

Entrepreneurial education: Guiding principles

The following principles invite a different approach to embedding entrepreneurial thinking in curricula across different disciplines. (Italicised words below have an entry in the glossary.)

Think beyond start-ups and hi-tech

Significant *entrepreneurial thinking* and behaviours occur within existing organisations or in everyday activities, and many *innovations* are developed in low-tech or no-tech environments. Stereotypes of *entrepreneurship* and innovation can hinder a broader adoption of *entrepreneurial education* and *mindsets* that encourage questioning, challenging of assumptions, problem identification and collaborating with others to create value. Creating a new *venture*, or 'start-up' business, is just one aspect of entrepreneurship that can provide *entrepreneurial learning*.

Consider entrepreneurial learning outcomes

Your learning outcomes may focus on developing an entrepreneurial mindset through generating and applying ideas, or on entrepreneurship *by* applying *enterprising competencies* in different contexts creating cultural, social or economic value.

There are three teaching and learning strategies associated with supporting entrepreneurial learning outcomes:

1. learning **'about'** *enterprise* and *entrepreneurship* as an academic discipline
2. learning **'through'** activities which practice and develop entrepreneurial capabilities. This could include internships and industry placements.
3. learning **'for'** experiences which help students discover and prepare for *entrepreneurial action*; and

(Advance HE *et al.*, 2019)

Apply to discipline-specific contexts

Embedding entrepreneurial learning in a discipline-specific context should complement course content, extending curricula through an entrepreneurial 'lens'. It can reinforce prior learning and deepen students' learning. Different disciplines draw on entrepreneurial education in different ways, as is appropriate to their subject matter. They may utilise a discipline-specific language, culture, and application of entrepreneurial education and this enhances the diverse community of entrepreneurial thinking and action at UQ.

Make entrepreneurial learning explicit

Increase understanding and awareness of *entrepreneurial competencies* and behaviours *by* explicitly articulating these in course descriptions, learning objectives, and throughout learning activities and assessments. Encourage students to reflect on and articulate entrepreneurial learning outcomes through learning activities and assessments.

Scaffold through a program

It may not be necessary or desirable for every course to feature entrepreneurial learning, and the pattern of scaffolding may vary between programs. Taking a programmatic approach that seeks to combine theory, concepts, and practical applications for students will build skills across a program. Activities early in a program might focus on an entrepreneurial mindset, with activities later in a program providing opportunities to deepen understanding, awareness and experiences and include more complex reflections on practice.

Encourage students to learn through productive failure

To experiment, fail, reflect and learn in order to try again is one way an entrepreneurial mindset is used in everyday life. Structuring learning activities and assessment around the process of learning how to learn through productive failure empowers students to reflect and learn from their mistakes, motivates learning and can enable stronger decision-making, innovative outcomes and tolerance for ambiguity. Providing a safe environment in which to fail, facilitates learning, and reframes failure as a necessary and even desirable, to allow true learning to occur. A balance between authentic formative and summative assessment provides a safe space for failing forward.

Engage stakeholders

People with an entrepreneurial mindset practice collaborative reasoning; they connect and engage with others, drawing on available resources and knowledge to achieve shared outcomes and priorities. Engaging students, industry, and wider community stakeholders in course design and learning activities, such as Work Integrated Learning and teamwork, can support the development of students' entrepreneurial competencies and their practical application in authentic contexts.

Connect to co-curricular opportunities

Entrepreneurial learning occurs both in and outside of the curriculum. There is a large range of co- and extra-curricular entrepreneurial learning experiences for students at UQ, including but not limited to Ventures' entrepreneurship programs and Employability experiences. Activity in the curriculum should be distinctive but may make strong connections to these opportunities for students who want to further explore their entrepreneurial pathways in different settings.

Examine ethics for purposeful entrepreneurship

Critical thinking on ethics in entrepreneurship is a learning opportunity that can be utilised to develop a deep understanding of entrepreneurship and objectivity about its purpose and impact. Gaining experience of entrepreneurship with a social or environmental purpose, either in practice or in a learning environment, provides students with the opportunity to understand ethical responsibility, the importance of sustainability, and the impact that *social entrepreneurship* can have.

Utilise good practice in entrepreneurship teaching and learning

There is strong evidence to support experiential learning as critical in developing the competencies and behaviours associated with an entrepreneurial mindset. As such, utilising good practice in teaching and learning and applying classroom learning to a professional environment by reflecting on Work Integrated Learning supports this development.

Further, Crittendon and Babson College explain that “entrepreneurship needs to be practiced in order to be learned” (p. 54-56), and proffer five practices which can “develop the entrepreneurial thinking and acting abilities of students” (p. 56). These include:

The practice of play	Play is a foundational practice in entrepreneurship education because it cultivates an imaginative, exploratory mindset that helps learners see possibilities and innovate. Three forms of play support this development. Sociodramatic play uses imagination and fantasy, such as deliberately generating absurd or unconventional ideas to stretch creative thinking. Functional play involves hands-on interaction with tools and environments, for example using game-based activities with business model components to prompt discussion, prioritisation, and collaboration. Constructive play focuses on building and problem solving, as seen in challenges where teams create solutions with limited materials and learn through experimentation. Together, these forms of serious play help students develop skills in creativity, lateral thinking, teamwork, business model understanding, and learning from trial and error, reinforcing the idea that even complex entrepreneurial concepts can be effectively taught through playful, experiential approaches.
The practice of empathy	Empathy is a core practice in entrepreneurship education because it enables students to deeply understand the experiences, emotions, and needs of others. It involves developing the capacity to see the world from another person’s perspective, whether that is an entrepreneur navigating uncertainty or a customer with unmet needs. Empathy can be deliberately cultivated through experiential learning, such as interviewing entrepreneurs, observing users without interaction, or engaging with design thinking activities that prioritise human-centred observation. These practices help students form more realistic views of entrepreneurial life and build authentic connections with customers and stakeholders, supporting the identification of meaningful problems and opportunities, the foundation of innovation.
The practice of creation	The practice of creation is central to entrepreneurship education because it emphasises producing value with available means rather than being constrained by perceived resource gaps. Drawing on effectuation and creativity theories, it encourages students to view opportunity creation as an active, iterative process grounded in openness, experimentation, and an entrepreneurial mindset. Creation involves recognising, shaping, and exploiting opportunities by creatively leveraging what is already at hand, as illustrated through immersive exercises such as small-budget venture challenges. Developing this practice depends on helping students believe in their

	own creative capacity and engaging them in sustained creative activity, supported by tools and experiences that build creative “muscle.” Rather than relying on sudden insights, the practice of creation reinforces that innovation emerges through ongoing development, practice, and thoughtful engagement with constraints.
The practice of experimentation	Experimentation is a core practice in entrepreneurship education because it emphasises learning through action, reflection, and iteration. It involves trying ideas in real contexts, observing results, making sense of what happens, and adapting based on new insights. Drawing on problem-based, evidence-based, and sensemaking approaches, experimentation encourages students to engage with uncertainty by interacting directly with people, places, and resources to test assumptions and resolve real problems. Rather than learning before acting, students act in order to learn, using tools such as business model frameworks to gather real-world evidence, validate ideas, and refine their thinking. This practice develops the capacity to learn from experience, integrate creativity with analysis, and continuously improve through informed action.
The practice of reflection	Reflection is the integrating practice in entrepreneurship education that connects and strengthens play, empathy, creation, and experimentation. Because these practices are highly action-oriented, reflection enables students to pause, critically examine their experiences, and convert activity into deep, durable learning. Grounded in reflective practice theory, reflection supports critical thinking by helping learners make connections between concepts, experiences, and future applications. Effective reflection requires intentional guidance and can take multiple forms, including narrative, emotional, perceptual, analytical, evaluative, and critical reflection, each representing increasing depth of learning. Used consistently, reflection reinforces learning across activities, assignments, and courses, allowing students to assimilate insights over time and embed them within an ongoing entrepreneurial learning cycle.

References

- Advance HE, EEUK, IOEE, ISBE, SFEDI & QAA (2019) *Enterprise and Entrepreneurship Education Framework*. Advance HE. Available at: <https://www.advance-he.ac.uk/guidance/teaching-and-learning/enterprise-and-entrepreneurship> (Accessed: 06/11/2019).
- Crittenden, V. L., & Babson College. Center for Engaged Learning and Teaching. (2015). *Evolving entrepreneurial education: innovation in the Babson classroom* (V. L. Crittenden, Ed.; First edition.). Emerald Insight.