpreted as a validated causal model. Its value lies in providing a theoretically differentiated explanation of how experiential entrepreneurship education may contribute to entrepreneurial mindset development and in creating a basis for subsequent empirical refinement.

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