

Encouraging intelligent failure in an MBA class

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Abstract

Failure has an important role to play in learning how to navigate highly uncertain organizational environments. But “failing fast” just for its own sake may in fact undermine learning if not set up or handled correctly. Using failure-based pedagogy, including generative failure, whole-person learning, and entrepreneurial thinking, an MBA course was designed and experienced by 48 students in three instances. Structured around a novel guiding framework of “brains, bravery, and belief,” the course has resulted in highly impactful learning for students. Student experiments are typically based around either exploring an entrepreneurial idea, developing or enhancing a particular skill, or applying skills and knowledge to help improve a societal problem. In each case, students are supported but also challenged to go beyond their comfort zones and encounter some intelligent failure in the journey. Regular reflection on their experiences, both from a cognitive and an affective perspective, is an essential element built into the course experience. The course, which itself was an experiment and not without its own instructive failures, is now an essential part of the MBA experience.

KEYWORDS

course design, executive education, experiential learning, pedagogical approaches

1 | INTRODUCTION

There is much rhetoric in both business and academia encouraging organizations and individuals to become more entrepreneurial, innovate more often, and “fail fast” (Dobson & Walmsley, 2021; Hall, 2007; McGrath, 2011; Shankar & Clausen, 2020). “Failing fast” has been coined in order to encourage rapid learning, and this is proposed as a key skill for managers in organizations in dealing with uncertain environments that are now more commonplace (Bennett & Lemoine, 2014; Cannon & Edmondson, 2005). But recent research has shown that this supposed link between failure and learning is certainly not automatic (Khanna et al., 2016), that it may not happen at all, or that failure may even undermine learning (Eskreis-Winkler & Fishbach, 2019). So blindly encouraging failure for failure’s sake could be highly counterproductive for learning if not handled correctly. In educational settings in particular failure has very strong negative connotations (Feigenbaum, 2021). No student wants to fail a course, or even an assignment, no matter how much they

may learn in the process (Dobson & Walmsley, 2021). Yet the learning potential of some failure is arguably greater than that of success (Estabrooks & Couch, 2018; Loibl & Rummel, 2014). Manalo and Kapur (2018) go so far as to say that “failure is essential to successful learning” (p. 1).

In order to better equip managers to deal with the volatile, uncertain, complex, and ambiguous (VUCA) environments facing them today, they need to develop skills based on synthesis, creativity (Aylesworth & Cleary, 2020; Chandler & Teckchandani, 2015; Hall & Rowland, 2016), intuition (Brown et al., 2015), and experimentation (Bennett & Lemoine, 2014), including learning from intelligent failure (Cannon & Edmondson, 2005; Edmondson, 2011; McGrath, 2011). Most MBA programs, and management education generally, still focus on discipline-specific skills, largely developed through theories and frameworks designed for relatively stable organizational environments. In stable environments, experimentation and failure are not necessary in order to understand the situation, so these skills are not normally encouraged. As summarized by Walsh and Powell

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(2020), “solutions to the wicked problems offered in contemporary society require creativity and innovation—aspects that may be difficult to incorporate into the curriculum of a functionally oriented MBA programme” (p. 150). The negative associations of failure are particularly strong in executive MBA classes, where high-achieving experienced managers have often built careers on successful performance and have avoided associations with failure. As a result, they tend to have a delivery-centered performance orientation rather than an exploratory-centered learning orientation (Miron-Spektor et al., 2021).

In response to these challenges, a triple-crown accredited (EQUIS, AACSB, AMBA) Executive MBA program redesigned its offering in 2020 to include a compulsory course focused specifically on learning from failure. Titled “Creative Challenge,” the course was designed to push students to experiment—and most likely fail—in intelligent ways, in order to learn. Itself an experiment, the course has now been delivered on three occasions and has resulted in some novel student experiences and significant learning. This article will describe the pedagogical background to failure-based learning in the management education context, as well as the resulting course design, including the novel “brains, bravery, and belief” framework. Examples of the student experiments that have been conducted in the course will be provided, including student feedback on their learning. The article concludes with discussion and reflection on the successes—and failures—of the course itself and implications for this and other management programs.

2 | FAILURE-BASED PEDAGOGY FOR MANAGEMENT EDUCATION

Given the pervasive rhetoric of “fail fast” (Dobson & Walmsley, 2021; Hall, 2007; McGrath, 2011; Shankar & Clausen, 2020), the first thing we need to unpack when introducing the concept in management settings is that not all failure is the same. There are many different types of failure, and in fact, most are not helpful for learning. In management education, we therefore need to explore which types of failure are useful for learning in uncertain environments and how to frame such failures to maximize the learning potential.

To this end, Edmondson (2011) outlines three broad categories of failure in organizations. First, there is preventable failure in routine operations. This is the realm of a manufacturing plant that does not want to encourage failure in the production line. In fact, a good manufacturing process will have extensive quality control measures in place, to avoid any parts that fail to meet specifications leaving the process. The second type of failure is where failure occurs due to complex systems. This is the realm of healthcare where there may be many competing and complex reasons why a diagnosis may fail to address the cause of a set of symptoms. However, systems will be put in place to ensure there is sufficient testing and revision to ultimately confirm or modify a diagnosis. Here also, failure

is not desired, though it is expected from time to time. Third, there are intelligent failures where an experiment is conducted to learn something new. In ambiguous environments, experimentation is a key skill, and failure an expected part of the process. We need to frame intelligent failures, then, as a deliberate outcome of experimentation; therefore, this type of failure needs to be encouraged in organizations dealing with uncertain environments or navigating new opportunities (McGrath, 2011).

Similar to the distinction between types of failure in organizations, Feigenbaum (2021) highlights a useful distinction between generative failure and stigmatized failure in educational settings:

Generative failure is learner-centered and process-driven, framing failure as a natural and formative process of experimentation that produces beneficial feedback. By contrast, stigmatized failure is institution-centered and grades-driven, rendering failure a summative judgment that has harmful economic, cognitive, and health-related consequences for individuals deemed to have failed, or even to be at risk of failing (p. 14).

Although not explicitly using those terms, it has been recently argued that in the majority of business schools today, even if the value of generative failure is espoused, the subjects, systems, and structures of courses and programs largely reinforce stigmatized failure while developing twentieth-century discipline-specific thinking (Dobson & Walmsley, 2021; Hall & Rowland, 2016; Walsh & Powell, 2020).

Kapur’s (2008, 2016) pedagogy of productive failure promotes the use of well-crafted problems presented to students prior to any instruction on the concepts normally needed for solving them. Students naturally struggle with the problem and typically fail to solve it. Only then are they provided with instruction on the relevant concepts to help solve the problem. This approach has been found to produce better learning outcomes than traditional instruction-first methods (Manalo & Kapur, 2018). However, this approach, which had its origins in mathematics education, implies that there is a “best” method that should be used to produce a single correct answer. In real-world managerial settings, it is often difficult to define the problem itself, and there may be any number of potential approaches or ultimate solutions. So while some of the productive failure approach may not translate directly, we can take from this approach the requirement for careful scaffolding of course structures. There needs to be enough structure to help students navigate beyond their current knowledge, without being overly directive and limiting the options for students to take different, even unproductive, paths (Kapur, 2016).

Arts-based education often relies on generative failure as a part of the creative process to generate novel solutions to open-ended problems (Sawyer, 2019). Given the global need for more creativity in organizations (Aylesworth & Cleary,

2020), it is not surprising that more arts-based approaches to management education are being proposed and deployed (Dobson & Walmsley, 2021; Kerr & Lloyd, 2008; Walsh & Powell, 2020). In contrast to typical management education, these highly experiential approaches develop and apply practical as opposed to purely theoretical knowledge. They also synthesize knowledge from multiple disciplines and have very short feedback loops with close support from instructors who help students learn from failures (Sawyer, 2019).

Another key aspect of learning from failure is the emotional associations attached to it; this leads us to the pedagogy of whole-person learning (Hoover et al., 2010). This is an approach deployed in MBA education that aims to develop not only cognitive knowledge but also emotional and behavioral skills through high-involvement, experiential learning environments. In creating such environments, it is important for students to be well supported so they stay motivated even when things do not go as intended (Sawyer, 2019). With project failures, people experience negative emotional reactions, including grief (Shepherd, 2003; Shepherd & Cardon, 2009), and if not well handled on a psychological level, are likely to avoid similar situations in the future, even subconsciously (Eskreis-Winkler & Fishbach, 2019). Shepherd and Cardon (2009) suggest that developing increased levels of self-compassion (consisting of self-kindness, common humanity, and mindfulness) allows an individual to learn from failure without interference from negative emotions.

As managerial settings become more uncertain and ambiguous, there is also much to learn from entrepreneurship where these factors are inherent in the environment. Entrepreneurial thinking has been proposed as a signature pedagogy relevant for all undergraduates that will have to navigate highly uncertain futures (Peschl et al., 2021) and is directly relevant to MBA cohorts. This thinking includes having a tolerance for ambiguity and an ability to “fail forward,” described as an individual’s ability to learn from their negative experiences, build self-confidence, and develop persistence. The ability to persist with difficult tasks over a long period of time has been described as grit (Duckworth, 2016) and involves a combination of passion and perseverance. Of particular note for managers who are often fixated on talent, grit theory suggests that skill development and ultimately achievement is far more reliant on persistent effort than on talent.

An essential part of the process of learning from failure is the ability to reflect on the experience (Harvey et al., 2016), including the emotional aspects (Harvey et al., 2019). Politis and Gabrielsson (2009) found that entrepreneurs who were able to learn from their experiences of failure used reflection, thinking, and acting, as described by experiential learning theory (Kolb & Kolb, 2009), to develop a positive attitude toward failures and view them as part of the exploration process. Experienced MBA students who have become good at what they do often respond to failure with defensive reasoning (Argyris, 1991), then pour more effort in to try and correct the situation. However, this single-loop learning of trying to eliminate errors after a course of action can often make mat-

ters worse. They need to actually take time to reflect and engage in double-loop learning to understand why they are taking a specific action and what values and assumptions may need to be challenged. Often this requires rethinking long-held beliefs and values, which may even require rethinking self-identity (Grant, 2021).

To synthesize and apply this body of knowledge in an MBA course, the author created a three-part framework (described in Table 1) which helped define learning outcomes and give structure to the course. The first element is brains. This is based on the underlying pedagogy of generative failure (Feigenbaum, 2021), and leverages the concept of intelligent failure (McGrath, 2011) to unpack the different types of failure (Edmondson, 2011) and show why experimentation and learning from failure is a key skill in navigating a VUCA environment. The second element is bravery. This draws on the pedagogy of whole-person learning (Hoover et al., 2010) to highlight the emotional side of dealing with failure (Shepherd, 2003). Using self-compassion (Shepherd & Cardon, 2009), emotional resilience can be built to deal with failure in a positive way and enable passion and perseverance (Duckworth, 2016). The third element is belief. This draws on the pedagogy of entrepreneurial thinking (Peschl et al., 2021) with the use of reflection (Harvey et al., 2019), double-loop learning (Argyris, 1991), and rethinking (Grant, 2021), which builds self-awareness and self-confidence in the ability to “fail forward.”

3 | COURSE DESIGN

With the brains, bravery, and belief framework established, ideas from arts-based education influenced the delivery mode of the course (Dobson & Walmsley, 2021; Kerr & Lloyd, 2008; Walsh & Powell, 2020). As such, it is designed to be highly experiential and based around a self-defined experiment with a practical connection to industry. This includes support from experienced industry mentors in addition to academic staff. The author who leads this course has a background in design thinking, entrepreneurship, innovation, and strategy. But the key attribute for this course to be successful, is for the facilitator to have high emotional intelligence (Goleman, 2004), which consists of self-awareness, self-management, motivation, empathy, and social skills. These attributes are needed to relate to students, set high expectations, and push them where needed while providing support and encouragement on the often challenging emotional journey. This course is deliberately placed toward the end of the MBA journey so that students have already developed some awareness of their own strengths, weaknesses, interests, skills, and passions through other courses. Industry mentors are sourced through the personal networks of the facilitator and are selected to match the subject matter of each student experiment. These are typically working professionals who generously share their time and knowledge with the students as a means of giving back to their community.

The in-class sessions are two hours long and students were encouraged to attend in person when possible. A live zoom

**TABLE 1** Brains, bravery, and belief framework

3B Framework	Pedagogical foundations	Key concepts	Learning outcome
Brains	Generative failure (Feigenbaum, 2021)	Different types of failure (Edmondson, 2011) Characteristics of intelligent failure (McGrath, 2011)	Apply an experimentation-based approach to navigate a VUCA environment
Bravery	Whole person learning (Hoover et al., 2010)	Emotional responses to failure (Shepherd, 2003) Self-compassion (Shepherd & Cardon, 2009) Grit (Duckworth, 2016)	Develop improved emotional resilience to embrace learning from failure and be able to deal with setbacks in positive ways
Belief	Entrepreneurial thinking (Peschl et al., 2021)	Reflection (Harvey et al., 2019) Double loop learning (Argyris, 1991) Rethinking (Grant, 2021)	Build self-confidence to go beyond known comfort zones, challenge assumptions, and develop increased self-awareness around core values

TABLE 2 Weekly focus for MBA Creative Challenge course

	Topics	Materials	Assessment
Week 1	Introduction on types of failure The role of grit. Reflective exercise on areas of combined skills, passion and value	Prereading: Strategies for learning from failure (Edmondson, 2011) Video: TED overview of Grit (Duckworth, 2016)	n/a
Week 2	Self-directed research into potential focus for the challenge		
Week 3	Characteristics of intelligent failure Creating a proposal with each of the characteristics, stretch goals defined Role of reflection including cognition and emotion	Prereading: Failing by design (McGrath, 2011)	Proposal defining significance, hypothesis, assumptions, scope, risks, and plan with stretch goal (15%)
Weeks 4–6	Matched with an industry mentor Self-directed experiment begins along with fortnightly video reflections		Video reflections fortnightly (20% total)
Week 7	Progress report workshop 1 Introduce Double loop learning Dunning-Kruger effect	Prereading: Teaching smart people how to learn (Argyris, 1991)	
Weeks 8–10	Self-directed experiment continues along with fortnightly video reflections and mentor meetings		
Week 11	Progress report workshop 2 Introduce role of grief after failure and self-compassion Significance of rethinking	Prereading: Emotional Reactions to Project Failure and the Self-Compassion to Learn from the Experience (Shepherd & Cardon, 2009) Video: TED summary of Think Again (Grant, 2021)	
Weeks 12–14	Self-directed experiment continues along with fortnightly video reflections and mentor meetings		
Week 15	Final progress report workshop Debrief with report due week following	None—students preparing presentations	Final presentation covering brains, bravery and belief (20%) Final report (45%) covering brains, bravery and belief

session was typically used for those who were not able to attend, but the class sessions were not recorded for later viewing. This was largely due to the bespoke nature of the early sessions, where one-on-one time was spent with each student ensuring they were setting up their experiment appropriately. Students also shared personal stories in progress workshops, and it was felt having recordings would hinder the psychologically safe environment, as discussed further below. As shown in Table 2 below, the course spanned one semester of 15 weeks, though the in-class sessions are not held every week since a large part of the course is self-directed time. The

class was held at the University's Centre for Entrepreneurship, which has a more open-plan workshop environment than the usual lecture space. This is to encourage a more experimental mind-set and to signal that this is not a "typical" MBA course. This particular MBA program does not have a functional specialization, so this course is taken by all students.

During the first class session, students were introduced to the notion of different types of failure (Edmondson, 2011) and that, despite common rhetoric that we need to "fail fast," this is only useful if we are engaged in intelligent failure

(McGrath, 2011). Using Edmonson's (2011) spectrum of failure, which students are expected to have read prior to class, they are asked to identify examples of preventable failure in predictable operations, unavoidable failures in complex systems, and intelligent failures at the frontier. This establishes the understanding of different types of failures and the need for intelligent failure through experimentation in order to explore new fields. This is followed by the introduction of grit (Duckworth, 2016), which is also required in order to persevere in the face of uncertainty. Students are expected to have watched Duckworth's TED talk prior to class, and following a discussion of grit during class, they completed the grit scale (available at: <https://angeladuckworth.com/grit-scale/>) as a means of reflecting on their own passion and perseverance. To help identify potential areas of focus for their experiments, students were taken through an exercise, based on the hedgehog principle (Collins, 2001), of mapping their own areas of passion, skills, and what they can get paid for in a Venn diagram. First, they mapped some of these elements for how they see themselves at the current time, and then decide which elements they might like to try and move to a different zone through this challenge. By incorporating the three elements, the experiments should have some grounding in skills or areas related to their working life.

We deliberately avoid the use of the term "project" in this course because a project implies some fixed deliverables, with milestones according to a schedule that has little tolerance for failure. Instead, we frame the course as an experiment, which implies that there are uncertainties to be explored and ideas to be tested as part of the process. Students still need an intelligent plan for how to proceed (McGrath, 2011) and an overarching "stretch goal" in mind, but these are defined in terms of what students are trying to learn as opposed to what they are trying to deliver. So, rather than a project topic with deliverables, they have a hypothesis with assumptions to be tested. A critical aspect of the course is each student defining the experiment to be conducted; this needs to happen in the first 3 weeks of the course. Given that this is a very different experience from most MBA courses (where a relatively clear path is defined by the lecturer), students often feel uncomfortable, nervous, and sometimes skeptical in the first week when they realize this responsibility lies with them. It is recommended that precourse communication highlight this so students can start thinking about potential areas for their experiments even before the first class.

After the first class session, students were given a week to independently research a field of interest and start to define the focus for their experiment. In week 3, students developed a written proposal for the experiment that also forms the first assessment item. The proposal is given some structure explicitly taken from the characteristics of an intelligent failure (McGrath, 2011), and consists of six sections. First, there is significance. Why is this important? This may be at a personal level, or from an organizational or social perspective. Second, there is the hypothesis. What is the idea we want to test and our best guess about it at this time? How

will we know if this is true or false? Third, what are the key assumptions we are making? These should be explicitly listed so they can be tested. Fourth, what is the scope and cost of this experiment? We are aiming to test the assumptions and ultimately the hypothesis as quickly and cheaply as possible. Fifth, we examine the overall plan. How are we going to test the assumptions and then prove or disprove the hypothesis? This should be broken down as much as possible, acknowledging the uncertainty in how it may evolve over time. How will we know if we are making progress? Expected progress should be listed to align with the progress workshops, leading to an overall stretch goal that should align with the learning associated with the hypothesis. Sixth and finally, there should be a risk section outlining any identified risks, their likelihood, potential impact, and actions that will be taken to minimize or eliminate them.

An example worksheet that is used in the proposal class session is provided as Supplemental file 1. During the class session, following the discussion and explanation of each of these areas, students worked through the proposal worksheet with one-on-one support and guidance from the facilitator to ensure they have sufficient detail in each area, and mostly to ensure their stretch goals are challenging enough (with an estimated 50% chance of failure). Examples of anonymized student proposals are shown in Supplemental files 2–4.

We also built in a regular routine of reflection with a fortnightly video journal throughout the experiment (Harvey et al., 2019). Video journals, using the Flipgrid platform, were utilized as opposed to a written journal because we wanted the reflection to include the emotional aspects of the journey and video is a richer medium better able to capture authentic expressions of emotion (Ishii et al., 2019). An introduction to the role of reflection was also conducted during the week 3 class session. Prompts were given to guide student reflections:

- Reflect on your action from the past fortnight.
- What went well/not so well?
- What did you learn about the challenge?
- What did you learn about yourself?
- What does this mean for the weeks (or further) ahead?

The students were graded three marks per reflection submission and provided the following criteria for maximum marks: moves beyond description to show critical understanding of self and/or others; ability to challenge own thinking; and learn in the process. In the early weeks, most students started by being too descriptive in their submissions, just reporting what had happened. With feedback from the facilitator, they soon learned to focus on actual reflection, that is, their learning and personal growth during the process.

In addition to the individual experiential learning, we aimed to also create a psychologically safe environment (Grant, 2021) where vicarious learning could occur from sharing the journey—particularly the failures—with others in the class (Bledow et al., 2017). To this end, progress report workshops were held every 4 weeks, allowing students to


TABLE 3 Example experiments, with learning that resulted across three categories, from one instance of the creative challenge course

Experiment focus	Learning that resulted
<i>Startups</i>	
Develop a startup for falls prevention in the elderly	What can be achieved when take a chance and give full effort
Commercialize a new research-based behavioral finance tool	How to bring diverse skills and personalities together to achieve
Develop a fermented foods startup	Level of commitment a startup needs and sometimes it is better to be a hobby
Take an assisted living community business model to a new town	Clarified personal appetite for risk and that of team
<i>Skills development</i>	
Increase sales of a children's book through new marketing tactics	Overcoming fear of success and appreciation for complexity of small business
Implement a commercialization strategy for an IP-based startup	Challenges in maintaining motivation when given freedom
Build a training and development tool for remote workers	Importance of listening to others and not making assumptions
Using community of practice to implement culture change in training	Self-confidence increased with personal strength and support to not underestimate own capability
Becoming a more effective leadership team by reducing hours and being more authentic	It takes vulnerability to lead authentically
<i>Social impact</i>	
Reduce water wastage in the city (pair of students)	Personal motivation for grand challenges and perseverance needed
Attract premium international tourists post Covid (pair of students)	Overcame nervousness to engage with public and work with local government
Help a corporate develop an effective flexible working system (pair of students)	Relinquishing control sometimes required and personal priorities outside of work
Develop a social enterprise hub for common tasks to benefit the sector	Not to lose personal purpose in order to avoid burnout common in social enterprises
Attract international students post Covid	Value of testing assumptions before proceeding

share their experiences with the class and culminating in a final presentation session and report where students outlined their overall learning according to the brains, bravery, and belief framework. Table 2 above outlines the weekly structure.

3.1 | Examples of student experiments

To date, the range of student experiments has generally fallen into three categories, as shown below in Table 3 with examples from one semester. First, there are startups created by students with an entrepreneurial idea they want to test. An example of this is a student who wanted to test if he could set up his own technology consulting business. He had good technical experience and had a desire to own his own business. But during the challenge, he needed to go well beyond his comfort zone to talk with many potential customers, try and articulate what the value proposition would be, and decide how he would resource the operation, who else would need to be involved, and so on. Although ultimately he failed in creating this particular business, he learnt a great deal about what would be involved if he chose to go down this path, and it helped him understand his own motivations for wanting to own his own business in the future.

The second common category of experiments is skills development, in which students want to develop a particular skill that they feel they may be lacking. An example of this is one student who worked as an engineer within a

product development team and wanted to develop his leadership skills. He had a goal of taking responsibility to lead a new team to a particular point in their development process, which he ultimately failed to reach. But in the process, he worked closely with an industry mentor who helped him develop and apply soft skills to positively influence individuals well beyond his immediate team, including senior leaders in the organization. He developed a renewed self-confidence in this process and was reinvigorated in his work.

The third category is social impact. This is where students want to use their skills to help improve a societal problem they care about. An example of this is where one student wanted to help small business owners. She hoped to provide tools to allow small business owners to upskill themselves, so they became less reliant on expensive consultants. In the process of talking with a number of small business owners about their issues, she soon discovered that one of her first assumptions was incorrect. She assumed that the business owners were most in need of technical knowledge about issues such as how to scale their businesses. But actually, she discovered they had a much greater need for social support to help with mental health and stress. This led her down an unforeseen path, well outside her comfort zone, of talking with mental health experts and understanding more about her own mental health. She failed in building the tools she initially aimed for, but through this process learnt a great deal about herself and aimed to continue the work to find ways to help support the mental health of small business owners.

There are also some examples of student experiments that have managed to combine two or even all three of the above categories, that is, an entrepreneurial idea that requires the student to develop and test new skills and also helps with a community issue. An example of this was one student who had a concept to establish a contract manufacturing business that would be able to employ people being made redundant from his parent company. This ultimately failed, but produced significant personal learning for him, and as a part of the process, an alternative was found which allowed for the jobs to be saved. The student described his experience saying:

I discovered in retrospect that a fear of failure was inhibiting my personal growth. My incessant overthinking was creating self-doubt which in turn caused procrastination. My strong desire for success and subsequent anxieties were holding me back from pursuing new opportunities. The creative challenge enabled me to experiment with failure and broaden my perspectives. I learnt to take leaps of faith when confronted with new challenges or opportunities to be flexible. The initial approach I adopted regarding my financial requirements for the challenge did not end favorably due to time constraints and investor expectations. Failure in this instance taught me to revise and adapt my approach ultimately proved successful. During the challenge, I discovered that failure could create opportunity and perseverance could open further doors. This was a key learning for me as my previous fear of failure had been holding me back. A new business opportunity with an established manufacturing company came up which would not have happened if I had given up on funding options. I learnt by persevering and facing my fears that opportunities can evolve and, in this instance, has led to significant retention of approximately 75 jobs and a continued manufacturing presence in the region. If the creative challenge had not existed, the outcome would have been vastly different.

3.2 | Replicating elements of the course design

The author acknowledges that many colleagues may not have the luxury of introducing an entirely new course into a program in order to replicate all of what is described here. In fact, it is arguably better to experiment at a smaller scale before taking this step. To this end, many key aspects of failure-based learning could be introduced to an existing course where there is a project-based learning element (Bayley et al., 2021). There are three ways this might be achieved. First, rather than student projects being presented as a way to demonstrate specific knowledge, these course components

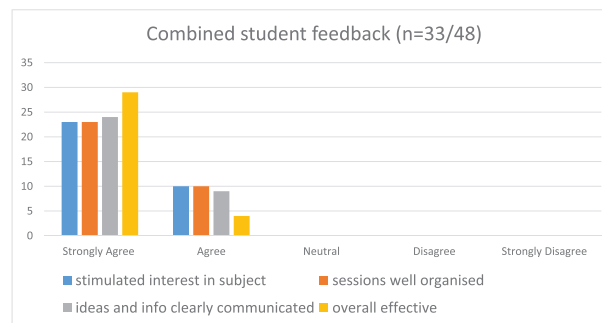


FIGURE 1 Summary of anonymous student survey results

could be framed as opportunities for experimentation and intelligent failure. Naturally, this will mean educating students on intelligent failure and encouraging them to define experiments rather than projects per se. Second, reflection on the process of experimentation should be included as a core part of the experience. Various tools and frameworks can be introduced to guide the reflection. Third, the way the experiments are assessed can adopt the brains, bravery, and belief framework described here to provide a structure for assessment and reinforce the learning goals. The marking guide with breakdown of brains, bravery, and belief categories is provided as Supplemental file 5.

4 | RESULTS

Three instances of the course have been completed since it began in early 2020. In each case, it was based on the structure described above with relatively minor adjustments, such as the inclusion of video reflective journals (rather than written journals) after the first instance and updating of various supporting materials as they have become available. Following each course, an anonymous survey asked if the course stimulated interest in the subject area, along with questions relating to course organization, clarity of communication, and overall effectiveness of teaching. There were 33 responses from the 48 students who completed the course. As shown below in Figure 1, of that number 88% strongly agreed, with 12% agreeing, that the course overall was effective in achieving the learning outcomes. Responses to the other areas were also dominated by strong agreement.

Of more interest are the qualitative responses to the survey's open-ended questions. Students were asked "How has this course changed your perspective on intelligent failure?" along with "What were the most valuable things you learnt from your experience in this course?" There were also some free-form comments to the standard questions above that offer insight into student perspectives.

Three main themes emerged from the qualitative student responses. The first related to the overall scaffolding and design of the course. Students responded positively to the balance of structure and freedom. The following are verbatim comments from the student surveys:



- “Even though there was a looseness to the sessions, this suited the approach to the whole course really well. There was enough structure for us to progress but not so much that it was constraining.”
- “The course was structured in a way that helped me experiment with my learning. It pushed me outside of my comfort zone which I found really rewarding.”
- “Good balance of being hands-off to allow students to pick their own stretch goal, or help for those that needed it.”
- “The timing of the content was incredibly on point which was particularly impressive given the wide scope of the projects.”
- “I found the interactive nature of the assessments and the supportive cohort beneficial throughout the course.”

The second common theme related to the value of the video reflections and receiving individual feedback on these. As the lecturer, I can confirm that the use of video rather than written journals gave me a more authentic sense of the students’ reflection, particularly when discussing emotional aspects. Feedback on these reflective journals (provided via video) is also a highly valued part of the experience. Student comments:

- “I loved the video journals because they were authentic and provided an opportunity for deeper reflection.”
- “I was not sure my project was on the right track or not, however as we get feedback on the journal, I have gradually understood the concept of this challenge.”
- “Feedback on the video journals helped a lot.”
- “One-on-one feedback was constructive and thoughtful”
- “Definitely got positive feedback and encouragement. Sounded like others felt the same.”
- “I like the way Christian challenges us to work outside our comfort zones.”
- “Was extremely supportive and accommodating without being soft”
- “Supportive, collegial and challenging”

The third theme relates to students’ perceptions of their own personal growth as a result of this course. Students reported having a changed perspective on failure that could have far-reaching consequences in both their professional and personal lives. Below are examples of student comments:

- “Challenged my assumptions about asking for help and my need to constantly perform highly and this has the potential to have large impacts on how I go about my life, hopefully leading to a happier and healthier me”
- “From my perspective, the course was invaluable in helping me confront failure and learn to not only accept it, but lean into the processes which could result in failure (but on the flip side result in much learning!). In the environments I tend to work in, failure is not really an option, and as a result, we are not only encouraged not to fail, but we have many in-built psychological mechanisms to avoid failure at all costs. Unfortunately, this incredibly risk-averse

behavior can severely limit curiosity and experimentation. It was a very personally challenging and confronting course, and I appreciate the ways it forced me to grow.”

- “Wasn’t entirely sold on the concept of a whole paper focused on a stretch goal initially, but it has been a pretty incredible experience.”
- “I initially thought this class would be a waste of time. But it was really good from a personal growth viewpoint and a chance to put a lot of the practical learnings from the MBA into practice.”
- “I was surprised that the creative challenge provided deep insight and personal growth that I can take forward in my personal and professional life.”

There has also been external and organizational support for the course. In 2021, the MBA program the course is a part of was reviewed by an independent AMBA review panel. In their formal report re-accrediting the program, the panel explicitly mention in the commendations section, “The Creative Challenge is an innovative feature of the MBA program.” The MBA director in providing a testimonial for an internal teaching award stated, “This course started on the recently re-designed MBA as a risky proposition in itself but the Creative Challenge is now a key feature of the MBA learning journey.”

5 | DISCUSSION AND REFLECTIONS

In reflecting on the course through the three iterations to date, there have been some instructive failures and a lot of learning for the lecturer. The most significant failure in the course design and delivery occurred the first time the course was run. In the initial stages of defining the experiments, there were no limitations placed on the nature of the challenge to students. A small number of students took the opportunity to design physical fitness challenges for themselves. This met the criteria set out in the proposal because it was personally significant to them, they had defined a hypothesis, assumptions were stated, and the scope and costs were limited. They had clear plans in place, developed in consultation with a personal trainer, including ambitious goals that they may not have been able to reach; they had also considered the various risks and developed mitigation plans. However, the university’s legal department, on hearing that a course designed to encourage failure was going to engage some students in physical challenges, determined that this was a legal risk to the university. The implication was that we were expecting students to injure themselves, which was clearly never the plan; in fact, avoiding this was a key part of the risk management. Despite this—and even when the students offered to sign legal waivers—we were instructed to close these experiments down and find alternatives for the affected students, which we did. Interestingly, most of the affected students continued with their original plans outside of the official course and took great delight in reporting their fitness progress alongside their

officially approved experiments. But this failure did lead us to require subsequent experiments to have some relation to business or management skills or issues, even though the same kind of learning can happen in other contexts. Regardless of the actual topic, the best learning outcomes are produced when students have a personal interest in their subject. This aspect is now emphasized in the early phases of defining the experiment; to reinforce this point, students are asked to articulate why this matters to them in the proposal.

There has also been personal learning for the lecturer. The first major learning deals with the emotional side of the regular reflections from students and providing constructive feedback, which has been an essential part of the student learning experience but is also personally challenging and emotionally draining at times for the lecturer. It requires an empathetic approach to get to know each student to ensure the students feel both supported and challenged. Finding this balance takes time and should not be rushed. Also, it is important to use the self-compassion tools introduced in the course (Shepherd & Cardon, 2009). Because the course runs twice per year, one failure in the first year was not having a sufficient break between the two instances, which did not allow much time for the lecturer to recharge. The second major learning has been in the use of video reflections as a medium along with video feedback, both via Flipgrid. This has helped build more engagement between the student and lecturer and particularly allows for better conveying of emotion as discussed earlier. This was used in the second and third iterations of the course as an experiment, and ongoing tests are being conducted to refine this method. For example, the video duration was set to a maximum of 60 s for the second iteration of the course but was extended to a maximum of 90 s for iteration three. The relatively short times were set to encourage the students to slow down and focus on the most important aspects of the previous fortnight's learning, as opposed to a lengthy activity report that is the default for many students.

Overall, the Creative Challenge has been a highly influential course in the MBA students' learning journey. An open question is how might a similar approach be applied to other programs or other groups of students? The Executive MBA students that have experienced the course to date are all highly motivated and largely self-directed in the execution of the actions for the experiments once defined and make good use of the external mentors. There is still much for less experienced students to learn from a failure-based approach, but they are likely to need much closer guidance in the planning and execution of the experiment. This could be accommodated by having more weekly class sessions as opposed to the self-directed time currently in the course. Another alternative, as discussed above, would be to look at a single failure-based assessment using an experiment on a much smaller scale that could be contained within an existing course. The author looks forward to seeing the results of other experiments in this light. The other question is one of scale. To date, the individual class sizes of less than 20 students have allowed for the close connection between lecturer and student, which ensures the fine balance between

support and challenge. Larger classes can be accommodated with the existing structure, but adjustments may be necessary if the personal connection aspect were starting to be lost.

6 | CONCLUSION

The Creative Challenge is an innovative failure-based MBA course with 48 students having experienced the three instances of the course to date. It attempts to bring failure-based pedagogies, generative failure (Feigenbaum, 2021), whole-person learning (Hoover et al., 2010), and entrepreneurial thinking (Peschl et al., 2021) to MBA students to help them build the skills, emotional resilience, and confidence to fail forward when navigating VUCA environments. The learning experiences of students to date have been often remarkable, and it is hoped that with further experimentation, the course can continue to deliver and improve these experiences to subsequent cohorts of students.

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REFERENCES

- Argyris, C. (1991) Teaching smart people how to learn. *Harvard Business Review*, 69(3), 1–12.
- Aylesworth, A. & Cleary, R. (2020) Reawakening creativity for business leaders: Removing obstacles. *Journal of Education for Business*, 95(4), 248–254. <https://doi.org/10.1080/08832323.2019.1632780>
- Bayley, T., Wheatley, D. & Hurst, A. (2021) Assessing a novel problem-based learning approach with game elements in a business analytics course. *Decision Sciences Journal of Innovative Education*, 19(3), 185–196. <https://doi.org/10.1111/dsji.12246>
- Bennett, N. & Lemoine, G.J. (2014) What a difference a word makes: Understanding threats to performance in a VUCA world. *Business Horizons*, 57(3), 311–317. doi: <https://doi.org/10.1016/j.bushor.2014.01.001>
- Bledow, R., Carette, B., Kühnel, J. & Bister, D. (2017) Learning from others' failures: The effectiveness of failure stories for managerial learning. *Academy of Management Learning & Education*, 16(1), 39–53. <https://doi.org/10.5465/amle.2014.0169>
- Brown, A., Holtham, C., Rich, M. & Dove, A. (2015) Twenty-first century managers and intuition: An exploratory example of pedagogic change for business undergraduates. *Decision Sciences Journal of Innovative Education*, 13(3), 349–375. <https://doi.org/10.1111/dsji.12066>
- Cannon, M.D. & Edmondson, A.C. (2005) Failing to learn and learning to fail (intelligently): How great organizations put failure to work to innovate and improve. *Long Range Planning*, 38(3), 299–319.
- Chandler, J.D. & Teckchandani, A. (2015) Using social constructivist pedagogy to implement liberal learning in business education. *Decision Sciences Journal of Innovative Education*, 13(3), 327–348. <https://doi.org/10.1111/dsji.12073>
- Collins, J. (2001) *Good to great*. London: Random House Business Books.



- Dobson, S. & Walmsley, B. (2021) Fail fast, fail often...but don't fail this course! Business and enterprise education through the lens of theatre and the creative arts. *Industry & Higher Education*, 35(4), 336–346. <https://doi.org/10.1177/0950422220955071>
- Duckworth, A. (2016) *Grit: The power of passion and perseverance*. New York: Scribner.
- Edmondson, A.C. (2011) Strategies of learning from failure. *Harvard Business Review*, 89(4), 48–137.
- Eskreis-Winkler, L. & Fishbach, A. (2019) Not learning from failure—The greatest failure of all. *Psychological Science*, 30(12), 1733–1744. <https://doi.org/10.1177/0956797619881133>
- Estabrooks, L.B. & Couch, S.R. (2018) Failure as an active agent in the development of creative and inventive mindsets. *Thinking Skills and Creativity*, 30, 103–115. <https://doi.org/10.1016/j.tsc.2018.02.015>
- Feigenbaum, P. (2021) Telling students it's O.K. to fail, but showing them it isn't: Dissonant paradigms of failure in higher education. *Teaching and Learning Inquiry*, 9(1), 13–26. doi: [10.20343/teachlearninginqu.9.1.3](https://doi.org/10.20343/teachlearninginqu.9.1.3)
- Goleman, D. (2004) What makes a leader? *Harvard Business Review*, 82(4), 82–91.
- Grant, A. (2021) *Think again: The power of knowing what You don't know*. New York: Viking.
- Hall, D. (2007) Fail fast, fail cheap. *Business Week*, 32, 19–24.
- Hall, R. & Rowland, C. (2016) Leadership development for managers in turbulent times. *The Journal of Management Development*, 35(8), 942–955. <https://doi.org/10.1108/JMD-09-2015-0121>
- Harvey, M., Baumann, C. & Fredericks, V. (2019) A taxonomy of emotion and cognition for student reflection: Introducing emo-cog. *Higher Education Research & Development*, 38(6), 1138–1153.
- Harvey, M., Coulson, D. & McMaugh, A. (2016) Towards a theory of the ecology of reflection: Reflective practice for experiential learning in higher education. *Journal of University Teaching & Learning Practice*, 13(2), 2–20.
- Hoover, J.D., Giambatista, R.C., Sorenson, R.L. & Bommer, W.H. (2010) Assessing the effectiveness of whole person learning pedagogy in skill acquisition. *Academy of Management Learning & Education*, 9(2), 192–203. <https://doi.org/10.5465/AMLE.2010.51428543>
- Ishii, K., Lyons, M.M. & Carr, S.A. (2019) Revisiting media richness theory for today and future. *Human Behavior and Emerging Technologies*, 1(2), 124–131.
- Kapur, M. (2008) Productive Failure. *Cognition and Instruction*, 26(3), 379–424. <https://doi.org/10.1080/07370000802212669>
- Kapur, M. (2016) Examining productive failure, productive success, unproductive failure, and unproductive success in learning. *Educational Psychologist*, 51(2), 289–299. <https://doi.org/10.1080/00461520.2016.1155457>
- Kerr, C. & Lloyd, C. (2008) Pedagogical learnings for management education: Developing creativity and innovation. *Journal of Management & Organization*, 14(5), 486–503. <https://doi.org/10.5172/jmo.837.14.5.486>
- Khanna, R., Guler, I. & Nerkar, A. (2016) Fail often, fail big, and fail fast? Learning from small failures and R&D performance in the pharmaceutical industry. *Academy of Management Journal*, 59(2), 436–459. <https://doi.org/10.5465/amj.2013.1109>
- Kolb, A.Y. & Kolb, D.A. (2009) The learning way: Meta-cognitive aspects of experiential learning. *Simulation & Gaming*, 40(3), 297–327. <https://doi.org/10.1177/1046878108325713>
- Loibl, K. & Rummel, N. (2014) Knowing what you don't know makes failure productive. *Learning and Instruction*, 34(34), 74–85. <https://doi.org/10.1016/j.learninstruc.2014.08.004>
- Manalo, E. & Kapur, M. (2018) The role of failure in promoting thinking skills and creativity: New findings and insights about how failure can be beneficial for learning. *Thinking Skills and Creativity*, 30, 1–6. <https://doi.org/10.1016/j.tsc.2018.06.001>
- McGrath, R.G. (2011) Failing by design. *Harvard Business Review*, 89(4), 76–137.
- Miron-Spektor, E., Vashdi, D.R. & Gopher, H. (2021) Bright sparks and enquiring minds: Differential effects of goal orientation on the creativity trajectory. *Journal of Applied Psychology*, <https://doi.org/10.1037/apl0000888>
- Peschl, H., Deng, C. & Larson, N. (2021) Entrepreneurial thinking: A signature pedagogy for an uncertain 21st century. *The International Journal of Management Education*, 19(1), 100427. <https://doi.org/10.1016/j.ijme.2020.100427>
- Politis, D. & Gabrielsson, J. (2009) Entrepreneurs' attitudes towards failure. *International Journal of Entrepreneurial Behavior & Research*, 15(4), 364–383. <https://doi.org/10.1108/13552550910967921>
- Sawyer, R.K. (2019) The role of failure in learning how to create in art and design. *Thinking Skills and Creativity*, 33, 100527. <https://doi.org/10.1016/j.tsc.2018.08.002>
- Shankar, R.K. & Clausen, T.H. (2020) Scale quickly or fail fast: An inductive study of acceleration. *Technovation*, 98. doi: <https://doi.org/10.1016/j.technovation.2020.102174>
- Shepherd, D.A. (2003) Learning from business failure: Propositions of grief recovery for the self-employed. *The Academy of Management Review*, 28(2), 318–328. <https://doi.org/10.2307/30040715>
- Shepherd, D.A. & Cardon, M.S. (2009) Negative emotional reactions to project failure and the self-compassion to learn from the experience. *Journal of Management Studies*, 46(6), 923–949. <https://doi.org/10.1111/j.1467-6486.2009.00821.x>
- Walsh, A. & Powell, P. (2020) Re-imagining the MBA: An arts-based approach. *Higher Education Pedagogies*, 5(1), 148–164. <https://doi.org/10.1080/23752696.2020.1797523>

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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