

# THE RIGHT STUFF: DEFINING AND INFLUENCING THE ENTREPRENEURIAL MINDSET

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## ABSTRACT

*The entrepreneurial mindset is a poorly defined concept, often based on older theories that may be outdated or inconsistent with current theories and assumptions in the field of psychology. This paper presents a framework for analyzing the utility of entrepreneurial mindset attributes and then provide both conceptual and empirical ties between the entrepreneurial mindset construct and attitude theory. The model for attitude theory for this paper draws upon the Entrepreneurial Attitude Orientation (EAO). Influencing the entrepreneurial mindset is explored through the use of experiential education and engaged learning. Two examples of engaged entrepreneurship education are provided and related back to the elements of engaged learning.*

**Keywords:** Entrepreneurial Mindset, Entrepreneurial Attitudes, Experiential Education, Engaged Learning.

## INTRODUCTION

The “*Entrepreneurial Mindset*” is one of the hottest topics in the entrepreneurship literature, particularly in the popular press. Yet, there is little agreement as to:

1. What the mindset is.
2. How it is acquired.
3. How it can be influenced or change.

This research provides a critical look at current concepts related to the entrepreneurial mindset and goes on to provide a more comprehensive framework for understanding the mindset as a set of attitudes entrepreneurs’ have toward business activities. Educational practices that influence the entrepreneurial mindset are then examined with conceptual and empirical support from the field of education and entrepreneurship.

Definitions of the entrepreneurial mindset include such diverse conceptualizations as:

- “*A state of mind which orientates human conduct toward entrepreneurial activities and outcomes*” (Financial Times Lexicon, 2017).
- The ability to rapidly sense, act, and mobilize even under uncertain conditions (Haynes et al., 2010; Ireland et al., 2003)
- Mental frames used in pattern recognition activity focused on opportunity recognition (Baron & Ensley, 2006; Munoz et al., 2011).

Most research on entrepreneurial mindset focuses on cognitive models with linkages to behaviors. This focus negates or minimalizes the influence of emotion in the entrepreneurial

processes and the perception, evaluation and development of opportunities (Baron, 2008; Carden et al., 2012; Foo, 2009). Baron (2008) documents the influence affect plays in the entrepreneurial process through its influence on cognitions and behaviors. However, he does not propose an integrated theory or model for an entrepreneurial mindset that would include affect. This research proposes a comprehensive model of entrepreneurial mindset which includes affect, as well as cognition and behavior. It then examines teaching methods and practices that can positively influence the mindset of individuals to help them become more entrepreneurial. Finally, two mini-case studies are presented as examples of experiential teaching activates that are used in an engaged classroom setting to influence the entrepreneurial mindset.

## THE METATHEORY OF MINDSET MODELS

There appears to be a set of mental characteristics that set entrepreneurs apart from managers, professionals and wage & salary workers. This set of at least “*quasi-innate capabilities*” (Haynes et al., 2010) have collectively been called the entrepreneurial mindset. The question then becomes, what constitutes the entrepreneurial mindset?

In the popular press, there are as many definitions or formulas for the entrepreneurial mindset as there are consultants, researchers and educators. A Google Scholar search in February 2017 turned up over 9,570 results in 0.03 seconds, of articles published since 2016 alone. While there was a great deal of redundancy, the list was expansive. Even when the search on entrepreneurial mindset was limited to scholarly research over a broad timeframe, there were over 23,000 results.

However not all attributes are of equal value in identifying beneficial and valuable characteristics of an entrepreneurial mindset. To be useful as an attribute of an entrepreneurial mindset, characteristics should meet four basic critical criteria. These are:

**First:** They must be empirically supported, not based on individual experience.

**Second:** They must be consistent with current social science theory and practice.

**Third:** They must be able to distinguish entrepreneurs from other individuals or groups—managers, professionals, and wage & salary workers.

**Fourth:** They must provide some utilitarian value—deliver some practical application such as being influenced through education and/or experience.

**Criteria one:** characteristics cited as part of the entrepreneurial mindset must have empirical support to reduce the probability of: (1) an inductive fallacy, where conclusions are made based on limited support, and then followed by (2) a confirmation bias, reinforcing the preexisting beliefs or hypotheses without proper testing. Robinson & Hunt (1992) cited an example in research on birth order and entrepreneurship. They state that “*stereotypic expectations are apparent when researchers report that 'the Irish entrepreneur is generally the firstborn in the family' and then report that only 32% of the Irish entrepreneurs were actually born first. Furthermore, contradictory research is seldom acknowledged.*”

The resulting misconceptions may be perpetuated in subsequent writings through (argumentum ad antiquitatem) the fallacy of “*appeal to tradition*” where a conclusion is supported solely because it has long been held to be true.

**Criteria two:** a lack of theory often results in a reliance on the use of older and outdated information (Robinson & Shaver, 1995). This has resulted in “*a considerable amount of folklore and myth about the entrepreneurial mindset, which has become embedded in popular and some scholarly conceptualizations of the entrepreneur*”. Some of these older conceptualizations tended to be based on assumptions that are consistent with a “*trait approach*” (McClelland, 1961; McClelland et al., 1953; Timmons, 1987) such as personality typing. The lack of empirical support for the “*trait approach*” led to a focus on: (1) firm level strategic orientations such as the Entrepreneurial Orientation (Covin & Lumpkin, 2011; Wales, 2015) and (2) the behavior of the entrepreneur (Bird & Schjoedt, 2017; Endres & Woods, 2006; Gartner & Carter, 2003; Ross, & Westgren, 2006). These approaches resulted in some concluding that, “*there are some things that just can’t be taught*” (Henry et al., 2005; Klein & Bullock, 2006; Neck & Greene, 2011).

**Criteria three:** The characteristics under consideration as part of the entrepreneurial mindset must be “*distinguishing characteristics*.” They should be qualitatively or quantitatively unique to entrepreneurs. That is, mindset characteristics are unique in type or amount that entrepreneurs possess relative to other groups. Unique in type (qualitative) simply means that only entrepreneurs possess a specific attribute, it is a defining characteristic. Unique in amount (quantitative) means that entrepreneurs have a significantly greater or lesser amount or quantity of a specific attribute. The essence of these criteria is that a specific attribute or characteristic can be used to differentiate entrepreneurs as individuals or groups from other individuals or groups that are not entrepreneurs such as managers, professionals or wage & salary workers.

**Criteria four:** Any attribute or characteristic must provide some utility with regard to becoming an entrepreneur. This is the “*so what*” question. When considering elements of an entrepreneurial mindset, knowledge about these elements must provide some practical application. When considering entrepreneurship education, this application is the ability to change or be influenced through teaching practices that help an individual become more or less entrepreneurial.

In summary, characteristics that are part of an “*entrepreneurial mindset*” should: (1) have empirical support for, (2) conceptually consistent with current concepts that, (3) can differentiate entrepreneurs from people who are not entrepreneurial, and that, (4) can be influenced through education, formal or informal, and experience.

## ENTREPRENEURIAL MINDSET AND ENTREPRENEURSHIP EDUCATION

Older theories and models of the “*entrepreneurial mindset*” with elements that do not meet the four criteria, characterize entrepreneurs as having innate traits or “*types*,” such as: a need to achieve, internal locus of control, or a certain Myers-Briggs personality type (Johnston et al., 2009; Müller & Gappisch, 2005). Since these traits or “*types*” are characteristics that could not be taught, it resulted in educational curriculum and pedagogy emphasizing skill building, behavior parroting, appropriate responses to outside stimulus and static business models, with educational practices based on behaviorist learning theory (Boghossian, 2006; Jonassen et al., 1999; Rothschild & Gaidis, 1981). This would suggest pedagogical tools and instructional design based upon (a) lectures and text books, (b) with case studies, (c) the memorization of terms and concepts, and (d) the analysis of historical business problems, all incorporating very few real world, practical situations.

Conceptualizations of an “*entrepreneurial mindset*” that meet the four criteria would result in approaches to teaching based on newer approaches to the human experience. Exploring the newer approaches and pedagogies requires: (a) an examination of assumptions underlying the field of entrepreneurship as well as, (b) assumptions at the foundation of current social psychological theory.

### **The Changing Approach to Psychological Assumptions and Attributes**

Before exploring the attributes of education for entrepreneurship, there must be some exploration of the assumptions, and theories of psychology which form the basic assumption for a useful conceptualization of an entrepreneurial mindset. Mitchell & James (1989) described “*a new view of psychology that stressed the important attributes of people, their contexts, and their interactions.*” They listed several points that defined the relationship between the person and the environment. They summarize these points as: “*what emerges, is a human who is active psychologically and behaviorally, interacting in a dynamic way, with a changing environment. For the person, there is both stability and change, there is [pro] active and reactive behavior, [and] there are abilities and acquired skills that merge.*”

This view became part of the foundation assumptions of a stream of theories that provide for characteristics that are: (1) both dynamic and changing, (2) stable across both time and situations. They are learned through experiences, including experiential education, in which individuals interact in meaningful ways with their environment. The primary thrust of this line of research in entrepreneurship was attitude theory as conceptualized by Robinson (Robinson et al., 1991).

### **Changing the Attributes that Need to be Taught**

Shane & Venkataraman (2000) examined the literature across multiple business disciplines looking for those activities that distinguished entrepreneurship from every other business discipline (strategy, organizational behavior, organizational development, organizational theory, etc.). They found three defining activities that were unique to entrepreneurship in opportunity: (a) identification, (b) evaluation, and (c) execution.

This took entrepreneurship from a knowledge base or skill set to a process. It moved the attributes that define an entrepreneur from: a static, stimulus response set of traits and behaviors; to a dynamic, interactive mindset. This made it appear, at first, as though these attributes really couldn't be taught. Instead, it clearly defined the processes that constitute the field of entrepreneurship, and challenged the field to find ways to model, measure, and teach these processes (Alvarez & Barney, 2013; Shane, 2012). Another example of an entrepreneurial process that is challenging to teach is entrepreneurial judgement: decision-making under conditions of uncertainty (Foss & Klein, 2004)

It clarified what many had been advocating for some time. Models of entrepreneurial characteristics must be based on current theory and founded on accurate assumptions of how people interact in their environment (Corbett, 2005; Harrison & Leitch, 2008; Lindsay, 2005; Politis, 2005; Pratkanis et al., 2014; Robinson & Shaver, 1995; Shariff & Saud 2009). Entrepreneurship became an intention and an inclination, not just an action or set of behaviors. It

had become a mindset, not a skill set or knowledge base (Balan & Metcalfe, 2012; Cope & Watts, 2000; DeTienne & Chandler, 2004; Krueger, 2007; Rideout & Gray, 2013).

### **Attitude Theory and the Entrepreneurial Mindset**

Mindset may be defined as an established set of attitudes, held by someone that influences or predisposes an individual to interact (perceive and behave, act and react) with the world in specific and consistent ways. It is synonymous with an intention or inclination, a frame of mind, an approach or an outlook. Operationalizing constructs such as “*mindset*” has been the domain of social psychology for decades and is best embodied in research dealing with attitudes. Attitude is the predisposition to respond in a generally favorable or unfavorable manner with respect to the object of the attitude (Allport, 1935; Ajzen, 1982; Huefner, 1991; Kristensen et al., 2001; Robinson et al., 1991; Rosenberg & Hovland, 1960; Shaver, 1987). Attitude is a dynamic construct, changing over time and acquired through experience. Maio (2012) wrote:

*“The superiority of the attitudinal approach is its focus on a specific domain, which reduces unexplained variability and improves the prediction of real activity. Instruments that focus on attitude tend to account for more of the variance in a particular set of behaviors than do personality disposition or trait-based instrument.”*

In the field of entrepreneurship recent research by Spagnoli et al. (2017) building on the earlier work of Athayde (2009) demonstrated the use of attitude theory in assessing entrepreneurial potential in school children. Their work was built on the conceptual framework of Robinson (1987) but lacked the specificity of the attitude object and psychometric detail found in the Robinson framework. Rather if focused on the context of school activities.

The best embodiment of the use of attitude theory in assessing entrepreneurial tendencies and discriminating between entrepreneurs and non-entrepreneurial groups is the Entrepreneurial Attitude Orientation (EAO) developed by Robinson (1987). It is a widely used and cited attitude measure (Aloulou, 2016; Busenitz & Barney, 1997; Fayolle & Gailly, 2015; Del Giudice et al., 2017; Krueger et al., 2000; Maio, 2012; Paramond, 2004; Pihie & Bagheri, 2011; Veciana et al., 2005; Zhao et al., 2005; Tan et al., 2013) focused on business related attitudes, held by entrepreneurs to a greater degree than other groups.

The EAO consists of a constellation of four related attitude scales, the objects of which are a psychological construct representing a way of interacting with the world in the context of business. Together they constitute a measure of the entrepreneurial mindset. It should be noted that the EAO does not measure one’s attitude toward entrepreneurship, rather, it measures four business-based attitudes that differentiate entrepreneurs from other groups of non-entrepreneurial individuals. These four scales are:

1. Achievement in business, referring to concrete results associated with the start-up and growth of a business venture.
2. Innovation in business, relating to perceiving and acting upon business activities in new and unique ways.
3. Perceived Personal Control of business outcomes, concerning the individual’s perception of control and influence over his or her business.
4. Self-Esteem in business, pertaining to the self-confidence and perceived competency of an individual in conjunction with his or her business affairs.

Each subscale is measured using a tripartite attitude model, which holds that people interact with and learn from their environment in three distinct and interactive ways, through their: (1) affect, (2) cognitions, and (3) conations. Attitude is a combination of all three forms of interaction (Allport, 1935; Breckler, 1983:1984; Carlson, 1985; Carlson, 1994; Katz & Stotland, 1959; Kothandapani, 1971; Kristensen et al., 2001; Ostrom, 1969; Robinson, 1987; Rosenberg & Hovland, 1960; Shaver, 1987). The affective component consists of positive or negative feelings toward the object. The cognitive component consists of the beliefs and thoughts an individual has about an attitude object. The conative or behavioral component consists of intentions, predispositions or inclination to act in specific ways towards the attitude object.

The EAO has been validated across dozens of studies, multiple industries, cultures, and countries (Gibson et al., 2010; Harris et al., 2007; Harris et al., 2009; Hatten & Ruhland, 1995; Kasselman et al., 2002; Kassicieh et al., 1996; Maio, 2012; Rasheed & Rasheed, 2003; Robinson et al., 2000; Shariff & Saud, 2009; Tam, 2009; Tam et al., 2009; Tan et al., 1996; Van Wyk et al., 2003; Walstad & Kourilsky, 1998). It provides a strong foundation for attitudes as a viable model of entrepreneurial characteristics and for the four sub scales as components of the distinct set of characteristics that set entrepreneurs apart from the general population. It is an accepted tool to measure the entrepreneurial mindset.

### **Changing Education to Influence Mindset**

The attitude model of entrepreneurial mindset has strong implications for education and training, where the objective is to positively influence attitudes related to entrepreneurship that previously were considered things that “*can’t be taught*”.

With the changes in perspective advocated by Shane & Venkataraman (2000), and the adoption of a dynamic paradigm consistent with the mindset/attitude conceptualization of Robinson, learning becomes a “*process, whereby knowledge and understanding (Defined as a quality of knowing going beyond cognitions such as facts, concepts, beliefs and principles to include conation and affect) are created through the transformation of experience within a realistic environment*” (Robinson & Malach, 2004:2007).

This approach posits that one can acquire the attributes that define entrepreneurs through experiences that facilitates a change in one’s attitudes. Education is then a process of providing specific realistic experiences followed by structured reflection on those experiences. Through performance of structured activities and active reflection an individual can change and adapt their entrepreneurial attitudes. This is “*learning from doing*” which goes beyond “*learning by doing*” based on the structure of the pedagogy and inclusion of reflection and introspection as part of the learning process.

Learning from doing informs the mental, emotional and actions of the learner. It is therefore crucial that the structured activities used to influence the entrepreneurial mindset stimulate students cognitively, emotionally, and compel them to engage in actual behaviors. These elements can be delivered through actual entrepreneurial activities, or through activities that can be represented in the student’s mind as being entrepreneurial.

Education that influences an entrepreneurial mindset is best achieved through actual performance of tasks relevant to the learning objectives (Specht & Sandlin, 1991) within a theory base or conceptual framework. This model has been a standard in the field of medicine for hundreds of years. Students of medicine are expected to learn through the “*practice*” of

medicine and this “*practice*” usually includes a “*clinical setting*” as part of the overall curricula. It also follows that learning entrepreneurship may be best accomplished through undertaking entrepreneurial activities in a similarly realistic environment.

Crosby (1995) indicated that the assumptions underlying experiential education are more reliable than those underlying traditional theories of education. This means “*that students educated according to these assumptions are better prepared to deal with the world than are students educated according to traditional epistemologies*”.

At the foundation of this type of learning is a shift in the way students interact with their environment. Simply interacting with the environment is not enough to gain the higher-level thinking skills as suggested by researchers (Balan & Metcalfe, 2012; Bloom, 1956; Karthwohl & Anderson, 2002). Joplin (1995) states that the learning process must include reflection (Hubbs & Brand, 2010) and then went on to provide a five-step model for how this interaction may be structured for maximum effect (Dernova, 2015; Kolb & Kolb, 2005; Robinson & Malach, 2004).

### **Empirical Links: Entrepreneurial Mindset and Engaged Learning**

While past research has identified the elements of the entrepreneurial mindset as embodied in attitude theory and the Entrepreneurial Attitude Orientation, there has been research linking engaged entrepreneurial education to changes in mindset. Rasheed & Rasheed (2003) found empirical evidence using a pre-test, post-test experimental design for a positive shift in the entrepreneurial attitudes of inner-city youth participating in a business education program focusing on entrepreneurship.

More substantial work has linked entrepreneurship education to entrepreneurial mindset. Tam (Tam, 2009; Tam et al., 2009) and others (Harris et al., 2007; Rasheed & Rasheed, 2003; Souitaris et al., 2007) provide empirical evidence that education affects entrepreneurial characteristics and particularly the entrepreneurial attitudes of students, on top of imparting the skills and knowledge embodied in a curriculum. Tam’s research went on to demonstrate that:

*“Students became more entrepreneurial through the confidence gained from the real-world relevant content material and the application focus of the curriculum. The mix of having: (a) practice-oriented instructors capable of blending practice with theory, (b) frequent exposure to reputable practitioner guest-speakers with expertise in topical areas, (c) learn by doing through hands-on projects in collaborative teams are contributory factors.”*

This provides empirical evidence for the theoretical link between engaged learning and the entrepreneurial mindset. Based on this research we can conclude that in terms of entrepreneurship, yes, these attributes can be taught, or at least influenced.

### **ENGAGED LEARNING IN PRACTICE**

Engaged learning activities are designed to teach complex principles through the use of structured behavioral activities (Dutton & Stumpf, 1991; Higgins et al., 2013; Thatcher, 1990; Woolfolk-Ruiz & Acosta-Alvarado, 2016). It is through these activities that the person-environment relationship with respect to affect, cognitions, and conations, can be established or changed for a specific individual for a specific set of complex principles.

Therefore, engaged learning is an approach whereby knowledge and understanding are acquired through a complex set of interactions between thinking, feeling, and behaving beings

and a complex environment. Through this interaction relationships and theories can be explored and examined to create new insights into the practice of any specific field.

### **Example of Engaged Learning in Entrepreneurship**

The following are two examples of engaged learning in the field of entrepreneurship. “*The Challenge*” is an in-class activity based in a simulation. “*Start-a Business*” is a five-week out-of-class activity based in reality. Both are designed to teach complex relationships in an entrepreneurial context. Both are structured to inform the mental, emotional and actions of the learners.

#### **“THE CHALLENGE” AS ENGAGED LEARNING**

“*The Challenge*” was adapted for entrepreneurship education from part of a larger set of experiential learning activities. It has also been used for over 20 years in entrepreneurship and has been integrated into both classroom and public seminar settings with participants ranging from high school students to postgraduate students and educators. A full description of the “*The Challenge*” can be found in, Robinson (1996), and Josien et al. (2017).

“*The Challenge*” is a simulation base learning activity that involves structured scenarios within which the participants enact unstructured roles. Learning takes place through the examination of interactions between:

- The scenario and the roles adopted by the individuals.
- The different roles adopted by the individuals in the activity.
- The roles adopted by the participants and their normal mode of behavior.

The scenario involves a strong problem-solving component, yet it is not the solution to the problem that is critical to the learning (there are multiple solutions to any scenario), but the examination of the processes involved in arriving at the solutions.

### **Simulations**

“*The Challenge*”, although it is not couched in a business scenario, can be related to the entrepreneurial process through the use and manipulation of artifacts and symbols that can represent business-based concepts. First, the participants are part of a venture, an undertaking involving risk and uncertainty. The scenario goes on to introduce key variables consistent with an entrepreneurial situation, such as:

- A superordinate goal or mission to be accomplished.
- Limited resources that may change based on factors within and external to the group.
- An uncertain outcome including the possibility of failure.
- An ambiguous situation where the procedures are not set but must be developed by the group.
- Multiple options in terms of strategies and tactics in accomplishing the task.
- Emotional involvement and commitment to reach the objective.
- An action imperative where participants are asked to act, often without fully understanding the situation.



In summary, “*The Challenge*” models an entrepreneurial venture along several key dimensions that can be manipulated and controlled by the facilitator.

### **The Scenario**

Several scenarios can be used as long as the situation incorporates the key variables listed above. The specific scenario used most often comes from a set of team-building activities centered around escaping from confinement and having to pass through several obstacles. The specific scenario discussed here involves crossing a mine field and although there are many variations on the minefield activity, the following is the version found to contain the key variables critical for the desired experience.

Participants should imagine that they have been caught behind enemy lines after recently escaping from a prisoner of war or concentration camp. They have hired a guide or bribed a guard to help them get back to their own territory. Their last obstacle is a very sophisticated electronic minefield. The minefield is constructed with sensors so that if anyone touches any part of the ground within the field, that person and anyone else on the field or in the near vicinity is killed and the activity reboots.

To accomplish what appears to be an impossible task, the guide (facilitator) provides the group with several anti-mines disguised as rocks, wooden blocks, or other flat unstable objects that can sustain 200 to 500 pounds of pressure, and can be easily picked up, carried, and tossed very short distances without breaking, chipping, or cracking. Rocks are often used as anti-mines, but if they are unavailable, scrap lumber of about one-half square foot, cut at odd angles, may be used.

Individuals can place the anti-mines on the field and stand on them without triggering the mines (sensors). Several people may share one anti-mine. However, if anyone falls or steps off the anti-mine, they are immediately blown up-along with the entire group-and will have to return to the starting line to begin again. The group should start with two or three fewer anti-mines than the total number of people participating in the exercise.

### **Three Rules**

There are three specific rules that must be stressed to create the level of discomfort to elicit an emotional commitment to the activity. They are:

1. There can be no talking, laughing, or even whispering. Group members can communicate if it is not written or done orally.
2. No one may exit the minefield until everyone is on an anti-mine in the minefield; that is, out of the starting area.
3. There are to be no sacrifices or martyrs; everyone must exit the minefield.

### **The Minefield**

The minefield to which the group is taken is described to the participants as an area of unlimited width and variable length; in truth, it is usually an open area at least 50 yards long and 10 yards wide, ideally with grass (or carpet if indoors). At the onset, the field should be a minimum of 10 to 15 feet longer than the group could stretch if everyone in the group stood,

arms spread, fingertip to fingertip, lengthwise on the field. The perception of the group should be that this is an impossible distance to cross given the resources available. The length of the field may change at any time during the activity, with the leader determining the length at any moment. A visible marker should be placed at both ends of the field to identify the beginning and end for the participants.

Ideally, the activity should take place outside on a lawn or grassy area with access to rocks or other objects. It also may be conducted indoors in a large hallway or gymnasium. The leader should be creative in building environmental factors such as sidewalks, ditches, landscaping, buildings, hallways, and so on, into the scenario.

### **The Leader**

The guide has the freedom to roam across the minefield without detonating the field and: (a) to add or remove anti-mines from the group for their use (only the anti-mines they give to the group may be used), (b) to move the end of the minefield closer to or further from the group, (c) to catch people talking or touching the ground and send them back to the start, or (d) to forgive those who step off the anti-mine by not sending them back (this option should not be used except when there are extreme time constraints).

The group is usually rewarded (e.g., adding an anti-mine or shortening the field) when they work together well and progressing toward the goal. They may lose an anti-mine; find the field lengthened; or get blown up when group members talk, laugh, make individual rather than group efforts, or in general are not working together and helping each other. The addition or removal of one anti-mine may appear insignificant, but after the group has been struggling for a half-hour or more and has become highly involved, one anti-mine can be extremely meaningful.

### **The Objective**

The objective is simple, get everyone across the minefield. There are no martyrs, no one can take one for the team. It is all or nothing.

### **The Minefield and Entrepreneurial Mindset**

When the students first are introduced to the activity and taken to the area designated as the minefield, the distance and lack of resources create an impression that this activity is impossible within the restraints of the situation. This negative emotional reaction eventually give way to determination as the activity progresses and eventually elation as the last person exits the minefield. Students are actively engaged cognitively trying to find the solution to crossing the minefield with limited resources. Finally, the physical exertion of the actual behaviors required to cross the minefield challenge them mentally and emotionally. This is particularly true when resources (anti-mines) are removed in the middle of the activity and they are forced to adapt to the changing situation. This engagement of affect, cognition and behavior influence the entrepreneurial mindset of the learner in ways that can be generalized to the real world through reflection and processing the event.

## “START-A-BUSINESS” AS ENGAGED LEARNING

Start-a-business has been used for decades in teaching entrepreneurship. It is not a simulation but a reality-based activity designed to force students into an entrepreneurial act in a relatively safe, low risk environment. However, it is done it is intended to be a condensed experience that engages students in opportunity identification, evaluation, and execution.

Because students are seldom experienced in this level of engaged learning it must often be stressed to them that this is not an academic exercise or a plan for a business that they might start at some point but that they are to start a real revenue generating business. One version of this activity takes the following form as described in the syllabus of the introductory class.

### Instructions

As a group or as an individual you will start a LEGAL and profitable business. You may have a maximum of one dollar (\$1) for each person involved in your business as start-up capital. The business must be new to you and/or the group. You may sell existing products/services in new markets or sell new products/services to current customers. Current products/services to current markets (target customers) is not acceptable.

In addition to the dollar, you may use any other resources you currently possess. If those resources are expendable (lumber, materials, cake mix, etc.) they must be replaced or the replacement value subtracted from the revenue of the business. The use of capital assets (equipment, tools, computer, vehicle, etc.) is acceptable.

The sale of capital assets is not acceptable except under exceptional circumstances—see the instructor.

You will have about five weeks to complete the assignment. At the end of the time you will add up all revenues (paid and accounts receivable) and subtract all expenses (paid and accounts payable) to determine profits. Grades will be awarded on a competitive basis with the top profit performer(s) receiving 100 points, the second most profitable receiving 99 points, third 98 points and so on. The lowest grade you may receive on this assignment will be 80 points or a “B” if:

- You try to start a business. This is not a hypothetical or academic exercise. This is practice, not theory. You must demonstrate a real effort to sell a product or service. It doesn’t matter whether you make a profit, however, you must try.
- You must hand in a report, on time. Late reports will be discounted.

### Results

Most students struggle with the assignment. Some go into denial for a period. Others spend so much time planning that there is not enough time to execute their business. In the end, most make some money

It is common for 10% to 20% of a class to make over \$1000 in the five weeks with the highest profit earner coming in between \$2,000 and 4,000 (highest earners over the years have exceed \$10,000). On the low end 20-30% will earn less than \$50. The majority (80%) earn more on an hourly basis in their little venture than they can make working at their normal employment and 20-30% of the students intend to continue their venture while they are in school.

In all cases the students identify, evaluate, and execute opportunities in a relatively safe, risk free environment. Failure is possible but the consequence of the is minimal. If they try and hand in a report the lowest grade they can get is a B-and this assignment only counts for 5 to 10% of their course grade.

### **Start-a-Business and the Entrepreneurial Mindset**

When introduced to this assignment, learners who have not started a business in the past are hit with a wave of fear of the unknown, failure, or being put in a new and difficult position. Those who have started a business in the past have a much milder reaction, mostly focused on the \$1 of startup capital and how to start something with nothing. Over the course of the weeks the emotional reaction subsides, problem solving cognitions kick in, and the selling behavior ensues. Over the course of the exercise students experience the full range of emotions, thoughts and behaviors anyone starting a new business will experience. The range is very similar, but the intensity is somewhat less due to the safe situation of the class. They also report that the “*fear factor*” is gone and it will not be nearly as hard the next time they start a business. The mindset has definitely become more entrepreneurial.

### **CONCLUSION**

This paper represents a strong linkage between engaged entrepreneurship education and the entrepreneurial mindset. The paper goes on to provide insight into the type of educational pedagogy (experience based or engaged learning) that is likely to have the strongest effect on increasing the strength of the entrepreneurial mindset as conceptualized by the attitude model.

This entrepreneurial mindset model based on Robinson’s attitude model is important for several reasons. First, it provides a dynamic framework for understanding the changing characteristics of an entrepreneur over time. Second, it provides a much lacking theory base as to how and why educational practices influence the entrepreneurial mindset. Third, it can be used to assess the fit of an individual with the lifestyle of an entrepreneur. Fourth, it can be used to assess the strengths and weaknesses of an individual’s entrepreneurial mindset using the consistency between the attitude components, that is, their affect, cognitive and conative interactions. Finally, it may also be the start of a theory-based assessment program for entrepreneurship programs at all levels of education. Assessment that can go beyond knowledge and skill-based testing to demonstrate a true impact on an individual’s attitude-based mindset.

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