

Entrepreneurship can be Taught: What about Risk Tolerance

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Abstract

One of the key factors in producing learners who are going to become future entrepreneurs is teaching risk tolerance. This paper proposes a model to achieve this goal. Using mastery learning delivered via experiential learning, universities will increase the self-efficacy of their learners. Developing self-efficacy gives learners the confidence to tackle novel situations and set challenging goals as it shifts the learner's locus of control and gives them the confidence to attempt new challenges and accept risk.

Keywords: Entrepreneurship, Mastery Learning, Self-efficacy, Experiential Learning, Risk Tolerance

Introduction

It has been a long-standing debate in literature as to whether one can teach entrepreneurship. Evidence supports the case that yes indeed entrepreneurship is taught (Marram, Lange, Brown, Marquis, and Bygrave, 2014) and education plays an important role in developing entrepreneurial activities (Van der Kuip & Verheul, 2004; Gibb & Hannon, 2006; de Celis & Lipinski 2007).

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However, the case has not been firmly established as to which aspects of entrepreneurship education are most effective in producing successful entrepreneurship graduates. Lawrence, Clark, Labuzetta, Lawrence, Sahakian and Vyakarnum (2008) studied brain scans on entrepreneurs to determine what separated entrepreneurs from other people. This study found it was tolerance for risk and suggests the number one thing universities could do if they want to increase the number of practicing entrepreneurs graduating from their programs is to devise a system to teach risk tolerance. This paper suggests a model linking key educational stakeholders to the constructs of mastery learning (delivered via experiential learning) and self-efficacy to accomplish this.

Literature Review

Mastery Learning

Mastery learning is an instructional approach that requires students to achieve a defined proficiency before proceeding to the next objective. (Cook, Bydges, Zendejas, Hamstra & Hatala, 2013). Although developed in the 1920s and 1930s, mastery learning did not become prominent in the educational system until the 1960s (Kulik, 1983). There are two forms of mastery learning, Bloom's learning for Mastery (LFM) and Keller's Personalized System of Instruction (PSI) (Bloom, 1968; Keller 1968). The techniques differ in that LFM involves instruction led largely by a teacher. Whereas PSI is presented largely through written materials. As our model requires the guidance of the key stakeholders in the education process, this paper focuses on LFM.

The goal of the LFM model is for all students to achieve mastery. In a master class, the objective is for all students to achieve the 90th percentile or above for test criterion (a level previously only reached by the top 10% of students) (Kulik, Kulik & Bangert-Drowns, 1990). According to Bloom (1976), weak students only need extra attention at the initial stages of a course. For learning strategies to be effective, students must accurately perceive the nature of a task and its demands. Then they are required to choose and enact appropriate strategies to meet those demands. Learning strategies may be quite conscious and require focused effort, particularly when tasks require knowledge that is unfamiliar to a student. (Farrington, Roderick, Allensworth, Nagaoka, Keyes & Johnson, 2012). Eventually all students of mastery courses will have command of the fundamentals and will be able to progress at a quick pace.

The instructional needs of less able students will become indistinguishable from the needs of more able students. Studies of this technique (see Kulik, Kulik & Cohen, 1979; Guskey & Gates, 1985) confirm this assertion.

Modern implementation of mastery learning following LFM stresses that students have some curricular choice over their learning. This sense of agency and autonomy for the learner is important (McClarty, Orr, Frey, Dolan, Vassileva & McVay, 2012), providing the learner with feelings of belongingness and socio-emotional support (Jalongo, 2007). David Kelley, the CEO of the company IDEO, teaches a course on creativity at Stanford University. He has adapted mastery learning to teach people how to be creative and take risks. They refer to their method as Guided Mastery (Kelley & Kelley 2012) and explain how they take learners who claim that they have a complete lack of creativity, lead them through a set of guided exercises, and encourage them to come up with creative solutions to their problems. This process leads to confidence and a willingness to take risks, leading to self-efficacy.

Self-efficacy

Self-efficacy has its roots in the work of Albert Bandura. It is defined as an individual's belief in his or her capacity to execute behaviors necessary to produce specific performance attainments (Bandura, 1977). He refers to people's judgements of their capabilities to organize and execute courses of action required to attain designated types of performances such that their level of motivation, affective states, and actions are based more on what they believe to be true versus what is objectively true (Bandura, 1986, p. 391; 1997, p2).

Gist and Mitchell (1992) find that, based on experience and the anticipation of future obstacles, self-efficacy affects an individual's perception of whether specific goals are achievable. Once a goal has been determined, an individual's judgment of their level of self-efficacy in relation to it helps to determine the degree of effort, perseverance, and resilience that they will exert towards accomplishing the goal in the face of the obstacles present (Herron & Sapienza, 1992).

The development of individuals' sense of self-efficacy is a critical element in developing a confidence and motivation. A highly efficacious learner will have greater confidence in their own abilities (McLellan, Barakat & Winfield (2009).

Lucas and Cooper (2005) observe that self-efficacy is concerned with the commitment to accomplishing goals more than any other psychological construct. As such, it is extremely important to cultivate high levels of self-efficacy to influence a willingness to accept risks and attempt challenging goals. It also strengthens confidence in decision making (Potter et. al. 2010).

Self-efficacy is also important when one considers the concept of locus of control. Locus of control is the general expectancy about whether outcomes are controlled by a person's behavior or external forces beyond their control (Rotter 1954). People with a high locus of control see the future as being in their own hands rather than chance or luck (Rotter 1990). Self-efficacy influences an individual's perception as to whether or not they can perform a certain task and believe that their performance of the task will lead to certain consequences versus the influence of outside forces (Boyd & Vozikis, 1994). As such, an efficacious learner will trust their abilities over the randomness of outside forces to influence success and be more willing to take risks.

Boyd and Vozikis (1994) find that a person's intention to start a company is formed in part by their perception of the expected outcome. This finding was confirmed by Chen, Greene, and Crick (1998) who found that entrepreneurial self-efficacy correlated with the intention to start a new venture. The effect goes beyond the school years for a learner with Mau (2003) demonstrating that the effects of self-efficacy endure for years. Self-efficacy is partnered with behaviors like persistence in the face of uncertainty, the setting of higher goals, and reduced levels of learned helplessness (Bandura, 1986). Anna, Chandler, Jansen, and Mero (2000) found that self-efficacy was a strong predictor of success in both traditional and new business ventures. Baum and Locke (2004) collected data from over 200 entrepreneurs and found that goals and self-efficacy have direct consequences for venture growth. As such, it is reasonable to expect that university programs that focus on entrepreneurship should be designed to enhance self-efficacy (McLellan, Barakat & Winfield (2009).

Experiential Learning

Efforts to improve higher education have focused on improving the learning process in education through the application of research from the new science of learning.

Kolb and Kolb (2005) found that experiential learning is of particular interest. The Association for Experiential Education (1994, p. 1) defines experiential education as a process through which a learner constructs knowledge, value, and skill from direct experience. The concept draws on the work of numerous 20th century scholars who gave experience a central role in their theories of human learning and development. Such notables as John Dewey, Kurt Lewin, Jean Piaget, William James, Carl Jung, Paulo Freire, Carl Rogers, and others developed a holistic model of the experiential learning process and a multilinear model of adult development (Kolb, 1984).

Experiential Learning is a holistic philosophy where carefully chosen experiences, supported by critical analysis and synthesis, are structured to require the learner to take initiative, make decisions, and be accountable for the results. This learning is done by actively posing questions, investigating, experimenting, being curious, solving problems, assuming responsibility, being creative, constructing meaning, and integrating previously developed knowledge (Itin, 1999). The teacher is responsible for presenting opportunities for experiences, helping students utilize these experiences, establishing the learning environment, placing boundaries on the learning objectives, sharing necessary information, and facilitating learning. The learner is challenged to move beyond what is known (Chapman, McPhee & Proudman, 1995; Itin 1997; Kolb, 1984).

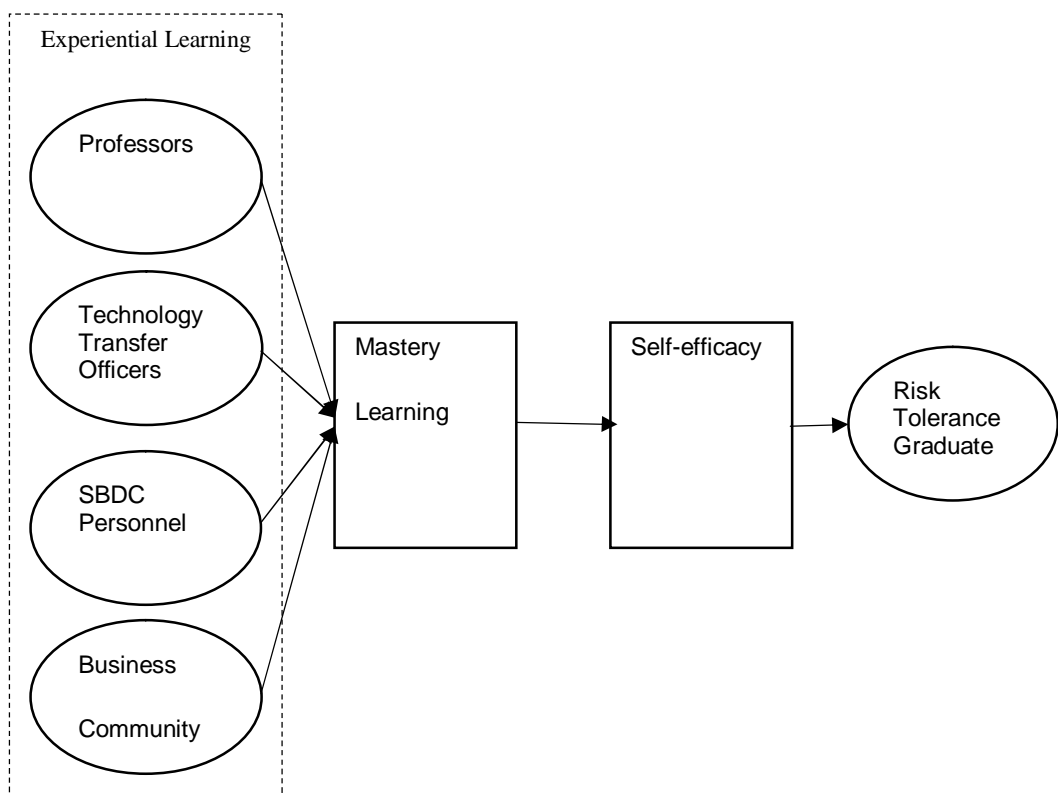
Learning is a cognitive and social process of knowledge acquisition (Gemmell, Borland and Kolb 2012). As such, experiential learning is well suited to conveying knowledge and helping learners establish mastery. Politics (2005) explains how entrepreneurs learn experientially through two different transformational modes, first by exploiting existing knowledge through testing actions similar to earlier experiences and second by exploring entirely new actions.

Holcomb, Holmes, and Connelly (2009) further demonstrate that learners gain tacit knowledge through both experience and observing the actions and results of others. By exposing students to real world experiential learning projects and discussing their experiences with groups of other similarly engaged students, students will be exposed to both modes of education (Lipinski, Lester & Nicholls, 2013). Experiential learning is an excellent technique to conduct mastery learning.

A New Model

To facilitate this process, an emphasis must be put on having learners interact with instructors who can expose them to the multiple challenges that will be faced by entrepreneurs. This exposure will ensure that learners have well-rounded backgrounds and will have a high comfort level with a variety of challenges. The more experiences that they are exposed to and led through via guided mastery, the higher their comfort level will be with future obstacles. Successfully navigating these obstacles will lead to greater self-efficacy and will generate learners who will grow to become more risk tolerant entrepreneurs.

Figure 1: The New Model



The above model suggests that universities must go beyond the professor-learner model and step outside the classroom to achieve risk tolerant graduates.

By purposely increasing experiential learning and involving other related personnel, for example personnel from the university's technology transfer office, Small Business Development Center personnel, and members of the business community, learners will be exposed to a variety of challenges and will be guided through solving those challenges by "masters" with a variety of backgrounds and experiences. The result will be graduates of entrepreneurship programs who are more risk tolerant.

Implications

One of the challenges of entrepreneurship programs is producing graduates who actually start businesses. A large barrier for graduates to take this next step is risk tolerance—specifically risk avoidance. Much classroom instruction focuses on avoiding risk. To change this focus, adopting an experiential learning model where students are given instruction following the tenants of guided learning will allow students to gain self-efficacy and become more tolerant of risk. The increased openness to risk, risk tolerance, will increase the likelihood that graduates will take the next step and launch new ventures.

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