

1. Practice-based entrepreneurship education using actionable theory

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During a recent viewing of a news story on television, the anchor transitioned from one part of the story to another in a way that piqued our interest. She said, ‘Let’s move from the more theoretical to the real’. Given the academic in us, we thought what a false dichotomy! Is theory not derived from the real (at least in the social sciences)? As Van de Ven (1989) noted in honor of Lewin (1945), good theory is practical because it ‘enlightens the profession of management’ (p. 486). But let us be clear, management is not entrepreneurship. Management is a practice of facilitating what is known while entrepreneurship is a practice of identifying and creating from what is relatively unknown, new or emerging. Thus the relevance of theory in entrepreneurship comes into question more often than in any other business discipline because there does not exist a single, unifying theory informing entrepreneurs, entrepreneurial teams, entrepreneurial organizations, and so on how to act or decide from a portfolio of options, in a generalizable sense, under conditions of extreme uncertainty. In many respects, the choice is quite simple in this scenario. Under conditions of extreme uncertainty the only choice is simple—take action.

As noted in Corbett and Katz (2012), ‘it is supremely ironic that for a field defined by an action, the discipline of entrepreneurship has had such an inconsistent tradition of actually studying action’ (p. ix). But this requires a view of the whole that does not exist in entrepreneurship today (Gartner, 2001). Entrepreneurship may lack *a* theory—but the field is not without theory and given the multidisciplinary nature of entrepreneurship there is a long list of theories that can apply to various entrepreneurship phenomena. In other words, there is theory available to us today that will motivate our students to act. Furthermore, the theories demand practice.

The purpose of this chapter is three-fold. First, we address the never-ending and ever-growing debate regarding theory and practice and introduce a continuum and categorization of entrepreneurship education to the

debate. A concept of ‘synthesis’ is introduced that represents highly experiential entrepreneurship education where theory is actionable but, more or less, invisible to the student but very present. Following this notion of synthesis, we present five practices of entrepreneurship education (Neck, Greene and Brush, 2014). Each practice is grounded in actionable theories from across disciplines and together constitute a method of thinking and acting entrepreneurially regardless of context. Much of the work presented in this chapter is based on a more in-depth body of work presented in our book *Teaching Entrepreneurship: A Practice-Based Approach* (2014).

THE THEORY–PRACTICE CONTINUUM AND CONUNDRUM

We posit that entrepreneurship is one of the most applied business disciplines and in order to learn entrepreneurship one must actually do entrepreneurship. This statement immediately conjures images of the practitioner, also known as the recovering entrepreneur, imparting his words of wisdom on students based on his experience, and only his experience. But we do not ignore the theoretical component of entrepreneurship education; rather, we demand that the theoretical component be an essential part of entrepreneurship education. Where we depart from the norm, however, is that we do not care if students know the theory by name or even know it is there. The theory is invisible and, more importantly, actionable. In line with Fiet (2000), educators should incorporate theoretical content into entrepreneurship courses not simply by exposure but through action where students practice the skills necessary to engage in entrepreneurship.

Given that entrepreneurship is a part of the larger field of management, the tension between theory and practice is not unique. Wren et al. (1980, 1994, 2007) conducted research in the 1980s, 1990s, and early 2000s to assess the degree to which management educators emphasize theory or application. The 1970s seemed to be a decade of theory followed by a decade of application in the 1980s. Not a surprising finding because in the 1970s we were still feeling the effects of two landmark studies (Gordon and Howell, 1959; Pierson, 1959) that criticized the lack of rigor in business education and called for more theory and analysis and favored business faculty as scientists rather than consultants. We suspect the 1980s witnessed another transition where theory alone lacked relevance in building managers and leaders; therefore, application started to trend higher. What we find surprising, however, are the more recent findings based on 2005 data. Wren et al. (2007) report a pendulum swing back to theory.

In many instances, the 2005 respondents indicated that theory was even more pervasive in our pedagogy than was reported in the 1977 data . . . Although theory is emphasized more in undergraduate courses, the aforementioned trend toward more theory is similarly occurring in graduate courses. This lends further credibility to the notion that theories are emphasized to a greater extent than the usefulness of those theories in practice at all levels of our management instruction. As some have suggested, it appears as though the trend in our pedagogy has been more directed toward the exercise of theory and analysis than toward training our students in thinking, analysis, and application skills. (Wren et al., 2007, p. 490)

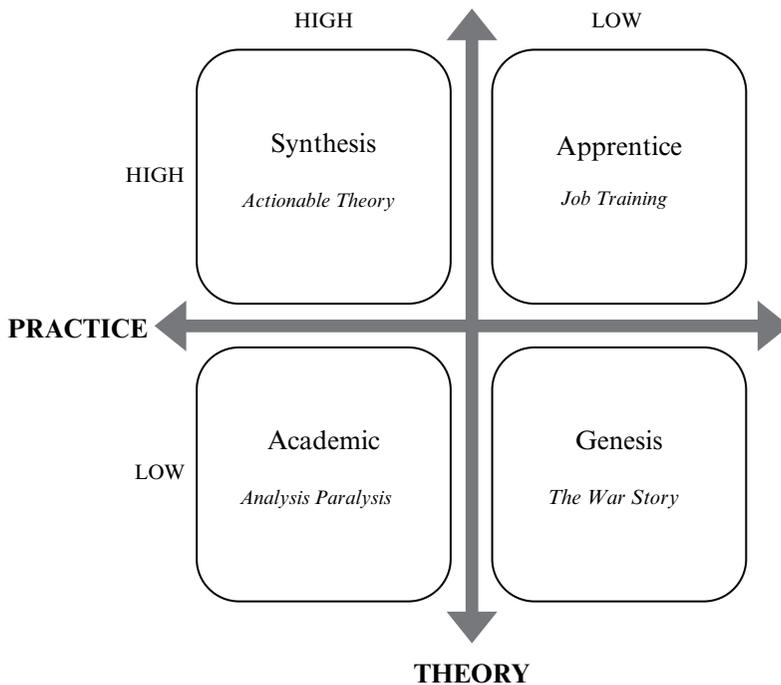
Today in entrepreneurship education a theory–practice continuum and tension continues to exist. If a group of 100 entrepreneurship educators are asked where they are most comfortable teaching on a scale of 1 to 10 with 1 being pure theory and 10 being pure practice, the room is typically split—but not evenly. Thirty percent would score themselves as a one or two (the theory side) and seventy percent would fall closer to nine and ten (the practice side). Unfortunately, where we need our educators to be is in the middle and that seems to be an anomaly rather than the norm. This is probably reflective of those that are teaching entrepreneurship. The ‘professor’ is either a Ph.D. (traditional academic) or practitioner (current or recovering entrepreneur). Depending on the pathway to academe, there tends to be a direct correlation with position on the theory–practice spectrum. Even today entrepreneurship courses are readily taught by adjunct professors given the lack of supply of doctoral-trained entrepreneurship faculty (Brush et al., 2003; Low, 2001). Evidence of the lack of supply is reported by Finkle (2010) with 1.6 entrepreneurship positions available per candidate.

According to Whetten (1989), good theory consists of four elements:

- What: Those factors and variables that constitute the explanation for a particular phenomenon.
- How: The interconnectedness among the variables and their contribution to the creation of a particular phenomenon.
- Why: The justification for what variables come together in a particular way to produce the phenomenon—the explanation.
- Who, Where, When: The context that sets boundaries for generalizability.

Alternatively Weick (1995) dismisses this theory as a product view in favor of theory as a process or a series of approximations—what Weick terms ‘theorizing’.

Strong or high practice, on the other hand, relates to actions taken or applications made in the real world. If theory is book learning then



Source: Neck, Greene and Brush (2014).

Figure 1.1 Theory–practice matrix

practice is street learning. If theory is understanding and describing then practice is experimenting and doing. If theory is a model then practice is the building of that model. We could go on and on, but the point should be evident. Theory without action is busy work and action without theory is, according to Fiet (2002), nothing worth learning.

In *Teaching Entrepreneurship* (2014), we introduce a theory–practice matrix (Figure 1.1) that illustrates the different ‘boxes’ of entrepreneurship education on a continuum of theory and practice. It could also be argued that our matrix reflects the evolution of entrepreneurship education.

The *Genesis* cell (low theory–low practice) is symbolic of the origins of entrepreneurship education when little theory existed and telling war stories that often suffered from extreme retrospective bias dominated the classroom. Because the entrepreneur was seen as a hero surmounting unfathomable odds, the interest in traits of entrepreneurs emerged. The emergence of traits research was an attempt to create some generalizability

around the war story model. Thus, Genesis is really about the traits of those entrepreneurs illustrated in the war stories. Practice was nonexistent given that students were relegated to listening and learning from war stories rather than developing their own stories. The downside revealed students opting out of entrepreneurship because they did not fit the mold and perceived themselves as not being born ‘with the right stuff’ (Neck and Greene, 2011).

The *Apprentice* cell (low theory-high practice) is not typically the domain of higher education. This cell closely aligns with vocational or technical training where theory is irrelevant (and rightly so) in favor of narrow skill development over cognitive development for a particular job or craft. Business schools, known as a professional school, started in this cell but were later criticized for narrowness and lack of theory (Gordon and Howell, 1959). In entrepreneurship this takes the form of business plan workshops or community courses designed to help one learn how to open a business—more aligning with small business management than entrepreneurship. We see evidence of the apprentice cell in entrepreneurship programs when we send untrained adjunct faculty into the classroom. Their wealth of practical experience frames the course, but there is a clear lack of knowledge on the various theoretical contributions that can make the classroom experience richer. As noted by Fiet (2000), ‘it would be better if our [entrepreneurship] classrooms were not places where we merely exposed our students to theoretical descriptions of what entrepreneurs actually do’ (p. 103).

The *Academic* cell (high theory–low practice) dominates where we are in entrepreneurship education today. Our insecurity as a legitimate field has propelled us into a world where entrepreneurship is science and the scientific method will yield the answers to our most pressing questions. Looking back at the emergence of our field, researchers began calling for the evaluation of entrepreneurship as a process (Low and MacMillan, 1988; Amit et al., 1993). At the same time an influx of strategy Ph.D.s immigrated into entrepreneurship domain (ourselves included), and we brought a lot of theoretical baggage. The process view extended the reach of entrepreneurship because it includes everything from opportunity identification to business exit (Neck and Greene, 2011). Not only did we borrow a lot of theory from strategy but we also borrowed teaching methodologies. The case method dominated as the way to engage and develop aspiring entrepreneurs and the business plan replaced the strategic plan as a gradable, capstone deliverable. Whatever approach or theory is used, the goal is to cultivate the analytical skills of students—to develop problem solvers, spreadsheet gurus, data collectors, number crunchers, and, in general, rationalists. And if we tear apart the academic cell there is

a phrase encapsulated in the cell that brings us back to our macroeconomics courses: *ceteris paribus*—the Latin phrase meaning all things being equal or everything else held constant. Theory learned in the academic cell without consideration to practice or real application in the real world is simple and pure theory that just describes and explains (Whetten, 1989). How boring for our students and how irrelevant for entrepreneurship education! Can we really blame Peter Theil, Paypal co-founder, for paying young students \$100,000 to drop out of college or not even attend college in order to become an entrepreneur, scientist, or social change-maker (<http://www.thielfellowship.org/>)?

Finally there is the *Synthesis* cell (high theory–high practice) where theory and practice collide to produce actionable theory. As entrepreneurship educators we have to really ask ourselves how important is it that students are able to recite theory. Or is it more important that students use and apply theory even if they do not know they are doing so? Because this is the essence of what we call synthesis and actionable theory—‘where invisible theory meets practice’ (Neck, Greene and Brush, 2014).

Where simple theory provides both description and explanation (Whetten, 1989), actionable theory requires action in order to understand (describe) and make sense of the situation (explain). Entrepreneurship, in the synthesis cell, is viewed less as a science and more as a method (Sarasvathy, 2012; Neck and Greene, 2011). As Sarasvathy noted, ‘what the scientific method has afforded us in terms of understanding the actual world we live in, the entrepreneurial method enables us in terms of making new ones’ (Sarasvathy, 2012, p. 2).

The method in the synthesis cell is in contrast with the process of the academic cell. Where the process of entrepreneurship is linear, predictive, planning-focused, data rich, even rational, the method of entrepreneurship is iterative, creative, action-focused, data poor, and even emotional.

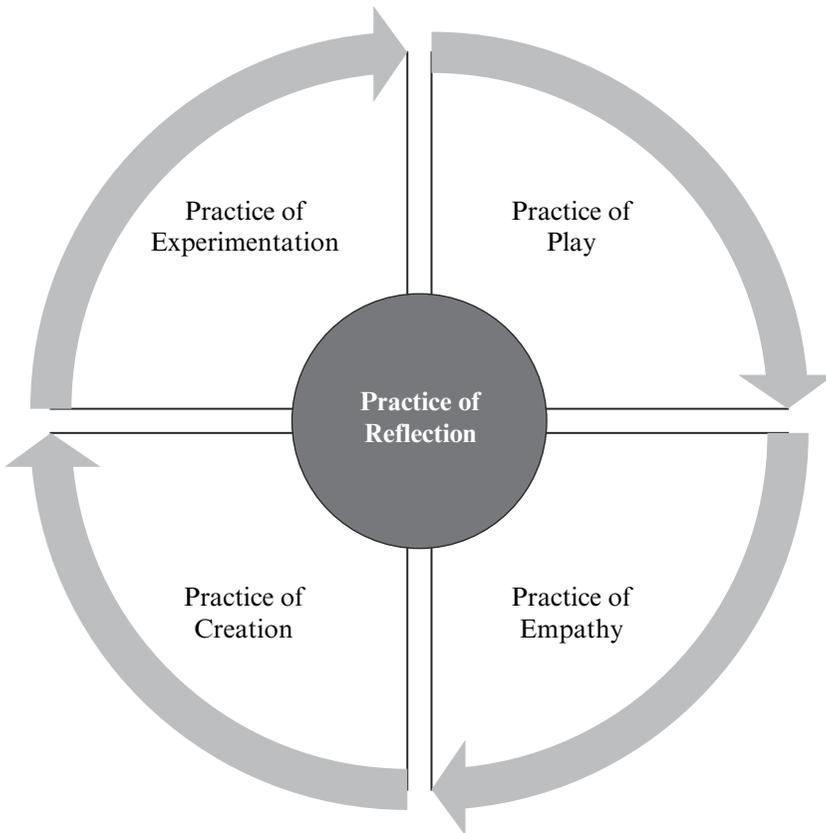
Approaching entrepreneurship as a method means teaching a way of thinking and acting built on a set of assumptions using a portfolio of practices to encourage creating. The method forces students to go beyond understanding, knowing, and talking. It requires using, applying, and acting. The method requires continuous practice. (Neck, Greene and Brush, 2014, p. xx)

Underlying the method is a notion of entrepreneurship as a portfolio of practices designed to help students think and act more entrepreneurially with intention. There is no overarching theory nor is there one practice; rather, we introduce multiple practices grounded in various theories. In the next section we discuss these practices and how actionable theory is embedded in each practice.

THE PRACTICES OF ENTREPRENEURSHIP EDUCATION

Earlier we introduced the theory–practice matrix as originating in our book *Teaching Entrepreneurship*. Also in that book we introduce in great depth the five practices of entrepreneurship education depicted in Figure 1.2. We will briefly discuss each practice in this section but let us first address what practices are.

The practices (plural) of entrepreneurship education are distinct from practice (singular) in the theory–practice matrix (Figure 1.1). ‘Practice’ in the matrix refers to actions taken or applications made



Source: Neck, Greene and Brush (2014).

Figure 1.2 The practices of entrepreneurship education

in the real world, 'practices' as presented here are developed over time to attain a state of mind or become habitual. The practices combined help students develop a method of thinking and acting entrepreneurially. The practices do relate to practice noted in the matrix because the practices are rooted in action and application and are integral to the synthesis cell.

The practices presented here relate to practice theory (cf. Rouse, 2006; Bourdieu, 1990; Pickering, 1992; Giddens, 1984) and the belief that particular kinds of learning activities can 'generate richer understanding about practice, but from and through practice, not on behalf of it' (Billett, 2010, p. 29). The predominant themes found in practice theory (Rouse, 2006) capture why Neck, Greene and Brush (2014) elect to take a practice-based approach to entrepreneurship education:

1. Practices are meaningful performances governed by social rules and norms;
2. Practices create culture and act as a platform for social construction;
3. Practices require continuous interaction with others and/or the environment leading to expanded knowledge structures and mindfulness in the practice;
4. Practices create shared meaning among participants through the use of language, frameworks, tools, and common experiences.

The rules and norms (1) are governed by the guiding theories associated with each practice. The use of practices inside a classroom creates a less traditional culture (2) of learning and engagement given the highly experiential activities required to develop the practices. Habits related to entrepreneurial thinking and acting are formed with and through ongoing practice and interaction with classmates (3), and communities of learning are formed when there is shared meaning (4) among the students and faculty.

Given the complexity and multidisciplinary focus of entrepreneurship there is no single practice of entrepreneurship. A range of practice (Dall'Alba and Sandberg, 2010) in entrepreneurship necessitates a portfolio of practices that comprise a method of thinking and acting entrepreneurially. Thus, there are five core practices of entrepreneurship education: the practice of play; the practice of empathy; the practice of creation; the practice of experimentation; and the practice of reflection.

THE PRACTICE OF PLAY

‘The practice of play is about developing a free and imaginative mind, allowing one to see a wealth of possibilities, a world of opportunities, and a pathway to more innovative ways of being entrepreneurial’ (Neck, Greene and Brush p. xx). Play in a classroom setting is often associated with ‘edutainment’—a derogatory term in our opinion especially since we happily self-identify as an ‘edutainers’. What’s wrong with edutainment? Think about it. Students learn best when they are highly engaged and we are typically highly engaged when we are having fun while being playful. Why should the words fun and play not be associated with education? The irony is that the connection between play and education is so taboo that an entire gaming category had to be labeled ‘serious games’ (Abt, 1970) to denote those games playable for education purposes only. ‘Learning is at its best when it is deadly serious and very playful at the same time’ (Kafai, 1995, p. 314).

Theoretical origins of play as it pertains to the approach here are found in the work of child development psychologist Piaget (1962), with more recent adaptations by Stone (1995). There are three forms of play that represent different cognitive levels. *Sociodramatic* play is based on imagination and fantasy. Guiding entrepreneurship students through creative exercises where mundane ideas are transformed to magical ideas in order to eventually get to a novel opportunity is an example of sociodramatic play. *Functional* play requires interacting with the environment. Take for example the popular business model canvas (Osterwalder and Pigneur, 2010). Creating a card game using the nine components of the business model canvas and asking student teams to put the components in order from the most important component to address to the least important is an example of functional play. Students are physically moving cards around and discussing each part of the business model canvas while competing with other teams for the ‘correct’ order. *Constructive* play encourages students to build, create, or problem solve. Consider the popular marshmallow challenge (<http://marshmallowchallenge.com/Welcome.html>). Teams are given 20 sticks of dried spaghettis, one yard of tape, one yard of string, and one marshmallow and asked to build the tallest structure they can with the marshmallow on top.

From these three forms of play with associated examples, students are engaging in idea generation, lateral thinking, business model understanding, teamwork, learning from trial and error, and so on. As suggested by Education Professor Selma Wasserman (1992), ‘virtually every important concept to be taught—whether it be at the primary, intermediate, or graduate level or whether it be in science, math, economics, or business management—can be taught through the medium of serious play’ (p. 137).

THE PRACTICE OF EMPATHY

You know how your best friend feels when her dog dies, because you have been through a similar experience. A nutritionist understands the emotional struggle felt by her patient trying to lose weight because the nutritionist lost 100 pounds before becoming a nutritionist. An anthropologist lives in the jungle among the apes and begins to develop a deep understanding for how they live, eat, and love. An entrepreneurship student interested in food distribution spends hours observing how people shop in various types of grocery stores. These are all examples of empathy—‘a social and emotional skill that helps us feel and understand the emotion, circumstances, intentions, thoughts, and needs of others, such that we can offer sensitive, perceptive, and appropriate communications and support’ (McLaren, 2013, p. 11).

Theoretical developments related to empathy are rich, complex, and multidisciplinary with origins in art history (Titchener, 1909). Empathy was used to describe the artist unable to separate himself from the objects portrayed in the art. As other disciplines began studying empathy (theology, philosophy, psychology, neuroscience), the complexity of the construct grew (Preston and de Waal, 2002). What is known is that empathy can be developed over time by creating experiences or scenarios where such a skill can be honed (Kouprie and Visser, 2009). Preston and de Waal (2002) found that empathy increases with such things as familiarity, similarity, past experience, and salience, which supports the notion that empathic development requires practice.

The practice of empathy is important in entrepreneurship education for two primary reasons (Neck, Greene and Brush, 2014). First, students need to develop empathy by understanding the lives of the entrepreneurs they want to become. A simple ‘interview-an-entrepreneur’ assignment can help students develop empathy for a practicing entrepreneur while also assessing their own ability to become an entrepreneur. Second, empathy allows students to connect with stakeholders in more meaningful and authentic ways in order to identify unmet needs—the antecedent of new products, services, and organizations. Introducing students to design thinking (Norman, 1988; Brown and Katz, 2009) can further develop their practice of empathy. Design thinking has three phases: inspiration, ideation, implementation (Brown, 2008). Empathy plays a powerful role in inspiration where observation is used to identify latent needs of customers. Simply assigning students a space to observe for two hours (without talking) can produce profound reactions from students.

THE PRACTICE OF CREATION

Inspired by effectuation theory (Sarasvathy, 2008) and creativity theorists (Amabile, 1983; Csikszentmihalyi, 1996; De Bono, 1985), the practice of creation relates to unleashing the creative ability of students to produce something of value with what they have rather than not producing because of constraints based on what they think is needed. As such this practice is multifaceted and includes creating and finding opportunities, problem-solving, searching opportunity spaces, idea generation, and a general openness to the world.

We do believe that entrepreneurship students are generally more open to creativity than students from other business disciplines. Our assertion is supported by some empirical support. Hamidi et al. (2008) found that personal creativity was higher in students enrolled in an entrepreneurship course when compared with a similar sample enrolled in other graduate courses. Thus, the practice of creation is about harnessing that creative potential to create opportunities. The perspective that new ideas come from a light bulb moment is a myth. ‘Even when an idea seems sudden, our minds have actually been working on it all along’ (Sawyer, 2006, p. 474). With students it is most important that they understand they can be creative and then are given the tools to be so.

Sarasvathy’s groundbreaking theory of effectuation (2001, 2008, 2012) is the ideal starting point because effectual entrepreneurs *create* opportunities, not simply find or look for opportunities. Developing a practice of creating opportunities is based on the following principles (Dew et al., 2009; Sarasvathy, 2008; Schlesinger et al., 2012; Neck, 2011):

1. *Desire to act precedes everything else* Without an avid desire to learn, insatiable curiosity, and unyielding energy, it is difficult to sustain and shape opportunities in the long run. Without desire the honeymoon period of ‘I have the most awesome idea’ is short-lived as soon as one piece of negative information is received. Desire is not passion because asking students what their passion is can be daunting. Rather, desire is simply their ‘want’ or what Dan Pink (2009) calls ‘the sentence’. ‘I want to impact entrepreneurship education on a global level’—is an example of a desire. ‘I want to use gaming to change primary education in South America’—is another example of a desire. A desire is not an idea; instead, it is an indicator of where the student wants to go and how badly he/she wants to get there. Asking students to rate their desire regarding an idea or an opportunity on a scale of 1 (low) to 10 (high) is an easy and thought-provoking exercise. We always suggest that if the self-score is an 8 or below . . . start over!

2. *What you have, not what you need* A perceived lack of resources is an easy excuse to rationalize inaction. Creation requires that students start with what they have rather than what they need. Effectuation theory encourages students to answer three basic questions: Who am I? What do I know? Whom do I know? The answers to these questions help students calculate the personal assets they have to start something immediately. Through action the resources and subsequent opportunity will grow over time.
3. *Enrolling others in the idea* (not selling or pitching) requires collaboration rather than competition. Sharing ideas and building a network of enrolled stakeholders will ultimately increase the resource base, validate the idea, and expand the possibilities available.
4. *Calculating what you are willing to lose* (affordable loss) to take steps forward is more empowering than estimating a highly variable internal rate of return. Small steps in the beginning cost very little (money, time, and reputation) but also build priceless confidence.
5. *Expect and leverage failure* The 'F' word is too often ignored in entrepreneurship classrooms but failure is both inevitable and a given. Learning from failure is a given but how to learn from failure is a slippery slope. In the practice of creation, we are mostly referring to small actions and therefore small failures, so learning from failure and leveraging that new knowledge is important.¹

The above five principles encourage students to act under conditions of extreme ambiguity and uncertainty, without complete information, to create something new of value. The roadblocks of creativity such as fear and perceived constraints are overcome.

THE PRACTICE OF EXPERIMENTATION

Perhaps it is most important to start here with what the practice of experimentation is not. Experimentation here is not meant to be compared with the scientific process that requires valid and reliable study designs that can produce statistically relevant and theory-building or testing results. The practice involves interaction with the environment (people, places, objects) in order to acquire new knowledge (Zahorik, 1995; Fletcher, 2009).

Experimentation, in entrepreneurship education, borrows from theories related to problem-based learning (Barrows, 1985), evidence-based learning (Howard et al., 2003), and sensemaking (Weick, 1995). Problem-based learning induces cognitive conflict as a stimulus for learning and evidence-based learning encourages the use of existing information, though often

incomplete, as a starting point for generating new knowledge. Then, sense-making is a combination of problem-based and evidence-based learnings because students individually ‘make sense’ or ‘give meaning’ to their actions in the context of the environments. According to Weick (1993), sensemaking is ‘an ongoing accomplishment that emerges from efforts to create order and make retrospective sense of what occurs’ (p. 50). So it is through experimentation, regardless of how it is done, that students are encouraged to act, learn from that action, and build the learning into the next iteration (Schlesinger et al., 2012).

The practice of experimentation is best described as students acting in order to learn rather than learning before acting or applying. Tools such as Steve Blank’s Lean Launchpad (2013, Blank and Dorf, 2012), the Business Model Canvas (Osterwalder and Pigneur, 2010), and the Innographer Toolkit (Bruton, 2014) all require actions through experimentation, getting out of the building, and collecting new and real information as opposed to depending on Google search or rich university databases to test new concepts. With every new idea and opportunity comes an associated set of assumptions and questions. The practice of experimentation encourages students to validate every assumption and answer every question.

THE PRACTICE OF REFLECTION

The final practice of reflection is situated in the center of Figure 1.2 because it both connects and enriches the other practices. A practice of reflection requires metacognition—a practice of thinking about thinking in order to codify one’s learning (Schraw and Dennison, 1994). Given the action-orientation of all the previous practices, reflection is used here as another action but one that helps to make sense of all of the other actions required in the practices of play, empathy, creation and experimentation.

The theoretical foundations of this practice are from Schön’s reflective practitioner work (1983, 1987) and Brockbank and McGill’s (2007) dense and rigorous treatment of reflection in higher education. The purpose of reflection is to go beyond surface learning into deep learning—‘an active approach to learning, and a desire to get a grasp of the main point, make connections and draw conclusions’ (Brockbank and McGill, 2007, p. 42) in order for entrepreneurship students to ‘feel themselves to be the agents of learning’ (Marton, 1975, p. 137). Schön addresses ‘reflection-on-practice’ and ‘reflection-in practice’ as important to an ongoing cycle of learning from and during experiences. Brockbank and McGill (2007, pp. 126–27, and adapted by Neck, Greene and Brush, 2014) offer six different types of

reflection that can be used to get to the desired deeper learning from an action-oriented, practice-based approach to entrepreneurship education:

- Narrative reflection: Describe what happened.
- Emotional reflection: Focus on what you were feeling, why, and how the emotions were managed.
- Percipient reflection: Think about the perceptions (your own and others) and how they affected the experience.
- Analytical reflection: Explain the processes or important elements of the events, and how they are connected or related.
- Evaluative reflection: Assess the experience and identify the criteria used for the evaluation.
- Critical reflection: Considering the experience and approach, identify alternatives or contradictions as well as reflecting on what was learned about yourself in the process.

Each type of reflection represents a different level of depth and learning. Entrepreneurship students need to practice all types in order to codify their learning at a deeper level. Assign a different type of reflection six class sessions in a row and see what happens!

CONCLUSION

The practice-based approach to entrepreneurship is indicative of several shifts in entrepreneurship education today. First, whether entrepreneurship scholars like it or not, entrepreneurship is not simply new venture creation. The word entrepreneurship has taken on new meaning and is motivating a generation that must think and act more boldly than ever before. Our students are interviewing for Fortune 500 jobs in finance, consumer products, insurance, and healthcare (to name a few) and using the language from entrepreneurship courses. And they are being hired by those companies!

Second, Rindova et al. (2009) introduced ‘entrepreneurship’ as a form of emancipation. We wish more people would start using this word. The verb change is critical here because it denotes action—‘to create something new—a new idea, a new thing, a new institution, a new market, a new set of possibilities’ (Rindova et al., 2009, p. 478). The language of entrepreneurship is pervasive and extends the boundaries set by scholars living in silos. Today entrepreneurship has become less about a process or an event or even an individual and more about a lifestyle and a philosophy (Fleischmann, 2006).

Third, developing students with a bias for action is starting to take hold across colleges and universities today. Classes where students are required to start a business are more commonplace than ever before and tools like the Business Model Canvas and Lean Startup are demanding more experiential approaches to learning. This is a good start but we need more. The practices presented here can help develop more students with a bias for action because the practices cannot be developed without learning through doing. The difference is that the practices do not simply relegate the student to learning about business creation. We like to say we are helping students live a more entrepreneurial and impactful life. At least that is our desire!

Finally, we would like to end with an excerpt from a provocative article in the *Journal of Cell Science* aptly titled ‘The Importance of Stupidity in Scientific Research’:

Productive stupidity means being ignorant by choice. Focusing on important questions puts us in the awkward position of being ignorant. One of the beautiful things about *science* is that it allows us to bumble along, getting it wrong time after time, and feel perfectly fine as long as we learn something each time. No doubt, this can be difficult for students who are accustomed to getting the answers right. No doubt, reasonable levels of confidence and emotional resilience help, but I think *scientific* education might do more to ease what is a very big transition: from learning what other people once discovered to making your own discoveries. The more comfortable we become with being stupid, the deeper we will wade into the unknown and the more likely we are to make big discoveries. (Schwartz, 2008, p. 1771)

Now read the above again and replace ‘science’ in sentence 2 and ‘scientific’ in in sentence 4 with the word ‘entrepreneurship’. This is what a practice-based approach to entrepreneurship education is all about.

NOTE

1. Shepherd (2004) addresses more devastating types of failure and offers interesting examples of how to help students deal with business failure. He incorporates theory from death and grief education.

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