Volume 1, Number 1

Print ISSN: 2574-0415
Online ISSN: 2574-0423

GLOBAL JOURNAL OF ENTREPRENEURSHIP

Martin Bressler
Southeastern Oklahoma State University
Editor

Victor S. Sohmen
Drexel University
Co Editor

The *Global Journal of Entrepreneurship* is owned and published by the Institute for Global Business Research. Editorial content is under the control of the Institute for Global Business Research, a non-profit association of scholars, whose purpose is to support and encourage research and the sharing and exchange of ideas and insights throughout the world.

The *Global Journal of Entrepreneurship* is owned and published by the Institute for Global Business Research, 1 University Park Drive, Nashville, TN 37204-3951 USA. Those interested in communicating with the *Journal,* should contact the Executive Director of the Institute for Global Business Research at info@igbr.org.

EDITORIAL REVIEW BOARD

TABLE OF CONTENTS

WHAT MANAGEMENT SCHOLARS THINK: AN EXPLORATORY STUDY OF MANAGEMENT SKILLS FOR NASCENT ENTREPRENEURS

Shontarius D. Aikens, Concordia College
Tim O. Peterson, North Dakota State University

ABSTRACT

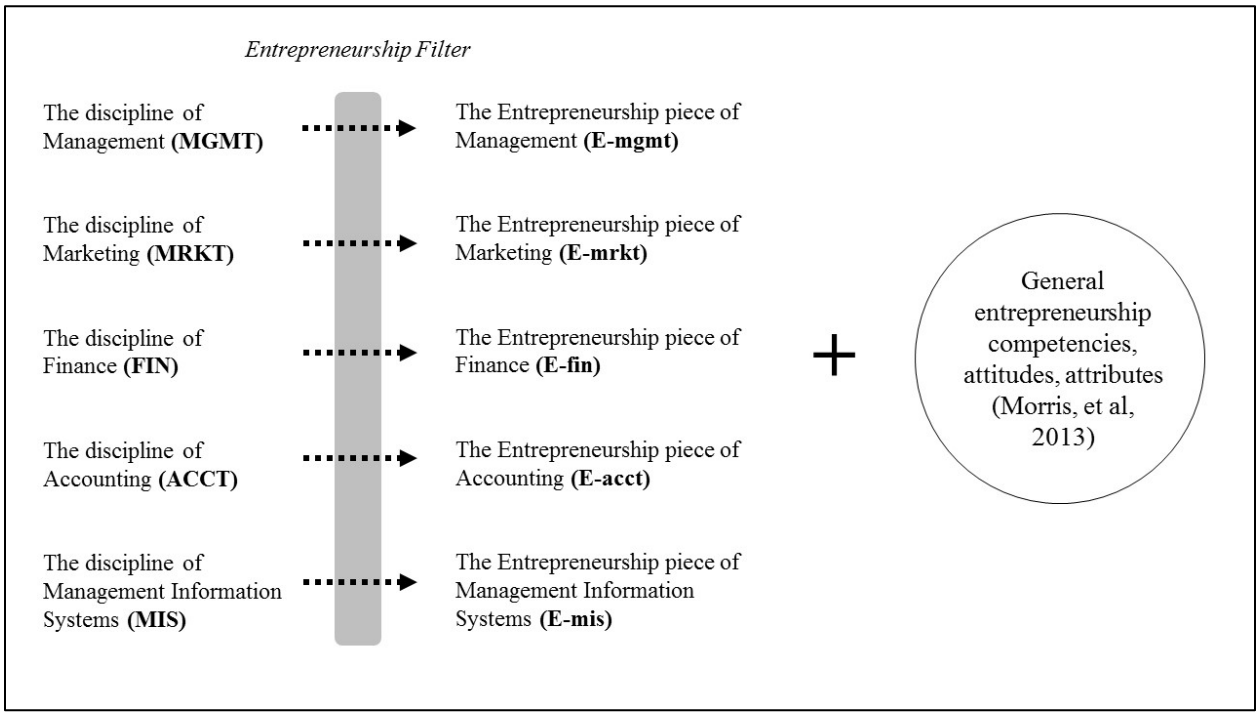
The authors present the results of a pilot exploratory research study regarding management skills for nascent entrepreneurs. Through a brief historical look at the evolution of the management process and current thinking within the management discipline, a framework was created as a tool to determine how the management process is carried out within various types of organizations. Then, utilizing Delphi methodology, twenty-seven unique Knowledge, Skills, and Attitudes (KSA) themes were identified to develop a framework specifically for nascent entrepreneurs. The findings allude to possible latent complexities for nascent entrepreneurs in regards to management skills.

INTRODUCTION

The research literature on new ventures and nascent entrepreneurship is clear in terms of the struggles that all new venture builders face (Kessler & Frank, 2009). As a result, scholars and practitioners study the habits and patterns of successful new venture builders in order to determine a set of knowledge, skills, or attitudes (KSA) that could be used to train or educate future entrepreneurs (Morris, Webb, Fu, & Singhal, 2013).

When determining appropriate training for nascent entrepreneurs, two salient points must be considered. First, there is a difference between traditional business education and entrepreneurship education. Traditional business education is focused on preparing students to be employees at existing organizations (Rideout & Gray, 2013). However, the context and needs for entrepreneurship education are different and more specialized (Zhang, Wei, Sun, Chan, 2016). Thus, the nature and context of entrepreneurship presents a filter through which the knowledge content from each business discipline passes through. This conceptual model is illustrated in Figure 1. Due to the unique nature of starting a new venture, entrepreneurs are tasked with pooling together a variety of resources from different areas. This often results in learning various knowledge and skills from the various business disciplines (i.e. Management, Marketing, Accounting, Finance, Management Information Systems). As a result, traditional entrepreneurship textbooks and training tend to cover various topics from the various business disciplines at the surface level. For example, if one were to compare the topics discussed in a traditional introductory marketing textbook versus the topics discussed in the marketing chapter of an entrepreneurship textbook, one would find that the marketing textbook would present a more comprehensive and thorough treatment of marketing principles. Since it is impractical for a nascent entrepreneur to possess significant breadth and depth of knowledge in all business disciplines, the focus of entrepreneurship education is to provide the *minimum amount of breadth*

Figure 1: The Entrepreneur's Comprehension Model



and minimum amount of depth while covering the essential business principles in hopes of jumpstarting their initial venture activities. This appears to be the one size fits all model of entrepreneurship education to meet the needs of various learners (Neck & Green, 2011; Zeithaml & Rice, 1987).

The second point is that if nascent entrepreneurs only receive the essential amount of breadth and depth for a business discipline, it is important that the content presented provides the new venture builder with the critical KSA's from that discipline. Literature and previous research has suggested and found discrepancies between the academic content in textbooks versus the actual practicing activities of entrepreneurs. This has led to the call for future studies to focus on the content critical to entrepreneurship education (Edelman, Manolova, & Brush, 2008).

While researchers have suggested specific content as it relates to entrepreneurship education as a whole (Solomon, 2007), our particular interest focuses on the treatment of content from the management discipline within entrepreneurship education. When discussing content from a specific business discipline, it is different when applied in an entrepreneurship setting (Kuratko, 2005). From previous experience of teaching entrepreneurship, other disciplines (i.e. marketing) have unique textbooks that provide the appropriate breadth and depth of essential content unique to nascent entrepreneurs (Crane, 2013). After a review of various management discipline textbooks, the authors were unable to find an equivalent textbook that provided the essential breadth and depth of knowledge on the subject of management that catered specifically to the unique needs of nascent entrepreneurs. In addition, we determined that research into the

essential breadth and depth of management knowledge and skills needed by nascent entrepreneurs should clearly fall within the discipline of management.

To our knowledge, no research has examined the essential KSA's specifically from the academic discipline of management that is vital for nascent entrepreneurs. Thus the goal of this paper is to present the results of an exploratory research study to identify the essential content needs of nascent entrepreneurs specifically within the academic discipline of management. While we acknowledge that there are essentially two perspectives within entrepreneurship education—academic and practitioner (Kuratko, 2005; Neck & Greene, 2011)—the scope of this paper examines management related content for nascent entrepreneurs from the academic perspective as this would be the appropriate starting point for this research topic.

In addition to the general call for more innovative and creative approaches to educating entrepreneurs (Kuratko, 2005), we believe that this exploratory study contributes to the entrepreneurship education literature in several ways. First, we contribute to the void of research that examines entrepreneurship education content specifically within the management discipline. While efforts have been made to examine content from a general and broad viewpoint (Edelman, Manolova, & Brush, 2008), our study examines content from a specific approach, namely within the discipline of management. It is suggested that we know little on how entrepreneurs become effective managers of people and resources (Cope, 2005). By examining course content within the management discipline, we examine if it is in alignment with the goal of being an effective manager of people and resources. This exploration allows us to begin to examine the connection between entrepreneurial course content and the intended outcomes. Second, we explore this topic in a different way than traditional research on nascent entrepreneurs. A majority of research conducted on nascent entrepreneurs utilizes secondary data sources and data sets (Markova, Perry, & Farmer, 2011). We contribute to the research literature by collecting primary data in a new and more focused way.

The paper is structured as follows. First, a brief literature review concerning the management process from a historical and universality standpoint is provided. Second, a framework to be used to examine the management process within organizations is presented. Third, the methodology for the study is presented. Next, the essential management KSA's for nascent entrepreneurs are presented within the management function framework. Finally, a discussion on the implications of the findings as well as the limitations and directions for future research will be shared.

LITERATURE REVIEW

The Evolution of the Management Functions and Resources Framework

One of the first pioneers of management thinking was Henry Fayol who discussed management as the makeup of several functions: a) planning, b) organization, c) command, d), coordination, and e) control (Albers, 1972). Over time, the functions of management have either changed or been described as something different. Around the 1980's, the management functions of *command* and *coordination* were replaced with the terms *staffing* and *leading*, respectively (Koontz, 1980). The current thinking of management scholars, as evidenced by current management textbooks, is that management consists of four functions: a) planning, b) organizing, c) leading, and d) controlling (Griffin, 2017; Neck, Lattimer, & Houghton, 2014; Pride, Hughes, & Kapoor, 2009; Schermerhorn & Bachrach, 2015). Since the function of

staffing is no longer a separate function, it indicates that it has been absorbed by another management function, most likely within the *organizing* function. While the different descriptions and number of management functions have changed over the years, the one constant theme is that scholars view management as a process (Albers, 1972; Griffin, 2017).

The Universality of the Management Process

Another theme of the Management Functions and Resources Framework is that the management process can be applied universally to different organizations. Albers (1972) indicated that management is applicable in a wide variety of different organizations (i.e. business, political, military, religious, education) and can be applied to other business functions (i.e. Production, marketing, finance, personnel, procurement). This theme still exists today which is evident by reviewing the list of companies and organizations listed as examples in management textbooks. For example, a review of essential management textbooks (Griffin, 2016; Lussier, 2017) includes a wide variety of organization examples from government, education, and business.

Others approach the universality of management from the perspective that every organization has a common set of resources. Resources can be either tangible or intangible (Barney, 2001). The need for resources is even more important in the context of nascent entrepreneurship (Kuratko & Hodgetts, 2004; van Gelderen, Thurik, & Patel, 2011). While there are different ways to categorize environmental resources (Dimov, 2010; Rotefoss & Kolvereid, 2005), we use the Griffin (2017) classification of four different environmental resources that need to be managed: 1) human, 2) financial, 3) physical, and 4) information. The manner in which these resources are managed depends on the specific goals of the organization (Pride, Hughes, Kapoor, 2009). The current functions of management along with the environmental resources to be managed are depicted in Figure 2.

Figure 2: Management Functions and Resources Framework

	Human	Financial	Information	Physical
Planning				
Organizing				
Leading				
Controlling				

As a result, we define management as a process that involves four basic functions (planning, organizing, leading, controlling) being applied to four resource areas (human, financial, information, physical) in order to achieve a purpose. According to Ireland, Hitt, and Sirmon (2003) all entrepreneurs must possess the ability to manage these four critical resources strategically. For this reason, we posit that the framework in Figure 2 can be used to determine how the management process is carried out within all types of organizations including new ventures.

The Management Process within New Ventures

There is a gap in understanding how management activities can be applicable in a new venture or startup. While the literature is very clear on the differences between established firms

and new ventures (Hopp, 2012), the gap in regard to this particular paper is in two areas. First, is the maturity of the organization. Early research on management was based on established organizations (Barnard, 1938; Fayol, 1929). While Albers (1972) included business as a sector in which management is applicable, organizations within the business sector differ in terms of maturity as defined by years of operation. Second, is in terms of resources. While both mature and new ventures must manage all four critical resources, some resources are more important to manage than others depending on the organization's maturity. For example, an existing business may have substantially more physical resources than a new venture. Kuratko (2003) identified the overlap of the managerial and entrepreneurial domains (in the context of resources) when identifying trends and future issues of entrepreneurship education.

As a result, we posit that the essential management needs of a mature business would differ from the essential management needs of a new venture, and that management of resources is more critical for new ventures since those resources might be more scarce. Thus, the identification of an essential set of management skills for nascent entrepreneurs that would help in this regard would deem to be important.

Previous Research on Entrepreneurship Education Content

While some approach entrepreneurship education from a psychological traits and attributes perspective (Kirby, 2004; Neck & Green, 2011), our particular focus is on the specific management content within entrepreneurship courses. A review of the applicable literature on entrepreneurship education indicates course content recommendations at a general or broad level typically involving skills needed. Rae (1997) discussed a need for change in course content and discussed the following skills that should be included within courses: communication skills, creativity skills, critical thinking and assessment skills, leadership skills, negotiation skills, problem-solving skills, social networking skills, and time management skills. Cope (2005) suggested further research on content in the following areas: 1) learning about oneself, 2) learning about the business, 3) learning about the environment and entrepreneurial networks, 4) learning about small business management, and 5) learning about the nature and management of relationships. Entrepreneurship education approaches that go against the traditional instructional methodology have been developed by Collins, Smith, and Hannon (2006) when developing an entrepreneurial training program containing content centered under three key entrepreneurship capacities: 1) motivation, 2) entrepreneurial skills, and 3) new venture creation.

In relation to content, it can be taught using various approaches. Neck and Green (2011) categorized existing approaches to entrepreneurship education: 1) Entrepreneur World: educating about the traits/characteristics of the entrepreneur, 2) Process World: teaching about the entrepreneurial process, 3) Cognition World: teaching about how entrepreneurs think, and 4) a Method approach: Portfolio of techniques to practice entrepreneurship. They propose using a method approach, which includes the identification of a body of skills or techniques that would be at one's disposal depending on the context and situation. This method approach is consistent with our thinking and reinforces why it is critical to identify the essential management KSA's.

Through our review of the literature, we were unable to find any prior research conducted examining entrepreneurship education content at the discipline specific level. Thus, in order to advance the literature and to deepen our understanding, we have narrowed the scope of our focus on entrepreneurship education content that would fall specifically within the realm of the

management discipline. The next section will discuss the methodology used to explore the management discipline.

METHODOLOGY

This study used a Delphi methodology. The Delphi technique is used to achieve a convergence of opinions from subject matter experts (Hsu & Sandford, 2007; Yousuf, 2007). There are several reasons why we chose to use a Delphi methodology. First, using the criteria established by Edmondson and McManus (2007), our focal area of research on the content of the management discipline within an entrepreneurship education context could be classified as nascent theory. While more powerful research designs and methods in entrepreneurship research are recommended (Storey, 2000), this does not fit with the needs of research areas that are nascent in nature. Nascent theory consists of "topics for which little or no previous theory exists" (Edmondson & McManus, 2007, p. 1161); thus, new areas of inquiry suggest the need for more open ended research questions and the collection of qualitative data. Second, since we are researching this topic solely from the academic perspective, this would suggest the need to collect data from entrepreneurship educators who teach the content in their classes (Edelman, Manolova, & Brush, 2008). The Delphi methodology enabled us to accomplish both goals.

In order to find a representative sample of academic scholars, we used the 2014 Academy of Management (AOM) Program Guide to identify people who presented on Entrepreneurship at the conference. A total of 123 individuals were identified. Then, using internet resources (Google, University Faculty Bios, Websites), we looked at the qualifications of these individuals. When targeting individuals for inclusion in the study, it is important to target individuals who are experts and have appropriate knowledge experience (Ludwig, 1997). Thus, for inclusion in the study, the individuals had to be currently employed in higher education and meet one of the following criteria: 1) hold a Doctorate in Management, Strategic Management, Human Resource Management, Organizational Behavior, or Business Administration, or 2) teach in Entrepreneurship.

Individuals meeting at least one criterion were contacted to determine if they would be willing to participate in the study. Those that agreed to participate were emailed a link to the online survey with a unique id code to avoid duplicate entries.

There are varying definitions of nascent entrepreneurs. While the term nascent entrepreneurs could include those who participate in activities leading up to starting a business, some actually do start a business while others quit during the gestation process (Renko, Kroeck, & Bullough, 2012). Since we are interested in those management skills which produce successful outcomes in managing resources, we narrowed our focus to those nascent entrepreneurs who have actually started a business. Thus, this formed our open ended research question which was included on the survey: *What are the management skills for nascent entrepreneurs? Nascent is defined as being in a business or a new startup that is less than 5 years old.* The survey question was an open ended text question. Fourteen individuals (n=14) responded, equating an 11.38% response rate.

In terms of the appropriate sample size for a Delphi study, there is not an agreed number of subjects or panelists (Hsu & Sandford, 2007). The numbers range from as high as fifty subjects (Witkin & Altschuld, 1995) to as low as ten if the subjects of the Delphi study have similar backgrounds (Delbecq, Van de Ven, & Gustafson, 1975). Given our above definition and

selection criteria for the subjects of this study, our sample is in alignment with the Delbecq et al (1975) sample criteria and is thus appropriate for this exploratory research study.

RESULTS

Table 1 displays the results of each participant in terms of their answers to the question. This table represents the raw statements contributed by our 14 participants.

Table 1
PARTICIPANT RESPONSES

Participant Number	Participant Responses
Participant 01	• "...to be able to determine whether their opportunity is valid." • "...to be able to process the litany of information and tasks that may lie ahead of they choose to become entrepreneurs." • "For new entrepreneurs (who have actually started), they must be able to master or else to administer to someone else a litany of tasks across every business activity from finance to operations. The scope of each depends on the venture."
Participant 02	• "Distillation. The entrepreneur must be able to find, assimilate, and apply many different types of information into a single concept and strategy." • "Mental flexibility. The entrepreneur must overcome her own confirmation bias as new information arrives." • "Persistence. It's gonna get ugly!"
Participant 03	• "Interpersonal/communications" • "financial literacy" • "opportunity recognition" • "investment-seeking" • "legal knowledge" • "research"
Participant 04	• "Leadership" • "capacity to work in teams (ideally working with multidisciplinary teams)" • "understand the environment (for discover and exploit business opportunities)" • "sales" • "negotiation"
Participant 05	• "...sound critical thinking" • "...decision making" • "basic strategic planning" • "time management" • "delegation of responsibilities"
Participant 06	• "Willingness to take risks" • "self confidence (but not over confident)" • "technical knowledge of produce/service focus of venture." • "Able to identify opportunities that others do not see." • "can be strategic with the idea (to ensure not only first mover advantages but also to fend off competition)."
Participant 07	• "Ability to validate customers - build a viable, sustainable biz model" • "Team building" • "Selling" • "Understanding finances"

Table 1
PARTICIPANT RESPONSES

Participant Number	Participant Responses
Participant 08	• "Analytical skills" • "communication skills" • "leadership skills" • "Nascent entrepreneurs should be visionaries."
Participant 09	• "Opportunity recognition: understanding what potential customers want and what is currently available in the market; identifying the 'gap'" • "Financial skills: understanding valuation, cash flow, where money is made within the particular business" • "HR: knowing who to hire, how to train and what positions to place individuals given their competencies and personal characteristics"
Participant 10	• "Strategy" • "business planning" • "financing" • "opportunity identification" • "networking"
Participant 11	• "Overall the nascent entrepreneur ought to have "resource finding" skills. This is important since one expects a nascent entrepreneur to have better search, problem solving and decision making skills than the typical manager but there those that do not - however they have the ability to source resources that have the skills that they lack - this is what I mean by "resource finding". Aside from sourcing skills,resource finding is also linked to sourcing finance." • "The nascent entrepreneur must also have the skills to sell his/her idea to investors, financiers, customers and suppliers. So though the entrepreneur might be able to use other resources to develop the feasibility of the idea he or she must understand the feasibility and have "sales skill" to sell the idea." • "Another key skills linked to organising is the ability to coordinate the activities of various resources required to implement the idea - he or she needs to provide unity of action in pursuit of common purpose." • "Associated with resource finding and organising is the ability to lead in particular human resources that he/she employs or contracts during the early years. Leading in times of uncertainity and being able to motivate anxious employees is a key skill."
Participant 12	• "Ability to sell (salesmanship)" • "Networking skills" • "Read and understand financial statements" • "Develop rough financial statements" • "Negotiation skills" • "Communication skills"
Participant 13	• "Selling" • "Achieving profitability" • "Envisioning" • "executing the business" • "protecting the business" • "Systematize the business" • "Attract employees" • "Attract suppliers" • "Attract customers" • "motivate employees"

Table 1 PARTICIPANT RESPONSES	
Participant Number	**Participant Responses**
	• "motivate suppliers" • "motivate customers"
Participant 14	• "Leadership" • "Listening" • "Delegation" • "Critical Thinking" • "Trustworthy" • "Decision Making" • "Time Management" • "Managing Discipline" • "Motivation"

In an effort to make sense of this disparate information (Weick & Sutcliffe, 2005), we utilized a content analysis method to analyze the qualitative data (Ruona, 2005). This resulted in twenty-seven unique themes. Table 2 displays each theme along with the participants' responses used to develop each theme.

Table 2 CONTENT THEMES – DERIVED FROM PARTICIPANT RESPONSES		
Content Theme	**Participant Number**	**Participant Responses**
Analyzing (SKILL)	Participant 08	Analytical skills
Assembling a team (SKILL)	Participant 07	Team building
Business Planning (SKILL)	Participant 10	business planning
	Participant 11	Another key skills linked to organising is the ability to coordinate the activities of various resources required to implement the idea - he or she needs to provide unity of action in pursuit of common purpose.
	Participant 13	Systematize the business
Communicating (SKILL)	Participant 03	Interpersonal/communications
	Participant 08	communication skills
	Participant 12	Communication skills
	Participant 14	Listening
Critical Thinking (SKILL)	Participant 05	...sound critical thinking
	Participant 14	Critical Thinking
Decision Making (SKILL)	Participant 05	...decision making

Table 2
CONTENT THEMES – DERIVED FROM PARTICIPANT RESPONSES

Content Theme	Participant Number	Participant Responses
	Participant 13	executing the business
	Participant 14	Decision Making
Delegating (SKILL)	Participant 01	For new entrepreneurs (who have actually started), they must be able to master or else to administer to someone else a litany of tasks across every business activity from finance to operations. The scope of each depends on the venture.
	Participant 05	delegation of responsibilities
	Participant 14	Delegation
Envisioning (SKILL)	Participant 08	Nascent entrepreneurs should be visionaries.
	Participant 13	Envisioning
Financial Literacy (KNOWLEDGE)	Participant 03	financial literacy
	Participant 07	Understanding finances
	Participant 09	Financial skills: understanding valuation, cash flow, where money is made within the particular business
	Participant 10	financing
	Participant 12	Read and understand financial statements
	Participant 12	Develop rough financial statements
Information Processing (SKILL)	Participant 01	...to be able to process the litany of information and tasks that may lie ahead of they choose to become entrepreneurs.
	Participant 02	Distillation. The entrepreneur must be able to find, assimilate, and apply many different types of information into a single concept and strategy.
	Participant 02	Mental flexibility. The entrepreneur must overcome her own confirmation bias as new information arrives.
Leading (SKILL)	Participant 04	Leadership
	Participant 08	leadership skills
	Participant 11	Associated with resource finding and organising is the ability to lead in particular human resources that he/she employs or contracts during the early years. Leading in times of uncertainity and being able to motivate anxious employees is a key skill.
	Participant 14	Leadership
	Participant 14	Trustworthy
	Participant 14	Motivation
Legal Knowledge (KNOWLEDGE)	Participant 03	legal knowledge
Managing Human Resources (SKILL)	Participant 09	HR: knowing who to hire, how to train and what positions to place individuals given their competencies and personal characteristics
	Participant 13	Attract employees
	Participant 13	motivate employees
	Participant 14	Managing Discipline
Managing One's Time (SKILL)	Participant 05	time management

Table 2
CONTENT THEMES – DERIVED FROM PARTICIPANT RESPONSES

Content Theme	Participant Number	Participant Responses
	Participant 14	Time Management
Managing Risks (SKILL)	Participant 13	protecting the business
Negotiating (SKILL)	Participant 04	negotiation
	Participant 12	Negotiation skills
Networking (SKILL)	Participant 10	networking
	Participant 12	Networking skills
Persistence (SKILL)	Participant 02	Persistence. It's gonna get ugly!
Recognizing and Identifying Opportunities (SKILL)	Participant 01	...to be able to determine whether their opportunity is valid.
	Participant 03	opportunity recognition
	Participant 04	understand the environment (for discover and exploit business opportunities)
	Participant 06	Able to identify opportunities that others do not see.
	Participant 09	Opportunity recognition: understanding what potential customers want and what is currently available in the market; identifying the 'gap'
	Participant 10	opportunity identification
Researching (SKILL)	Participant 03	research
Resource Finding (SKILL)	Participant 03	investment-seeking
	Participant 11	Overall the nascent entrepreneur ought to have resource finding" skills. This is important since one expects a nascent entrepreneur to have better search, problem solving and decision making skills than the typical manager but there those that do not - however they have the ability to source resources that have the skills that they lack - this is what I mean by "resource finding". Aside from sourcing skills,resource finding is also linked to sourcing finance."
Risk Taking (SKILL)	Participant 06	Willingness to take risks
Self-Confidence (ATTITUDE)	Participant 06	self confidence (but not over confident)
Selling (SKILL)	Participant 04	sales
	Participant 07	Ability to validate customers - build a viable, sustainable biz model
	Participant 07	Selling
	Participant 11	The nascent entrepreneur must also have the skills to sell his/her idea to investors, financiers, customers and suppliers. So though the entrepreneur might be able to use other resources to develop the feasibility of the idea he or she must understand the feasibility and have sales skill" to sell the idea."
	Participant 12	Ability to sell (salesmanship)
	Participant 13	Selling
	Participant 13	Achieving profitability
	Participant 13	Attract suppliers
	Participant 13	Attract customers
	Participant 13	motivate suppliers

Table 2
CONTENT THEMES – DERIVED FROM PARTICIPANT RESPONSES

Content Theme	Participant Number	Participant Responses
	Participant 13	motivate customers
Strategic Planning (SKILL)	Participant 05	basic strategic planning
	Participant 06	can be strategic with the idea (to ensure not only first mover advantages but also to fend off competition).
	Participant 10	Strategy
Technical Knowledge of the Business (KNOWLEDGE)	Participant 06	technical knowledge of produce/service focus of venture.
Working within a team (SKILL)	Participant 04	capacity to work in teams (ideally working with multidisciplinary teams)

After each theme was developed, we then attempted to put all of the identified themes into the Management Functions and Resources Framework displayed in Figure 2 to determine where they fit. While the participants identified various skills that are important to a nascent entrepreneur, we wanted to ensure that these skills were aligned within the management discipline which is the focus and scope of this study. To determine which management function the content theme was closely aligned to, definitions of the four management functions from four different management textbooks (Griffin, 2017; Neck, Lattimer, & Houghton, 2014; Pride, Hughes, & Kapoor, 2009; Schermerhorn & Bachrach, 2015) were used as criteria for inclusion (See Table 3). If a content theme did not fit conceptually within the definition of a management function, it was excluded.

Finally, a determination was made whether the remaining themes were most directly applicable to one or more environmental resource types as identified by Griffin (2017). Human resources refer to "managerial talent and labor" or people working in and for the organization (Griffin, 2017, p. 4). Financial resources refer to "the capital used by the organization to finance both ongoing and long-term operations" (Griffin, 2017, p. 4). Physical resources refer to "raw materials, office and production facilities, and equipment" or any tangible assets owned or utilized by the organization (Griffin, 2017, p. 4). And information resources refer to "usable data needed to make effective decisions" or any intangible assets or knowledge owned or utilized by the organization. Figure 3 displays the themes and their positioning within the framework; it also indicates those themes that were excluded. The frequency of occurrences for each row (management functions) and each column (environmental resources) are provided; unique occurrences of each management theme for each row and column are indicated in parentheses.

Table 3
MANAGEMENT FUNCTION DEFINITIONS

	Griffin (2017)	**Neck, Lattimer, & Houghton (2014)**	**Pride, Hughes, & Kapoor (2009)**	**Schermerhorn & Bachrach (2015)**
Planning	"Setting an organization's goals and deciding how best to achieve them" (p. 8).	"The process of setting goals for the future, designing strategies, and deciding on the actions and resources needed to achieve success" (p. 10).	"Establishing organizational goals and deciding how to accomplish them" (p. 214).	"Planning is the process of setting goals and objectives and making plans to accomplish them" (p. 17).
Organizing	"Determining how activities and resources are to be grouped" (p. 8).	"The process of orchestrating people, actions, resources, and decisions to achieve goals" (p. 11).	"The grouping of resources and activities to accomplish some end result in an efficient and effective manner" (p. 216).	"Organizing is the process of defining and assigning tasks, allocating resources, and providing resource support" (p. 17).
Leading	"The set of processes used to get members of the organization to work together to further the interests of the organization" (p. 8).	"The process of effectively motivating and communicating with people to achieve goals (p. 11).	"The process of influencing people to work toward a common goal" (p. 217).	"Leading is the process of arousing enthusiasm and inspiring efforts to achieve goals" (p. 18).
Controlling	"Monitoring organizational progress toward goal attainment" (p. 9).	"The process of monitoring activities, measuring results and comparing them with goals, and correcting performance when necessary" (p. 12).	"The process of evaluating and regulating ongoing activities to ensure that goals are achieved" (p. 217).	"Controlling is the process of measuring performance and taking action to ensure desired results" (p. 18).

Figure 3: Management Functions and Resources Framework for Nascent Entrepreneurs

	Human	Financial	Information	Physical	
Planning	* Business Planning * Decision Making * Envisioning * Managing One's Time * Negotiating * Networking * Resource Finding * Strategic Planning	* Analyzing * Business Planning * Critical Thinking * Decision Making * Envisioning * Information Processing * Negotiating * Recognizing and Identifying Opportunities * Researching * Resource Finding * Strategic Planning	* Analyzing * Business Planning * Critical Thinking * Decision Making * Envisioning * Information Processing * Researching * Resource Finding	* Business Planning * Decision Making * Envisioning * Resource Finding	**31 (13)**
Organizing	* Assembling a team * Decision Making * Managing Human Resources * Negotiating * Resource Finding * Technical Knowledge of the Business	* Analyzing * Critical Thinking * Decision Making * Information Processing * Negotiating * Researching * Resource Finding * Technical Knowledge of the Business	* Analyzing * Critical Thinking * Decision Making * Information Processing * Researching * Resource Finding * Technical Knowledge of the Business	* Decision Making * Resource Finding * Technical Knowledge of the Business	**24 (10)**
Leading	* Communicating * Decision Making * Delegating * Leading * Managing Human Resources * Working within a team	* Decision Making * Information Processing	* Decision Making * Information Processing	* Decision Making	**11 (7)**
Controlling	* Decision Making * Managing Human Resources	* Analyzing * Critical Thinking * Decision Making * Information Processing * Managing Risks * Researching	* Analyzing * Critical Thinking * Decision Making * Information Processing * Managing Risks * Researching	* Decision Making	**15 (7)**
	22 (14)	**27 (13)**	**23 (10)**	**9 (5)**	

Content Themes Not In Management Discipline:

Financial Literacy, Legal Knowledge, Persistence, Risk Taking, Self-Confidence, and Selling.

DISCUSSION

Management Functions Observations and Implications

Figure 3 displays both the frequency of occurrences as well as the unique occurrences of each management theme for each management function (planning, organizing, leading, controlling). One would expect that the rankings of the management functions and the rankings of the environmental resources would be the same for each metric of analysis. However, this is

not the case. For example, when ranking the importance of the management functions in terms of frequency of occurrences, the order is planning (31), organizing (24), controlling (15), and leading (11). But, when ranking their importance in terms of unique occurrences, the order is planning (13), organizing (10), leading (7), and controlling (7).

This brings to light some interesting implications. First, the results from this study indicate a heavy focus on skills in the management functions of planning and organizing. Our findings are in alignment with the current literature and existing common entrepreneurship training and education for nascent entrepreneurs since most traditional training and education for nascent entrepreneurs include topics such as making a business plan or determining a business model (Barringer & Ireland, 2006). These activities clearly fit in the planning functional area. This would indicate that the current practice of helping nascent entrepreneurs develop management skills in the planning functional area is correct and should assist in the increase likelihood of the venture being successful. This is consistent with a previous entrepreneurship study that found the most critical skills were planning and organizing (Schmitt, 2013).

Second, the results indicate a possible new approach to discussing or introducing skills from the leading and controlling functional areas to nascent entrepreneurs. As displayed in Figure 3, while leading and controlling are considered equals when looking at unique occurrences of the themes, the leading functional area is actually the least populated when looking at the frequency of the occurrences. Given that these two themes were the least populated, it would suggest that an initial focus on KSA's in these management functional areas for nascent entrepreneurs is not in alignment with what they may need at that point in their development. However, the topic of leadership is a popular topic for training or educating nascent entrepreneurs. We propose that the development of KSA's in the leading and controlling functional areas should be secondary to the development of KSA's in the planning and organizing functional areas. Once the nascent entrepreneur is established in these areas, focusing on the leading and controlling functional areas should occur.

Environmental Resources Observations and Implications

Figure 3 displays both the frequency of occurrences as well as the unique occurrences of each environmental resource (human, financial, information, and physical). One would expect that the rankings of the environmental resources would be the same for each metric of analysis. However, this is not the case as well. When ranking the importance of environmental resources in terms of frequency of occurrences, the order is financial (27), information (23), human (22), and physical (9). But, when ranking their importance in terms of unique occurrences, the order is human (14), financial (13), information (10), and physical (5).

These rankings bring to light some interesting implications. First, it is clear that physical resources are the least important resource to be managed by nascent entrepreneurs initially. It seems natural to suspect that physical resources would be the least populated since most new ventures do not have significant physical resources to manage. Thus, we propose that the application of KSA's toward physical resources should not consume a significant part of initial training or education for nascent entrepreneurs. However, as physical resources grow over time, it would make sense that training and education in this area should be of importance.

Secondly, the rankings introduce a dilemma in determining whether the initial focus should be placed on the human or the financial resource area. From a frequency perspective, it seems that the initial focus should be on financial resources. There is lots of training and

education for nascent entrepreneurs on this such as obtaining financing, angel funds, and small business loans. From a unique occurrences perspective, it seems that the initial focus should be on human resources. While organizations consider its people as the most important resource (Haag, Cummings, & McCubbrey, 2004), it would make sense that managing the human resource within the organization should be the number one priority. However, there is not a lot of focus on training and education for the human resource piece but more so on the financial resource piece. This is probably due to the idea that the majority of the budget for an organization is tied to its employees. Thus, we propose that when focusing on KSA's in terms of resources, additional and perhaps equal attention should be devoted to human resources in addition to financial resources.

Environmental Resources in the Context of the Management Functions

While the previous sections focused solely on the sum totals of the rows (management functions) and the columns (environmental resources), this section will consider the importance of each resource within the context of each management function. At an initial glance, Figure 3 indicates that some resources are more important to be managed depending on the management function being involved. In terms of the planning function, financial resources appear to be the most critical followed by human resources and information resources. In terms of the organizing function, it is fairly even across the board in terms of human resources, financial, and information resources. In terms of the leading function, the human resource dimension is the top priority, as the themes are concentrated in this area. In terms of the controlling function, equal weight is depicted for the financial and information groups. By looking at the concentration of themes, one can conclude which resource is most important for new ventures in the context of each management function. Viewing this in the context of strategic management, this could provide some insights to how management related content is prioritized within entrepreneurship education.

The Complexity of the Nascent Entrepreneurs Framework

By analyzing and depicting the results of the themes from two perspectives (frequency and unique occurrences), we have introduced an interesting and more complex implication that was not the focus of our initial study but turned out to be some unexpected fruit. By viewing the management themes from a frequency of occurrences perspective, we may have touched upon some of the underlying reasons why nascent entrepreneurs struggle due to the complexity of their initial training and education. Below are some interesting observations from Figure 3:

1. Only two themes were represented across all management functions: *Decision Making* and *Information Processing*.
2. Only four themes were represented across all environment resources: *Business Planning*, *Decision Making*, *Envisioning*, and *Resource Finding*.
3. Only one theme was represented in all management functions and in all environmental resources: *Decision Making*.

The finding on *Decision Making* is rather interesting in that it is represented in all areas. One can see why this is so. Using the Churchill (1983) model of new ventures, the owner does everything at the beginning stage of the business to ensure its survival. Given that the owner is

embedded in all the major tasks of the business, the ability to manage key resources, specifically financial resources, is vital. Therefore, decision making is critical to ensure that decisions being made (in both the management functions and in relation to environmental resources) are not detrimental to the company's existence. Given this, we posit that themes represented in multiple positions in the framework may actually function differently or look very different based on its positioning in the framework. For example, let's take the content theme of *Decision Making*. Below are examples of plausible points of inquiry related to *Decision Making* based on its positioning in Figure 3:

1. Deciding how many people to hire, to bring on board the organization. (*Planning function, Human environmental resource)*
2. Deciding how much money is needed to start the venture, how and where the financial resources are going to come from. (*Planning function; Financial environmental resource)*
3. Deciding which information resources will be shared with the public. *(Planning function; Information environmental resource)*
4. Deciding the location of the venture and/or what physical equipment will be needed. *(Planning function; Physical environmental resource)*
5. Deciding the organizational structure (flat organization, tall organization), who will be supervised by whom *(Organizing function, Human environmental resource)*
6. Deciding on the business structure for tax purposes – Sole proprietorship, partnership, LLC, Corporation *(Organizing function, Financial environmental resource)*
7. Deciding on how to codify knowledge and/or procedures and the level of access that stakeholders have to that information *(Organizing function, Information environmental resource)*
8. Deciding on whether to build, rent/lease, relocate where the business functions; whether to buy, repair, sell, our outsource *(Organizing function, Physical environmental resource)*
9. Deciding on the appropriate motivation, communication, and/or leadership style for employees in order to accomplish organizational goals *(Leading function, Human environmental resource)*
10. Deciding on ways to inspire investors to give more money; manager of a sales force to get/motivate employees to meet financial objectives; to convince stakeholders to pursue a specific financial strategy for the long-term growth of the firm *(Leading function, Financial environmental resource)*
11. Deciding on advocating for a POS (Point of Sale) system so inventory and sales volume can be tracked *(Leading function, Information environmental resource)*
12. Deciding on making the commitment to lease an office space in order to move out of the university incubator *(Leading function, Physical environmental resource)*
13. Deciding whether to promote, retain, or downsize employees *(Controlling function, Human environmental resource)*
14. Deciding whether to cut costs – increase revenue – to meet financial objectives *(Controlling function, Financial environmental resource)*
15. Deciding whether to modify organizational policies and/or procedures if they are not meeting organizational goals *(Controlling function, Information environmental resource)*
16. Deciding whether to upgrade facilities based on organizational goals *(Controlling function, Physical environmental resource)*

Each point of inquiry for the *Decision Making* theme is different or has a different focus depending upon the management function and its application to a specific environmental resource. In addition, within each area, there is a potential to bleed to other areas or require the development of additional thoughts. For example, decision four (location of the venture; physical resource) has connections to decision two (startup capital; financial resource). In addition, once a point of inquiry is addressed, it might lead to the development of additional points of inquiry. Given that this process has the potential to be both recursive and reiterative just from the one example above, we conclude that this complexity could apply to other aforementioned themes with multiple representations in the framework.

APPLICATION TO PREVIOUS RESEARCH

As mentioned previously, we were unable to find research that specifically examined entrepreneurship education content specifically within the management discipline. In this section, we attempt to link our findings to the previously mentioned research conducted on general entrepreneurship content (Collins et al., 2006; Cope, 2005; Rae, 1997). Figure 4 details the connections between findings of this study with the entrepreneurship skills identified in previous research.

Figure 4: Overlap with Rae (1997), Cope (2005), and Collins et al. (2006)

	Human	Financial	Information	Physical
Planning	* *Business Planning* [3] * *Decision Making* [3] * *Envisioning* [3] * *Managing One's Time* [1, 3] * *Negotiating* [1, 3] * *Networking* [1, 2, 3] * *Resource Finding* [2] * Strategic Planning	* Analyzing * *Business Planning* [3] * *Critical Thinking* [1] * *Decision Making* [3] * *Envisioning* [3] * Information Processing * *Negotiating* [1, 3] * *Recognizing and Identifying Opportunities* [3] * Researching * *Resource Finding* [2] * Strategic Planning	* Analyzing * *Business Planning* [3] * *Critical Thinking* [1] * *Decision Making* [3] * *Envisioning* [3] * Information Processing * Researching * *Resource Finding* [2]	* *Business Planning* [3] * *Decision Making* [3] * *Envisioning* [3] * *Resource Finding* [2]
Organizing	* Assembling a team * *Decision Making* [3] * *Managing Human Resources* [3] * *Negotiating* [1, 3] * *Resource Finding* [2] * *Technical Knowledge of the Business* [2]	* Analyzing * *Critical Thinking* [1] * *Decision Making* [3] * Information Processing * *Negotiating* [1, 3] * Researching * *Resource Finding* [2] * *Technical Knowledge of the Business* [2]	* Analyzing * *Critical Thinking* [1] * *Decision Making* [3] * Information Processing * Researching * *Resource Finding* [2] * *Technical Knowledge of the Business* [2]	* *Decision Making* [3] * *Resource Finding* [2] * *Technical Knowledge of the Business* [2]
Leading	* *Communicating* [1] * *Decision Making* [3] * Delegating * *Leading* [1] * *Managing Human Resources* [3] * *Working within a team* [3]	* *Decision Making* [3] * Information Processing	* *Decision Making* [3] * Information Processing	* *Decision Making* [3]
Controlling	* *Decision Making* [3] * *Managing Human Resources* [3]	* Analyzing * *Critical Thinking* [1] * *Decision Making* [3] * Information Processing * *Managing Risks* [3] * Researching	* Analyzing * *Critical Thinking* [1] * *Decision Making* [3] * Information Processing * *Managing Risks* [3] * Researching	* *Decision Making* [3]

1 – Rae (1997) 2 – Cope (2005) 3 – Collins, Smith, & Hannon (2006)

Out of the eight items identified by Rae (1997), our findings overlapped with six items: *communication skills, critical thinking and assessment skills, leadership skills, negotiation skills, social networking skills,* and *time management skills*.

Out of the five items identified by Cope (2005), our findings overlapped with two items – *learning about the business* and *learning about the environment and entrepreneurial networks*.

Our findings overlapped with items contained within all three categories identified by Collins et al. (2006). The first category was motivation capacities. Out of the six items within the motivation capacities category, our findings overlapped with one item (*risk-taking*). The second category was entrepreneurial skills. Out of the 15 items within the entrepreneurial skills category, our findings overlapped with seven items: *opportunity spotting, team building, vision, intuitive decision making, managing interdependency on "know-who" basis, negotiation skills,* and *time management*. The third category was new venture creation. Out of the nine items contained within the new venture creation category, our findings overlapped with three items: *sufficient contacts-managing networks, taking risks,* and *business planning skills*.

Some of our findings were connected to 2 of these prior research studies (*managing one's time* and *negotiating)*, while one of our findings was connected to all 3 of these prior research studies (*networking)*. An interesting observation is that these three skills (*managing one's time, negotiating,* and *networking)* all appear in the planning-human quadrant in Figure 4. This finding provides additional support to our recommendation to provide additional educational emphasis in regard to planning for human resources.

While there has been some overlap with our previously cited examples, we should also consider that one key aspect in not just entrepreneurial education, but in all education, is assessment of learning outcomes. Thus, it would be important to develop a management specific learning goal (within the context of entrepreneurship education) when designing management related content. Morris, Kuratko, and Cornwall (2013) provide a common list of learning objectives for entrepreneurship education. The learning goal that is the most applicable for management content is the following: "gain skills at acquiring and managing scarce financial and non-financial resources" (Morris et al, 2013, p. 58). This particular learning outcome is in alignment with our approach to linking management functions to resources based on how we framed our research study. We might enhance this learning goal to read: develop knowledge and skill in acquiring and managing financial, human, information, and physical resources, respectively.

LIMITATIONS

Due to the exploratory nature of this study, several limitations are present. The first limitation is in regard to the population and the sample. In terms of the population, we acknowledge that there could be a flaw here since we used the AOM 2014 program to identify panel members. It is possible and acknowledged that this population might not represent all scholars on the topic. For example, some well versed scholars in this area may have attended the AOM 2014 conference without presenting either through choice or because their proposal was not accepted. In addition, there clearly are well versed scholars who chose not to attend the 2014 Academy of Management conference. This limitation in the population would affect the sample as well. The response rate was extremely small, and it is possible that that those who responded to the survey may not adequately represent the population of academic scholars qualified to comment on this topic.

The second limitation is in regard to generalizability. Typically, exploratory research of this nature is not sufficient grounds to be applied elsewhere. This is due to the fact that the data gathered in exploratory research is typically qualitative in nature. While the initial exploratory study can provide some insights and direction for future research, additional research is needed to provide additional support for how management discipline related content is approached in entrepreneurship education.

A third limitation refers to the fit of the content themes within the management discipline. The names of the themes were developed from participant responses. It is possible, and acknowledged, that each derived theme name might not be the same as management specific concepts as discussed in management literature.

The fourth limitation refers to the empirical fit of the themes within each management function. For example, one of our themes developed was *Recognizing and Identifying Opportunities.* This theme was placed in the Planning function, Financial Resource group. While there is literature that discusses this as an important skill for entrepreneurs (Baron, 2006), it is unknown whether this theme fits empirically within the management discipline specifically within the management functional area of planning. Again this is a call for further research.

The fifth limitation is that the themes were developed on the initial first round of this Delphi study. It is possible that changes to the themes (their names and positioning within Figure 3) could change in subsequent rounds with the participants in the study.

FUTURE RESEARCH

The results of this exploratory study suggest the possibility for additional research to provide further insights into future management discipline content within entrepreneurship education. First, this study can be deepened at a more in-depth level. For example, future research could determine if the themes identified fit conceptually with existing management constructs. This would help to refine the common core of possible management discipline related topics. In addition, research could be conducted to further explore whether the identified management themes function differently depending on their position in the framework in Figure 3. To address this issue in the future, we plan on sending this figure out to management scholars to get a bigger response rate. While the response size for this Delphi study falls within the appropriate response rate, we think the future would be to collect a larger group of entrepreneurship scholars who rate the importance of the content categories to help strengthen our initial findings.

Second, additional research could examine the connection between the management content we identified and whether there is overlap with the field of strategic management. It is argued that entrepreneurship and strategic management, while different disciplines, are complementary (Ireland, Hitt, & Sirmon, 2003). Since strategic management is in alignment with our definition of management in terms of its application to resources, future research should examine if the field of strategic management is more applicable and more vital to nascent entrepreneurs rather than established firms. Findings in this area would provide guidance as to additional content that should be included from the strategic management discipline within entrepreneurship education.

Moving toward the practitioner side of entrepreneurship, a third possible area of research would be to compare academic content with practitioner practices. While previous research has examined the connection between entrepreneurship textbooks and entrepreneurial practice

(Markova, Perry, & Farmer, 2011), there appears to be an incongruence between the instructional content covered in classrooms and what entrepreneurs are actually doing in practice (Edelman, Manolova, & Brush, 2008). As acknowledged earlier, the scope of this study is on entrepreneurship education from the academic perspective. This exploratory research study should be replicated by asking mature business practitioners their thoughts on the essential management skills needed by nascent entrepreneurs and examine any connections between the management themes identified by academic scholars and management behaviors and outcomes of nascent entrepreneurs. Doing this will enable a comparison between both academic and practitioner perspectives to identify any overlaps in content recognized as essential by both perspectives.

Finally, another future research area involves instructional approaches. The literature is clear that the required content needed in an entrepreneurial context is different than in a traditional corporate management structure. One aspect that is discovered is that this change is not only in the area of content but in instructional methods. Since instructional approaches differ within different business schools, an entrepreneur real world approach (Collins et al, 2006, p. 339), would suggest that the education of management related KSA's in an entrepreneurial course would need to be different as well. Future studies should examine not only what future management KSA's should be present, but also how those should be taught, if differently, in regards to management for entrepreneurs.

CONCLUSION

This exploratory study provides significance to the field of entrepreneurship in several ways. First, our initial results bring to light specific management related KSA's essential for nascent entrepreneurs. Second, it provides some implications for future training and education of nascent entrepreneurs in terms of the management discipline. Third, our initial results may have led us to an untapped area to advance the field of entrepreneurship. Because of the vast new knowledge that nascent entrepreneurs should have and implement along with the complexity and nuances of each skill depending on the function or resource being managed, we have a better initial understanding of the essential management skills for nascent entrepreneurs. In addition, this complexity provides us better insight as to why so many new startups fail. Since this research is exploratory in nature, there is substantially more work to be done in this research stream, and it is our plan to head upstream in pursuit of this goal.

REFERENCES

Alberts, H. H. (1972). *Management: The basic concepts*. New York: John Wiley & Sons, Inc.

Barnard, C. I. (1938). *The functions of the executive.* Cambridge: Harvard University Press.

Barney, J. B. (2001). Is the resource-based "view" a useful perspective for strategic management research? Yes. *Academy of Management Review*, *26*(1), 41-56.

Baron, R. A. (2006). Opportunity recognition as pattern recognition: How entrepreneurs "connect the dots" to identify new business opportunities. *Academy of Management Perspectives, 20*(1), 104-119.

Barringer, B. R. and Ireland, R. D. (2006). *Entrepreneurship: Successfully launching new ventures.* Upper Saddle River, NJ: Pearson.

Collins, L. A., Smith, A. J., & Hannon, P. D. (2006). Applying a Synergistic Learning Approach in Entrepreneurship Education. *Management Learning, 37*(3), 335-354

Cope, J. (2005). Toward a dynamic learning perspective of entrepreneurship. *Entrepreneurship Theory and Practice,* 373-397.

Churchill, N. C., & Lewis, V. L. (1983). The five stages of small business growth. *Harvard Business Review*, *61*(3), 30-50.

Crane, F. G. (2013). *Marketing for entrepreneurs: Concepts and applications for new ventures.* Sage Publications

Delbecq, A. L., Van de Ven, A. H., & Gustafson, D. H. (1975). *Group techniques for program planning.* Glenview, IL: Scott, Foresman, and Co.

Dimov, D. (2010). Nascent entrepreneurs and venture emergence: Opportunity confidence, human capital, and early planning. *Journal of Management Studies, 47*(6), 1123-1153.

Edelman, L. F., Manolova, T. S., and Brush, C. G. (2008). Entrepreneurship education: Correspondence between practices of nascent entrepreneurs and textbook prescriptions for success. *Academy of Management Learning & Education, 7*(1), 56-70.

Edmondson, A. C. and McManus, S. E. (2007). Methodological fit in management field research. *Academy of Management Review, 32*(4), 1155-1179.

Fayol, H. (1929). *Industrial and general administration.* Geneva: International Management Institute.

Griffin, R. W. (2017). *Management.* (12th Ed.). Boston: Cengage Learning.

Griffin, R. W. (2016). *Fundamentals of Management.* (8th Ed.). Boston, MA: Cengage Learning.

Haag, S., Cummings, M., and McCubbrey, D. J. (2004). *Management Information Systems for the Information Age.* (4th Ed.). New York: McGaw Hill Irwin.

Hopp, C. (2012). For better or for worse?—Nonprofit experience and the performance of nascent entrepreneurs. *Nonprofit and Voluntary Sector Quarterly, 41*(6), 1251-1268.

Hsu, C. C. and Sandford, B. A. (2007). The Delphi technique: Making sense of consensus. *Practical Assessment, Research & Evaluation, 12*(10), 1-8.

Ireland, R. D., Hitt, M. A, and Sirmon, D. G. (2003). A model of strategic entrepreneurship: The construct and its dimensions. *Journal of Management, 29*(6), 963-989.

Kessler, A. and Frank, H. (2009). Nascent entrepreneurship in a longitudinal perspective: The impact of person, environment, resources and the founding process on the decision to start business activities. *International Small Business Journal, 27*(6), 720-742.

Ludwig, B. (1997). Predicting the future: Have you considered using the Delphi Methodology. *Journal of Extension,* 35, 5. Retrieved October 28, 2016, from: http://www.joe.org/joe/1997october/tt2.php

Lussier, R. N. (2017). *Management fundamentals: Concepts, applications, & skill development.* (7th Ed.). Thousand Oaks, CA: Sage.

Kirby, D. A. (2004). Entrepreneurship education: Can business schools meet the challenge? *Education & Training, 46*(8/9), 510-519.

Koontz, H. (1980). The management theory jungle revisited. *Academy of Management Review, 5*(2), 175-187.

Kuratko, D. (2003). Entrepreneurship education: Emerging trends and challenges for the 21st century. *2003 Coleman Foundation White Paper Series for the U.S. Association of Small Business and Entrepreneurship.*

Kuratko, D. F. (2005). The emergence of entrepreneurship education: Development, trends, and challenges. *Entrepreneurship Theory and Practice,* 577-597.

Kuratko, D. F. and Hodgetts, R. M. (2004). *Entrepreneurship: Theory, process, practice.* Mason, OH: South Western College Publishers.

Markova, G., Perry, J., and Farmer, S. M. (2011). It's all about the data: Challenges and solutions in the study of nascent entrepreneurs. *Journal of Developmental Entrepreneurship, 16*(2), 169-198.

Morris, M. H., Kuratko, D. F., & Cornwall, J. R. (2013). *Entrepreneurship programs and the modern university*. Northampton, MA: Edward Elgar Publishing.

Morris, M. H., Webb, J. W., Fu, J., and Singhal, S. (2013). A competency-based perspective on entrepreneurship education: Conceptual and empirical insights. *Journal of Small Business Management, 51*(3), 352-369.

Neck, H. M. and Green, P. G. (2011). Entrepreneurship education: Known worlds and new frontiers. *Journal of Small Business Management, 49*(1), 55-70.

Neck, C. P., Lattimer, C. L., and Houghton, J. D. (2014). *Management.* Hoboken, NJ: Wiley.

Pride, W. M., Hughes, R. J., and Kapoor, J. R. (2009). *Foundations of Business.* Boston, MA: Houghton Mifflin Harcourt.

Rae, D. M. (1997). Teaching entrepreneurship in Asia: Impact of a pedagogical innovation. *Entrepreneurship, Innovation and Change, 6*(3), 193-227.

Renko, M., Kroeck, K. G, and Bullough, A. (2012). Expectancy theory and nascent entrepreneurship. *Small Business Economics, 39*(3), 667-684.

Rideout, E. C. and Gray, D. O. (2013). Does entrepreneurship education really work? A review and methodological critique of the empirical literature on the effects of university-based entrepreneurship education. *Journal of Small Business Management, 51*(3), 329-351.

Rotefoss, B. and Kolvereid, L. (2005). Aspiring, nascent and fledgling entrepreneurs: An investigation of the business start-up process. *Entrepreneurship & Regional Development, 17,* 109-127.

Ruona, W. E. A. (2005). Analyzing qualitative data. In Swanson, R. A. and Holton, E. F. (Eds.), *Research in Organizations: Foundations and Methods of Inquiry,* p. 233-263. San Francisco, CA: Berret-Koehler.

Schermerhorn, J. R. and Bachrach, D. G. (2015). *Management.* (13th Ed.). Hoboken, NJ: Wiley.

Schmitt, B. E. (2013). *Defining Economic Success as It Pertains to Native American Owned Businesses Located on/or Adjacent to North Dakota Reservations.* Doctoral dissertation, North Dakota State University. Retrieved from ProQuest Dissertations Publishing, 2013. 3601302.

Solomon, G. (2007). An examination of entrepreneurship education in the United States. *Journal of Small Business and Enterprise Development, 14*(2), 168-182.

Storey, D. J. (2000). Six steps to heaven: Evaluating the impact of public policies to support small business in developed economies. In Sexton, D. and Landstrom, H. (Eds.), *The Blackwell Handbook of Entrepreneurship*, p. 176-193. Oxford: Blackwell.

van Gelderen, M., Thurik, R., and Patel, P. (2011). Encountered problems and outcome status in nascent entrepreneurship. *Journal of Small Business Management, 49*(1), 71-91.

Weick, K. E. and Sutcliffe, K. M. (2005). Organizing and the process of sensemaking. *Organizational Science, 16*(4), 409-421.

Witkin, B. R., & Altschuld, J. W. (1995). *Planning and conducting needs assessment: A practical guide.* Thousand Oaks, CA: Sage Publications, Inc.

Yousuf, M. I. (2007). Using experts' opinion through Delphi technique. *Practical Assessment, Research & Evaluation, 12*(4), 1-8.

Zeithaml, C. P. and Rice, G. H. (1987). Entrepreneurship/Small business education in American universities. *Journal of Small Business Management, 25*(1), 44-50.

Zhang, F., Wei, L., Sun, H., & Chan, C.M. (2016, August). How entrepreneurship education impacts entrepreneurial orientation: A planned behavior approach. Paper presented at the *76th Academy of Management Conference, Anaheim*, CA.

ENTREPRENEURSHIP IN THE GENERAL EDUCATION CURRICULUM: READY OR NOT?

Eric Arseneau, Florida Gulf Coast University
Bryan Schaffer, Florida Gulf Coast University
Craig Randall, Florida Gulf Coast University
Sandra Kauanui, Florida Gulf Coast University

ABSTRACT

The general education curriculum is the foundation of the American higher education structure. Course topics in the curriculum span the boundaries of knowledge from the sciences to the humanities. Through these courses, students develop the knowledge, skills, and abilities necessary for successfully navigating life. In this paper, we examine how entrepreneurship education extends the purpose and mission of a general education program. Our proposal is that an Introductory Entrepreneurship course exist in the GenEd curriculum, alongside the more established courses, so as to best prepare the 21st century student for life beyond academia. The process of doing so is an entrepreneurial endeavor in itself and requires the development of relationships across campus. The goal herein is to offer a specific framework for understanding sources of resistance and how faculty can overcome these challenges to develop key strategies for initiating successful change.

INTRODUCTION

The first U.S. business school was established in 1881 at the University of Pennsylvania. Sixty-six years later, the first class specifically focused on entrepreneurship was offered at Harvard University (Katz, 2003). Another three decades passed before entrepreneurship became recognized as an *academic* discipline. It was not until the 1980's that the field experienced more significant development. Since this time, exponential progress has been made as evidenced by the development of new degrees, departments, endowed chairs, centers, academic conferences, and journals worldwide (Kuratko, 2005; Morris, Kuratko & Pryor, 2014). Although the other mainstream business disciplines (e.g., accounting, finance, marketing, etc.) were formed within universities first, in practice they only exist as a *consequence* of entrepreneurial action. In this sense, the development and progression of the field may seem rather counterintuitive.

At its foundation, entrepreneurship is principally concerned with why, when, and how individuals attempt to create value by exploiting opportunities under conditions of uncertainty (McMullen & Shepherd, 2006). While the creation of a new business fits well within this definition, so do the actions taken in established companies to create new initiatives, programs, or strategic business units. Therefore, the contemporary view of entrepreneurship education is that it not be limited strictly in scope to examining the process of founding a new, for-profit business (Baron, 2014). Intrapreneurs, or entrepreneurs working inside established companies, are the subject of many studies and books in the entrepreneurship domain (Hornsby, Naffziger, Kuratko & Montagno, 1993; Ruohotie & Koiranen, 2000). Furthermore, *social* entrepreneurs seek to create value beyond its economic definition (Noyes & Linder, 2015).

We posit that the 21st century student - every student, not just business students - is best prepared for the realities of modern life with an entrepreneurial mindset and related skills, whether or not they ever go on to start a business. Accordingly, the research question underlying this work is the following. How can university faculty create an introductory course in entrepreneurship appropriate for a general education designation? In our attempt to answer this question, we draw from and make contributions towards the literature regarding trends in entrepreneurship education and the general education system in the United States.

The Age of Entrepreneurship

Students entering the workforce today are faced with ongoing trends and environmental conditions, which highlight the benefits of acquiring entrepreneurial skills, such as 1) important and disruptive advances in technology, 2) an ever-evolving definition of employment, and 3) an emphasis on more socially and environmentally conscious citizenship.

Advances in technology continue to distribute unparalleled power to businesses and consumers. A standard smartphone today can be used to complete tasks only dreamed of just twenty years ago. As a result of this distribution and miniaturization, Steve Case (founder of AOL) argues that the rate and impact of entrepreneurial activity will continue to rise. He argues that the "third wave" of entrepreneurship will be driven by the confluence of such technological advances, widespread connectivity, and passionate entrepreneurs capable of exploiting these technologies to disrupt mature industries (such as healthcare, education, and transportation) (Case, 2016). Unlike ever before, advances in technology can empower individuals to act on opportunities, as Stevenson and Jarillo (1990) markedly said, "without regard to the resources they currently control." In short, technology has an instrumental role in the democratization of opportunity. Citizens have now, more so than ever before in history, access to the tools to create value for others.

In addition, (perhaps because of) advancing technologies, the very concept of employment is ever changing (Zammuto et al., 2007). The trend of jobs, even within large organizations, is to be less structured around a fixed set of tasks, and for the work to be more project-based (Turner, 2014). There is a continuously growing emphasis on forming teams, acquiring and implementing resources faster, and in far more frequent intervals (Cross & Baird, 2000; Mathieu, Tannenbaum, Donsbach & Alliger, 2014). In addition, freelance work is more easily accessible and easier to complete for professionals such as graphic designers, web developers, writers, accountants, consultants, and virtual assistants among many others (Aguinis & Lawal, 2013). There are several web-based platforms that exist to connect those who need work completed with those willing to do the work. For example, the popular ridesharing companies, challenging the institutions guiding taxi services, have blurred the already gray line between independent contractor and employee. The schemas relating to the concept of a job appear to be transitioning away from scheduled, monotonous work for the same employer. Today's workers desire a more flexible career, working more so as one sees congruent with their personal aspirations. Finally, social trends continue to drift towards younger workers "job-hopping" or testing many career paths. The most recent data from the Bureau of Labor Statistics stated that the median employee tenure of workers ages 55 to 64 (10.4 years) was more than three times that of workers ages 25 to 34 (3 years) (BLS, 2014). These trends suggest that future university students must demonstrate how they can create value throughout their career. They must be flexible, adaptive to changing environments, and alert to present and future opportunities.

Finally, in the last two decades, a plethora of scientific research has driven a worldwide cultural shift in conversation and awareness of how human beings impact each other and the

environment. Newly formed projects, such as the Social Progress Imperative (SPI), seek to measure and report national statistics beyond purely economic progress (Porter, Stern & Loria, 2013). The SPI vision of the world is one in which, "social progress sits alongside economic prosperity as a measure of a sustainable society" (SPI homepage, 2016). In short, gross domestic product (GDP) is viewed as only one important measure of prosperity, but new measures are available that assess a country's ability to provide basic human needs, a positive wellbeing, and opportunity to its citizens. Furthermore, our knowledge of the environment and how scarce resources are used to sustain life have laid the path for better decisions regarding how to protect the environment (see the United Nations Division of Sustainable Development). The acquisition and deployment of resources are key elements of entrepreneurial theory and education (Shane, 2004). Furthermore, entrepreneurship is the driving force behind social progress, from creating, distributing, and providing the most basic of resources to poverty-stricken areas to fulfilling life's highest-order needs. In summary, the need for entrepreneurial education is well highlighted by these trends.

Bringing Entrepreneurship Education Across the University

Students of entrepreneurship learn the critical thinking skills necessary to be alert to new opportunities (Gaglio & Katz, 2001; Tang, Kacmar & Busenitz, 2012), to make better decisions under conditions of extreme uncertainty (Sarasvathy, 2001), to acquire and employ resources (Shane, 2004), to process and respond to failure (Shepherd, 2003), but most of all to create value for others (Katz, Hanke, Maidment, Weaver, & Alpi, 2016). Some universities, such as Babson College, infuse entrepreneurship within every aspect of the programming and curriculum. Part of the guiding vision of the College is to, "put the power of entrepreneurship as a force for economic and social value creation in as many hands in the world as we can" (Babson College, 2016). While Babson College may serve as an exemplar of an immersive entrepreneurial education, we propose that any university could adopt the idea of introducing entrepreneurial mindset and skills into education by including one or more entrepreneurship courses into the general education curriculum.

It is not presumed to be a minor nor easy task for a school to adopt such a change, but the reward for doing so, we argue, would be a significant impact on student learning. It would also serve as a signal of academic legitimacy for entrepreneurship as a business discipline to the university and its stakeholders. In this sense, we address an important gap in the entrepreneurship education literature. The legitimacy of entrepreneurship as an academic discipline has been put to question (Katz, 2008). While curricula do change over time in conjunction with new missions and student needs, status quo biases can present strong oppositional forces to such decisions (Eidelman & Crandall, 2012). New ideas or proposals often have to overcome burdensome hurdles. Thus, while an introductory entrepreneurship course for placement in a general education curriculum may face an environment that is highly biased against it, success in doing so can serve as a significant signal of legitimacy to the academic and non-academic community.

Methodology and Process

In this conceptual paper, we outline the methodology and our process utilized to successfully create an entrepreneurship course fit for the general education curriculum which includes consulting the documents that were prepared by the University's curriculum team to determine the acceptability of a course for Gen Ed, reviewing the many discussions that took place

with different University stakeholders at the time, and conducting a review of the literature regarding entrepreneurship education and the general education (hereafter GenEd) system. Finally, an extensive nationwide search of university course catalogs was conducted. While we found we are not the first university to have proposed and successfully added an entrepreneurship course to the GenEd curriculum, our review indicates that little progress has been made in this regard (D'Intinio, 2010).

If we are to move forward as a field, greater discussion is needed regarding unique frameworks and recommendations for moving forward. Therefore, the purpose of this article is fourfold. The first is to review the structure of GenEd programs and explain why entrepreneurship programs and coursework may have difficulty gaining acceptance within these structures. The second is to outline how the inclusion of an entrepreneurship course in the GenEd curriculum can be facilitated. The third is to outline how course content topics can be structured and added to match the outcome goals of a university's GenEd program. Finally, we draw on the sociological theory of structuration to highlight how the process of entrepreneurship is fundamentally a phenomenon within social science. We hope to provide educators with the methodology, structural framework, and the means to develop strategies for successfully positioning entrepreneurship courses into GenEd programs.

LITERATURE REVIEW

The Mixed Intent of General Education

GenEd across most institutions represents a broad set of courses within a principal set of academic disciplines. These courses are shared by all students and can take many forms, including introductory, advanced, and integrative pedagogical designs (Zai, 2015). Students tend to perceive these courses as the set of classes needed for graduation, despite one's major (Warner & Koeppel, 2009). Among the Association of American Colleges and Universities (AAC&U), there is evidence that higher education institutions are increasingly moving toward consistency in GenEd student learning outcomes (Hart Research Associates, 2016). In 2015, 85% of AAC&U member universities stated that they have a common set of GenEd learning outcomes, which is up from the reported 78% in 2008. These outcomes represent a wide array of knowledge areas and competencies. For example, across most universities, there seems to be a general agreement that the following learning outcomes are essential in GenEd programs (Hart Research Associates, 2016):

Writing skills
Critical thinking and analytic reasoning skills
Quantitative reasoning skills
Knowledge of science
Knowledge of mathematics
Knowledge of humanities
Knowledge of global world cultures
Knowledge of social sciences
Knowledge of the arts
Oral communication skills

Despite this trend, there is still some inconsistency in terms of the various weights, or degrees of emphasis, that different colleges and universities give to the areas cited above. Furthermore, evidence suggests that, to some degree, GenEd curricula can carry mixed meanings

or views across global and North American institutions. Wells (2016), for example, eloquently highlights the many meanings and multiple functions that can be linked to GenEd curricula across different universities. In one sense, defining GenEd can be problematic. Both educational practitioners and scholars have applied a wide range of somewhat related, yet often times confusing, terms to frame GenEd, including liberal education, liberal arts, liberal learning, core curriculum, and common learning (Wells, 2016). As such, "general education encapsulates a variety of forms and diverse ideas regarding its content" (Wells, 2016, p.9).

This dualism of consistency and inconsistency highlighted above presents an inherent paradox of GenEd. "Conceptually, general education is designed to encapsulate what every college student and subsequent graduate should know to be considered well educated; and yet, general education remains a vastly diverse, institutionally specific endeavor" (Zai, 2015, p. 197).

To summarize, GenEd is a core curriculum that every undergraduate student must take regardless of major; one that enables them to acquire certain intellectual skills and social competencies, with important knowledge of enduring value for all educated persons, regardless of their field, job, or profession. These required courses are intended to introduce students to important ideas and show how concepts can be approached from multiple perspectives and with appreciation for many viewpoints. The structure of GenEd, however, has a fair amount of inconsistency across academic institutions. Generally, the content of GenEd programs (the individual courses offered) is both created and delivered by the individual colleges and departments of the institution, and not by a GenEd department. Additionally, some amount of oversight and administration of all the GenEd courses, together, is done by a separate official entity – referred to here as the GenEd program.

The stated goals or purpose of any university's GenEd program – while similar in overall direction - will differ substantively from one institution to another. Some institutions may focus more on global issues or diversity for example, and others more on critical thinking and communication skills. Yet even within one institution, what might constitute a course as a candidate for inclusion into the GenEd program curriculum might not be consistent. This is an important consideration when looking to add an entrepreneurship course to the existing GenEd program. Proposals to add or change courses pass through decision points that potentially include department, college, and university levels. Because of the ever-changing makeup of faculty and/or administration committees across the institution, decisions concerning appropriateness are unlikely to be uniform over time. One committee appointment, or change in committee chair may change approval to delay or denial.

As an example, all GenEd coursework to be included, system-wide, at *"University ABC"* is selected from within five subject areas:

Communication
Mathematics
Humanities
Social Sciences
Natural Sciences

Each of these subject areas falls within numerous different departments and/or colleges. Some, such as mathematics, may fall within one single department, which simplifies curricula-related decision processes. Others, such as social sciences, involve not just multiple departments but multiple departments in multiple colleges. The decision on what courses should or should not be offered is delegated to individuals and committees that include administrative and faculty

personnel that cross unique boundaries. As a result, a broad variety of opinions can and will exist as to what, exactly, GenEd should include or exclude. Furthermore, even the specific inclusion and emphasis within each school or college can appear haphazard. Content and inclusion might be negotiated at the university or college or department level, and by committees made up of faculty and/or administration. Thus, GenEd has differing content and criteria at each institution – even within single state-wide university programs – based on historical factors such as representation level of colleges or departments on committees, or even the strong opinion of just a few voting individuals.

GenEd within Social Sciences

At most institutions, entrepreneurship generally falls within the college of business, which in turn is grouped within the social sciences for scholarship/academic subject purposes. Social sciences also generally includes subjects such as economics, political science, psychology, and sociology. The part of any institution's GenEd curriculum that is offered from within the various social science departments should, logically, show some consistency in purpose. Thus, social science sourced GenEd courses are expected to highlight the influence of *societal contexts, physical environments,* and *global processes*.

As an illustration the following is one description of the social science component of the GenEd program:

> *"Students will gain an understanding of historical and socio-cultural perspectives and a sense of the evolution of societies and the various modes of interaction among peoples of the world" (General Education Requirements – University ABC Academic Catalog, 2015).*

Reasons for Resistance

It is the philosophical differences of faculty and administration within this eclectic mix that is often behind the most material obstacles to adding entrepreneurship to a GenEd curriculum. Specifically, the non-business faculty from many social science departments may oppose a GenEd class in <u>any</u> business subject, entrepreneurship included. Therefore, even if the idea is supported within the Business School, other social science faculty may reject it. Understanding the arguments made concerning why entrepreneurship is not fit with the goals of the GenEd/social science curriculum is, therefore, critical.

The arguments made against the inclusion of entrepreneurship (and <u>any</u> business subject in general) may center on the social science intention (social science's contribution to the GenEd program) to offer broad societal perspectives as the focus, versus the teaching of skill sets or vocation preparation. Thus, the GenEd fit of an existing business school class can be difficult to explain. Entrepreneurship can indeed tend toward skill development within its pedagogy. However, it is neither impossible nor false-hearted for entrepreneurship to be, pedagogically, a social science that supports and meets GenEd goals. It is merely essential that a cultural and societal perspective be developed and included in the course design.

For business faculty, understanding the opposition by social science faculty to the notion that any business subject can be GenEd may be difficult. As an illustration of the basis for this oppositional perspective, a GenEd music class would include a perspective of music appreciation, history, or global and cultural differences. A course on mastering the guitar or on how to monetize

a musical skill would not be appropriate for the GenEd program. Any GenEd course on entrepreneurship, therefore, should expect to include significantly broad content.

Defining and Selecting GenEd Courses

In addition to an overall mission and purpose, GenEd programs normally implement a short list of program competencies. Regardless of which subject is covered (social science or humanities) or which department (e.g. math, chemistry, literature) is offering a GenEd course, one or more of the listed program competencies is expected to underpin the class. At University ABC, for instance, one or more of the following competencies (see Table 1 for more detail) must be demonstrably significant to the content of any proposed course in order to be considered for the GenEd curriculum:

Written Communication
Quantitative Reasoning
Critical Thinking
Intercultural Knowledge

Furthermore, GenEd program guidelines may require that all students take a certain total number of GenEd classes, of which a minimum number must meet each of the listed program competences. Coursework from any one department might be formally designated as satisfying one or more competencies.

Table 1
GEN ED COMPETENCIES
At University ABC

COMPETENCY	DESCRIPTION
1: WRITTEN COMMUNICATION	Employ the conventions of standard written English; Select a topic and develop it for a specific audience and purpose, with respect for diverse perspectives Select, organize, and relate ideas and information with coherence, clarity, and unity; Develop research skills including the ability to collect, analyze, synthesize, and accurately present and document information; Apply critical reading skills.
2: QUANTITATIVE REASONING	Solve mathematical problems; Analyze and interpret quantitative data; Summarize data into graphic and tabular formats; Make valid inferences from data; Distinguish between valid and invalid quantitative analysis and reasoning.
3: CRITICAL THINKING	Define a problem using appropriate terminology; Select and organize information; Identify assumptions and underlying relationships; Synthesize information, and draw reasoned inferences; Formulate an appropriate problem solving strategy; Evaluate the feasibility of the strategy.
4: INTERCULTURAL KNOWLEDGE	Demonstrate understanding of human diversity (e.g., cultural, social, historical, political, biological); Analyze cultural artifacts or customs of expression (e.g., thoughts, behaviors) that emerge in diverse contexts.

Every student is required to take a minimum number of GenEd courses, and these must be selected such that they also satisfy a minimum credit requirement of each competence. In other words, every new course proposal to GenEd from within the social sciences (e.g. an entrepreneurship course) would be required to demonstrate that it includes acceptable instruction in at least one of GenEd program competences.

Depending on the course design and its intent, an introductory entrepreneurship class could cover all of these competencies. At University ABC, the faculty's intent has been to offer entrepreneurship as an introductory class for four sections with 50 students each. Practical considerations, such as the challenge of grading extensive writing assignments, influenced the choice to assess for the critical thinking competency. Therefore, specific pedagogical content and assessment devices needed to be created and included in the course schedule which demonstrated critical thinking.

A Path Forward

The following sections offer further guidance for course content to show how entrepreneurship can easily fit within broader university programs. Examples from prior research and experience are provided to show how an entrepreneurship course can be designed to meet the goals of social sciences in a GenEd program. We conclude with suggestions for navigating sources of resistance by drawing on structuration theory.

ENTREPRENEURSHIP IN THE GENED CURRICULUM

Any introductory entrepreneurship course designed for the GenEd curriculum should be planned around audience and content. With respect to audience, there may be issues related to the fact that a significant percentage of GenEd students will have had no prior exposure to business concepts prior to taking the course. If a course is to be modified from its original form, it should be taken into account that most existing entrepreneurship courses assume that students are from the Business School and have taken at least one introductory business course. The business language used in the course, therefore, should be explained and connected using metaphors with non-business concepts, e.g. cash is the lifeblood of a business (Dodd, 2002).

With respect to content, a key concern is how well student learning outcomes match the university GenEd program's intent or criteria. Entrepreneurship, when viewed broadly, can easily fit within more conventional social science thinking. In truth, entrepreneurship has been fundamental to human behavior and human progress throughout history. Furthermore, it still overwhelmingly dominates day to day economic interactions and even social behaviors in all but a few western societies and cultures today (Swedberg, 2000). Therefore, the goal of including more general social science perspectives into the entrepreneurship coursework, one that matches the intent of GenEd, is attainable. Table 2 below provides detail regarding specific steps that can be taken to fulfill GenEd requirements, connect to student learning outcomes, and develop the corresponding pedagogical approach for an introductory entrepreneurship course.

Table 2
MAKING THE CONNECTIONS

GENED COMPETENCY	STUDENT LEARNING OUTCOME	PEDAGOGICAL APPROACH
Written Communication	1. Explain why a person becomes an entrepreneur; 2. Examine the importance of ethics in entrepreneurial activity; 3. Demonstrate the ability to gather market feedback about a new product or service.	1. Interview an entrepreneur and write a 3-6 page report detailing the individual's motives, decisions, regrets, etc. 2. Write a 1-2 page summary of an existing business where the founders faced clear ethical challenges (e.g., Facebook). 3. Write a one-page buying intentions survey or create a web-based survey for a new product.
Quantitative Reasoning	1. Explain the difference between the two types of profit (gross and net); 2. Calculate the initial start-up costs for a new company. 3. Compare the concepts of net worth (individual) and equity (company)	1. Document the annual gross and net profit for an existing company. Then, estimate the gross and net profit for one of the company's products. 2. Students bring their answers to class and write their answers on the board to generate class discussion. 3. Class discussion centered on the balance sheet: assets, debt, and equity. Explain how the different sources of startup funding relate.
Critical Thinking	1. Explain decisions and actions taken by entrepreneurs to mitigate risk; 2. Apply the principles of an entrepreneurial mindset to the career you aspire to have; 3. Discover opportunities in life.	1. Write a one-page summary outlining the definitions of risk and uncertainty. Explain one approach taken by an entrepreneur to mitigate risks. 2. Write a one-page summary connecting one principle to a desired career, explaining how this will help achieve a career objective. 3. Keep an ongoing journal of problems, needs, trends, and patterns seen in daily life.
Intercultural Knowledge	1. Analyze the differences in social progress worldwide; 2. Describe the role of the entrepreneur in society; 3. Identify the impact of entrepreneurial innovations on national cultures.	1. Document the score a country has on the Social Progress Index (SPI). Highlight the actions of one entrepreneur trying to enact change. Discuss in class. 2. Compare rates of entrepreneurial activity throughout the world using Kauffman.org data. Explain the difference between necessity and opportunity-driven entrepreneurship. Discuss in class. 3. Compare the rate of adoption of at least three social networking platforms. Examine this adoption rate as compared to previous technologies (television, radio, etc.). Write a one-page summary.

Course Content: Satisfying Key GenEd (Social Science) Perspectives

Any existing introductory entrepreneurship course can be fairly easily adapted and then adopted into the social science course offering for a GenEd program. As previously noted, there are four themes that are recognizable as being inherent to entrepreneurship but that also fit directly within the social sciences. These themes relate directly to the societal context conceptions of global processes, historical and socio-cultural perspectives, evolution of societies, and interaction among peoples. Stated in the context of entrepreneurship, these general social science conceptions could even take the form of four modules within a class. For example:

1. Entrepreneurship and economic systems
2. Entrepreneurship and human progress
3. Entrepreneurship and episodes of societal change/disruption
4. Cultural perspectives on entrepreneurship

Each of these four areas, as course modifications, is highlighted below.

1. Entrepreneurship in Economic Systems

Economics is a familiar course within the GenEd curriculum at most institutions, since teaching economic fundamentals to all undergraduates is assumed to be important for the GenEd program. This theme of entrepreneurship and economics can address emerging economies and entrepreneurship, as well as entrepreneurship's central role in economics generally.

Most of the world's population depends on an entrepreneurial livelihood, especially in the least developed economies. Any deep understanding of a functioning society in the bulk of the world relies on some grasp of entrepreneurship. Furthermore, economic progress is historically based on entrepreneurial formation and outcomes. Without understanding basic business formation principles and the headwinds to market success, even a rudimentary understanding of human activity and the relative wealth of nations is limited. For example, the concept of free market systems – a pillar of economic theory – is founded on entrepreneurial interactions. In fact, the study of early economics (circa 18th century) heavily relied on the description of entrepreneurial activities (e.g. Adam Smith, Wealth of Nations, 1776 especially Book 1 and 2). Later, and particularly with Western economies, the problem of persistent economic cycles was addressed by Schumpeter (1939) with entrepreneurship and creative destruction at its very core. The writings of well-known economists such as Hayek (1948) and Baumol (1968) also rely on entrepreneurial action. Thus, entrepreneurship is integral to our overall understanding of economic trends and economic system analyses.

2. Entrepreneurship as Foundational to Human Progression

Progress in society invariably describes a push past hunting and gathering societies; moves through early agrarian stages; then focuses on the rise of trades, entrepreneurial activities and entrepreneurial businesses; then includes descriptions of larger firms; and finishes with international concepts such as global commerce. Entrepreneurship, whether explicitly noted or not, is inseparable and foundational to this social progression timeline. A curriculum that traces the requirement and manifestation of entrepreneurship at each stage is a straightforward task. Even in modern times, regional progress across the globe is a study of entrepreneurial activities and the underlying systems that either inhibit or reward it – consider China's development since 1950.

3. Entrepreneurship as the Foundation to Societal Movements and Change

Understanding modern society, especially in the west, is heavily dependent on the impact of entrepreneurial business. Entrepreneurs and their businesses drive fundamental change to underlying societal dynamics that have far-reaching effects on our social fabric. Examples include recent upheavals caused by Facebook, Twitter, and YouTube; 20-30 years ago with Microsoft, Amazon, Google, Cisco, Ebay; and even more distant in our past airplanes, railroads, television, telephones, electric power, lighting and automobiles. Each of these examples can be linked to the study of entrepreneurs and entrepreneurship coupled with societal upheaval, creation, change, and transformation.

4. Cultural Perspectives

As alluded to previously, entrepreneurship is intricately tied to culture and cultural values. Take, for example, Weber's (1898) notion of the protestant work ethic. Furthermore, the American experience is replete with examples of quotes, political speeches, and stories of triumph that tie together entrepreneurship and the ideals of success, achievement, and quality of life. Numerous additional applications of culture to the study of entrepreneurship are possible. Entrepreneurship itself is not just a vocational competency or a business term. It is an ideal that has permeated numerous aspects of societal ethos across time and place.

In summary, the themes briefly presented here re-emphasize the natural fit that entrepreneurship has with the social sciences and with GenEd programs. In focusing on initiatives that aim to communicate, educate and collaborate, business faculty can use these themes to help craft and deliver their messages to other university stakeholders.

Designing the GenEd Entrepreneurship Course

The following provides a practical example of how an entrepreneurship course was designed at a specific university. At University ABC, *Introduction to Entrepreneurship* was added to the management curriculum in the fall of 2014. At first, there was no clear motive of trying to place the course into the GenEd program. The creation of the class emerged from the management department faculty desire to allow non-business majors with an interest in entrepreneurship to take existing entrepreneurship classes. Specifically, this introductory course was viewed as necessary because the existing entry-level entrepreneurship course assumed that students had already been introduced to basic business concepts. Non-business students, however, had no way to gain exposure to those core business concepts prior to enrolling in the first course, *Entrepreneurship and Creativity*. Thus, the initial design emphasis for the new introductory class was on basic business principles, plus some rudimentary marketing, organization, and finance concepts that emphasized the entrepreneurial context. In summary, the initial goals of the new introductory entrepreneurship course were threefold:

1. Allow a path for non-business majors to obtain an entrepreneurship minor.
2. Level the playing field of business knowledge for non-business students. Non-business students interested in entrepreneurship were seen as being unlikely to take other introductory business courses (e.g., Introduction to Business, Principles of Management, Introduction to Accounting, or Introduction to Marketing).
3. Give non-business majors an understanding of entrepreneurship, as well as introduce foundational skills essential for entrepreneurial endeavors should this be the only business course ever taken.

The new course was, therefore, originally designed along the normal business skills, problems, resources, and perspectives of entrepreneurship; without any substantive intention of including it in the GenEd program.

Once the course was offered, and significant interest arose from outside the college of business, the idea of adding entrepreneurship to GenEd program was considered. It was felt by business faculty, that since so much interest existed outside the business school, clearly the GenEd offering of the university would be enhanced by the expansion. Nevertheless, pushback, especially from social science representatives outside the Business School, was the impetus to first investigate and then possibly redesign the course.

The result was to change course content, syllabus, and description. For example, the course description was modified to specifically address the content that the broader Social science perspective was expected to bring to the GenEd curriculum. To that end, the wording of the course description became the following:

> *The study of entrepreneurship takes many forms in undergraduate education. In modern pedagogy, however, it is often a dichotomy – focused largely either on the mindset and thinking/acting of an entrepreneur, or focused largely on competencies and business models for nascent firms. Yet entrepreneurship is far broader. Entrepreneurship is an essential human behavior that has underpinned social progress. Individual economic activity dominates day to day behavior in all but a few western societies and cultures today; most of the world's population depends on an entrepreneurial livelihood versus on a large industrial corporate base. Without understanding the entrepreneur in economic formation and conceptions of markets, a basic historical understanding of societies and change, or the wealth of nations is limited. For our own times, a deep understanding of economics and society extends to how the output of entrepreneurs drive social change and often disrupts underlying societal dynamics.*
>
> *This course covers the many aspects of entrepreneurship and its implications for careers, for business, and for society. It is designed to introduce general concepts to students pursuing all University offered majors. Since entrepreneurial activity is historically foundational to social development and human interaction everywhere, students will gain a sense of the evolution of societies and modes of economic interaction among peoples.*

The class schedule, with associated topics, homework, and course modules were added and/or changed to directly address the intent of GenEd in the social sciences. Specifically, these topics were added to the course and to the syllabus:

Business & society
Entrepreneurship and the economy
Entrepreneurship in different cultures
Demand & customers
Industries, entrepreneurship & change
Exchanges & transacting
Product economics
Business economics

Further modifications to the language above were made to meet GenEd program competence requirements. To that end, syllabus and course description wording became:

> *Entrepreneurship and its associated way of thinking rely heavily on clear communications, quantitative reasoning, and an evidence-based approach to issue identification, analysis, and decision making (thinking critically). Critical Thinking, Quantitative Reasoning, Writing, and Intercultural Knowledge are the four GenEd competencies. To meet the GenEd requirement of assessing students on at least one of the four competencies, there will be several assignments which will assess critical thinking skills. Selected assignments will also require quantitative competency. (See Table 1 for a list of GenEd Competencies at University ABC)*

Finally, the course was designed to include multiple written individual assignments, one of which, was specifically designed for a critical thinking assessment. Each student was required to use the PEAS model (Problem, Evidence, Analysis, Solution) as their response format.

The preceding example is just one approach that was taken for an entrepreneurship course to be designed to fit within a broader university GenEd framework. In doing so, faculty kept in mind that *effective* and planned communication throughout the process was critical, and that

anticipating the various forms of resistance from other university members – and subsequently modifying content and approach - was essential to success. We recognize, however, that resistance can come in various forms. The following section provides insight into the sources of such resistance and offers a practical approach for dealing with university stakeholders.

NAVIGATING THE CHANGE: OVERCOMING RESISTANCE

Structuration Theory

Gidden's (1984) structuration theory offers a framework through which faculty can better understand how to integrate entrepreneurship into GenEd curricula and address potential sources of resistance. The essence of structuration theory is that the factors of both structure and agency are important and equal in their influence on individuals' efforts in initiating change. The theory provides needed insight into the complex interactions between these factors and how they have the potential to constrain individual choice (Bratton, Callinan, Forshaw & Sawchuk, 2007). In the current context, the basic idea is that entrepreneurship educators act as agents in shaping change, with a certain perceived sense of control. This is consistent with Zimmerman and Cleary's (2006) definition of agency, focusing on the actor's capability to originate and direct actions for a given purpose. However, people are also shaped by their environments, rarely acting in isolation. They are required to work within existing structures.

Here we make the argument that *academic entrepreneurs* should think about how to create change in their environments (for example, integrating entrepreneurship courses into the GenEd curriculum), while making sure that relevant stakeholders recognize the value of doing so. Oppong (2014) effectively highlights one of the key conditions of structuration theory, the dualism of agency and structure. Recognizing this condition is important, given that there is often a tendency for individual actors to focus on internal motivations without giving proper credence to the notable constraints of structural and societal forces (see Lamsal, 2012). This duality of agency and structure suggests that the process of initiating change within a university setting can be examined through a framework that first identifies potential outcomes and then takes into account the potential influences of both the structure and the business faculty.

This interaction of agency and structure implies a connection between three domains that, when examined together, offer further guidance for formulating strategies for including entrepreneurship in GenEd programs (Giddens, 1984). These domains include structures of significance, structures of domination, and structures of legitimation. Structures of *significance* centrally relate to effective communication. Structures of *legitimation* involve norms and, for example, are related to existing standards and opinions that indicate what GenEd courses should be or should constitute. Structures of *domination* are about power and influence within the university system. In establishing effective communication, faculty must navigate through these structures to both create alliances and craft messages in an effective way to address stakeholders at each level. Giddens (1984) focuses on the mobilization of potential resources in this particular domain. Resources can refer to specific capabilities such as faculty's authority, knowledge, expertise, and ability to articulate entrepreneurship's fit within GenEd and social sciences.

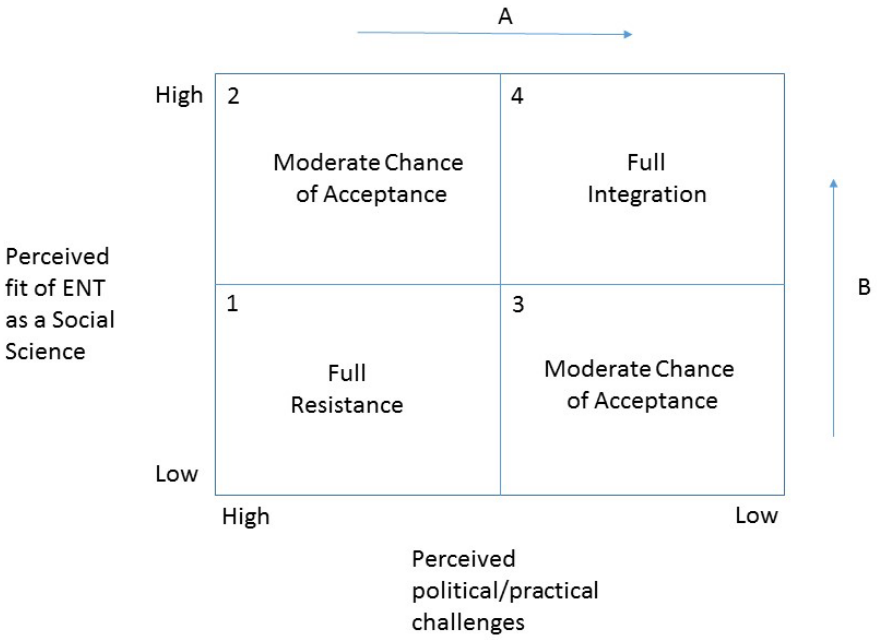
This same structural framework has been applied broadly to such settings as community health practices, information technology, geography, social psychology, organizational science, and management research and we suggest that there is much potential in applying it to the university environment (see Oppong, 2014; Pozzebon & Pinsonneault, 2005; Kort & Gharbi, 2011;

Kristiansen, 2009; Asante-Sarpong, 2007; Albano, Masino & Maggi, 2010; den Hond, Boersma, Heres, Kroes & van Oirschot, 2012; Whittington, 1992).

In summary, structuration theory suggests that understanding of curriculum development and the placement of entrepreneurship courses will be limited if the duality and complexity of agency and structure is not appreciated. In the current context, this appreciation must take into account the motivations behind the change agents' efforts (i.e., faculty who are promoting this initiative) and also the broader issues at all university levels (structure) that would either facilitate or hinder such efforts.

Educators and administrators outside of the college of business may have different levels of acceptance ranging from full integration and collaboration, to full resistance. Figure 1 shows four conditions of possible scenarios.

Figure 1: Moving to Acceptance



We propose that these scenarios present two critical challenges. The first issue addresses external stakeholders' perceptions of the fit of entrepreneurship within GenEd and the social sciences, and the need for an enhanced understanding throughout the university system of this fit. Earlier sections of the paper have offered evidence of how entrepreneurship is intricately tied to fields such as psychology, sociology, philosophy, anthropology and political science. Path B in Figure 1 suggests that there may be a need to consciously develop strategies for *educating* administrators and other faculty about the reciprocal contributions that can be made between entrepreneurship and GenEd programs. Initiatives around this goal are tied directly to structures of significance and the communication of meaning – in this case, the message must be clear and must be delivered effectively to different levels of agency throughout the university structure. Ultimately, this task may be achieved with persistence and credible evidence.

The second issue is more political in nature and is related to structures of domination. In providing messages that clarify meaning about entrepreneurship's role in GenEd, how do we

successfully convey information that can transcend barriers related to power and competitive positions? This addresses approaches to negotiation and conflict and offers ways to promote resolutions that satisfy all university members. The issue here largely represents territorial concerns where the introduction of entrepreneurship into the GenEd program positioned as a social science may threaten parties who have an interest in existing GenEd courses and who feel that entrepreneurship might replace or displace those courses. This is a very real perception that is common across universities anytime curricula change is proposed or introduced. Path A in Figure 1 suggests that leaders promoting entrepreneurship into the social science GenEd programs at a particular institution need take a collaborative, not a competitive, perspective. Thomas (1977) suggests that such an approach in essence allows all interested parties to benefit from proposed solutions without having to give up much through the process.

This style of handling potential conflict becomes essential when each stakeholder's concerns are too important to be compromised. It requires effective leadership and the integration of multiple perspectives and insights. Entrepreneurship faculty working on such initiatives must identify the ways in which entrepreneurship courses may benefit all programs and students as a GenEd offering. In summary, adopting approaches that *educate and collaborate* will move potential resistors from boxes 1, 2, and 3 in Figure 1 to box 4. The effective communication of meaning (education) will be positively related to successful initiatives that aim to integrate entrepreneurship into GenEd social science programs. Furthermore, collaborative (versus competitive) approaches for dealing with potential resistance will be positively related to successful initiatives that aim to integrate entrepreneurship into GenEd social science programs.

We also recognize, however, that efforts around education and collaboration will be moderated by the nature and strength of the current university culture. Again, structures of legitimation are directly tied to existing norms that vary in nature and strength. In this case, the nature of the culture is specifically related to the university's orientation around change. This ranges from a high flexibility orientation to one that values stability and the maintenance of the status quo. Strength of culture refers to the degree to which university norms have an impact on member behavior and the degree to which values around change are deeply held (see Kotter & Heskett, 1992). In essence, then, there are four potential conditions of the university culture that impact the potential success of change initiatives that focus on integrating entrepreneurship into GenEd programs:

1. Strong culture / Flexible and change orientation (Highest chance of success)
2. Weak culture / Flexible and change orientation (Moderate chance of success)
3. Strong culture / Stability orientation (Lowest chance of success)
4. Weak culture / Stability orientation (Moderate chance of success)

We propose that these characteristics of culture will moderate the relationships between effective communication and collaboration, and successful initiatives that aim to integrate entrepreneurship into GenEd programs. Efforts around education and collaboration should be more successful in environments where the culture is strong (versus weak) and is characterized by change and flexibility (versus maintaining the status quo).

Oppong (2014) has suggested that more work is needed that highlights the interactions between agent and structure. Our application of structuration theory here offers, then, both a practical and theoretical contribution. Prior work has often considered the important roles of both domains (agency and structure), but has largely failed to get at this interaction. The development

of our framework addresses this shortcoming and offers a unique approach for overcoming inherent challenges within a university system.

DISCUSSION

It is useful here to reiterate the many potential benefits of the initiative to expose all undergraduates to basic entrepreneurship concepts. Only in entrepreneurship courses do students have the opportunity, early on in their academic experience, to consider small or early stage firms as a job choice. This exposure can have profound effects on the career path students choose. Additionally, a course in entrepreneurship early in their career can help non-business students develop a mental framework through which potential opportunities can be identified and exploited within their "home" major or discipline. For students, entrepreneurship courses are, by their nature, interdisciplinary. Many areas of business are linked within the semester and/or within any cases used in the pedagogy. Entrepreneurship courses can develop many of the competencies required by GenEd programs. For example, with respect to critical thinking, problem identification and evidence-driven decision making are foundational to the coursework.

Entrepreneurship in the GenEd program can also have important benefits to the university's surrounding community. Students taking such a course develop an entrepreneurial mindset that helps students become proactive thinkers who are alert to new opportunities in their social environments. In this way, they are poised to interact and network with potential employers, advisory board members, nonprofit organizations, and other community partners. This helps to build an engaged student body and an engaged community, together working in a recursive relationship. Examples include retired or second-career individuals who are more amenable to giving back to the students and to the university and who are motivated to inspire the next generation of entrepreneurs. The most aggressive universities are proposing the infusion of entrepreneurship throughout the university in order to foster risk taking, innovativeness and more proactive behaviors. It is also a means of school differentiation.

In any event, the process of implementing entrepreneurship programs within the university, however, might not be simple, and may need to be done *entrepreneurially*. For instance, faculty interested in expanding entrepreneurial education beyond the bounds of the business school must not overcommit resources where few exist. The endeavor must be built in stages, incrementally with purposeful direction and cannot live or die based on one or two people's interest in entrepreneurship (Kuratko, 2005). Interested readers should beware the *positive* reactions that can come from such initiatives. University stakeholders, particularly those external to the school, may have unrealistic expectations regarding the implementation of new initiatives, which could place overwhelming pressures on existing human resources.

While GenEd courses and entrepreneurship are both included in the curriculum at universities and colleges across the county, it is important to note that this paper was limited to the experience at one university setting at one time span. Educational institutions are somewhat idiosyncratic. They differ in important aspects such as culture, student expectations, mission, and funding. What is appropriate for one university, may be unworkable at another. Furthermore, opportunities to make substantive changes to curricula may be sporadic. The very same proposal for a change or addition that is welcomed and supported by administration and faculty committees at one time, can be vehemently opposed at another time. We argue that the evidence of growth in entrepreneurship education nationwide has reached a critical mass, and as such, these concerns alone cannot justify inaction (Morris et al., 2015).

Future research should examine important measures that could be employed for empirical analyses of the ideas presented in this paper. For example, studies may be designed to explore what the faculty outside business schools view as appropriate for an entrepreneurship course to add to the GenEd curriculum. Oreg (2003) and colleagues have developed validated scales for measuring resistance to change. Such scales should be examined and adapted for use when measuring potential resistance from multiple university stakeholders. Similarly, future work should seek to provide evidence for the favorable impact of having entrepreneurship courses in GenEd. We envision potential mixed methods studies that utilize both qualitative and quantitative approached for gathering such information. Finally, on a broader scale, future work should track both global and national trends related to entrepreneurship education. One would expect that as more universities continue to develop programs (majors, minors, and concentrations) in entrepreneurship, the importance of the issues presented herein will become even more apparent.

CONCLUSION

This paper has set out to explicate the ways in which the integration of entrepreneurship within GenEd curricula may be facilitated. Furthermore, we have attempted to develop specific content direction to help develop such a course and a process model that will help guide faculty in addressing structural resistance. The goal here is to offer a specific framework for understanding how faculty can develop key strategies for initiating successful change. We believe the approach here introducing entrepreneurship into GenEd programs relates to an even larger goal of creating *The Entrepreneurial University* in the 21st century. Because entrepreneurship is interdisciplinary by nature, successful integration of this course with other university programs is an important objective that meets multiple needs of a variety of university stakeholders. The process requires the development of relationships across campus. Our framework in this paper has offered a process for building such relationships. Approaches that communicate and educate (as opposed to those that conceal or mislead) and styles that foster collaboration (as opposed to competition) are likely to reduce potential resistance to such initiatives and provide a more inclusive strategy for making real change.

While it may require substantial work and time, the vision we have for entrepreneurship is to become a staple of a GenEd program. We hope that the process and methodology presented in this paper can help faculty develop successful changes that would embed entrepreneurship into GenEd programs to the point that it would be something all university stakeholders could not be without.

REFERENCES

Aguinis, H. & Lawal, S. O. (2013). eLancing: A review and research agenda for bridging the science–practice gap. *Human Resource Management Review, 23*(1)*,* 6-17.

Albano, R., Masino, G. & Maggi, B. (2010). The relevance of Giddens' structuration theory for organizational research. Bologna, Italy: TAO Digital Library.

Asante-Sarpong, H. (2007). From their own perspective: Perceptions of women about modern and natural/traditional methods of contraception in Koforidua and Asokore in the Eastern Region of Ghana (Unpublished master's thesis). Trondheim, Norway: Department of Geography, Norwegian University of Science and Technology.

Babson College. (2016). Mission Statement. Retrieved June 1, 2016, from http://www.babson.edu/about-babson/at-a-glance/Pages/mission-statement.aspx.

Baron, R. A. (2014). *Essentials of entrepreneurship: Evidence and practice.* Northampton, MA: Edward Elgar Publishing.

Baumol, W. (1968). Entrepreneurship in economic theory. *American Economic Review,* 58(2), 64-71.

Bratton, J., Callinan, M., Forshaw, C.& Sawchuk, P. (2007). *Work and Organizational Behaviour.* London, England: Palgrave Macmillan.

Bureau of Labor Statistics. (2014). U.S. Department of Labor: Occupational employment statistics. Retrieved May 3, 2016, from http://www.bls.gov/oes/.

Case, S. (2016). *The Third Wave.* New York, NY: Simon & Schuster.

Cross, R. & Baird, L. (2000). Technology is not enough: Improving performance by building organizational memory. *Sloan Management Review, 41*(3), 69-78.

den Hond, F., Boersma, F., Heres, L., Kroes, E. & van Oirschot, E. (2012). Giddens à la Carte? Appraising empirical applications of Structuration Theory in management and organization studies. *Journal of Political Power, 5*(2), 239-264.

D'Intino, R., Ross, L., Byrd, K. & Weaver, K. M. (2010). Entrepreneurship is a general education course! The why, how and transferability of the concept. *Journal of Small Business & Entrepreneurship, 23*(2010 Special Issue)*,* 669-682.

Dodd, S. D. (2002). Metaphors and meaning: A grounded cultural model of US entrepreneurship. *Journal of Business Venturing*, *17*(5), 519-535.

Eidelman, S. & Crandall, C.S. (2012). Bias in favor of the status quo. *Social and Personality Psychology Compass, 6*(3), 270–281.

Gaglio, C. M. & Katz, J. A. (2001). The psychological basis of opportunity identification: Entrepreneurial alertness. *Small Business Economics*, *16*(2), 95-111.

Giddens, A. (1984). *The constitution of society*. Cambridge, England: Polity Press.

Hart Research Associates. (2016). Recent trends in general education design, learning outcomes, and teaching approaches: Key findings from a survey among administrators at AAC&U member institutions. Retrieved from http://aacu.org/sites/default/files/files/LEAP/2015_Survey_Report2_GEtrends.pdf

Hayek, F. (1948). *Individualism and economic order*. Chicago, IL: University of Chicago Press.

Hornsby, J. S., Naffziger, D. W., Kuratko, D. F. & Montagno, R. V. (1993). An interactive model of the corporate entrepreneurship process. *Entrepreneurship: Theory and Practice*, *17*(2), 29-38.

Katz, J. A. (2003). The chronology and intellectual trajectory of American entrepreneurship education: 1876–1999. *Journal of business venturing*, *18*(2), 283-300.

Katz, J. A. (2008). Fully mature but not fully legitimate: A different perspective on the state of entrepreneurship education. *Journal of Small Business Management, 46*(4), 550-566.

Katz, J. A., Hanke, R., Maidment, F., Weaver, K.M., & Alpi, S. (2016). Proposal for two model undergraduate curricula in entrepreneurship. *International Entrepreneurship and Management Journal, 12*(2), 487-506.

Kotter, J. & Heskett, J. (1992). *Corporate culture and performance*. New York: Free Press.

Kort, W. & Gharbi, J. (2011). Call centers performance: An application of Structuration Theory. Communications of the IBIMA.

Kristiansen, M. (2009). The quality of life of children living in residential child care facilities: A comparative study of three children's homes in Accra and Cape Coast, Ghana (Unpublished master's thesis). Trondheim, Norway: Department of Geography, Norwegian University of Science and Technology (NTNU).

Kuratko, D. F. (2005). The Emergence of Entrepreneurship Education: Development, Trends, and Challenges. *Entrepreneurship Theory and Practice*, 29: 577–598.

Lamsal, M. (2012). The structuration approach of Anthony Giddens. *Himalayan Journal of Sociology & Anthropology, 5*, 111-122.

Mathieu, J. E., Tannenbaum, S. I., Donsbach, J. S. & Alliger, G. M. (2014). A review and integration of team composition models moving toward a dynamic and temporal framework. *Journal of Management*, *40*(1), 130-160.

McMullen, J. & Shepherd, D. (2006). Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur. *Academy of Management Review,* 31(1), 132-152.

Morris, M., Kuratko, D. & Pryor, C. (2014). Building blocks for the development of university-wide entrepreneurship. *Entrepreneurship Research Journal, 4*(1), 45-68.

Noyes, E. & Linder, B. (2015). Developing undergraduate entrepreneurial capacity for social venture creation. *Journal of Entrepreneurship Education*, *18*(2), 113-124.

Oppong, S. (2014). Between Bandura and Giddens: Structuration theory in social psychological research? *Psychology Thought, 7*(2), 111-123.

Oreg, S. (2003). Resistance to change: Developing an individual difference measure. *Journal of Applied Psychology,* 88, 680-693.

Porter, M. E., Stern, S. & Loria, R. A. (2013). Social progress index 2013. Washington, DC: Social Progress Imperative.

Pozzebon, M. & Pinsonneault, A. (2005). Challenges in conducting empirical work using structuration theory: Learning from IT research. *Organization Studies, 26*, 1353-1376.

Ruohotie, P. & Koiranen, M. (2000). In the pursuit of conative constructs into entrepreneurship education. *Journal of Entrepreneurship Education*, *3*, 9-22.

Sarasvathy, S. D. (2001). Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review*, *26*(2), 243-263.

Schumpeter, J. (1939). *Business cycles: A theoretical, historical and statistical analysis of the capitalist process*. New York: McGraw-Hill.

Shane, S. A. (2004). *A general theory of entrepreneurship: The individual-opportunity nexus.* Northampton, MA: Edward Elgar Publishing.

Shepherd, D. A. (2003). Learning from business failure: Propositions of grief recovery for the self-employed. *Academy of Management Review*, *28*(2), 318-328.

Smith, A. (1776). *An inquiry into the nature and causes of the wealth of nations.* London: W. Strahan.

Social Progress Imperative. (2016). Measuring social progress, not wealth. Retrieved June 15, 2016, from http://www.socialprogressimperative.org.

Stevenson, H.H. & Jarillo, J.C. (1990). A paradigm of entrepreneurship: Entrepreneurial management. *Strategic Management Journal*, 11 (Special Issue: Corporate Entrepreneurship. Summer): 17-27.

Swedberg, R. (2000). The social science view of entrepreneurship: Introduction and practical applications. In R. Swedberg (Ed.), *Entrepreneurship: The social science view* (pp. 7-44). Oxford: University Press.

Tang, J., Kacmar, K. & Busenitz, L. (2012). Entrepreneurial alertness in the pursuit of new opportunities. *Journal of Business Venturing*, *27*(1), 77-94.

Thomas, K. (1977). Towards multidimensional values in teaching: The example of conflict behaviors. *Academy of Management Review, 2*(3), 484-490.

Turner, J. R. (2014). *The handbook of project-based management* (Vol. 92). New York, NY: McGraw-Hill.

Warner, D. B. & Koeppel, K. (2009). General education requirements: A comparative analysis. *Journal of General Education, 58*(4), 241–58.

Weber, M. (1898). *Lectures on general (theoretical) economics.* Tübingen: J.C.B. Mohr.

Wells, C.A. (2016). Realizing general education: Reconsidering conceptions and renewing practice. *ASHE Higher Education Report, 42*(2), 1-85.

Whittington, R. (1992). Putting Giddens into action: Social systems and managerial agency. *Journal of Management Studies, 29*(6), 693-712.

Zai, R. (2015). Reframing general education. *Journal of General Education, 64*(3), 196-217.

Zammuto, R., Griffith, T., Majchrzak, A., Dougherty, D. & Faraj, S. (2007). Information technology and the changing fabric of organization. *Organization Science, 18*(5), 749-762.

Zimmerman, B. J. & Cleary, T. J. (2006). Adolescents' development of personal agency: The role of self-efficacy beliefs and self-regulatory skill. In F. Pajares & T. Urdan (Eds.), *Self-efficacy beliefs of adolescents* (pp. 45-70). Greenwich, CT: Information Age Publishing.

INSPIRING INNOVATION AND CREATIVITY: AN EXAMPLE OF EFFECTUATION IN THE ENTREPRENEURIAL CLASSROOM

Pauline Assenza, Western CT State University

ABSTRACT

21st century skills such as complex problem-solving, creative and innovative thinking, and teamwork and collaboration can be developed in the classroom via entrepreneurship education. However, entrepreneurship educators face a particular challenge – how to encourage students to use innovation and creativity to engage in ideation/opportunity identification/recognition and then find a way to bring these opportunities to market. One practical barrier that sometimes needs to be overcome is the belief on the part of many students that they are "not creative". Effectuation, or starting with what you've got and trying to create something new, being open to the surprises that emerge in the process of just doing something, is proposed as a useful pedagogical model. After an overview of key concepts, suggestions are given for how to design entrepreneurial exercises or activities, using an effectual approach, to unleash creativity by "breaking the frame", imposing constraints, offering rewards based on goals with clear and fair rules, and requiring students to work in teams. It is proposed that incorporating these suggestions might inspire students to apply these concepts, to identify opportunities and act entrepreneurially, everywhere, all the time.

INTRODUCTION

In the 21st century, certain universal skills can lead to success. Most of these skills are not new: leadership experience, communication and problem solving skills, ability to work in a team, and having a strong work ethic have topped the list of attributes employers seek for many years (NACE, 2015). However, increasingly, the ability to take risks, be flexible and adaptable, and approach problem solving with creativity and innovation have become more critical (P21, 2007; Rotherham & Willingham, 2009). Changes in the way the worldwide economy works now require more attention to social and human capital, and an understanding of what makes companies successful means that agility, awareness of the larger ecosystem and the willingness to collaborate across networks are critical to attaining and sustaining a competitive advantage (Satell, 2016). All this means the entire workforce must be prepared: "schools must be more deliberate about teaching critical thinking, collaboration, and problem solving to all students" (Rotherham & Willingham, 2009), and skills in learning and innovation, with a focus on creativity, communication and collaboration, are essential (P21, 2007).

Increasingly, in colleges and universities, this challenge has been met by entrepreneurship education, the overall goal of which is "the teaching of skills and cultivation of talents that students need to start businesses, identify opportunities, manage risk, and innovate in the course of their careers" (Kauffman, 2013, p. 4). 21st century skills that can be developed via entrepreneurship education include complex problem-solving, creative and innovative thinking, and teamwork and collaboration (Boyles, 2012), and this education has been found to positively

influence students' desire to actually act entrepreneurially once they leave higher education (Kuttim, Kallaste, Venesaar, & Kiis, 2014). However, exactly how to accomplish this goal is still debatable, with a call to use the entrepreneurial attributes of continual innovation and creativity to focus on further refining and moving entrepreneurship education to the "next level" (Kuratko, 2005, p. 591), perhaps acknowledging the "inadequacy of the existing business oriented approach" (Gibb, 2002, p. 234), and even questioning the overall efficacy of entrepreneurship education itself – whether this education, the way it is currently delivered, can "really work to create business enterprise" (Rideout & Gray, 2013, p. 329). Perhaps as a reaction to these challenges, the movement away from a more traditional classroom approach toward more experiential pedagogies is becoming more widespread (Fixson, ND; Neck & Greene, 2011; Pittz, 2014; Schindehutte & Morris, 2016; Vanevenhoven, 2013).

In the entrepreneurial classroom where a more experiential approach is adopted, the suggestion is to find ways to develop creative capabilities, primarily because imagination and the ability to "relate previously unrelated objects or variables to produce novel and appropriate or useful outcomes" has been identified as a key entrepreneurial competency (Morris, Webb, Fu, & Singhal, 2013, p. 358). Arguments have been made that "entrepreneurship should not be equated with new venture creation or small business management, but with creativity and change" (Kirby, 2005), and empirical studies have demonstrated that teaching creativity in the context of entrepreneurship education can increase students self-perceptions of their creative abilities (Schmidt, Soper, & Facca, 2012), and have a "positive impact on team and firm innovation" (Gundry, Ofstein, & Kickul, 2014, p. 529). However, even though entrepreneurial creativity has long been identified as a valuable attribute, and this training has started to be introduced into the entrepreneurial classroom, there is still no clear consensus on how best to do this (Lin & Nabergoj, 2014). There is a call for more pedagogy that stimulates entrepreneurial creativity, and subsequently measures its effectiveness, its contribution to both individual and organizational success (Gundry et al., 2014; Lin & Nabergoj, 2014; Rideout & Gray, 2013; Schmidt et al., 2012). The suggestions presented in this paper are meant to address this challenge.

THE CREATIVITY CHALLENGE

The assumption is that educators have bought into the aforementioned challenge to incorporate creativity into the curriculum, and may desire to do so via some sort of assignment or exercise, usually beginning with ideation, or the first investigation of potential new business ideas. However, when educators ask students in the beginning of a class to come up with these new ideas, they often hear students complain, "but I'm not creative!" The educator then must convince these students that "everyone is creative!" At this point, the educator has several options.

In the entrepreneurship class, the educator can point out, via a mini-lecture or assigned readings, that an entrepreneur has to be aware of the entire entrepreneurial process, from the initial recognition or identification of an opportunity, through the evaluation of its feasibility, acquisition of sufficient resources, and actual action taken to realize a presumably profitable outcome (adapted from Shane & Venkataraman, 2000). And, in order to be truly entrepreneurial, some creativity may be necessary at every step.

In order to engage the students, to help them understand why this is so, the educator can then use "war stories" and case studies to model the creative entrepreneurial process, and, if the models are credible, students may be inspired to try based on what they've seen others do.

However, this doesn't substitute for direct experience. Therefore, instructors might want to develop an experiential exercise where students actually enact a creative process in pursuit of a solution to an identified problem, observe the effects of what they've done, and continue to learn as they adapt, essentially becoming self-efficacious agents of change. Alternatively, educators can expose the students to a story with a credible model of the entrepreneurial process, and ask the students to experience it vicariously by walking in the shoes of the creator, commenting on what they see along the way, and then reflecting on how this might be incorporated into their own way of doing things.

Whatever the pedagogical mechanism, educators should be aware of how their own process mirrors what they're trying to teach. If the subject matter involves innovation and creativity, the educational process should be equally innovative and creative in how it approaches the content.

What follows are suggestions for how to incorporate effectual entrepreneurship in the classroom: starting with what you've got and trying to create something new. However, just like in any entrepreneurial activity, there are some assumptions, some things we need to know, in order to pave the way for success. First we will give an overview of salient points, then we will give examples of how those concepts might play out in an entrepreneurial example. Then we will suggest how entrepreneurial educators might use these concepts and examples to design lessons that maximize their potential, inspiring students to creatively apply these concepts, to identify opportunities and act entrepreneurially, everywhere, all the time.

CONCEPTUAL FRAMEWORK & EXAMPLES

The Concept: Entrepreneurship

Entrepreneurship is an activity that involves doing something with something that results in something different. It can be practiced by *discovering* a new application or use for something that already exists – exploring the universe for things/processes/ideas, identifying the opportunities associated with these discoveries, and exploiting the properties of these elements for a new market, or expanding the possibilities for use in an existing market – OR by *creating* something new, transforming existing resources into something that has never been seen before – identifying existing resources, starting with who you are, what you know, and who you know (Sarasvathy, 2012; Sarasvathy, 2001), investing "no more than what you can afford to lose" (Read, Sarasvathy, Dew, Wiltbank, & Ohlsson, 2011), trying something, seeing if it will work, and continuing to tinker with it until you've found a viable market or markets.

The first process has been labeled the "causal" approach – starting with a predetermined goal where optimal resources are identified and systematically applied (efficiently and/or effectively) in order to achieve this goal, with results evaluated through experimentation and quantitative assessment, yielding the highest potential return –while the second process employs "effectual" reasoning, where the goal is not predetermined, but instead open to the surprises that emerge in the process of just doing something – the entrepreneur in this case "effects" change by transforming something into something else, and is not constrained by any preconceived notion of a market or strategy, therefore is free to create something truly new, turning the "unexpected into the profitable" (Sarasvathy, 2001).

Both processes are acceptable entrepreneurial activities that can lead to what Schumpeter (1934) famously called the "creative destruction" of an existing market or industry, thereby

leading to economic outcomes that can be simultaneously disruptive and reinvigorating, an essential component of economic growth. Both processes also require entrepreneurial creativity. Schumpeter (1934) considered entrepreneurs to be the agents of transformation, creating new things out of the old, converting new ideas into successful innovations, but this requires an understanding of how that transformation can occur, and a good understanding of how to get people to be creative.

The Example: Effectuation

One way to create something new through transformation is to reconfigure something that already exists – deconstructing it and then reconstructing it into something different. One example of how this process has lead to a profitable venture comes from the company Terracycle, which partners with individual recyclers, major consumer product companies, retailers, manufacturers, municipalities and small businesses across 20 different countries to "recycle the non-recyclable". As of 2016, over 60 million people have helped collect and recycle enough waste to raise over 15 million dollars for charities around the world. Terracycle's mission is to "eliminate the idea of waste". (http://www.terracycle.com/en-US)

This concept is at the heart of Terracycle's founder Tom Szaky's approach to waste. He calls it "upcycling" and explains that it is a way of rethinking waste – turning waste into raw material that can be used for another purpose, a purpose for which the waste material was never intended (Szaky, 2014). This idea underpins the Terracycle business model that sees waste as an asset, "not as the end of a linear process but as a stage in a circular life cycle" (Szaky, 2014, p. 5).

When Szaky started out in 2001, his major goal was to find a way to win a business plan competition and use the money to start a business. He had had an idea to do something that reused existing materials and therefore helped the environment, and so he started there, but what he learned along the way made him continually refine his vision. Although his business model has evolved over the years, and he's always remained open to opportunities, he's also remained true to his ultimate goal – to eliminate waste. He has turned the unexpected into the profitable, and the trick to doing that is to change people's perception of waste, get them to see possibilities in a crumpled bag of potato chips. This requires creativity.

The Concept: Creativity

Creativity has been defined as "the production of novel, useful ideas or problem solutions" (Amabile, Barsade, Mueller, & Staw, 2005, p. 570), and the "generation of products or ideas that are both novel and appropriate" (Hennessey & Amabile, 2010, p. 570). Relative to the entrepreneur's task of creating something new that will find a profitable market, another definition for creativity is "the goal-oriented individual/team cognitive process that results in a product (idea, solution, service, etc.) that, being judged as novel and appropriate, evokes people's intention to purchase, adopt, use, and appreciate it" (Zeng, Proctor, & Salvendy, 2011, p. 25). This focus on the subsequent adoption and use of a new product or idea means that entrepreneurs must not only have the idea, but also find a way to *act* on that idea. Therefore, even though the idea might be novel and useful, if the idea or product is not brought to market, it would not be considered an example of entrepreneurial creativity (Amabile, 1997).

In addition, even though much attention has been paid to the ideation process – coming up with new ideas, seeing opportunities available for exploration or exploitation – entrepreneurial creativity can also be present not only in the products, services or ideas themselves, but also in the process of identifying a market, figuring out a new way of producing or delivering these products or services, and, echoing the effectuation approach, obtaining or transforming resources into innovative combinations that create a market where one did not previously exist (Amabile, 1997; Read et al., 2011).

This requires the entrepreneur to be aware of the entire entrepreneurial process, from the initial recognition or identification of the opportunity, through the evaluation of the feasibility of this opportunity, acquisition of resources necessary to act on the opportunity, and actual action taken to realize a presumably profitable outcome (adapted from Shane & Venkataraman, 2000). Although there is need for creativity at each stage, much attention has been paid to the initial opportunity identification/recognition phase, mostly because no subsequent entrepreneurial action would be possible without this ability on the part of the entrepreneur to become aware that an opportunity actually exists.

The Example: Opportunity Recognition

To return to the example of Terracycle, founder Tom Szaky's journey from initial idea to profitable business illustrates the use of creativity at every stage of the entrepreneurial process: he began with the novel idea that "worm poop" could be harvested and turned into fertilizer: he fed worms on garbage he collected from local sources, used a conveyor process to collect the "poop" then mixed it with water to make a "tea" that could be applied to plants in need of nourishment. He tested the feasibility of this fertilizer idea by applying the liquefied product to plants, and saw that it worked, and that it met a need in the market – people liked the organic fertilizer as an alternative to chemical concoctions. Therefore the product was not only useful, but also appropriately positioned to appeal to a certain user.

During the production of this product, Szaky rapidly realized that he didn't have access to all the resources necessary for processing and bottling, so he had to get creative in locating alternative solutions. For instance, Szaky's team scavenged used soda bottles and low-cost methods for applying labels, at one point using old paint strippers to heat-shrink the label sleeves so they'd adhere to the bottles (see the full story in Szaky, 2013).

Once the fertilizer business had established itself, Szaky realized that he needed to investigate other business extensions if he wanted to grow beyond the niche market for eco-friendly fertilizer. He wondered if there were other ways to apply what had become the Terracycle business model – could he find "new ways to use things that other people will pay you to dispose of" (Szaky, 2013, p. 111)? This led Szaky to look at the possibility of converting all waste into potential consumer products – one very productive product line is the creation of book bags, pencil pouches and document folders from used drink pouches and chip bags, collected by "brigades" of school children. (See https://www.terracycle.com/en-US/ for more information.) The current mission of Terracycle is to eliminate the concept of waste – in the belief that all waste "can be either reused, upcycled, or recycled into something new" (Szaky, 2013, p. 198).

This entrepreneurial journey has used creativity in multiple ways, at every stage, and illustrates the application of entrepreneurial effectuation, *creating* something new, transforming existing resources into something that has never been seen before, and ending up with a viable,

profitable and sustainable business. As such, the Terracycle story can become an excellent case study, useful for explaining the concepts and modeling the process so students can learn about entrepreneurship and hopefully be inspired to try it out for themselves. In addition, as part of *entrepreneurial education*, some of Tom Szaky's techniques for ideation and opportunity identification/recognition can be used as a model to design instruction in such as way as to show students that anyone can be creative.

PEDAGOGICAL IMPLICATIONS & APPLICATIONS

Entrepreneurial Education

Entrepreneurship educators have investigated both theory and method to determine the best way to teach students about the entire entrepreneurship process, but recently the focus has been on the opportunity recognition/identification component, since the ability to identify viable opportunities is "one of the most important abilities of successful entrepreneurs" (DeTienne & Chandler, 2004, p. 242). Research has determined that this ability can be taught, or awareness can be facilitated by manipulation of the environment (Autio, Dahlander, & Frederiksen, 2013; DeTienne & Chandler, 2004), yet there are still unanswered questions about how best to do this, and how to identify the exact mechanism by which students acquire and activate this knowledge.

Lin and Nabergoj (2014) specifically address these questions by focusing on entrepreneurial creativity as the gateway to improving students' cognitive entrepreneurial skills. They question the current pedagogy and point to the current lack of empirical evidence investigating the effects of creativity training on entrepreneurial activity. They suggest that too much emphasis has been placed on the opportunity discovery stage, and not enough focus has been placed on the process by which these opportunities, once identified, can be exploited and brought to market (p. 167). They encourage educators to "design an entrepreneurial, context-based pedagogy" to nurture entrepreneurial creativity in students (p. 170).

However, even if entrepreneurship educators desire to give students experience in the entire entrepreneurship process, and give students the self-efficacy to act creatively on this experience, one practical barrier that sometimes needs to be overcome in the classroom is the belief on the part of many students that they are "not creative". In anticipation of this response, educators often turn to exercises that engage students in activities designed to reawaken their creativity and build self-efficacy or confidence in their ability to use their imagination as an "endless renewable resource" for making sense of the complicated world around them (Michalko, 2001; Seelig, 2012). Although many of these exercises are fun, and effectively engage the students, there are also concerns that the experience will be short-lived, and may not transfer beyond the classroom, or even beyond the class session within which it was introduced. In particular, there is as yet no concrete evidence that training nascent entrepreneurs in how to identify innovative opportunities will actually result in profitable business ventures (DeTienne & Chandler, 2004).

There are both practical and theoretical reasons for why this might be so. Sarasvathy (2015), when asked how to best teach entrepreneurial effectuation, acknowledged that many students are worried they don't have any brilliant ideas, money or other resources to use, and they are afraid to fail, or just don't like the uncertainty of the entrepreneurial process. She suggests educators address these practical concerns by encouraging students to just start with what/who they know, and by inspiring students to just try, and see what they're capable of. In the

case of the older student, or one with more work experience, he or she may be so confirmed in his or her "causal" mindset – believing that the route to success is through the traditional business planning process – that the concept of proceeding without first acquiring the needed resources is very uncomfortable. These students may have to unlearn something, and one way to do that might be to engage them in activities that fuel their imagination, exposing them to what's possible.

Research has identified psychosocial and external environmental variables that may influence the activation of entrepreneurial creativity. As we develop skills, we incorporate knowledge we've acquired over time, knowledge that has allowed us to categorize new information and develop heuristics or rules-of-thumb that help us know what to do in various circumstances. There are habits and routines we've adopted, "dispositions to act in particular ways under certain conditions" (Aldrich & Yang, 2014, p. 62), that have served us well in the past, and, because these are habitual and therefore unconscious mental processes, they may not be that useful when we're faced with ambiguous or uncertain environments or circumstances.

Effectuation is a useful way of dealing with uncertainty by identifying existing resources, starting with who you are, what you know, and who you know. The objective is to transform something into something else that's useful, that serves a profitable purpose. What follows are four suggestions for what to do to incorporate effectuation into the entrepreneurship classroom.

When designing entrepreneurial education, especially when encouraging students to use innovation and creativity to engage in ideation/opportunity identification/recognition, there are four things educators should consider doing. Whether designing exercises, prepping students for case discussions, or giving advice on how to proceed with specific entrepreneurial tasks, educators should consider

1. *"breaking the frame",*
2. *imposing constraints,*
3. *offering rewards based on goals, and*
4. *working in teams.*

Although these seem like rather standard suggestions, if the educator considers these as being part of an overall entrepreneurial mindset, this mindset might inspire students to act entrepreneurially as well. These suggestions are meant as one approach for nurturing entrepreneurial creativity, therefore better preparing students for their entry into the 21st century workplace.

Effectuation in the Classroom

Given that we all have biases that predispose us to use the same techniques that have worked in the past, we may need reminders that this is not the "same old, same old" situation. Yes, we start with what we've got, but the situation may require us to consciously reconsider our options. We may need something to jump start the process.

Therefore, educators might have to do something to ***"break the frame"*** of existing habitual responses, perhaps by purposefully creating an unusual environment that contains juxtaposition of inconsistent elements, thereby alerting both themselves and their students to the fact that something different is going on (Miron-Spektor, Gino, & Argote, 2011). This encourages everyone to reframe the problem, which can open up new possibilities for solutions.

Ways of doing this include asking students to physically or mentally change their point of view, ask others, including other educators, for their perspectives, or ask questions that begin with "why" (Seelig, 2012, p. 30).

Regarding how to engage students in ideation/opportunity identification/recognition, this leads to

> **Suggestion 1: Break the existing frame**
> *At the beginning of the lesson or activity, present the students with an uncommon or unusual environmental cue, one that will break their existing perceptual/habitual framework, alert them to the presence of something new, and warn them that the same-old-same-old way of doing things may not work.*

An example of how that might work is to have students walk into the classroom which has been reconfigured with workstations where recycled material is there to be reconstructed or upcycled into something else. The Terracycle case can then be used as a model for how to proceed. Students could be asked how they might act if they were Tom Szaky. Is there another way to think about garbage? This might get students to rethink their own values regarding waste, essentially helping them consider the effectuation question "Who am I"?

An additional environmental barrier that exists in many entrepreneurial activities is the presence of ***constraints***. Especially in the effectual reasoning model, constraints are a given, and the entrepreneur is encouraged to see this not as a negative, but as an opportunity to activate what/who they know in pursuit of a solution. Constraints can be either inhibiting or freeing of creative activity. Especially when externally imposed, constraints such as strictly regimented evaluation mechanisms, restricted choice of options and tight deadlines can reduce the motivation to engage in creative behavior, however "individual differences in people's *interpretation* of the constraints can significantly affect the outcomes on creativity" (Amabile, 1990. p. 75).

Research has indicated that time pressures, especially, can either help or hinder creativity: when people experience a fragmented environment where changes occur frequently under tight deadlines, and where they don't believe their work is important, then constraints reduce creativity – people feel as if they are "on a treadmill"; when people are allowed to focus deeply on an activity they believe is important, and are challenged by the work itself, time pressures can increase creativity – people feel as if they are "on a mission" (Amabile, Hadley, & Kramer, 2002). In the entrepreneurship literature, it has been proposed that "bricolage", or making use of available resources to create something new, is chosen as a viable path simply because of the lack of other viable resources – therefore "resource constraints facilitate the emergence of entrepreneurial creativity" (Lin & Nabergoj, 2014, p. 172)

In addition to individual response and interpretation of constraints, acknowledging realistic constraints in a market subsequently forces entrepreneurs to focus attention on the need to create viable products(Ries, 2011). It's been said, "every habitat has its own constraints", and acknowledging this reality can sharpen the creative response (Seelig, 2012, p. 114). Artists, especially, often purposefully impose constraints on their creative process: poets follow the rules for haikus, musicians limit themselves to an acoustic rather than an amplified venue, painters choose oil rather than watercolor (see, for example, 10KHrs, 2015). Therefore educators should not ignore the impact of either externally imposed or self-imposed constraints on the creative process.

Regarding how to engage students in ideation/opportunity identification/recognition, this leads to

Suggestion 2: Impose constraints
At the beginning of the lesson or activity, inform students that there will be things they cannot do, resources they cannot use, and that there will be a time limit on the activity.

For how this might work, again using the Terracycle example, tell students that there is a deadline from the customer, and they must create a new product using only the materials in front of them. This is reminiscent of Szaky's need for a creative solution when he had orders to fill and faced resource constraints in bottling the "worm poop". The creative challenge is to "make do" with what you've got, utilizing the resources you do have available, and consider the effectuation question "What do I know?"

Closely associated with the concept of constraints is the need to consider ***rewards*.** People are intrinsically motivated to do things from which they feel a sense of satisfaction, where doing the activity enhances their sense of self-determination, where they feel an opportunity to have autonomy or freedom to choose the methods to use or tasks to do, where they can demonstrate their competence or feel they have an opportunity to do good work, and where they have a chance to work with or socially relate to other like-minded people (Deci & Ryan, 1985). To the extent that educators can also provide rewards that enhance these feelings of self-determination, students will be motivated to exercise creativity (Amabile, 1997). In addition, imposing *rules* that directly relate to meaningful *goals*, although essentially constraining, will focus students' activity, especially if the reward is clearly related to these goals, and feedback is clear and fair – so the rewards are perceived to be distributed justly (Seelig, 2012, p. 126).

In effectuation, goals are important, for the entrepreneur needs to make decisions based on the *effects* of what he or she has accomplished. Even though the goal may not be predetermined, but instead open to the surprises that emerge in the process of just doing something, evaluating what happened against what was expected to happen requires the identification of some criteria against which this assessment can be made.

Regarding how to engage students in ideation/opportunity identification/recognition, this leads to

Suggestion 3: Offer Rewards Based on Goals, With Clear & Fair Rules
At the beginning of the lesson or activity, inform students that they will be rewarded for accomplishing something (i.e. provide a goal and the criteria that will be used to evaluate goal accomplishment); at the end of the exercise, provide feedback that directly relates to the goal accomplishment, and assign rewards fairly based on clear criteria. Note that this might mean that the criteria will need to be changed in the future, based on what was learned!

To include this suggestion as part of the activity, tell students that they will be rewarded based on how innovative their response is to the Terracycle challenge. One reward might be based how much the students learned, even if they did not "win" – just like Tom Szaky did, how might they change things in the future in order to get better next time? This encourages students to think about what they have learned, and how they might pivot.

Finally, one other variable that affects creativity and opportunity awareness is the extent to which the entrepreneur activates his or her external network of others – in the effectuation model this is "who you know", and is an essential part of the process of gathering enough resources to proceed with entrepreneurial action. Social networks are increasingly important sources of information, and research has indicated that exposure to diverse knowledge domains heightens awareness of opportunities for action (Autio et al., 2013). In addition, depending on the structure of the network and the individual's place in this network, when there are "structural holes" that require boundary spanning or brokerage activity, then individuals are exposed to more diverse and potentially useful information due to the different perspectives available – and this can lead to more creative insights (Burt, 2004).

Working in teams, as long as the members are mutually supportive yet willing to engage in constructive criticism, also provides access to multiple perspectives that not only enhance the opportunity for innovative solutions, but also creates a sense of "collective efficacy" in the team's ability to do good work (Krueger, 2000, p. 15). Regarding the classroom, the lesson gained from multiple research streams is to "encourage students to gain insights from everyone they can and to work in constructive teams where everyone contributes" (Seelig, 2012, p. 146).

One interesting additional caveat here involves the quality of group ideas. Research has indicated that sometimes individuals are more creative than the group, and that this finding indicates there's something about the nature of the group relationship that affects the quality of idea generation. In order to generate good ideas, not only do group members have to have diverse yet applicable knowledge bases, but the relationship among group members needs to include some "critical interplay" with an element of "constructive antagonism" in order to be maximally effective (Tippett, 2013). This underpins the recent suggestion that brainstorming might not be as effective as previously thought and that "dissent, debate and sharing of competing views can stimulate divergent and creative thought" (Nemeth, Personnaz, Personnaz, & Goncale, 2003).

One final caution remains, however. When dealing with ideation: really creative individuals may not want to share their ideas with others for fear that the idea may be stolen or otherwise appropriated (DeTienne & Chandler, 2004). This fear can be mitigated by the instructor who clearly establishes a culture of trust among participants in any collective endeavor, or outlines rules for sharing and penalties imposed for violation of these rules.

Regarding how to engage students in ideation/opportunity identification/recognition, this leads to

> ***Suggestion 4: Work in Teams***
> *At the beginning of the lesson or activity, inform students that they will be asked to work with others to accomplish the stated goal. Depending on the nature of the exercise, the size of the team may be important, and it is also important to create teams made up of individuals with diverse backgrounds and knowledge bases. Depending on the nature of the exercise, it may also be important to establish ground rules for interaction that increase trust and encourage constructive interaction that still allows for critical interplay and sharing of competing views.*

An important part of moving forward with something new is using all one's resources, including other people, asking the effectuation question "Who do I know?" Ask students how Tom Szaky did this as he grew his successful business, and then ask them to reflect on how

effectively they used this human resource, their own social capital, in accomplishing their goal. This reinforces the importance of the 21st century competencies of critical thinking, collaboration, and creative problem solving, and developing an understanding that agility, awareness of the larger ecosystem and the willingness to collaborate across networks are critical to attaining and sustaining a competitive advantage.

By utilizing these four suggestions for framing an experiential pedagogy, educators have an opportunity to practice effectuation themselves, starting with what they've got and encouraging students to do the same, developing self-efficacy or confidence in their ability to practice entrepreneurial creativity and produce something innovative, something new and useful.

CONCLUSION, LIMITATIONS & SUGGESTIONS FOR FUTURE RESEARCH

This overview of conceptual underpinnings and suggestions for how to encourage innovation and creativity by incorporating effectuation in the entrepreneurial classroom is meant to refresh educators' knowledge of the salient points regarding entrepreneurial activity, creativity and entrepreneurial education. Especially when encouraging students to engage in the initial stages of the entrepreneurial process – ideation, opportunity identification/recognition – and then in an overall awareness of entrepreneurial possibility – it can be hard to know what is the best way to proceed. Even seasoned entrepreneurs can miss things. When students come in saying, "I'm not creative", the educator has a challenge ahead.

Suggestions for utilizing entrepreneurial exercises to unleash creativity included "breaking the frame", imposing constraints, offering rewards based on goals with clear and fair rules, and requiring students to work in teams. An example was given of Tom Szaky, founder of Terracycle, and how he successfully used effectuation and the entrepreneurial process to *create* something new, transforming existing resources into something that had never been seen before, and ending up with a viable, profitable and sustainable business. Although educators are encouraged to create their own exercises and activities, the Terracycle case study can be an additional way of inspiring students to apply these concepts, to identify opportunities and act entrepreneurially, everywhere, all the time.[1]

These suggestions are meant to inspire educators to investigate their own methods of encouraging entrepreneurial activity in the classroom. Although the author has used these methods, there has, as yet, been no empirical evaluation of the outcome of this pedagogy, and one limitation of this current suggestion is that it has only been deployed, so far, in undergraduate classrooms in the United States. If we agree that entrepreneurial creativity is an approach to problem solving that engages with the entire scope of the entrepreneurial process, and therefore is important to encourage in everyone, then we cannot help but want to develop methods for expanding its use. Other educators are encouraged to use these techniques, or variations thereof, and communicate results to the author.

There has been a call to further identify the underlying foundations of entrepreneurship education – what its goals truly are (Kauffman, 2013), whether it works to achieve those goals (Rideout & Gray, 2013), and how, exactly, that goal accomplishment might be done (Kuratko, 2005; Morris et al., 2013). One suggestion for proceeding to answer these questions is to conduct "methodologically adequate" research (Rideout & Gray, 2013), particularly using the case study design, to help identify conditions under which successful entrepreneurial enterprises have developed and flourished. A combination of case studies might allow us to discover which variables are most influential, and which conditions and concepts might mediate relationships

between those variables. This paper has proposed using the Terracycle case study as one example of the application of effectuation, and has proposed using this case study as a focusing mechanism for experiential activity regarding entrepreneurial creativity, both modeling the way for students, and giving them an opportunity for practice in a supportive environment. What's remaining is to track those students as they go out into the world and try to fully engage in entrepreneurial activity – to what extent did the pedagogical model inspire and energize action? Was the promise of self-efficacy – the development of confidence in one's ability to act – actually realized? And did it make a difference? All we can do, as educators, is to start with what we've got.

[1] A case study of Terracycle that can be used in conjunction with the approach discussed in this paper can be requested from the corresponding author.

REFERENCES

10KHrs. 2015. Episode 61 on Constraints with Michael Hardesty of 24HR Records, ***Ten Thousand Hours***, Vol. http://www.10khrs.co/ep61.

Aldrich, H. E., & Yang, T. 2014. How do entrepreneurs know what to do? Learning and organizing in new ventures. ***Journal of Evolutionary Economics***, 24: 59-82.

Amabile, T. M. 1990. Within you, without you: The social psychology of creativity, and beyond. In M. A. Runco, & R. S. Albert (Eds.), ***Theories of Creativity***. Newbury Park, CA: Sage Publications.

Amabile, T. M. 1997. Entrepreneurial creativity through motivational synergy. ***The Journal of Creative Behavior***, 31(1): 18-26.

Amabile, T. M., Barsade, S. G., Mueller, J. S., & Staw, B. M. 2005. Affect and creativity at work. ***Administrative Science Quarterly***, 50: 367-403.

Amabile, T. M., Hadley, C. N., & Kramer, S. J. 2002. Creativity under the gun. ***Harvard Business Review***, August 80(8): 52-61.

Autio, E., Dahlander, L., & Frederiksen, L. 2013. Information exposure, opportunity evaluation, and entrepreneurial action: An investigation of an online user community. ***Academy of Management Journal***, 56(5): 1348-1371.

Boyles, T. 2012. 21st Century Knowledge, Skills, and Abilities and Entrepeneurial Competencies: A Model for Undergraduate Entrepreneurship Education. ***Journal of Entrepreneurship Education***, 15: 41-55.

Burt, R. S. 2004. Structural Holes and Good Ideas, ***American Journal of Sociology***, Vol. 110: 349-399: University of Chicago Press.

Deci, E. L., & Ryan, R. M. 1985. ***Intrinsic Motivation and Self-Determination in Human Behavior***. New York, NY: Plenum Press.

DeTienne, D. R., & Chandler, G. N. 2004. Opportunity identification and its role in the enterpreneurial classroom: A pedagogical approach and empirical test. ***Academy of Management Learning and Education***, 3(3): 242-257.

Fixson, S. ND. The Role of Experiential Learning in Developing Entrepreneurial Leaders: Babson.

Gibb, A. 2002. In Pursuit of a New 'Enterprise' and 'Entrepreneurship' Paradigm for Learning: Creative Destruction, New Values, New Ways of Doing Things and New Combinations of Knowledge. ***International Journal of Management Reviews***, 4(3): 233-269.

Gundry, L. K., Ofstein, L. F., & Kickul, J. R. 2014. Seeing Around Corners: How Creativity Skills in Entrepreneurship Education Influence Innovation in Business. ***The International Journal of Management Education***, 12(3): 529-538.

Hennessey, B. A., & Amabile, T. M. 2010. Creativity. ***Annual Review of Psychology***, 61: 569-598.

Kauffman. 2013. Entrepreneurship Education Comes of Age on Campus. St. Louis, MO: Ewing Marion Kauffman Foundation.

Kirby, D. A. 2005. Entrepreneurship Education: Can Business Schools Meet the Challenge? ***Education and Training***, 46(8/9).

Krueger, N. F. 2000. The cognitive infrastructure of opportunity emergence. ***Entrepreneurship Theory and Practice***, Spring: 5-23.

Kuratko, D. F. 2005. The Emergence of Entrepreneurship Education: Development, Trends, and Challenges. ***Entrepreneurship Theory & Practice***(September): 577-597.

Kuttim, M., Kallaste, M., Venesaar, U., & Kiis, A. 2014. Entrepreneurship Education at University Level and Students' Entrepreneurial Intentions. ***Procedia - Social and Behavioral Sciences***, 110: 658-668.

Lin, J., & Nabergoj, A. S. 2014. A Resource-Based View of Entrepreneurial Creativity and its Implications to Entrepreneurship Education. ***Economic and Business Review***, 16(2): 163-183.

Michalko, M. 2001. ***Cracking Creativity: The Secrets of Creative Genius***. Berkeley, CA: Ten Speed Press.

Miron-Spektor, E., Gino, F., & Argote, L. 2011. Paradoxical frames and creative sparks: Enhancing individual creativity through conflict and integration. ***Organizational Behavior and Human Decision Processes***, 116: 229-240.

Morris, M. H., Webb, J. W., Fu, J., & Singhal, S. 2013. A Competency-Based Perspective on Entrepreneurship Education: Conceptual and Empirical Insights. ***Journal of Small Business Management***, 51(3): 352-369.

NACE. 2015. Job Outlook 2016: Attributes Employers Want to See on New College Graduates' Resumes: National Association of Colleges and Employers.

Neck, H. M., & Greene, P. G. 2011. Entrepreneurship Education: Known Worlds and New Frontiers. ***Journal of Small Business Management***, 49(1): 55-70.

Nemeth, C. J., Personnaz, M., Personnaz, B., & Goncale, J. A. 2003. The liberating role of conflict in group creativity: A cross cultural study. ***Working Paper Series, Institute for Research on Labor and Employment***, http://escholarship.org/uc/item/4k70n7v8(April 15, 2003).

P21. 2007. Framework for 21st Century Learning. Washington, DC: Partnership for 21st Century Learning.

Pittz, T. G. 2014. A Model for Experiential Entrepreneurship Education. ***Journal of Business & Entrepreneurship***, 26(1): 179-192.

Read, S., Sarasvathy, S., Dew, N., Wiltbank, R., & Ohlsson, A.-V. 2011. ***Effectual Entrepreneurship***. New York, NY: Routledge.

Rideout, E. C., & Gray, D. O. 2013. Does Entrepreneurship Education Really Work? A Review and Methodological Critique of the Empirical Literature on the Effects of University-Based Entrepreneurship Education. ***Journal of Small Business Management***, 51(3): 329-351.

Ries, E. 2011. ***The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses***. New York, NY: Crown Business.

Rotherham, A. J., & Willingham, D. 2009. 21st Century Skills: The Challenges Ahead. ***Teaching for the 21st Century***, 67(1): 16-21.

Sarasvathy, S. 2012. Everyone should learn the entrepreneurial method. ***Harvard Business Review***, https://hbr.org/2012/03/everyone-should-learn-the-entr(March 15, 2012).

Sarasvathy, S. 2015. AoM Entrepreneurship Division Live Webinar with Saras Sarasvathy, ***Academy of Management***, Vol. https://www.youtube.com/watch?v=pbFP-ZzRRtM.

Sarasvathy, S. D. 2001. Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency. ***Academy of Management Review***, 26(2): 243-263.

Satell, G. 2016. 3 Major Shifts That Will Drive How We Compete in the 21st Century, ***Forbes***.

Schindehutte, M., & Morris, M. H. 2016. The Experiential Learning Portfolio and Entrepreneurship Education. In M. H. Morris, & E. Liguori (Eds.), ***Annals of Entrepreneurship Education and Pedagogy - 2016***: 161-175: Edward Elgar.

Schmidt, J. J., Soper, J. C., & Facca, T. M. 2012. Creativity in the Entrepreneurship Classroom. ***Journal of Entrepreneurship Education***, 15: 123-131.

Schumpeter, J. A. 1934. ***The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest and the Business Cycle*** (2nd ed.). Cambridge, MA: Harvard University Press.

Seelig, T. 2012. ***inGenius: A crash course on creativity***. New York, NY: HarperCollins Publishers.

Shane, S., & Venkataraman, S. 2000. The promise of entrepreneurship as a field of research. ***Academy of Management Review***, 25(1): 217-226.

Szaky, T. 2013. ***Revolution in a bottle: How Terracycle is eliminating the idea of waste*** (Revised ed.). New York, NY: The Penguin Group.

Szaky, T. 2014. ***Outsmart waste: The modern idea of garbage and how to think our way out of it***. San Francisco, CA: Berrett-Koehler Publishers, Inc.

Tippett, K. 2013. Creativity and the everyday brain - with Rex Jung, ***On Being: American Public Media Broadcast***, Vol. http://www.onbeing.org/program/creativity-and-the-everyday-brain-with-rex-jung/transcript/5441.

Vanevenhoven, J. 2013. Advances and Challenges in Entrepreneurship Education. ***Journal of Small Business Management***, 51(3): 466-470.

Zeng, L., Proctor, R. W., & Salvendy, G. 2011. Can traditional divergent thinking tests be trusted in measuring and predicting real-world creativity? ***Creativity Research Journal***, 23(1): 24-37.

STRATEGIC PLANNING: A PRACTICAL PRIMER FOR NOT-FOR-PROFIT ORGANIZATIONS

Erich Brockmann, University of New Orleans
Kenneth Lacho, University of New Orleans

ABSTRACT

Strategic planning's acceptance is generally accepted at For Profit (FP) organizations while the Not for Profit (NFP) organizations are overlooked. However, the two types of organizations are not that different when it comes to the strategic planning process; oftentimes it's simply a matter of semantics or different labels. For instance, FP organizations have customers, NFP organizations have donors.

Regardless of an organization's type, FP or NFP, each can benefit from the strategic planning process. This article illustrates the strategic process at a NFP organization. It walks leadership through the strategic management planning process using a fictional chamber of commerce.

The various tasks in the strategic process (mission, vision, internal analysis, external analysis) are illustrated with examples from a typical chamber of commerce. The examples show how the strategic management tasks are interrelated and ultimately lead to a philosophical approach to managing a NFP organization.

INTRODUCTION

Entrepreneurs are primarily concerned with recognizing opportunities and seizing the initiative (Baron & Ensley, 2006). However, once seized, the organization needs to be able to survive in a competitive environment. For this follow-on survival, one needs strategic management skills in addition to the entrepreneurial skills already held (Ireland, 2007). In this article we intend to provide NFP management a practical primer to strategic management in a very easy to understand format by following the process using a fictional chamber of commerce in an urban environment.

THE CHAMBER OF COMMERCE

Since the beginning of commerce, traders cooperated to regulate the conduct of trade, provide common protection against enemies and promote their businesses (Morro Bay, n.d.). As guilds grew, these groups formed an important part of medieval city and town life (Guilds in the Middle Age, n.d.). Over time, these groups evolved into modern day trade associations and chambers of commerce. Today, there are 2,800 state and local chamber chapters in the United States (U.S. Chamber of Commerce, n.d.).

A chamber of commerce is defined as an organization of businesses seeking to further their collective interests while advancing their community, region, state or the nation (Association of ...). Chamber missions may vary, but they all concentrate to some degree on the following goals: building communities, promoting these communities, representing the united voice of business to the community and government, and reducing friction through local networks (Association of ...).

Chambers are supported by member dues. U.S. chambers today fare fast-moving trends. These include technology, government regulation, and economic development.

PURPOSE

Differences between FP and NFP organizations aren't really that different. First is the obvious focus on profits. That's just an accounting determination. FP pay taxes and NFP don't.

Second is identification of customers. This determination rests upon what the organizations are "selling". The FP organizations normally have a readily identifiable good or service. The NFP's service may not be as readily identifiable. However, both need to be clear what they are offering and to whom the service is being offered (i.e., the target market).

Third is the identification of competitors. Their determination is symbiotic with the identification of customers. What are you trying to get from your customers in exchange for what you're offering? And, who else is trying to get the same thing? For example, a lawyer seeks clients who need legal service; he's competing with other lawyers offering the same service in that market. On the other hand, a NFP seeks members do pay dues or other organizations to provide donations and grants as the source of operating funds; a NFP is competing with other organizations also seeking members, donations or grants.

As illustrated above, the differences between FP and NFP organizations do not preclude the use of the traditional strategic management tools. However, the NFP label may be biasing management of NFP organizations away from the performance benefits available through the strategic management approach. Therefore, our purpose in this paper is to help mangers of NFP organizations recognize how the strategic management approach can help improve the performance of NFP organizations much in the same way as the same tools help FP organizations (Porter, 1980).

In the following sections, we'll provide a summary of the strategic planning approach in general so that everyone has a common understand. Concurrently, we'll apply to tools to a NFP; specifically to a Chamber of Commerce for a large metropolitan city.

THE STRATEGIC MANAGEMENT PROCESS

Your first step in learning the strategic management process should be to put yourself at ease. Although, the name itself invokes a grandiose scheme that may seem bigger than life, strategic management is, in fact, little more than an exercise in time management. It's all about how to achieve what's important when faced with conflicting demands and limited resources.

Second, don't get caught up in the hype of strategic management. Too many organizations go through the motions but lose sight of the intent. These companies are ridiculed in mainstream culture such as in the Dilbert comic strip. Remember the intent of strategic management is to set your company up for future success.

The following discussion includes descriptive steps in the strategic planning process. The first phase of strategic management is planning followed by implementation. We concentrate on the planning process here by showing how things *should* progress while giving some practical examples.

We start off with the direction setting strategies. In setting the direction for an organization, we need to answer some basic questions. Where are we today? Where do we want to go? How are we going to measure our progress?

Mission

Where we are today is addressed in the Mission statement. Equally important as knowing where you are going, you need to know where you are starting from—where you are today (Ireland & Hitt, 1992). Finding examples of BAD Mission statement is as easy. A good mission statement is simple, to the point. It should include your organization's name, its purpose, its major product/service offering, its major customer(s), and its source of competitive advantage. Basically, it needs to answer the question of "Why are we in business?"

For illustration, assume a fictitious chamber of commerce, Metro City. Metro City's members include businesses from the Metro City metropolitan area. A good mission statement would be:

"The Metro City Chamber is the premier business organization in the greater Metro City area. We work on behalf of our members to help their businesses grow, implement relevant and informative programming and provide opportunities to build relationships with other businesses in the community. We offer training courses, marketing assistance, networking events, advocacy support and liaison between our members and the city, state, and national political leaders, while also trying to remove some of the stress with social events. Our operations rely on funds from dues paid by our members who come from the business owners in the Metro City area. We consider the Kiwanis Club, Downtown Development District, and Tourist Commission to be our competitors for these members and their dues. However, we stand apart from our competitors by offering a much more comprehensive breadth of business services to our members."

After reading this mission, one can easily picture what the chamber does. It would be difficult to develop a similar understanding if the mission was simply "To promote business". In fact, the statement could include some more detail on the services offered to members. However, one needs to balance content with understanding. Therefore, avoid the hype and concentrate on the facts. You can use other tools to expand on the message at some future point. For strategic management tools, we should remain with the critical few factors, not the trivial many.

Vision

Now that we know where we are, we turn to address where we want to go. This issue is addressed in our Vision statement. We can all remember President John F. Kennedy's vision of "A man on the moon by the end of the decade" and Martin Luther King's vision of "I have a Dream". Both are simple yet extremely powerful.

A good vision need not be as powerful as those above; but, it should be useful. The organization's vision should paint a clear picture of the company in the distant future—one that can easily be seen in the mind.

In general a vision is often less defined than the mission and more goal-oriented. Visions provide a unifying motivation. While flexible, three to five years is a reasonable time frame. A good vision should inspire and motivate the entire organization.

Building on Metro's example, a decent vision could be, "Metro City Chamber of Commerce is recognized as an integral part of pursuing business in Metro City. When a business owner decides to open a business in Metro, the decision to join the Metro City Chamber of Commerce is an automatic part of the opening process." This vision provides sufficient direction for the leaders of the Chamber to use when setting priorities.

Now that we know where we are (e.g., the mission) and where we want to go (e.g., the vision), it's time for a reality check. The leadership needs to evaluate the organization relative to

competitors to see what he needs to do in order to make sure that he can reach his desired future. This issue is addressed in the next part of the process and has two steps. We start by looking inside the organization with an internal evaluation of what the organization has and then look outside at the external environment to see how the organization compares to competitors.

Internal Evaluation

Internal evaluation involves some serious soul-searching. You need to look around your organization and take inventory of everything that you have at your disposal. Put yourself in Metro's shoes and the inventory should contain everything: people, buildings, desks, chairs, membership rosters, telephones, web pages, grants, etc.—these are resources. Now look at what's being done with those resources: training members, recruiting new members, lobbying for the membership, applying for grants—these are activities.

The internal evaluation process should provide a very detailed description of the business, what it has and what it does. The more detail the better. In fact, the soul-searching session will be more effective if you can remain objective and refrain from assigning adjectives during the identification phase. To illustrate by building on Metro's example, one resource could be the chambers' membership roster. While the roster may be a reason for success, avoid any claims of 'comprehensive' or 'talented' list of members for the moment. Simply list everything; the list will be pared down and prioritized later.

Metro's resources would include: a Board of Directors with credentials from particularly well known businesses in the area; two web design technicians; 1,000 square feet training facility; three projectors; three laptop computers; a lease on the property; etc. Metro's activities would include: three training classes per day, five days a week; sending weekly newsletters to all members electronically; coordinating annual meet and greet sessions during legislative sessions; daily updates to the community web page; tracking new business licenses; sending invitations to all new business owners to join the chamber; paying the employees; etc.

More detail in describing the activities is better because we have to evaluate each of the activities to see where Metro ranks relative to its competitors. We want to find out what Metro does better than its competitors. Furthermore, why should potential members choose Metro over its competitors: Kiwanis Club, Downtown Development District, and Tourist Commission? This is the question we want to answer next, and the more activities we have in our description, the more options we have in our next step—external evaluation.

External Evaluation—the Competitors

You now need to identify your Industry; this is you and all the competitors fighting for the same group of customers (Porter, 1980). Your company's intent should be to attract those customers instead of allowing them to freely seek out your competitors; this is critical to your company's success. Simply, you need to determine what the customers want. You then need to perform those internal activities which are the bases for what the customers want; and, you need to do so better than the competitors. You can now see why it was so important to identify all of these players clearly—so that you can now analyze the situation.

A side note here: strategic management should be an on-going process and not a one-time event. Likewise, nothing is case in stone; you can change your definition of the players as necessary to ensure you're not overlooking potential changes in the future. Now, back to the analysis.

Of course, identifying customers and what they want are much easier said than done. You'll have to rely on marketing research to identify what your target customers want and how they decide among various competitors. In Metro's target market, the potential members come from owners of businesses in the metropolitan area; this is consistent with the earlier mission statement. Similar to FP businesses, Metro can hire a consultant to survey the potential members to see what criteria they use when deciding how best to spend their limited resources on improving the chances of business success. And, since Metro also has the benefit of regional and national level chambers, it can draw on their expertise.

For our example, let's assume the consultant identified three factors that are strategically viable (i.e., can be used to attract customers): good track record at helping businesses grow; well established; and, breadth of services to a business owner. Metro, being a NFP organization, identified three other organization's that may be able to satisfy the above criteria: Kiwanis Club, Downtown Development District, and Tourist Commission.

The task at hand is to make sure that Metro is better able to provide the above three factors better than the other three organizations can. In other words, Metro wants to make sure it has a competitive advantage. Therefore, we need to evaluate each of Metro's activities relative to the corresponding activities of the other three competitors. The initial intent is to see which activities Metro performs better (i.e., the strengths) AND where Metro doesn't perform as well (i.e., the weaknesses) relative to the competitors' performance of corresponding activities.

We can now revisit Metro's activities and see if, and where, it has a competitive advantage. Recall, the customers' first decision criterion was convenience. After evaluating her location relative to those of the three competitors, we can see if more potential customers are within a three block radius or not. The second criterion was good record of helping businesses grow. After hiring an objective evaluator to examine members of all four organizations, Metro found that its roster contained more successful businesses than the rosters of the other three organizations. This evaluation demands further measure since it is so critical. Metro really needs to come up with objective measures for defining a 'business growth'. The second criterion was well established. Again, an objective measure of this criterion could be the age of the organization or the average tenure of the current board of directors.

Due to space constraints, we'll limit our coverage here. To be really useful, you should evaluate ALL of your activities against VERY specific measurement criteria in order to see where you rank relative to your competitors or industry standards (Barney, 1997). You may find other sources of competitive advantage as well as areas, not necessarily linked to the competitive advantage but where you need to improve your business such as reducing costs.

We'll now shift our focus to the longer term implications. What else is going on around your organization that you haven't considered yet? How will those events change the way you're conducting business in the long term?

Other, Broader External Considerations

Strategic management considers those changes in the external environment that affect me and my competitors to be the most applicable. Normally, these changes will affect the overall demand for the good or service being offered. In our situation, Metro and its competitors are offering a service to businesses in general. Therefore, whatever can change those potential member business's will also affect Metro and the competitors.

For instance, when the availability of capital increases, we normally see an increase in the number of business openings. These new businesses increase the market for services offered by Metro and the competitors (e.g., the 'pie' gets bigger).

In general, we refer to external factors that can have a positive impact on businesses as opportunities and the negative ones as threats. Since these opportunities and threats affect all businesses, your organization's specific competitive advantage will allow you to benefit more than your competitors when all are faced with the same opportunity.

For instance, the increase in the number of business openings increased the number of potential members. On the positive side (from Metro's perspective), these new business owners are going to be looking for ways to increase their business. In our scenario, they will look to Metro, Kiwanis Club, Downtown Development District, and Tourist Commission. They will then look at the three factors we considered strategic viability. Since Metro has an advantage in success, it should enjoy higher demand than the other three.

On the negative side, an economic downturn would most likely decrease the number of businesses. At the very least, such a downturn will reduce the ability of businesses to pay membership dues. However, since Metro enjoys a competitive advantage in success rates, it should lose few customers than the other three.

The evaluation of the general environment is the least well-defined analysis in strategic management. One must be very creative and insightful in order to notice changes. In fact, it would really help if you could predict the future. However, since that's impossible, your next best bet is to stay alert to what's going on around you by scanning the environment. By paying close attention to as much media as you can afford, you become more sensitive to changes. Although you won't be able to actually predict a change, you may be able to notice subtle changes before your competitors. You can then take action before anyone else and give yourself a competitive edge.

Putting it all together in a Plan

It's now time to put these pieces together into a coherent and comprehensive strategic plan. The theme in any strategic plan is to FIT all the pieces together. Ask yourself the following questions and then develop a to-do list of objectives that will set your company up for future success:

Do I have sufficient resources to accomplish my current mission and achieve my future vision?
Do I have sufficient strengths to ensure that I remain competitive?
Do I have too many weaknesses such that they will overwhelm any advantages I may have?
Are there enough opportunities and not too many threats such that I can achieve my future vision?

If you can answer all questions, yes, then your priority is to simply monitor the situation and note if anything changes. If you answer no to any of the questions, then you need to establish a detailed action list to correct the situation. Based on your understanding of where each of the pieces fit into the bigger picture, you can develop an action plan to correct the situation.

Actually accomplishing the necessary tasks is the basis for the second phase of strategic management, the implementation phase. But, until the actions are identified, the plan can't be carried out. The entire process strategic management process becomes iterative and enduring. It's easy to see that strategic management is a philosophy or way of thinking.

SUMMARY

Strategic management is all about positioning your company relative to your competitors so that your performance will be better than theirs. This process is accomplished through discrete but interconnected steps where you identify resources and activities. You then compare your activities against your competitors' activities to see whose are better; these become strengths for the owner. Your strengths that correspond to what the customers want become your competitive advantage. You then use your competitive advantage, in the face of changing environmental conditions, to out-perform your competitors.

But, it's not just a one-time deal. Strategic management is more of a philosophy than a step-by-step process to fix something. It's all about being proactive. And, since we're talking about the future, we know that we can't be exact. Therefore, things change and you have to be able to adjust to that change. Nothing about your strategic plan is cast in stone. The environment changes, the customers change, the competitors change. You just have to make sure that you're best situated to change too.

All too often we hear about: putting out the fires; crises management; and, reactive vs. proactive. We 'know' that we should plan; it's just too easy NOT to plan. Through the use of this primer, we hope that you how have a better understanding of the practical application of strategic management tools. Even more so, we hope that you recognize how naturally strategic management fits with a common sense perspective of running an on-going business. Finally, combining an understanding that one should plan with the planning structure that strategic management provides, we hope that many will embrace the strategic management philosophy and enjoy a positive influences on their bottom lines.

REFERENCES

Barney, J. B. (1997). *Gaining and Sustaining Competitive Advantage*. Reading, MA: Addison-Wesley.

Baron, R. A., & Ensley, M. D. (2006). Opportunity Recognition as the Detection of Meaningful Patterns: Evidence from Comparisons of Novice and Experienced Entrepreneurs. *Management Science*, 52: 1331-1344.

Ireland, D., & Hitt, M. A. (1992). Mission Statements: Importance, Challenge, *Business Horizons*, Vol. 35: 34: Elsevier Science Publishing Company, Inc.

Ireland, R. D. (2007). Strategy vs. Entrepreneurship. *Strategic Entrepreneurship Journal*, 1(1-2): 7-10.

Mitchell, R. K., Busenitz, L., Lant, T., McDougall, P. P., Morse, E. A., & Smith, J. B. (2002). Toward a Theory of Entrepreneurial Cognition: Rethinking the People Side of Entrepreneurship Research. *Entrepreneurship: Theory & Practice*, 27: 93.

Porter, M. (1980). Competitive Strategy: Techniques for Analyzing Industries and Competitors. New York: Free Press.

Association of Chamber of Commerce Executives. (n.d). What is a chamber. http://www.acce.org/whatisachamber/ Retrieved 1/1/2015.

Guilds in the Middle Ages (http://www.Middle-ages.org.uk/guilds-in-the-middle-ages-htm). Retrieved 8-31-08.

Morro Bay Visitors Center and Chamber of Commerce. *History of the Chamber of Commerce*. (http://www.morro-buy.net/visit/ccahouthm.) Retrieved 12-12-07.

U.S. Chamber of Commerce. The U.S. Chambers history. (http://www.uschamber.com/about/history/default). Retrieved 12-12-07.

ENTREPRENEURSHIP EDUCATION OPPORTUNITIES

Todd A. Finkle, Gonzaga University
Manasi Katragadda, University of Massachusetts Amherst

ABSTRACT

Entrepreneurship education continues to be a high growth area at universities throughout the world. Utilizing institutional theory, this article examines 27 years of data based on job opportunities and candidates in the field of entrepreneurship. During 2015/16, there were 466 entrepreneurship positions (both tenure track and non-tenure track) for faculty in Schools of Business and Management. The number of candidates was 144 for a ratio of 3.24 jobs per candidate during 2015/16. This ratio is favorable to candidates seeking employment, however it must be noted that these positions included full-time tenure track, visiting professorships, instructors, adjuncts or part-time positions. During the past academic year there were 142 tenure track candidates and 204 tenure track AACSB positions for a ratio of 1.44 tenure track AACSB jobs per tenure track candidate. This was also a very strong ratio for candidates. Overall, the findings of this study show that this is a sellers' market for candidates. The article closes with an in-depth discussion on recommendations to administrators, faculty, and executives.

INTRODUCTION

This article provides information on the current trends that are occurring within the field of entrepreneurship. Specifically, this article looks at the current market trends in regards to job opportunities for faculty in higher education within the field of entrepreneurship.

Understanding the current trends is extremely important for the field of entrepreneurship. By understanding the market trends, schools of higher education and candidates can get a better picture of the dynamics of the job pool and make better informed decisions. The field of entrepreneurship needs to be able to visualize these trends to provide schools and candidates with information that will assist them.

This study looks at the annual trends in the number and type of jobs and candidates over a 27-year period. The information will allow schools the ability to evaluate potential candidates and then assist them with hiring decisions. It will also allow schools the ability to examine the trends of candidates, which may assist them with their long-term strategies related to their undergraduate, graduate, and/or doctoral programs. For candidates, the information from this study will allow them to see the supply and demand dynamics within the market. This will allow them to examine the trends, opportunities, and competition. The more information they have the better they will be able to negotiate.

This article follows the trends in entrepreneurship jobs and candidates for the field of entrepreneurship from 1989 through 2016. It investigates whether the field of entrepreneurship is becoming increasingly institutionalized by examining market trends, jobs, AACSB jobs, and candidates. Institutional theory (Meyer and Rowan, 1977) posits that organizations operating in institutionalized environments demonstrate that they are acting in a legitimate manner adopting the structures and activities that are perceived to be legitimate by their critical external resource providers (Finkle and Deeds, 2001). In essence by adopting appropriate structures, the organization increases its legitimacy and is able to use this legitimacy to increase its support and

ensure its survival (Dowling and Pfeffer, 1975; Meyer and Rowan, 1977). Scott (2008) stated that institutional theory is "a widely accepted theoretical posture that emphasizes rational myths, isomorphism, and legitimacy." This article investigates the institutionalization of the field of entrepreneurship by examining the market trends and the adoption of entrepreneurship within schools of higher education's curriculum.

The study will answer the following research questions: (1) What are the market trends for entrepreneurship faculty? (2) What are the market trends for entrepreneurship faculty in higher education for tenure track positions in entrepreneurship (including tenure track AACSB positions)?

The results of this study will not only answer these questions, but will give an in-depth discussion on implications to faculty and administrators. This information will allow both candidates and schools to be more proactive in their strategies to take advantage of the changes in the workplace and make the field of entrepreneurship more efficient.

PREVIOUS RESEARCH

Finkle and Deeds (2001; 2002) were the first to examine the trends in regards to job opportunities and candidates within the field of entrepreneurship. They found that the field was becoming increasingly institutionalized, but was still weak in a number of areas. For instance, most of the entrepreneurship positions were not tenure track, there was no mandate for entrepreneurship education, entrepreneurship was primarily an elective, and departments were rare. They concluded that the field had a long way to go to become institutionalized.

Since Finkle and Deeds initial study, the field has seen a significant increase in the number of entrepreneurship programs in Schools of Business and Management. Entrepreneurship has become increasingly institutionalized at universities as evidence by the rise in the number of centers (see Finkle, 2007a; Finkle, 2008; Finkle & Kuratko, 2004; Finkle, Kuratko & Goldsby, 2006a; 2006b; Finkle, Menzies, Kuratko & Goldsby, 2010; 2012; 2013) and tenure in the field of entrepreneurship (Finkle, Stetz & Deeds, 2004; Finkle, Stetz & Mallin, 2007). Several studies have built upon Finkle and Deed's (2001) initial findings (see Finkle 2006; 2007b; 2008; 2010; 2012a; 2012b; 2013a; 2013b; Finkle, 2015; Finkle, 2016a; 2016b; Finkle & Thomas, 2008).

Finkle (2007b) examined market trends and AACSB positions. The rationale for including AACSB positions should indicate that if a school is dedicating resources to hire faculty, this would indicate more institutionalization. According to AACSB (2015), AACSB accreditation depicts the highest measure of achievement for schools of business worldwide. AACSB schools have to pass a voluntary, non-governmental review of educational institutions and programs. Schools that earn AACSB accreditation are committed to quality and continuous improvement.

Finkle's (2007b) study found that during 2004/05 there were 122 tenure track AACSB positions and 102 tenure track candidates or 1.2 tenure track AACSB positions per tenure track candidate. Overall, he found that the field was making significant progress and was becoming more institutionalized on several fronts: There were increases in primary positions, strong recruitment of senior faculty and candidates for the Top 50 schools.

One of the biggest findings in Finkle's (2010) study was the increasing institutionalization of entrepreneurship on a world-wide basis. At the start of the study in 1989/90 until 2007/08, the number of international jobs grew from 0 to 76. The study also reported that the growth of international positions more than doubled from 2006/07 to 2007/08.

Finkle (2013a; 2013b) examined trends through 2011/12 and found a total of 319 available entrepreneurship positions and 245 candidates during the final year. One significant finding of the study was the increase in the number of schools that were seeking candidates with a primary interest in teaching/research. Out of the 319 advertisements, 202 (63%) were for primary candidates. This was the highest number of primary advertisements since the inception of the study. Another interesting finding was the advertisement of 203 tenure track positions. There was only one year which is the largest number since the beginning of the Great Recession in 2007. However, the number of tenure track candidates was higher at 231. The findings indicate an increase in the institutionalization of the field.

Utilizing institutional theory, Finkle (2015) looked at the trends in the market for entrepreneurship faculty over the past 25 years (1989/90 to 2013/14). There were a few significant findings. In 2013/14 there were only 147 candidates, which was 84% lower from its peak at 270 in 2008/09. The last time it was that low was in 2005/06 when there were 141 candidates. This was probably due to the financial crisis. In 2008/09, during the middle of the Great Recession, there were almost 100 more tenure track candidates than tenure track positions (260 versus 165).

During 2013/14, there were 150 tenure track positions and 138 tenure track candidates. The findings show that the number of tenure track candidates in 2013/14 dropped to the second lowest level since 2005/06. Of the tenure track positions that were being advertised, 52% were for senior faculty (Associate or above). Finkle (2015) concluded that the field of entrepreneurship was continuing to be institutionalized.

METHODOLOGY

This study collected data from a number of sources over a 27-year period. In the late 1980's and early 1990's the *Academy of Management Placement* used to send out newspapers and pamphlets which listed jobs and candidates. In addition to these, microfiche of old editions of the *Chronicle of Higher Education* were used to supplement the number of positions.

During the early days of the Internet, advertisements started appearing on the *Academy of Management Placement* site. Over the past 10 years, there has been several other sites that also listed job opportunities for entrepreneurship faculty (See Exhibit 1). Job data was also collected through e-mails on a variety of networks and directly from universities themselves.

Exhibit 1: List of Web Sites Used to Collect Data on Schools

Academic 360 (http://www.academic360.com/general/UK.cfm)
Academic Careers Online (http://www.academiccareers.com/)
Academic Employment Network (http://www.academploy.com)
Academic Jobs EU (http://www.academicjobseu.com/)
Academic Keys for Business Education (http://business.academickeys.com/seeker_job.php)
Academy of Management Placement Services (http://jobs.aom.org/)
HigherEdJobs.com (http://www.higheredjobs.com/)
Indeed.com (http://www.indeed.com/)
Jobs.ac.uk (http://www.jobs.ac.uk)
Mid Atlantic Higher Education Consortium (http://www.midatlanticherc.org/home/)
United States Association for Small Business and Entrepreneurship (USASBE)
(http://usasbe.org/)

University 500 (http://www.university500.com/)
University Affairs (http://oraweb.aucc.ca/pls/ua/english_search)

In order to collect and analyze the data, a data base was created. The data was collected year round from the end of the month of the *Academy of Management* Meeting until the start of the next year's AOM meeting. All duplicates were dropped.

RESULTS AND DISCUSSION

Three tables were constructed to answer the research questions in this study. Since the tables documented the changes of numbers from 1989 through 2016, it gives the reader an ability to evaluate the trends in the field of entrepreneurship over a short and long period of time.

Table 1 examines the number of U.S. and international candidates and positions. These were then broken down into subtopics of interest. These subtopics were Primary, Secondary, or Tertiary areas of interest, which indicated the level of interest that a school or candidate has in teaching/research in the field of entrepreneurship.

Table 2 breaks down the total number of positions and candidates from Table 1 and determines the number and percentage that were tenure track. These tenure track positions were then broken down into the ranks that schools and candidates were advertising for. The ranks were Assistant, Associate, Full, Endowed, or Open. Open insinuated that a school would accept any applications for any position.

Table 3 examines the specific expertise that schools and candidates advertised. For instance, let's assume that St. Louis University was seeking a candidate with a primary area in Entrepreneurship, a secondary interest in Strategy/Business Policy, and a tertiary interest in Technology and Innovation Management, Table 3 would categorize these areas into the table and turn them into percentages.

Table 1: Entrepreneurship Positions and Candidates, 1989-2016

Table 1 shows that the total number of advertised jobs (tenure track and non-tenure track) over the past 27 years. The total number of jobs was the second highest ever this past academic year at 466. This number was only five jobs less than the previous academic year. This is proof that entrepreneurship continues to be a hot area at universities throughout the world as schools are increasingly advertising for faculty. It is further proof that the field is continuing to be institutionalized.

Despite the strong increase in jobs, there were only 144 advertised candidates in 2015/16. This was the lowest number of candidates since 2005/06 when there were 141 candidates. On a ratio basis, there were 3.24 jobs per candidate. This is a very positive number for candidates and the growth of the field. However, this number of jobs also includes adjunct, visiting, and instructor positions as well as tenure track positions.

International

Table 1 also took into consideration international positions and candidates. During 2015/16, there was the highest number of international positions (159) since this study began in 1989. This was 20% higher than the previous peak in 2014/15. This is proof of the increasing

Table 1: Number and Level of Interest in Entrepreneurship for Candidates and Positions 1989-2016

	Candidates w/Primary Interest	Positions w/Primary Assignment	Candidates w/2nd Interest	Positions w/2nd Assignment	Candidates w/Tertiary Interest	Positions w/Tertiary Assignment	Int'l Candidates	Int'l Positions	Total Candidates	Total Positions
Academic Yr. 89-90	5	5	15	12	15	9	3	0	35	26
Academic Yr. 90-91	3	9	23	6	20	12	2	2	46	27
Academic Yr. 91-92	7	12	20	3	13	3	1	2	40	18
Academic Yr.92-93	6	16	23	3	27	9	2	3	56	28
Academic Yr. 93-94	10	18	32	6	25	3	3	1	67	27
Academic Yr. 94-95	15	20	45	4	29	6	3	5	89	30
Academic Yr. 95-96	24	20	50	9	35	9	9	7	109	38
Academic Yr. 96-97	19	36	35	18	31	6	4	12	85	60
Academic Yr. 97-98	20	50	25	26	23	16	6	13	68	92
Academic Yr. 98-99	16	58	10	45	28	46	9	22	54	149
Academic Yr. 99-00	17	92	17	67	27	69	10	21	61	228
Academic Yr. 00-01	15	82	25	56	27	59	5	26	67	197
Academic Yr. 01-02	24	54	28	65	24	56	12	16	74	175
Academic Yr. 02-03	31	83	19	50	29	57	6	19	79	190
Academic Yr. 03-04	35	74	33	67	30	44	22	20	98	185
Academic Yr. 04-05	33	94	40	65	33	53	15	17	106	212
Academic Yr. 05-06	33	141	59	104	49	82	25	36	141	316
Academic Yr. 06-07	62	111	63	82	57	64	44	34	184	263
Academic Yr. 07-08	90	165	87	90	54	111	62	76	231	366

Academic Yr. 08-09	57	128	106	63	107	74	61	66	270	265
Academic Yr. 09-10	42	153	48	68	91	85	48	75	181	306
Academic Yr. 10-11	45	149	47	41	121	93	58	60	213	283
Academic Yr. 11-12	51	202	54	66	139	51	82	104	245	319
Academic Yr. 12-13	82	302	87	78	50	61	65	118	219	441
Academic Yr. 13-14	63	168	49	53	35	37	44	81	147	258
Academic Yr. 14-15	67	329	57	84	39	58	45	132	163	471
Academic Yr. 15-16	66	346	42	78	36	42	50	159	144	466

institutionalization of the field of entrepreneurship on a global basis. During 2015/16 the number of international candidates was only 50, which was an increase of only 11% from 2014/15. These numbers were extremely positive for candidates as the number of international jobs per international candidate was 3.18.

Interest Level

The final area that Table 1 examined was the number and percentage of in terms of interest in the field. These were broken down by primary, secondary and tertiary interest. During this past year, out of the total number of primary positions was 346 (74%), secondary positions was 78 (17%), and tertiary positions was 42 (9%). In 2015/16, 66 (46%) of the 144 candidates advertised entrepreneurship as their primary area of expertise. Forty-two (29%) and 36 (25%) advertised entrepreneurship as their secondary and tertiary areas of interest.

Indeed, 2015/16, is a great time to be a primary candidate because there were 5.24 primary jobs for each primary candidate. These numbers indicate a plethora of opportunities for candidates specializing in entrepreneurship as their primary area of expertise. What is contributing to this huge opportunity for candidates? It could be a combination of things. The strong growth and demand for faculty. A lack of doctoral trained faculty coming out of schools. Maybe faculty coming out of doctoral programs are hedging their bets by putting more established fields first, so they have a better shot at getting a job and tenure (e.g., Strategy or Organizational Behavior and Entrepreneurship). After all, the field is still rather young.

Summary

The past three years have seen a significant drop in the number of candidates seeking positions. Some of the reasons for the trend may be the slowing global economy, which has been coming out of the Great Recession. Unemployment has been dropping in the U.S. and there are other job opportunities available for people with higher education degrees. This may be more appealing to people rather than staying in school for another four years and going into debt. The

opportunity costs associated with getting a PhD may not be worth it to them. In the U.S., the millennial generation has been stuck with a very high student debt level, which has surpassed $1 Trillion. This has been causing turmoil and attention in the media. Additionally, the image of higher education has been diminished as of late. Society, in general, are frustrated with the exorbitant costs, significant increase in administrators and their salaries, new building binges, lack of relevance and ability to prepare students for the real world, and the negative implications of tenure.

This has had a negative effect on the industry as a whole. In general, schools are increasingly hiring fewer tenure track faculty, giving smaller raises, making it increasingly difficult to earn tenure, and are creating new post tenure review policies, which put more stress on faculty. Furthermore, due to the decrease in the number of high school students coming out, there has also been an increase in pressure put on universities to offer larger financial aid packages. Additionally, the integration of technology into the competitive realm of higher education is making it more competitive as well.

Table 2: Tenure Track Positions and Candidates, 1989-2016

Table 2 documents all of the tenure track positions and candidates. The table breaks down the tenure track positions and candidates in the ranks of Assistant, Associate, Full, Endowed, and Open. The tenure track positions were also cross-listed with the schools listed on the AACSB web site. These tenure track positions were then determined to be AACSB tenure track positions.

During 2015/16 there were 254 (54%) tenure track positions out of the 466 total advertised positions from Table 1. This was the fourth largest number of tenure track positions since the inception of the study. Only 204 (44%) of all of the advertised entrepreneurship jobs from Table 1, were tenure track AACSB positions.

In 2015/16, the 254 tenure track positions by rank were: 141 (56%) assistant, 38 (15%) associate, 15 (6%) full, 25 (10%) endowed chair, and 35 (14%) open positions. Schools were seeking 114 (45%) senior level faculty.

Table 2: Rank of Tenure Track Candidates and Positions, 1989-2016

	Candidates							Positions						
Academic Year	Assistant	Associate	Full	Endowed	Open	Total	%	Assistant	Associate	Full	Endowed	Open	Total	%
89/90	24	4	2	0	5	35	100	19	0	0	3	4	26	100
90/91	34	4	1	0	3	42	91	19	0	0	3	3	25	93
91/92	29	5	1	0	5	40	100	10	1	0	3	1	15	83
92/93	29	4	2	0	7	42	75	15	0	0	4	4	23	82
93/94	30	4	1	0	5	40	60	18	0	1	3	1	23	85
94/95	46	2	0	0	5	53	60	14	2	0	2	5	23	77
95/96	51	1	0	0	3	55	50	22	2	1	5	4	34	89
96/97	48	1	0	0	5	49	58	23	6	0	8	14	51	85
97/98	63	0	0	0	4	67	99	41	4	3	5	7	60	65

98/99	37	3	0	0	9	49	91	58	17	5	10	51	141	95
99/00	47	1	1	1	5	58	95	88	21	3	23	81	216	95
00/01	49	1	0	0	12	62	84	52	16	4	18	97	187	95
01/02	60	4	1	0	9	74	100	81	34	4	3	38	160	91
02/03	56	12	4	0	5	77	97	81	33	14	12	41	181	95
03/04	66	11	6	2	11	96	98	63	40	8	13	47	171	92
04/05	75	8	4	0	15	102	96	64	59	9	17	35	184	87
05/06	87	24	0	2	24	137	97	71	110	14	24	73	292	92
06-07	98	52	3	1	29	183	99	71	55	8	13	36	183	69
07-08	185	20	6	4	7	222	96	84	107	12	17	68	288	79
08-09	209	34	10	5	2	260	96	69	46	12	22	16	165	66
09-10	144	18	6	0	1	169	93	75	47	14	17	34	187	60
10-11	181	17	3	0	0	201	94	66	59	18	16	23	182	65
11-12	195	19	9	2	6	231	94	54	67	23	20	39	203	64
12-13	198	9	2	0	1	210	96	119	46	27	23	30	245	56
13-14	122	11	3	0	2	138	94	72	29	10	16	23	150	58
14-15	141	9	7	1	3	161	99	135	50	23	23	30	261	56
15/16	124	8	7	2	1	142	99	141	38	15	25	35	254	54

In 2015/16 there were 142 tenure track candidates. This was 12% lower than the previous year. The advertised rank of the candidates was: 124 (87%) assistant, 8 (6%) associate, 7 (5%) full, 2 (1.4%) endowed chair, and 1 (.7%) open. In 2015/16, the ratio of all of the tenure track positions (254) per tenure track candidates (142) was 1.79. In 2015/16, the ratio of tenure track AACSB positions (204) per tenure track candidate (142) was 1.44.

Summary

The ratio of tenure track jobs per tenure track candidate was very strong for candidates. This should place candidates in a very good negotiating position knowing that the supply of candidates is significantly less than positions. Furthermore, in looking at the date more closely, this does not include 14 non-tenure track positions that were being advertised for Directors of Entrepreneurship Centers. These are very high profile positions for faculty that could eventually lead to tenure track positions for faculty with PhDs. Even if a faculty member took one of these positions at that university, it could set them up for a tenure track position at another school.

Of course, there is the caveat that some faculty may not advertise publicly but send their applications directly to schools. Thus, we can assume that there are more faculty seeking tenure track positions.

Table 3: Percentage of Applicants and Positions Cross-Listed by Field, 1989-2016

Table 3 documents the different areas that both candidates and schools advertise in their profiles. For instance, if Dan Stewart was advertising for an entrepreneurship only position he

would only place entrepreneurship on his profile. If the University of Southern California was seeking a primary candidate in entrepreneurship with secondary and tertiary areas in International Management and Technology and Innovation Management, it would list these in its profile.

This area is important to examine for the field of entrepreneurship so we can determine the trends that are occurring in the marketplace. If the candidates can see what the needs are of the schools, they can specialize in these areas to enhance their ability to obtain a job.

Table 3: Percentage of Applicants and Positions Cross-Listed by Field, 1989-2016

	CANDIDATES					POSITIONS				
Academic Year	Entrepreneurship Only	Strategy	International	OB/HR	TIM	Entrepreneurship Only	Strategy	International	OB/HR	TIM
89/90	0%	63%	14%	23%	3%	15%	69%	38%	7%	0%
90/91	0%	80%	17%	15%	2%	28%	40%	12%	12%	0%
91/92	0%	68%	33%	30%	3%	67%	40%	0%	0%	0%
92/93	0%	73%	25%	21%	13%	65%	30%	26%	13%	0%
93/94	0%	73%	30%	16%	10%	61%	22%	13%	4%	4%
94/95	0%	71%	35%	19%	7%	74%	17%	9%	26%	0%
95/96	3%	65%	32%	28%	8%	35%	21%	15%	18%	3%
96/97	1%	73%	33%	26%	6%	37%	41%	22%	33%	8%
97/98	1%	79%	40%	43%	9%	48%	65%	27%	27%	8%
98/99	0%	74%	35%	15%	11%	47%	56%	27%	33%	15%
99/00	1%	60%	30%	21%	16%	24%	37%	15%	18%	14%
00/01	0%	76%	33%	19%	25%	26%	38%	18%	19%	16%
01/02	3%	80%	28%	16%	20%	18%	50%	21%	19%	12%
02/03	0%	72%	33%	25%	15%	25%	48%	16%	17%	9%
03/04	2%	72%	30%	14%	25%	25%	51%	19%	9%	10%
04/05	0%	68%	32%	16%	17%	22%	51%	18%	15%	11%
05/06	0%	66%	26%	22%	32%	22%	46%	16%	17%	8%
06/07	1%	73%	30%	18%	33%	23%	44%	29%	18%	9%
07/08	2%	71%	31%	21%	23%	22%	45%	18%	22%	14%
08/09	2%	70%	30%	17%	25%	20%	46%	20%	20%	16%
09/10	5%	89%	49%	41%	48%	33%	37%	19%	21%	17%
10/11	3%	77%	45%	41%	40%	46%	30%	15%	13%	9%
11/12	3%	72%	41%	48%	38%	45%	33%	16%	20%	19%
12/13	5%	64%	22%	22%	24%	52%	30%	14%	9%	7%
13/14	5%	62%	20%	24%	23%	51%	25%	10%	10%	5%

14/15	5%	68%	29%	23%	22%	58%	22%	6%	9%	5%
15/16	10%	53%	26%	17%	24%	63%	23%	7%	8%	3%

There are two parts for Table 3; one for positions and the other for candidates. The table is broken down into five categories: Entrepreneurship only, Strategy, International, OB/HR (Organizational Behavior/Human Resources Management), and TIM (Technology and Innovation Management). The respective areas each have a percentage. The percentages for the positions in 2015/16 were: Entrepreneurship Only (63%), Strategy (23%), International Management (7%), OB/HR (8%), and Technology and Innovation Management (3%). The percentages for candidates in 2015/16 were: Entrepreneurship Only (10%), Strategy (53%), International Management (26%), OB/HR (17%), and Technology and Innovation Management (24%).

In addition to the five areas above, the following areas were also advertised by schools: Management, Marketing, Organizational Theory, Business Ethics/Business Society, Operations, Finance, Research Methods, Management History, and Organizational Development. The percentage of jobs that advertised in these areas was: Management (8%), Marketing (4%), Organizational Theory (2%), Business Ethics/Business Society (1%), Operations (1%), and Finance (1%). The percentage of candidates that advertised in some of these areas was: Organizational Theory (13%), Business Ethics/Business Society (13%), Research Methods (5%), Organizational Development (4%), Consulting (4%), Management History (2%), and Operations (1%).

CONCLUSION AND IMPLICATIONS

The purpose of this study was to investigate whether the field of entrepreneurship has become increasingly institutionalized by answering the following questions: What are the market trends for entrepreneurship faculty? and What are the market trends for entrepreneurship faculty in higher education for tenure track positions in entrepreneurship (including tenure track AACSB positions)?

The first research question asked: What are the market trends for entrepreneurship faculty? Table 1 shows that the field of entrepreneurship is becoming increasingly institutionalized. In 2015/16, the field saw the second highest number of jobs, 466, since the author began documenting jobs in 1989. The ratio of the total jobs per candidate was 3.24, which was a very favorable for candidates.

The growth of international positions was also a sign that the field was becoming increasingly institutionalized. There were 159 international positions during 2015/16, which was the highest number in the study. The ratio of international positions per international candidate during 2015/16 was 3.18. Again, this ratio is very favorable to candidates.

Another indicator of institutionalization was the high number of jobs which advertised for candidates with a primary area in entrepreneurship. Out of 466 jobs, 346 (74%) were targeted towards primary candidates. This is a strong indicator that schools are increasing their resources towards entrepreneurship.

The second research question asked: What are the market trends for entrepreneurship faculty in higher education for tenure track positions in entrepreneurship (including tenure track AACSB positions)? In 2015/16 there were 254 tenure track positions. This was the fourth highest number of tenure track positions since the inception of the study.

During 2015/16 there were 254 tenure track positions. This was the fourth largest number of tenure track positions since the study began. Fifty-four percent of all of the advertised entrepreneurship jobs, which also included adjuncts, non-tenure track positions, visiting, etc. were tenure track positions. This was the lowest percentage of tenure track positions since this study began in 1989.

Two hundred and four (44%) of the tenure track positions were at AACSB accredited institutions. The advertisement of the tenure track positions included: 141 (56%) assistant, 38 (15%) associate, 15 (6%) full, 25 (10%) endowed chair, and 35 (14%) open positions. Schools were seeking 114 (45%) senior level faculty, an indication that schools sought more experienced faculty to possibly assist in the growth and legitimacy of their programs.

In 2015/16 there were 142 tenure track candidates, which was 12% lower than the previous year. The ratio of tenure track AACSB positions (204) per tenure track candidate (142) was 1.44. The ratio of tenure track jobs per tenure track candidate were strong numbers for candidates. In conclusion, this study supports the notion that the field of entrepreneurship is becoming increasingly institutionalized in relation to jobs, candidates, and AACSB positions.

Implications to Administrators

The findings of the study indicate that administrators will find fewer academically qualified entrepreneurship candidates as seen on the Academy of Management's (AOM) website. There are significantly more tenure track AACSB jobs (204) than tenure track entrepreneurship candidates (142). This is a ratio of 1.44 full-time AACSB jobs per candidate.

This study also examines the candidates' doctoral degree specializations, which were listed under their profile. Out of the 142 tenure track candidates that advertised on the Academy of Management website during the past year, 120 (85%) listed their degree specialization(s). Out of those 120, 32 (27%) had entrepreneurship listed as part of their major on their doctoral degree. Of those 32 candidates, 25 (78%) listed entrepreneurship as their primary area of expertise in their job advertisement, 4 (13%) listed it as their secondary area, and 3 (9%) listed it as their tertiary area. The other 88 candidates had their degrees in a variety of areas: Management, Strategic Management, International Business, Organizational Behavior, Human Resource Management, Marketing, Supply Chain Management, Economics, Organizational Development, Sociology, Management Science, Industrial Engineering, Philosophy, Organizations and Social Change, Mechanical Engineering, Industrial/Organization Psychology, Decision Sciences, Business & Quantitative Methods, and Organizational Communication.

This information shows how broad the candidates' backgrounds are. Certainly some of these candidates may have earned a minor or studied entrepreneurship on their own. On the contrary, there are probably some that are seeking to join the party and take advantage of the growth in the field. This is something that schools need to take into consideration when hiring faculty. The findings in this study show that there are not many students coming out with majors in entrepreneurship.

This study also broke down the 204 tenure track AACSB job openings and examined them more closely. These positions were broken down into: 155 (76%) candidates that had a primary interest in entrepreneurship, 40 (20%) candidates that had a secondary interest in entrepreneurship, and 9 (4%) candidates that had a tertiary interest.

The findings of this study showed that there were only 25 candidates advertising on AOM that had entrepreneurship listed as their primary interest and entrepreneurship on their doctoral

degree. Therefore, out of the 204 primary full-time tenure track jobs at AACSB schools only 25 with were perfect matches on paper. Schools may have realized the current limitations of the market as 44% of their positions were targeted towards senior faculty.

Given the current job market, it is recommended that schools seek candidates that attend meetings, ask leading faculty in the field which faculty would be a good fit, and contact faculty directly.

Given that it is a sellers' market, schools will have to make their openings attractive to get the best and brightest either at the junior or senior level. It has been known for quite some time and documented as far back as Katz (2003) that there is a shortage of entrepreneurship faculty. The results of this study further validate this fact.

As the field of entrepreneurship continues to grow schools must seek out qualified candidates. Since entrepreneurship is still a relatively new field, faculty will be needed to grow existing programs and create new ones. There will be an increase in the need for established faculty in the field to fill these openings.

If schools are interested in attracting established senior faculty they must be willing to negotiate. In an era of decreasing tenure track positions at universities, in certain circumstances, it may be warranted to give tenure to top entrepreneurship faculty. A worst case scenario may be giving established senior faculty one or two years to see if they fit into the culture of the organization before granting tenure. These type of people do not tend to care about tenure anyway as they are driven and self-motivated.

Schools should also consider making strong financial packages. Research has already been done on average AACSB salaries for senior level faculty (see Finkle, 2016a). Schools can use these salaries as benchmarks. Be aware that these figures are now public so the candidates will know the going market rate.

Schools must also consider that targeted senior faculty will have to: Give up their programs that they have built up (Often from scratch), sell their house, find a job for their spouse (If he/she works), move their belongings, change schools for their children (If they have any), obtain new doctors, and give up friendships they have built up over numerous years. This is an extremely high price to pay to come to your school.

To get attractive senior level entrepreneurship faculty schools must be willing to offer an attractive overall package (Money, courses, grants, research funding, travel allowance, graduate assistants, computers, etc.). This will be dependent on each school's situation and needs. In some of the higher cost cities, like San Francisco, some schools may want to add a housing allowance.

Sometimes there may be a reason why a faculty member wants to move to that particular area. For example, they have family located in the area or their spouse is getting transferred to the area. In this scenario, the school has the advantage and may not have to ante up as much to get their candidate. However, a smart candidate, who knows how to negotiate, may not reveal his/her entire hand.

Schools would benefit to ask candidates up front what kind of remuneration they are seeking. The school should state their appropriate approved package to the candidate. The candidate should give you their response as to whether they want to move forward. By doing this, schools can save a lot of time and resources. If they are within the school's range, then the school can begin the interviewing process. Both the school and the candidate should remain loyal to the offer to begin a positive fruitful relationship.

Implications to Faculty

Congratulations, it is a sellers' market for faculty seeking entrepreneurship positions. This is an ideal time for candidates to be seeking a position. With the information from this study and the recently published work on salaries (see Finkle, 2016a; 2016b), candidates are in a very good position to negotiate.

The 466 overall positions, 254 tenure track positions, and 204 tenure track AACSB positions are all positive signs for candidates. For international candidates, the findings of the study are extremely positive as well with 159 positions for 50 candidates. There were 3.18 international jobs per international candidate.

The findings of this study also show a very strong demand for senior level tenure-track faculty. In the past year, 45% of the tenure-track positions were seeking senior level faculty. The findings of this study are very positive for junior and senior faculty that are seeking to enhance their career. If existing faculty feel that they are being underpaid, want a promotion, and/or are seeking new opportunities, they can use the information from this study as a negotiating tool.

For doctoral students, entrepreneurship is the "odd bird" in academia. In many ways it is an oxymoron in the sense that entrepreneurship is about doing, but as academics, we are often rewarded through our research. Entrepreneurs learn through doing and taking risks, making mistakes, and then learning from their mistakes.

There will be different opportunities for students. They can go to research schools, which place a heavy emphasis on quality research and typically pay more money. There are not as many research positions in entrepreneurship and they will probably be more competitive as the perks that faculty tend to receive at research oriented schools are numerous (e.g., summer research money, doctoral students performing research, higher salaries, lower teaching loads, etc.).

Candidates also have the opportunity to go to a more balanced school where research and teaching are more equally weighted. These schools may be more suited for candidates that are not as motivated to spend the majority of their time doing research.

Candidates can also seek to go to traditional teaching oriented schools. These schools put the majority of their emphasis on teaching and tend to have higher teaching loads and generally do not tend to pay as much.

A good potential strategy for doctoral students is to obtain a job at a doctoral institution due to all of the benefits that come with that job. In academia, it is extremely difficult to move up (e.g., moving from a teaching or balanced school to a research oriented school). By starting at a doctoral school, this will give you more time and resources to build up your research base. The currency in academia tends to be research and your name is your brand. By writing some strong articles early in your career, you can build up your brand and enhance future opportunities. Even if you decide that you do not want to stay at a research school, you can always move down to balanced or teaching schools.

An important question that candidates must ask themselves; Do you want to go to a school with an existing entrepreneurship program or do you want to build a program? This question must also examine if the school has the appropriate resources to support candidates through the tenure process, as building a program by yourself can result in burn out.

In almost all situations, schools value candidates with an entrepreneurial mindset. Candidates that have the ability to use practical skills (e.g., build and market a program and/or the create and run a Center for Entrepreneurship) will have an advantage over other candidates.

The more experience candidates can get in creating ventures (for profit or non-profit) or serving on boards, the better prepared you will be to teach entrepreneurship. Having skills like writing feasibility studies (Business models) and business plans, sales, branding, advertising, and fund-raising are all extremely valuable. In the event that candidates do not have these skills, you must build relationships with people in industry and invite them to the classroom as guest speakers and/or members of an advisory board. In general, the field values faculty that have entrepreneurial experience plus academic credentials. However, there are not many of these individuals within the ranks of academia.

Implications to Executives

The trends in entrepreneurship education have some opportunities for executives. The significant rise in entrepreneurship jobs within higher education indicates an increase in the demand for entrepreneurship education. Executives can take advantage of the growth in entrepreneurial education by participating in internship programs at schools. Executives can also work with centers or professors to obtain free or low cost consulting for their ventures. By working with these students, executives can cherry pick the top students to work for their companies. Finally, executives have ample opportunities for continuing education today. There are numerous opportunities to take courses online or at universities. Massive Open Online Courses (MOOCs) are especially noteworthy at many prestigious schools today.

Limitations

Some limitations for this study include a reduction in the number of entrepreneurship positions due to budget cuts or the lack of the ability to find a qualified candidate. Another limitation may be the occasional candidate or position that the author did not document. Even though the authors updated the database approximately 3 to 4 times a week, there was always the possibility of missing a data point(s). Finally, the study was not able to capture the names and descriptions of faculty that do not advertise their profile, but apply directly to a school.

Future Research

What would really benefit the field is a longitudinal research study that documented the profiles of candidates that entered the field after graduation and followed them during their careers. This would allow us the ability to see how faculty are being treated over the long-term. For instance, what type of pay are they received? Is it competitive with other more established fields? What type of jobs are faculty being hired into and what courses do they have to teach? Are faculty getting full-time tenure track entrepreneurship positions or are they non-tenure track? Are entrepreneurship faculty expected to teach in other areas? Are entrepreneurship faculty earning tenure? What requirements or demands are being placed on entrepreneurship faculty? How are schools valuing entrepreneurship journals? Are entrepreneurship faculties moving up in schools to management levels (e.g., Deans, Chairs of Departments, etc.)?

REFERENCES

AACSB International (2015). The Association to Advance Collegiate Schools of Business. Retrieved from: http://www.aacsb.edu/accreditation/

AACSB International. Average Annual Salary Survey of AACSB Business Faculty 2000-2015. Tampa, FL.

Academy of Management Placement Roster. Academy of Management Placement Service. Used all volumes from 1989-2015.

Dowling, J. & J. Pfeffer (1975). Organizational Legitimacy: Social Values and Organizational Behavior. *Pacific Sociological Review,* 18, 122-136.

Finkle, T.A. (2007a). A Comparative Analysis of U.S. versus International Entrepreneurship Centers. *21st Proceedings of the Annual National United States Association for Small Business & Entrepreneurship Conference,* 125.

Finkle, T.A. (2016a). A Current Look at Salaries and Faculty Demand Within the Field of Entrepreneurship. *Journal of Applied Management & Entrepreneurship,* 21(2), 45-69.

Finkle, T.A. (2006). A Review of Trends in the Market for Entrepreneurship Faculty from 1989 2004. *Frontiers of Entrepreneurship Research 2005: Proceedings of the Twenty-Fifth Annual Frontiers of Entrepreneurship Research Conference*, Edited by Shaker Zahra, Candida Brush, Per Davidson, Patricia Greene, R. Harrison, James O. Feit, Miri Lerner, Jeffrey Sohl, & Dean Shepherd, Johan Wiklund, & M. Wright. Babson College: MA 168.

Finkle, T.A., D.F. Kuratko & M. Goldsby (2006a). An Examination of Entrepreneurship Centers in the United States: A National Survey. 50th Anniversary Special Issue of the *Journal of Small Business Management,* 44(2), 184-206.

Finkle, T.A. (2016b). An Examination of Job Opportunities, Candidates, and Salaries in the field of entrepreneurship. *New England Journal of Entrepreneurship,* 19(1), 1-33.

Finkle, T.A. (2015). An Examination of the Job Market for Entrepreneurship Faculty from 1989 to 2014. *Journal of Business and Entrepreneurship,* 26(3), 55-78.

Finkle, T.A. (2010). Entrepreneurship Education Trends. *Research in Business and Economics Journal* February, 1, 35-53.

Finkle, T.A. (2008). Global Trends in the Job Market for Faculty and Schools in the Field of Entrepreneurship. *Proceedings of the 2008 Annual American Society of Business & Behavioral Sciences National Conference* (ASBSS), 803-810.

Finkle, T.A. (2013a). Job Opportunities for Faculty in the Field of Entrepreneurship. *Journal of Applied Management and Entrepreneurship,* 18 (3), 94-112.

Finkle, T.A. (2013b). Trends in the Market for Entrepreneurship Faculty from 1989-2011. *Journal of Entrepreneurship Education,* 16, Special Issue, 59-76.

Finkle, T.A. (2007b). Trends in the Market for Entrepreneurship Faculty from 1989-2005. *Journal of Entrepreneurship Education,* 10, 1-25.

Finkle, T.A. (2012a). Trends in the Field of Entrepreneurship from 1989-2011. *26th Proceedings of the Annual National United States Association for Small Business & Entrepreneurship Conference,* 1042-1055.

Finkle, T.A. (2012b). Trends in the Market for Entrepreneurship Faculty from 1989 to 2010. *Journal of Entrepreneurship Education,* 15, 21-40.

Finkle, T.A. & D. Deeds (2002). Trends in the Market for Entrepreneurship Faculty from 1989-2001. *16th Proceedings of the Annual National United States Association for Small Business and Entrepreneurship Conference* 121.

Finkle, T.A. & D. Deeds (2001). Trends in the Market for Entrepreneurship Faculty during the Period 1989-1998. *Journal of Business Venturing,* 16(6), 613-630.

Finkle, T.A. & D.F. Kuratko (2004). Characteristics of the Top Ranked Entrepreneurship Centers. *Frontiers of Entrepreneurship Research 2003: Proceedings of the Twenty-Third Annual Frontiers of Entrepreneurship Research Conference,* Edited by William D. Bygrave, Candida Brush, Per Davidson, Patricia Greene, R. Harrison, James O. Feit, Miri Lerner, G. Dale Meyer, Jeffrey Sohl, & A. Zacharackis. Babson College: MA.

Finkle, T.A., D.F. Kuratko & M. Goldsby (2006b). The State of Entrepreneurship Centers in the United States: A Nationwide Survey. *Proceedings of the 2005 International Conference for Small Business (ICSB)*.

Finkle, T.A., T.V. Menzies, M. Goldsby & D.F. Kuratko (2010). A Global Examination of the Financial Challenges of Entrepreneurship Centers. *Proceedings of the 2010 International Conference for Small Business (ICSB)*, 1-39.

Finkle, T.A., T.V. Menzies, D.F. Kuratko & M. Goldsby (2013). An examination of the financial challenges of entrepreneurship centers throughout the world. *Journal of Small Business and Entrepreneurship,* 26(1), 67-85.

Finkle, T.A., T.V. Menzies, D.F. Kuratko & M. Goldsby (2012). Financing Activities of Entrepreneurship Centers in the United States. *Journal of Business and Entrepreneurship,* 23 (2), 48-64.

Finkle, T.A., P. Stetz & D. Deeds (2004). An Examination of Tenure Decisions for the Field of Entrepreneurship. *Frontiers of Entrepreneurship Research 2003: Proceedings of the Twenty Third Annual Frontiers of Entrepreneurship Research Conference*, Edited by William D. Bygrave, Candida Brush, Per Davidson, Patricia Greene, R. Harrison, James O. Feit, Miri Lerner, G. Dale Meyer, Jeffrey Sohl, & A. Zacharakis. Babson College: MA.

Finkle, T.A., P. Stetz, & M. Mallin (2007). Perceptions of Tenure Requirements and Research Records of Entrepreneurship Faculty Earning Tenure: 1964-2002. *Journal of Entrepreneurship Education*, 10, 101-125.

Finkle, T.A. & A. Thomas (2008). Entrepreneurship in International Markets. *Proceedings of the008 Annual American Society of Business & Behavioral Sciences National Conference* (ASBSS), 15(1), 970-973.

GCEC (2016). Global Consortium of Entrepreneurship Centers. Retrieved from: http://www.globalentrepreneurshipconsortium.org/home/

Kauffman Foundation (2013). Entrepreneurship Education Comes Alive Across Campus. Kansas City, MO.

Meyer, J.W. & B. Rowan (1977). Institutionalized Organizations: Formal Structure as Myth and Ceremony. *American Journal of Sociology,* 83(2), 340-363.

Scott, W.R. (2008). *Institutions and Organizations: Ideas and Interests*. Los Angeles, CA: Sage Publications.

The Chronicle of Higher Education. Washington, D.C. Used all volumes from 1989-2014.

ENTREPRENEURSHIP EDUCATION: A LOOK AT TWO UNIVERSITIES

Diana Pauna, Stockholm School of Economics, Riga, Latvia
Ellen J. Frank, Southern Connecticut State University

ABSTRACT

Reviews the contextual models used in designing university-wide entrepreneurship programs, and to explore some of the specific conditions that facilitate successful implementation of such programs across a campus. To do this, a case examination will be presented of the programs at the University of Michigan and the University of Kentucky. Both are land grant institutions that exemplify either the radiant or magnet approaches to successful entrepreneurship education.

INTRODUCTION

The working definition of entrepreneurship education being used for this paper is that it represents a set of curricular and co-curricular activities aimed at developing general business knowledge and providing an entrepreneurial mindset and skills to students across the university. However, an analysis of literature shows a range of designations for entrepreneurship education, with references made to "entrepreneurship education programs" (Streeter et al., 2004)," entrepreneurial learning" (Gibb, 2005), entrepreneurship education (Fayolle, 2009), "entrepreneurial development in teaching and learning" (Allison, 2013)," entrepreneurship education and training" (Valerio *et al,* 2014) and "internal entrepreneurship education ecosystem" (Brush, 2014). No matter the terminology, the common aim is to engage all students from all disciplines in learning opportunities that would include a set of entrepreneurial skills, attributes and competences.

MODELS OF ENTREPRENEURSHIP EDUCATION

The development of university-wide entrepreneurship education takes different pathways, depending on the regulatory framework, the mission of the university, its operational policies, and the available resources.

The first attempt to conceptualize university-wide entrepreneurship education was made by Streeter, Jaquette Jr. and Hovis (2004), based on the analysis of 38 ranked entrepreneurship programs in the United States. In their research, the university-wide programs were categorized into magnet and radiant, depending on the "the center of gravity" (ibid. p. 52) - the location, funding, faculty, students, curriculum, and administration.

The radiant model engages a decentralized approach, and the center of gravity is at each academic unit with an administrative unit that is located outside the academic units, whose role is to coordinate entrepreneurship education programs across the campus (ibid p. 54). Each academic unit provides for its funding, faculty, and administration of the entrepreneurship programs within

its unit. In the radiant model, academic units provide entrepreneurship education programs that are focused on the discipline-specific context: programs in law may embrace technology commercialization and legal aspects for start-ups; programs in communication could embrace the development of social media ventures; programs in arts usually focus on arts-oriented business, and similarly in other disciplines as discussed in a study by Antal et al (2014).

Thus, the advantages of the radiant model include discipline-specific entrepreneurship education for non-business students, while also calling for collaboration among faculty and students across academic units (ibid. p. 230).

The magnet model uses a highly-centralized approach with the center of gravity usually located in the business school; employing its funding, faculty members, and administration. If the center of gravity is a business school, the magnet model provides the business faculty opportunities for applying their entrepreneurship research (Antal, 2014). The magnet model may also allow several centers of gravity that Streeter, Jaquette Jr. and Hovis call "multiple magnets." Students from different academic units form diverse groups which adds an interdisciplinary focus to their studies of entrepreneurship.

An alternative model incorporating three options, and a template for entrepreneurial program development was presented by Gibb (2005):

1. "Optimum Fully Integrated Model" embraces university-wide application of entrepreneurship.
2. "Intermediate Model" provides a specialist center that is outside the university but still run by the university.
3. "External Business Services Support Model" refers to a specialist center that is owned by stakeholders, but features university participation (ibid. p.8).

Different from a traditional model of entrepreneurship education that focuses just on business plans and business management, these alternative models provide a new focus on entrepreneurship in relation to teaching, organizational design, and stakeholders. Further, by providing a template for entrepreneurial program development, universities and stakeholders have a more coherent understanding regarding the expected outcomes. The template can later serve as a self-assessment tool as well.

Viña and Flawn (2014) describe five models that may be developed by universities. These include degree programs and non-degree programs, centers, events, entrepreneurship ecosystems, international partners, and outreach. Some of these models overlap, and have similar features as the magnet and radiant models.

1. "Center Based Model" provides campus technology entrepreneurship programs based on the collaboration among business, engineering, and science schools.
2. "Entrepreneurship Eco-System Model" offers an innovative entrepreneurship curriculum, including mentoring, discussion groups, lab support and work with practicing entrepreneurs.
3. "Externally Based Model" focuses on technology commercialization, entrepreneurship education, and the launch of technology companies with most activity off campus.
4. "Comprehensive Model" is the most widely recognized, and it encompasses entrepreneurship education from degree programs to specific centers. This model was developed by Babson College.
5. "Global Model" focuses on joint entrepreneurship programs with overseas partners that typically are from countries with emerging markets.

The concept of an "entrepreneurship education ecosystem" is presented by Brush (2014). The entrepreneurship education ecosystem is composed of three domains: the curriculum, co-

curricular activities, and research. These domains are influenced by four dimensions: resources, culture, stakeholders, and infrastructure which are linked to the local community. Further, based on these domains and dimensions, a typology of school roles is developed, assigning four different roles: a broker, a coordinator or facilitator, a hub, and a developer. By this, the author sends a strong signal regarding each school's autonomy within the ecosystem, including the interpretation of entrepreneurship and entrepreneurship education (ibid. pp.34-35). Brush also provides a series of questions on the four dimensions and three domains that can be helpful when developing an entrepreneurship education ecosystem.

Given the various models proposed, there seems to be convergence when examining which models have been used in a research context. (OECD 2008, Antal *et al.* 2014, Fayolle *et al.* 2014, Morris *et al.* 2014). The preference seems to be to refer to the magnet and radiant models developed by Streeter *et al*. The two universities that will be discussed later are examples of each of the models.

CONTEXTUAL CHALLENGES TO PROGRAM IMPLEMENTATION

The specific contextual factors in a state influence the pathway of introducing these types of educational programs. More specifically, contextual factors explain why some state governments are more proactive than others in creating institutional frameworks for the implementation of university-wide entrepreneurship education.

According to Valerio *et al*. (2014), central to implementation of entrepreneurship education are contextual challenges within three categories: economic context, political context, and cultural context. The economic factors include local economic conditions, infrastructure, and regulatory and tax structures; the political factors include the local government support with specific policy actions, including partnerships with government agencies and local communities in financing entrepreneurship education interventions; and the cultural factors relate to local perceptions of entrepreneurship and "cultural attitudes toward failure, success, and the traditional roles of certain members of society" (pp. 40-42).

Similarly, Graham (2014) indicates successful universities have benefitted from contextual factors, specifically referring to a triad of university-industry-government collaboration. This is in line with the Triple Helix model indicating that university participation in what once was a dyad of industry and government involvement, enhances innovation and knowledge acquisition (Ranga and Etzkowitz, 2013). As such, the regulatory framework helps to create the basic structure, reduces uncertainty, and achieves coherent results nationwide.

Contrary to the classical model of the university with its focus on research and teaching, the modern university produces an economic and social impact through patents, licensing, academic spin-offs and startups that calls for partnerships with stakeholders, who need support structures and coherent mechanisms nationwide. (Fayolle *et al.* 2014)

Evidence from the literature reviewed (Graham 2014, Valerio *et al.* 2014, Fayolle *et al.* 2014) shows that both top-down and bottom-up campus implementation approaches are possible. While a top-down approach with governments leading the advancement of entrepreneurship education at universities can be seen as a national strategy, a bottom-up approach rests on individual regions or institutions taking the lead in integrating entrepreneurship education into higher education. These are often referred to as institutional or individual "champions" in entrepreneurship education.

ENTREPRENEURSHIP EDUCATION IN U.S.

In the United States, entrepreneurship education is driven by three groups: (1) academic institutions; (2) nonprofit and other private institutions and (3) federal, state, and local governments.

Universities are the dominant drivers of entrepreneurship education in the United States and thereby demonstrate different pathways to promoting entrepreneurship education. With entrepreneurship education having a long-established tradition in the country - Harvard Business School offered the nation's first entrepreneurship course in 1926, and the nation's first Small Business Management course was offered in 1927 at what is now the Ross School of Business at the University of Michigan - a number of universities can be listed as champions in attracting funding either through their alumni, foundations, or the local business community. These funds are used to support and to promote new approaches to teaching and learning entrepreneurship through a combination of classroom, co-curricular learning, and interdisciplinary learning across the campus involving non-business students**.**

The literature reviewed also clearly shows the dominant role of foundations in promoting entrepreneurship education in the United States, thereby following a bottom-up approach. Since there is no national coordination or oversight body of entrepreneurship education in the United States, nonprofit organizations and foundations are significant non-governmental players with the Coleman Foundation (CF) and the Kauffman Foundation (KF) being the largest and most significant in fostering entrepreneurship in higher education as a way of creating businesses and employment opportunities in the United States. The Kauffman Campuses Initiative was started in 2003, and the Coleman Foundation Entrepreneurship Education Impact Plan was launched in 2012. As a policy move, it is interesting to note that the Kauffman Campuses Initiative (KCI), has triggered a change in entrepreneurship education across the nation. In 2003 initially eight universities were awarded up to $5 million each with a three-to-one match. In 2006 ten more universities entered the KCI program, resulting in 18 universities in total (Hulsink in Fayolle et al, 2014). The Kauffman Panel on entrepreneurship curriculum in higher education has provided both "substantive rationales and concrete measures that universities can adopt" to make entrepreneurship fundamental in their activities and to create entrepreneurial campuses. (The Kauffman Foundation, 2008, p. 9)

A report by the Science and Technology Policy Institute (Peña *et al*. 2010) provides an overview of the current landscape in entrepreneurship education in order to assess opportunities for a more substantial involvement of the federal government by improving its strategic planning, financing, and operational roles. The current scheme with three agencies being involved - the U.S. Small Business Administration (SBA), the Minority Business Development Agency (within the Department of Commerce), and the U.S. Department of Agriculture (USDA) provides support either to entrepreneurs or to youth programs. However, no agencies or programs are aimed at specifically promoting entrepreneurship education in higher education.

Paradigm Shift

In the United States, the general landscape in entrepreneurial education has significantly changed since 2000 when universities received significant endowments for entrepreneurship education. As a result, the landscape of 250 entrepreneurship courses in 1985 has increased to more than 5,000 taken by more than 400,000 students a year taught by more than 9,000 faculty members at more than 1,300 colleges and universities (The Kauffman Foundation, 2015).

Moreover, a major shift (Solomon, 2014) has been observed from entrepreneurship courses being offered solely to business students, to extending them to all students across the campus in order to develop their entrepreneurial mindsets, complimented with entrepreneurship fundamentals.

Monitoring and Assessment

According to Forbes (Chen,L. 2014) the five most entrepreneurial universities are Stanford University, Massachusetts Institute of Technology, University of California, Berkeley, Cornell University, and University of California, Los Angeles. However, the actual metrics of measuring the outcomes of entrepreneurship education have been questioned by several researchers. Streeter et al (2011) argues that the current rankings are based on research income and startup effectiveness while "latent effects of entrepreneurial education" are ignored. This view is supported by Graham (2014) who refers to research commercialization metrics as unreliable indicators to assess sustainable entrepreneurship ecosystems in the long term. In a word, although entrepreneurship education has a long-established tradition in the United States, university-wide entrepreneurship education is still in the process of finding its evaluation metrics.

Overall, the assessment of the institutional framework in the United States clearly indicates a "bottom-up" development model of university-wide entrepreneurship education with universities being a driving force. State and local governments appear to be more motivated to support university led initiatives to boost economic development in the region. In addition, as mentioned earlier, non-profit foundations play a significant role in the development of university-wide entrepreneurship education, especially the Kauffman Campuses Initiative that has stimulated the development of the radiant model.

CASE STUDIES

The primary objective for these case studies is to explore in depth the highly regarded entrepreneurial education practices at two universities: University of Michigan, and University of Kentucky. They were also chosen since they each represent one of the entrepreneurship models – radiant and magnet. The criteria for the selection was designed to make the two subject institutions comparable as much as possible. These criteria were as follows: the nature of good practice and reputation, the legal status of the university, and the stage of implementing university-wide initiatives. The fieldwork[1] included observations, interviews, interpersonal interactions, as well as participation at university events linked to entrepreneurship education. The data consisted of field notes, including detailed descriptions and the context of the observations made. The fieldwork also included archival research - a detailed study of available to public university documents, reports, program descriptions, evaluations, and articles published about each university.

UNIVERSITY OF KENTUCKY

The University of Kentucky is a public higher education institution that was founded in 1865 as a land-grant university. At present, it is referred to as the state's flagship institution with 16 academic and professional colleges providing higher education to 21,441 undergraduate and 6,994 graduate students. The University's development has been recently guided by the Strategic Plan 2009 – 2014 that supports the university's mission and vision of aiming at becoming one of the 20 best public research universities nationwide. Within the context of the mission and the strategic plan, the structural units and their leadership have been encouraged to promote university-

wide interdisciplinary research and collaboration, and engaging in partnerships with local and international communities. Surprisingly, entrepreneurship nor entrepreneurship education is mentioned in the overall strategy, even though the mission refers to the economic development and improvement of people's lives in Kentucky**.**

Structure of Entrepreneurship Education

A significant figure that set an entrepreneurial agenda across the university was Lee T. Todd, the 11th President of the University of Kentucky. First, he instituted a new position of Vice President for Commercialization and Economic Development, and second, he supported the establishment of Von Allmen Center for Entrepreneurship in 2002. Nearly ten years later a new "bottom-up" initiative came from the Dean of the College of Communication and Information to start a university-wide undergraduate entrepreneurship education program. In a word, the entrepreneurial agenda at the University of Kentucky has been developing in strategic partnerships with local communities, hence stimulating economic development in Kentucky.

There are four structural units that form the University's entrepreneurship ecosystem: the Gatton College of Business and Economics, Von Allmen Center for Entrepreneurship, Innovation Network for Entrepreneurial Thinking (iNET), and the Advanced Science & Technology Commercialization Center. Exploring the development model of these structural units, the institutional framework of a land-grant university has had a significant impact on the 'bottom-up" approach (Graham, 2014) through local and state support. However, it is not a pure bottom-up process given the federal support through the Economic Development Administration's (EDA) "University Center Program," and the University's focus on research commercialization that imply signs of a "top-down" approach.

The Von Allmen Entrepreneurship Center with its two offices, one on the campus and the other downtown Lexington, serves as a magnet for commercialization of new ideas, technologies, products and services. The campus office of the Von Allmen Entrepreneurship Center is located in the same building as the Advanced Science & Technology Commercialization Center that serves as the university's business incubator, and a magnet for technology-based start-ups, emphasizing the link between innovation, research and entrepreneurship.

With funding, leadership, and administration provided by the College of Communication and Information, iNET has become a magnet offering interdisciplinary entrepreneurial education, both curricular and co-curricular, to non-business undergraduate students across the campus.

Current Entrepreneurship Offerings

Although the entrepreneurship activity is found at the Von Allman Center for Entrepreneurship in the Gatton School of Business, there is no major/minor in the discipline. However, there is an academic certificate program as well as a one semester participation certificate program for students from the Von Allman Center.

For the management major who would like to know a little more about entrepreneurship, but is not interested in heavy involvement, there is a course entitled, "Entrepreneurship and Venture Creation." It is an option in the seven-course list of electives where the student must choose three. There is also a choice of Small Business Management.

The one semester program conducted by the Von Allman Center is called, "Entrepreneurial Boot Camp." The program is designed to assess and validate the feasibility of a business concept,

create a business model, and provide hands-on experience with real world projects. Students may bring their own ideas or become part of an existing team. Teams have a three-person minimum. There are also once per week lectures over the 10 week program that are mandatory. Table1 lists the program schedule for Fall 2015. This program is open to any student, faculty and staff.

Table 1
BOOT CAMP SESSIONS

Session #1	Introduction Session & Sticky Note Challenge
Session #2	1-Minute Inventor Pitches & Team Formation
Session #3	Business Model Canvas & 1-Minute Elevator Pitch
Session #4	"Defining Your Customer" w/ Guest Panel
Session #5	Prototyping Resources w/ Guest Speakers
Session #6	1st Team Pitch (5-10 minutes) to Guest Panel
Session #7	Finances, Marketing, and Sales w/ Guest Speakers
Session #8	Intellectual Property w/ Guest Speaker
Session #9	2nd Team Pitch (10 - 15 minutes) to Guest Panel
Session #10	Bootcamp Two Day Pitch Event Finale

Participates are guided by mentors and students, called "Sharks." The Sharks are five individuals, mostly in graduate programs, who have had successful entrepreneurial projects. The mentor group is composed of 55 business people drawn from a diverse set of industries. The hands on portion of the semester is participating in the campus wide competitions, The main one, "University of Kentucky Venture Challenge" has the two winning ideas moving on to the State level competition. Students develop their ideas into new ventures, prepare a marketing video and a written proposal, and present their business concepts to judges from the local entrepreneurial community. Students are coached by members of the UK and local entrepreneurial community. The Venture Challenge judges provide feedback following the competition.

The Undergraduate Certificate in Innovation and Entrepreneurial Thinking is for students from any major. Students must complete four 3-hour courses -- two required and two elective courses. Students must have completed 60 credits to register for this program. Table 2 lists possible electives.

Table 2 **COURSE OPTIONS FOR CERTIFICATE PROGRAM***
The two required courses are:
Communication, Leadership and Entrepreneurial Thinking
Capstone Experience in Innovation and Entrepreneurial Thinking
Two electives chosen from the following list:
Arts Administration Communications
Marketing for the Arts
Arts Entrepreneurship: Art in Unlikely Places
Art Through Object: Theory and Practice for Engagement Strategies in the Museum
Creativity and Innovation (KIIS Paris 1, Summer 2015)
Information Technology Strategy (Enterprise Management)
Design Thinking in Education
Competitive Intelligence
Media Management and Entrepreneurship
Special Topics: Social Entrepreneurship
Introduction to Entrepreneurship
Business Management
Marketing Management
Music for Living
Creativity and Innovation in Rock Music: History and Sociology

The iNET Entreprenerial Studies Living Learning Program

The iNET Entrepreneurial Studies Living Learning Program is for students from all majors who want to gain entrepreneurial skills, experience and contacts. To insure students have contact with other students with their own entrepreneurial interests and start them networking, this program involves living together in a specific dorm section. Students are provided on-site programming and given the opportunity to discover their own entrepreneurial talents and interests as they learn team building, leadership, critical thinking, and innovative problem solving skills. Students engage in various exercises and activities to gain core entrepreneurial skills. Programs and mentoring are provided by the iNET Director, the Entrepreneur in Residence, and the on-campus and local entrepreneurial community.

Freshmen entering this program must take the courses shown in Table 3.

Table 3 **Freshmen Requirements for Entreprenerial Studies Living Learning Program***
Fall Semester (8 credits of connected courses):
Social Entrepreneurship (3 credits) Taught by the iNET Director
Entrepreneurial Thinking (1 credit): Co-Taught by the iNET Director and Entrepreneur in Residence
Academic Orientation (1 credit)
Composition and Communication I (3 credits):
Spring Semester (7 credits of connected courses):
iNET Elective Course (3 credits) Taught by iNET faculty member
Venture Challenge (1 credit) Co-Taught by iNET Director and Entrepreneur in Residence
Composition and Communication II (3 credits)

*https://ci.uky.edu/inet/page/inet-entrepreneurial-studies-living-learning-program

Future Entrepreneurship Program Growth

The development of the entrepreneurship ecosystem at the University of Kentucky as described above follows a mixed pattern with features of both a "top-down" and "bottom-up" approaches defined by the status of the university (public, land-grant, research university), engagement with stakeholders (local and state business communities), support by the university leadership, individual alumni, and faculty initiatives. While collaboration between the university and the local business community can be perceived as a success factor, the course offerings to non-business students might be perceived as insufficient for a campus with approximately 30,000 students. With the College of Communication and Information taking the lead, iNET has growth potential if it expands its cooperation with other colleges. There is already a mechanism in place for this through an Advisory Board which engages 50 members from different colleges across the campus, student representatives and other stakeholders representing the business community. The collaboration of the Innovation Network for Entrepreneurial Thinking as a university-wide education magnet, and with the Von Allmen Entrepreneurship Center as an entrepreneurship services and development magnet, form a multiple magnet model (Figure 1).

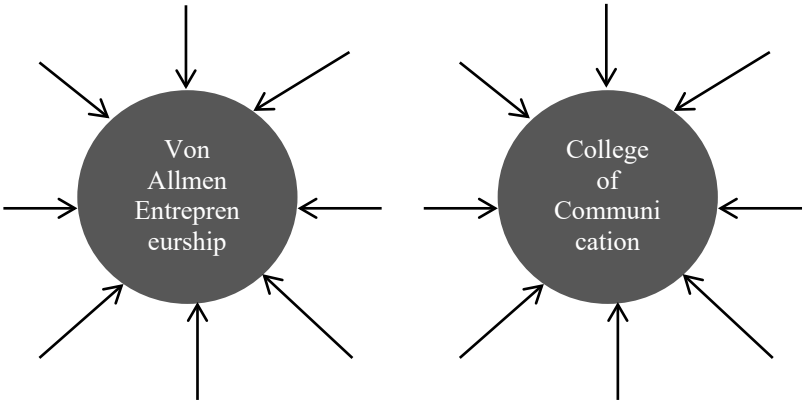


Figure 1

Program Analysis

The observations and analysis of university-wide education at the University of Kentucky indicate the following success factors and constraints:

Success Factors

Cooperation with the local and regional municipality and business community, resulting in strategic partnerships, and hence securing sustainable further development of university-wide entrepreneurship education.

A university-wide entrepreneurship program with a focus on entrepreneurial thinking that provides interdisciplinary entrepreneurial education both curricular and co-curricular to non-business undergraduate students across the campus.

A unique Entrepreneurial Studies Living Learning Program that makes efficient use of time and space to spur networking and interdisciplinary entrepreneurial learning.

A well-established structure of leadership by means of Advisory Boards that engage a variety of stakeholders to represent strategic partners, representatives from the university, and the local and regional entrepreneurial community.

Deficiencies

Limited number of course offerings to undergraduate non-business students, given the size of the university and potential activity.

No course offerings for undergraduate non-business students willing to continue after they have completed the Undergraduate Certificate in Innovation and Entrepreneurial Thinking.

Limited engagement of the business school faculty in providing support to further development of university-wide entrepreneurship education.

UNIVERSITY OF MICHIGAN

The University of Michigan is a public higher education institution that was founded in 1817. Today the University of Michigan is the only public university among 13 American universities in the top 25 universities in the QS World Rankings for 2014 with other 12 being private universities. (It is ranked 23rd in the world.) The University's 19 schools and colleges with its student body consisting of 28,395 undergraduates and 15,230 graduate and professional level students are governed by its mission to create, communicate, preserve and apply knowledge in order to serve the people of Michigan and the community at large. (U-M Enrolment Report, 2014) The University's goals described in the Vision Statement (ibid.) embrace ten objectives to be applied within all structural units across the university. Compared to other academic institutions in the United States, the University of Michigan is a highly decentralized institution, therefore its schools and colleges develop their own plans and initiatives in compliance with the University's mission and vision. The University's governance provides support through funding, infrastructure, and services consistent with the overall direction of the University's values. With reference to university-wide entrepreneurship education, two objectives attract attention: the interdisciplinary nature in teaching and research, and an entrepreneurial spirit to foster economic growth in the region and beyond.

Structure of Entrepreneurship Education

Historically, entrepreneurship has had a definite place at the University of Michigan since 1927 when the nation's first Small Business Management course was offered at what is now the Ross School of Business. Within the Ross School of Business, the Zell and Lurie Institute for Entrepreneurial Studies was launched in 1999 to create a focused entrepreneurship program and courses for business students. The push factor in starting the Institute was the endowment of $10 million provided by donors whose entrepreneurial careers began at the University of Michigan. Further, in response to the growing demand from students, faculty and the community, the Institute started providing course offerings in entrepreneurship basics to all students at all levels across the campus. It also served as the catalyst in launching entrepreneurship programs at the College of Engineering (2008), the School of Medicine (2008), and the Law School (2012). This development was fostered by the President of the university when he launched a multi-year program in 2007 to hire 100 new faculty members in innovation and entrepreneurship. In November 2013 the Provost established a policy to offer formal entrepreneurship education to all undergraduate students across the campus, and appointed a senior adviser to have the program implemented by fall 2014. As a result, the platform, "Innovate Blue" was created embracing entrepreneurship education and research. It serves a coordinating function between the more than 15 programs and centers in entrepreneur- ship and more than 30 entrepreneurial student organizations. In 2014 the College of Literature, Science and the Arts, the School of Information, and the School of Public Health started developing their entrepreneurship education programs.

Program Development

University-wide entrepreneurship education has a significant place within the university's entrepreneurship ecosystem. It has developed following the "bottom-up" model that is in line with the highly-decentralized university framework at the University of Michigan, and is rooted in the financial support provided by the alumni and the efforts coming from individual structural units. At the same time, these individual efforts have been recognized and fully supported by the university governance.

Having started as a magnet model with a center of gravity at the Ross School of Business with its Zell and Lurie Institute for Entrepreneurial Studies, the magnet model underwent transformation into a multiple magnet model anchored at the College of Engineering and the Law School (Figure 2). In response to even further perceived demand, other schools and colleges joined the program to provide entrepreneurship education to all students including those in art, communication, humanities, and science. As a result of this program growth, the radiant model of university-wide education can be attributed to the University of Michigan. This evolution is not surprising given the university's cultural structure. The step-by-step development from the magnet model into the radiant model can be perceived as a factor for the overall program's success because the initial experiences served as a knowledge base for the start-up of other entrepreneurship programs and centers, with their development of faculty and the curriculum, and designing the administrative structure.

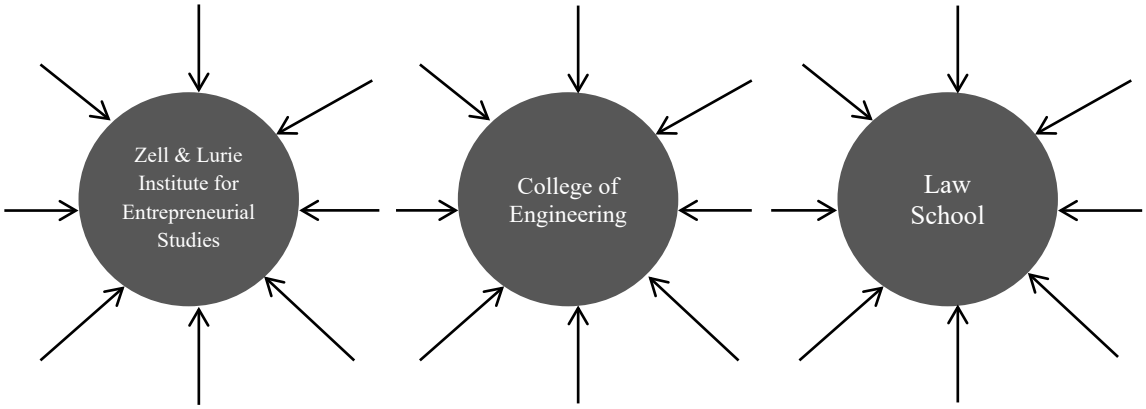


Figure 2

Current Program

University-wide entrepreneurship education at the University of Michigan encompasses 50 undergraduate and 60 graduate entrepreneurial courses and programs offered by educational partners including six schools - the Ross School of Business, the College of Engineering (serving also students from the School of Kinesiology and the School of Art and Design), the Law School, the College of Literature Science and the Arts, the School of Information, and the School of Public

Health – the Shapiro Undergraduate Library, the Barger Leadership Institute, and the TechArb that is a student accelerator. The entrepreneurship curriculum includes either a 15-credit Minor in Entrepreneurship, or a 9-credit elective Program in Entrepreneurship (PIE) both made available to students from any academic discipline. In addition to the entrepreneurship basics covered within the two core curriculum, each program includes electives and practicum that provides students with discipline-specific knowledge and experience. The necessary collaboration and communication, given the number of education partners and curricular classes combined with co-curricular activities, is provided by Innovate Blue, performing the functions of administration.

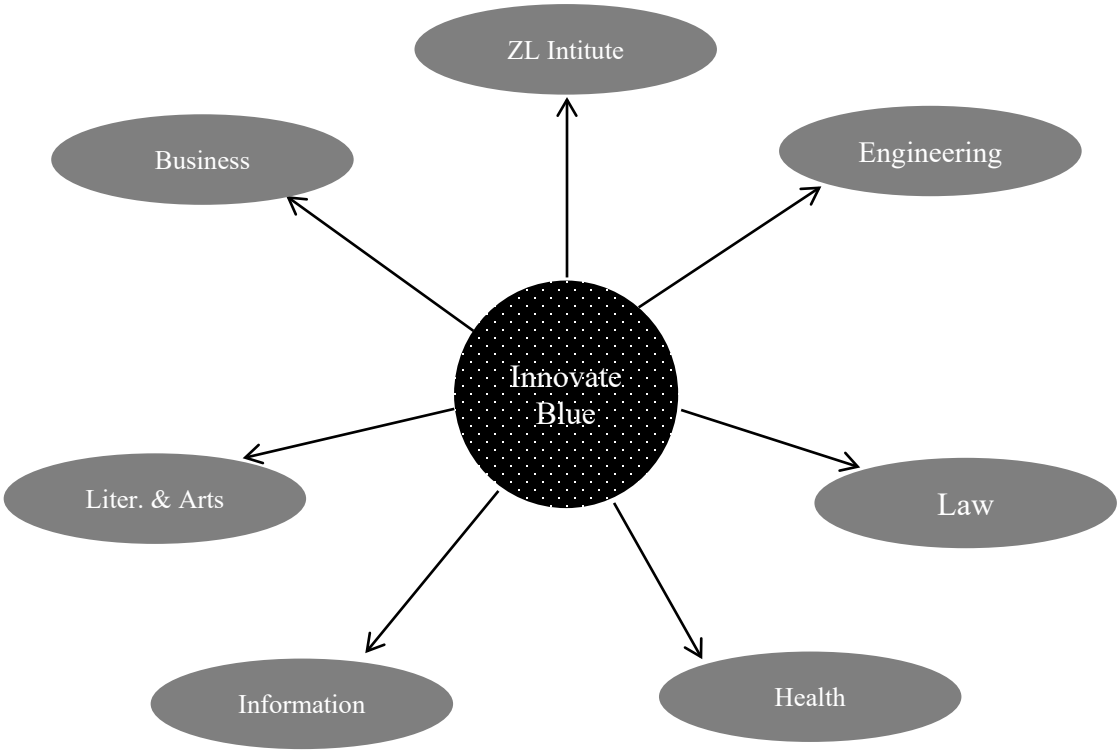


Figure 3

The following course list shows the variety of offerings that students can choose from based on their background and interest. (http://www.zli.bus.umich.edu/forms/ECourses_ Tracks_0809.pdf) The faculty members teaching these courses represent a mix of faculty members from different

schools, adjunct/practitioners and clinicians. Both programs, the minor and the PIE, have a strong focus on learning and experience with co-curricular activities being either required or recommended. In addition, there are entrepreneurship course offerings provided by Samuel Zell & Robert H. Lurie Institute for Entrepreneurial Studies, Ross School of Business, and School of Law.

Table 4
COURSE OFFERINGS

Entrepreneurial Focus	Course
Creation and Growth of Entrepreneurial Ventures	**Entrepreneurial Business Basics (core)** **Entrepreneurial Creativity (core)** Entrepreneurial Business Fundamentals Entrepreneurship Entrepreneurship Hour Entrepreneurship Hour Discussion Session Finding Your Venture Introduction to Entrepreneurship Entrepreneurship Management Entrepreneurial Marketing Family Business Managing the Growth of New Ventures
Entrepreneurial Finance	Entrepreneurial Finance Venture Business Development Introduction to Microfinance Financing Research Commercialization
Design, Innovation, and Technology	Creative Process Innovation and New Product Development Launching Design Practices Analytical Product Design Introduction to Design Process Design Prototyping CleanTech Entrepreneurship High Tech Entrepreneurship Working With Wood Working With Metal
ITC, Communications, and media	Digital Marketing Social Media and the Changing Nature of Business Communications Mobile App Development for Entrepreneurs Entrepreneurship in the Information Industry Busting Myths and Pursing Information Innovations with Mobile Apps Imagine, Innovate, Act
Environment and Community	Change by Design Leading Innovation Through Social Entrepreneurship Nonprofit Management, Community Engagement and Feminist Practice Urban Entrepreneurship Environmental Values in Public Policy Urban and Community Studies Organizing People, Power, and Social Change Theories and Practice for Community Action and Social Change Pedagogy of Empowerment: Activism in Race,

	Gender and Health Economics of Entrepreneurship
Application of Entrepreneurial Skills to Other Professional Careers	Business Entrepreneurship in Thought & Action Problem Solving, Troubleshooting, Entrepreneurship, Intrapreneurship, and Making the Transition to the Workplace Creativity at Work Startups and Upstarts: Psychology of Entrepreneur- ship and Intrapreneurship
Tools for Entrepreneurs	Patent Fundamentals for Engineers Patent Law Needs Assessment and Usability Evaluation Evaluation of Systems and Services Intellectual Property Law
Communication and Leadership Skills	Leadership and Collaboration Practicum in Leadership and Collaboration Psychology of Creativity Negotiations
Entrepreneurship in Performing Arts	Introduction to Stage Management Performing Arts Management Global Community Practicum

It should be noted that the University of Michigan also offers a one year Master's Degree in Entrepreneurship. This program is designed for graduates of their MsE program so they are "prepared to develop and launch disruptive, scalable ventures that address a societal need."

Considering that the faculty are affiliated with different academic units, coordination and communication are essential to ensure quality and the sustainability of programs and course offerings, as well as professional development of the engaged entrepreneurship faculty. The Advisory Board at each center or institute keeps an oversight of the quality of entrepreneurship education as a whole, provides a strategic direction, and maintains communication between different structural units to deploy synergies and avoid duplication.

Community Interface

The commercialization partners and community partners create a significant part of the entrepreneurship ecosystem at the University of Michigan that is essential and complimentary to university-wide entrepreneurship education. Evidence from experts confirms that such partnerships provide support in a form of infrastructure, human resources, financial resources and networks. For example, the Business Engagement Center, and the Center for Venture Capital and Private Equity Finance as commercialization partners assist with linking student business initiatives and startups with the business and financial community. The Office of Technology Transfer, and Fast Forward Medical Innovation assist in the commercialization of technological innovations and bring income to the university. Some student business ideas have developed into sustainable businesses in the form of student-led venture funds to support emerging businesses, notably the early-stage Wolverine Venture Fund, pre-seed Frankel Commercialization Fund, and the Social Venture Fund.

In addition to the communities located within schools, colleges, centers, and institutes across the campus, the faculty and students are engaged in cooperation with community partners

through Ann Arbor SPARK, and Michigan Economic Development Corporation (MEDC). Being part of these organizations, the University of Michigan maintains cooperation with the city of Ann Arbor and municipal stakeholders, other academic institutions, and the broader local entrepreneurial community. Students benefit from commercialization and community partnerships by gaining access to a range of internship placements, real-life projects, grants and professional networks that are useful in their co-curricular activities that include business plan and pitching competitions, conferences, innovation projects, and many other activities developing entrepreneurial skills and behaviors.

Program Analysis

The observations and analysis of university-wide education at the University of Michigan indicate to the following success factors and deficiencies:

Success Factors

A platform for university-wide entrepreneurship education Innovate Blue that serves as a unique site for communication and information across the campus and beyond; such a platform helps to avoid duplication and allows using resources more efficiently;

Cooperation with the local and regional municipality and business community both to foster the development of the entrepreneurship ecosystem at the university and to integrate students in the local and regional business community so that students are retained in the region after they graduate;

A well-developed network of the alumni who contribute in curricular and co-curricular activities as well as become most generous donors;

Well-integrated curricular and co-curricular activities with entrepreneurship programs embracing core courses coupled with a mandatory component of electives such as capstone projects, business plan competitions, pitching, etc.

At each school well-developed and strong Advisory Boards and leadership structures supported by the university governance.

Deficiencies

With six schools fully engaged as sites for entrepreneurship education (and two schools participating in cooperation with the College of Engineering), there are still 11 schools that have yet become educational partners;

Attracting financial support in the radiant model has the disadvantage of it being unclear how individual educational partners will succeed in attracting funding from their donors.

IMPLICATIONS FOR FURTHER RESEARCH

While based on a small sample of reviewing two universities, this study presents evidence that adds to our understanding of the dynamics of developing university-wide entrepreneurship education. It also highlights a few areas for further development and research, in particular such

areas as cooperation across the university, monitoring and assessment, and fostering multi-disciplinary teams of both students and faculty members.

Evidence from both case studies shows the importance of cooperation and communication across the university. Irrespective of the gravity center (Streeter et al., 2004) of entrepreneurship education within the university, or the type of school role within the entrepreneurship education ecosystem (Brush, 2014), there are boundaries between academic units, schools and centers. Therefore, there is a need for further research on the structural development within universities in creating the appropriate institutional environment for entrepreneurship. This concept of boundaries becomes significant when considering how faculty members form multidisciplinary teams, which generally is complicated within currently practiced academic structures. This points out to research needs into the mechanisms and approaches encouraging teaching and learning in a multidisciplinary environment not just for students, but also faculty.

Using the Gibb (2007) model, it would be useful to investigate the effect of the magnet's location. The three choices were on-campus run by the university, off-campus but university run, or off-campus run by other stakeholders. Which configuration brings in more alumni dollars? Which arrangement wins greater outside grant support?

Another variable that deserves some exploration is the location of the institution. Both of the universities studied were in cities where there was a vibrant business community with successful entrepreneurs. This provided local opportunities for internships, local speakers, and business planning feedback from people who had credibility. Schools that are in small towns, and far from major business centers, have fewer role models to interact with students first-hand. It may be harder for an institution to drum up campus enthusiasm for a university-wide entrepreneur program in this type of "isolated" environment. Examining the differences of rural vs urban institutions and their introduction of entrepreneurship education is an avenue to investigate
With the current paradigm shift making entrepreneurship education more available university-wide for both graduate and undergraduate students, research on its long-term effects on developing entrepreneurial members of society (Streeter et al. 2011, Brush 2014, Solomon 2014) can better inform the metrics used for university rankings.

A similar research agenda should follow-up on the various youth entrepreneurship training programs being offered. How many students who participated in these programs attend college and pursue studies that will lead to entrepreneurial careers upon graduation. Since entrepreneurship is a frame of mind or mindset, it would be interesting to note if when this perspective is instilled young, does it have significant impact on future behaviors and educational choices.

Future researchers might examine which of the two models, radiant or magnet, are perceived by students to best fit their future entrepreneurial ambitions. The magnet model encourages multi-disciplinary teams, while in the radiant model students study in their academic units and only may form multidisciplinary teams through co-curricular offerings. It is very possible, that programs coming from the radiant model are perceived by students to be more valid to their needs, and stimulate more excitement. Classes given within their own school, might have more face validity than an identical series of courses promoted solely through the school of business, for example.

From an educational design point of view, a study that defines the specific factors that help initially determine the appropriate depth and breadth of the entrepreneurship program an institution should initiate would be helpful. Programs can be nothing more than periodic presentations that are non-credit, extra-curricular activities to which students are invited. The next level up would

be a short series of courses that make up a certificate-type program. More involved, would be a recognized minor in the field, and finally a full major. Certainly, the size of the student body would be a large determinant. The faculty composition would be a factor. There is also the local business environment that might need to be considered. Identifying a list of factors that impacts the content and process of initiating a new program would be useful to institutions just beginning to consider adopting some sort of entrepreneurship program.

FINAL OBSERVATIONS

The two universities reviewed in this study have a range of entrepreneurship education activities and events that differ in the way they are organized and monitored. However, the case studies at both universities indicate the importance of a joint platform and communication across the university, so that entrepreneurship education is well-understood, and the communication channels are in place for all internal and external stakeholders involved.

Looking at the full picture at both universities, university-wide entrepreneurship education has a significant place within the university's entrepreneurship ecosystems, and it is supported by the university's governance, students, faculty, alumni, the regional and local municipalities, and the business community. Both universities started with establishing one magnet.

Today the University of Michigan has developed a radiant model with its administration center being outside schools and colleges. The radiant model offers the potential to grow beyond the six schools that are currently involved to the remaining thirteen schools and colleges that may join in the future. Within the radiant model, students who study discipline-specific entrepreneurship are also provided with opportunities to engage in interdisciplinary teams through co-curricular activities.

Students at the University of Kentucky are provided entrepreneurship basics by iNET at the College of Communication and Information, where they can study in multidisciplinary teams. iNet together with the Von Allmen Entrepreneurship Center create two magnets. However, it is the investigators' opinion that this is insufficient for such a large public, even though iNet has the potential to develop new programs. The Kauffman Campuses Initiative (Torrance, 2013) and the experience at the University of Michigan seem to demonstrate the advantages of the radiant model.

Overall, the observations made at both universities indicate a critical factor to successful programs is creating a leadership structure to coordinate all events and activities across the departments within a school or college both in the magnet and radiant models. (CEEPS Report, 2007) Creating such a leadership structure for its part requires support from the school's or university's governance.

While focused entrepreneurship education programs are fairly well developed at both universities, entrepreneurship course offerings for non-business students are unsystematic. It is unclear how students are informed about entrepreneurship course offerings across the university. Similarly, the faculty members teaching entrepreneurship courses do not have a common platform to work together and share experiences. Without a common platform, cooperation among the faculty members is hardly possible, especially when entrepreneurs and practitioners are engaging in teaching either in running a course or providing guest lectures that is practiced by the universities reviewed. So far, many initiatives are implemented based purely on the enthusiasm and the voluntary work by individual faculty members. Moreover, faculty members claim that there is little understanding in the way entrepreneurship education is perceived by colleagues from other faculties because entrepreneurship education is mainly perceived as an academic discipline within

social sciences. Similarly, a myth of entrepreneurship as a competence not possible to be taught has created certain skepticism that originates from the insufficient communication at all levels (The Kauffman Foundation 2008, Torrance 2013).

Entrepreneurship is a key driver of the U.S. economy. Wealth and a high majority of jobs are created by small businesses started by entrepreneurially minded individuals, many of whom go on to create big businesses. Entrepreneurs besides creating new businesses, add to the national income, create social change, and they also are active investors in community projects and provide financial support to local charities. This enables further development beyond their own ventures (Seth, n.d.).

According to Gallup (Clifton, 2015) the U.S. now ranks 12th among developed nations in terms of business startup activity. Countries such as Hungary, Denmark, Finland, New Zealand, Sweden, Israel and Italy all have higher startup rates than America does. Business startups outpaced business failures by about 100,000 per year until 2008. But in the past six years, that number suddenly has reversed, and the net number of U.S. startups versus closures is minus 70,000. But even more important to American's future economic growth is how we manage what has always been an American strong point -- Innovation. Innovation by itself does not lead to growth. Rather it is when the innovation becomes part of a business model developed by an entrepreneur and sold to customers does it really add strength to our economy.

The importance of educating the next generation of entrepreneurs in the necessary concepts and competencies is crucial to the United States' employment picture and its continued economic success. This study reinforces the fact that the institutions of higher education need to be the key players in this development.

ENDNOTES

1 Fulbright and Baltic-American Freedom Foundation grants have brought E. Frank to the Stockholm School of Economics in Riga and D. Pauna to University of Michigan and University of Kentucky.

REFERENCES

Allinson, R. (2013). Entrepreneurial universities – a European guiding framework. Presented to *University-Business Cooperation Project Conference*, University of Cantabria, Spain. Retrieved March 1, 2014 from http://www.cise.es/IIEIEE/material/28/REBECCA_ALLINSON.pdf

Antal, N., B. Kingma, D. Moore & D. Streeter (2014). University-Wide Entrepreneurship Education. In D. F. Kuratko, S. Hoskinson & A. R. Wheeler (eds.) *Innovative Pathways for University Entrepreneurship in the 21st Century. Advances in the Study of Entrepreneurship and Innovation and Economic Growth*, 24, 227-254. Emerald Group Publishing Limited

Brush, C. G. (2014). Exploring the Concept of an Entrepreneurship Education Ecosystem. In D. F. Kuratko, S. Hoskinson & A. R. Wheeler (eds.) *Innovative Pathways for University Entrepreneurship in the 21st Century. Advances in the Study of Entrepreneurship and Innovation and Economic Growth*, 24, 25-39. Emerald Group Publishing Limited.

Chen, L. (July 30, 2014) *Startup Schools: America's Most Entrepreneurial Universities 2014*. Forbes. Retrieved August 25, 2015 from http://www.forbes.com/sites/liyanchen/2014/07/30/startup-schools-americas-most-entrepreneurial-universities/

Clifton, J. (2015) *American Entrepreneurship: Dead or Alive**?*** Business Journal Retrieved August 4, 2015 from http://www.gallup.com/businessjournal/180431/american-entrepreneurship-dead-alive.aspx

Committee on Entrepreneurial Environment and Programs for Students (2007). *CEEPS Report: Empowering Entrepreneurial Students*. University of Michigan Retrieved March 3, 2014 from http://www.cfe.umich.edu/sites/default/files/CEEPS_FINAL%5B1%5D.pdf

Fayolle, A. (2009). Entrepreneurship Education in Europe: Trends and Challenges. Presented to *Universities, Innovation and Entrepreneurship: Good Practice Workshop*, Halle, Germany. Retrieved March 8, 2014, from http://www.oecd.org/regional/leed/43202553.pdf

Fayolle, A. & D. T. Redford (eds), (2014). *Handbook on the Entrepreneurial University*. Cheltenham: Edward Elgar Publishing, Incorporated.

Gibb, A.A. (2005). *Towards the Entrepreneurial University. Entrepreneurship Education as a lever for change.* A Policy Paper for the National Council for Graduate Entrepreneurship (NCGE) UK. Retrieved June 10, 2014 from http://ncee.org.uk/wp-content/uploads/2014/06/towards_the_entrepreneurial_university.pdf

Graham, R. (2014). *Creating University-based Entrepreneurial Ecosystems – Evidence from Emerging World Leaders*. Massachusetts Institute of Technology, Skoltech Initiative. Retrieved January 2, 2015 from http://www.rhgraham.org/RHG/Recent_publications_files/MIT%3ASkoltech%20entrepreneurial%20ecosystems%20report%202014%20_1.pdf

MEntrepreneur. Fall 2013/Winter 2014 Year Review. Ross School of Business, Zell Lurie Institute. Retrieved August 30, 2014 from http://www.zli.bus.umich.edu/pdf_files/Zell%20Lurie%20Year%20in%20Review%202013_14.pdf

Morris, M. & D. F. Kuratko (2014). Building University 21st Century Entrepreneurship Programs That Empower and Transform. In D. F. Kuratko, S. Hoskinson & A. R. Wheeler (eds.) *Innovative Pathways for University Entrepreneurship in the 21st Century. Advances in the Study of Entrepreneurship and Innovation and Economic Growt*h, 24, 1-24. Emerald Group Publishing Limited

Peña, V., M. Transue, A. Riggieri, S. Shipp & R. V. Atta (2010). *A Survey of Entrepreneurship Education Initiatives*. US Institute for Defense Analysis, Science & Technology Policy Institute. Retrieved May 5, 2014 from https://www.ida.org/~/media/Corporate/Files/Publications/STPIPubs/ida-nsd-4091.ashx

Potter, J. (Eds.), (2008). *Entrepreneurship and Higher Education*. OECD Publishing.

Ranga, M. & H. Etzkowitz (2013). Triple Helix Systems: An Analytical Framework for Innovation Policy and Practice in the Knowledge Society. *Industry and Higher Education*, 27(4), 237-262.

Report 2014. Samuel Zell & Robert H. Lurie Institute for Entrepreneurial Studies. Retrieved February 10, 2015 from http://www.zli.bus.umich.edu/pdf_files/ZLI_Report_2014-Final-web.pdf

Seth, S. *Why Entrepreneurs are Important to the Economy.* Investopedia. Retrieved on August 4, 2015 from http://www.investopedia.com/articles/personal-finance/101414/why-entrepreneurs-are-important-economy.asp, n.d.

Solomon, G. T. (2014). *The National Survey of Entrepreneurship Education: An Overview of 2012-2014 Survey Data*. The George Washington University Center for Entrepreneurial Excellence. Retrieved on February 10, 2015 from http://www.nationalsurvey.org/files/2014KauffmanReport_Clean.pdf

Streeter, D. H., J. P. Jaquette, Jr. & K. Hovis (2004). University-wide Entrepreneurship Education: Alternative Models and Current Trends. *Southern Rural Sociology*, 20(2), 44-71.

Streeter, D. H., R. J. Kher & P. John, Jr. (2011). University-wide Trends in Entrepreneurship Education and the Rankings: a Dilemma. *Journal of Entrepreneurship Education*. 14, 75-92.

The Kauffman Foundation (2008). *Entrepreneurship in American Higher Education. A Report from the Kauffman Panel on Entrepreneurship Curriculum in Higher Education*. Ewing Marion Kauffman Foundation. Retrieved December 11, 2013 from http://www.kauffman.org/what-we-do/research/2013/08/entrepreneurship-in-american-higher-education

The Kauffman Foundation (2015).*The Future of Entrepreneurship: Millennials and Boomers Chart the Course for 2020*. Ewing Marion Kauffman Foundation. Retrieved March 10, 2015 from http://www.kauffman.org/~/media/kauffman_org/resources/2015/soe/2015_state_of_entrepreneurship_address.pdf

Torrance, W. E. F. (2013). *Entrepreneurial Campuses. Action Impact, and Lessons Learned from the Kauffman Campus Initiative*. Ewing Marion Kauffman Foundation. Retrieved December 11, 2013 from http://www.kauffman.org/~/media/kauffman_org/research%20reports%20and%20covers/2013/08/entrepreneurialcampusesessay.pdf

University of Kentucky 2014 Financial Statements (2014). Retrieved on April 2, 2015 from http://www.uky.edu/EVPFA/Controller/Docs/2014ConsolidatedStatement.pdf

University of Michigan 2010 Accreditation (2010). Retrieved on May 8, 2014 from http://www.accreditation.umich.edu/mission/index.php

University of Michigan 2014 Annual Report (2014). Retrieved March 10, 2015 from http://www.finance.umich.edu/reports/2014/pdf/UM_Financial_Report_2014-hires.pdf

Valerio, A., B. Parton & A. Robb (2014). *Entrepreneurship Education and Training Programs around the World: Dimensions for Success.* Washington, DC: World Bank.

Viña, L. Y. & P. Flawn (2014). Key Models of Effective Entrepreneurship Education. In CIPE Report *Creating the Environment for Entrepreneurial Success,* 33-36. Retrieved February 4, 2015 http://www.cipe.org/sites/default/files/publication- docs/CIPE_Report_Creating_the_Environment_for_ Entrepreneurial_Success_1113.pdf

WHY DO NASCENT ENTREPRENEURS FAIL? THE IMPACTS OF NASCENT ENTREPRENEURS' OPTIMISM AND EFFORTS ON VENTURE STATUS

Shanshan Qian, Towson University
Chao Miao, Wilkes University

ABSTRACT

How entrepreneurs' optimism influences business performance has been examined in prior studies. Yet, this study contributes to the current literature by investigating the influence of optimism on nascent entrepreneurs' venture status. In addition, since the theoretical link between optimism and venture status remains unclear, we also examine how effort - a construct that consists of work on nascent entrepreneurs' own business and on other businesses - mediates the relationship between optimism and venture status. Our findings reveal that optimistic nascent entrepreneurs do exert efforts on other businesses.
Keywords: optimism, nascent entrepreneurs, effort, venture status.

INTRODUCTION

Optimism, one of the psychological capitals, enriches our understanding toward entrepreneurs. Researchers have found that entrepreneurs are more optimistic than general managers (Forbes, 2005) and they perceive fewer risks (Simon, Houghton, & Aquino, 2000). This explains why some people are more likely to be entrepreneurs while others are not (Shane & Venkataraman, 2000). However, studies have also demonstrated that high level of optimism will adversely influence venture performance. For example, Hmieleski and Baron's (2009) findings supported that entrepreneurs who are optimistic have unsound venture performance. Thus, optimism is generally viewed as a negative precursor of firm performance.

Previous studies have shown that optimism leads to negative outcomes; nevertheless, we perceive three gaps remain in the current literature. First, cross-sectional data was used in prior studies to examine the relationship between entrepreneurs' optimism and venture performance (Hmieleski & Baron, 2009). We argue that optimism may have a lagged effect on venture performance and this can only be tested by longitudinal data. Second, it is erroneous to confound optimism with overconfidence (Trevelyan, 2008). Many extant studies utilized thinking or estimation as an outcome of optimism rather than established the link between optimism and behavior to explain venture performance, thereby blurring optimism with overconfidence. For instance, Cassar (2010) tested how ex ante expectations of individual map onto actual ex post realizations and utilized estimations as outcomes of optimism rather than achieved behaviors. Optimism is a trait that generates confidence so that positive outcomes may occur. Optimists tend to hold positive expectancies for their future (Scheier, Carver, & Bridges, 1994). Further, these positive expectations will stimulate efforts towards tasks that generate the achievement of goals and aspirations (Higgins, 1998). Overconfidence, on the other hand, is a situation specific process (Griffin & Varey, 1996) that influences thinking (Bandura, 1997). Third, previous studies only measured entrepreneurs' efforts on their own venture creation (e.g., Edelman & Yli-

Renko, 2010). However, we argue that we should take a comprehensive perspective on entrepreneurs' behavior. Thus, we do not know yet about whether optimism will influence effort behavior in other direction.

This study fills extant research gaps by studying optimism and behavior. Specifically, this study explores the relationship between nascent entrepreneurs' optimism and venture status. Nascent entrepreneurs are defined as people who do not have previous entrepreneurial experience. In addition, efforts generated by optimism influence work outcomes (Latham & Pinder, 2005; Locke & Latham, 1990, 2002; Staw & Barsade, 1993). Hence, due to the theoretical and empirical voids in previous studies that measured overconfidence as optimism and that did not capture direct behaviors of optimism, this study answers the research question of "how does optimism influence nascent entrepreneurs' venture status?" Moreover, effort - an outcome of optimism and a predictor of venture status - is included in this study. Effort here refers to work effort, meaning the expenditure of physical and mental effort in the workplace (Douglas & Shepherd, 2002).

Furthermore, we address the aforementioned theoretical and empirical gaps by examining nascent entrepreneurs' optimism and their effort on ventures by using Panel Study of Entrepreneurial Dynamics II (PSED II). PSED II features its coverage of American adults, who are involved in the process of starting new ventures. PSED II longitudinally surveyed nascent entrepreneurs throughout the startup process, thus allowing us to obtain data on ex ante optimism, ex post effort, and venture status. PSED II addressed optimism in real situation and thus samples are less influenced by experimental contexts (Gatewood, Shaver, Powers, & Gartner, 2002).

The paper proceeds in the following manner. First, we identify influences of optimism, referring to positive expectations about future, on nascent entrepreneurs' venture status. Second, we review the literature on effort and propose hypotheses linking effort and venture status. Third, we use structural equation modeling and apply PSED II to test hypotheses. Finally, we discuss the results of empirical tests, limitations, future research, and make a conclusion.

THEORETICAL BACKGROUND AND HYPOTHESES

Entrepreneurs' optimism and venture status

Entrepreneurs' psychological capital, defined as psychic resource used to satisfy the emotional challenges of the moment (Csikszentmihalyi, 2004), was found to explain a significant amount of variance in new venture performance. Optimism, defined as positive expectancies for one's future (Scheier, Carver, & Bridges, 1994), is one of the psychological capitals (Luthans & Youssef, 2004). Researchers have identified that entrepreneurs are more optimistic than general managers (Forbes, 2005). For example, Cooper, Woo and Dunkelberg (1988) found that extreme optimism is pervasive among entrepreneurs. Lovallo and Kahneman (2003) argued that a disproportionate number of entrepreneurs are optimistic.

Substantial evidence confirmed that overly optimistic individuals have a generalized positive outlook toward the future (Carver & Scheier, 2003; Cassar, 2010; Scheier & Carver, 1985). Such biased expectations will interfere with entrepreneurs' decision making and judgment (Geers & Lassiter, 2002; Segerstrom & Solberg Nes, 2006). As a result, entrepreneurs will misjudge their ventures' conditions, further influencing ventures' development. For example, Hmieleski and Baron (2009) demonstrated that entrepreneurs' optimism is negatively related to

firm performance because highly optimistic individuals hold unrealistic expectations. Taking nascent entrepreneurs as study subjects, we assume that optimism will affect entrepreneurs' venture success in the long run. Thus, we argue that nascent entrepreneurs who are overly optimistic may have low probability of venture success.

H1 Nascent entrepreneurs' optimism is negatively related to business success.

Entrepreneurs' optimism and behavior

Optimism, as a mental construct, can dynamically influence human action (Bruner, 1990; Fiske & Taylor, 1991). Although previous studies have addressed the link between entrepreneurs' optimism and firm performance, few studies have examined the correlation between cognition and behavior. This calls us to study how the optimism regarding one's immediate circumstances plays in entrepreneurship and relates it to behaviors (Gregoire, Corbett, & McMullen, 2011).

In general, people hold optimism which is influenced by many sources of information. Regardless of their sources, the positive expectations with which people return to action are reflected in subsequent behaviors (Carver & Scheier, 2001). For example, if an individual holds optimism about successful outcomes, he or she will exert efforts toward the goal. However, entrepreneurs are excessively optimistic, thereby causing them to have optimism bias. This high level of optimism in general will exert negative effects on the judgment and decision making of individuals (Hmieleski & Baron, 2009). Entrepreneurs will exert less effort because they perceive that their ventures will be successful. Thus, entrepreneurs who are optimistic will assume lower risks which may jeopardize the survival of their firms (Lovallo & Kahneman, 2003). We posit that this less effort explains why optimistic entrepreneurs face high rate of failures. Hypothesis 2a states that entrepreneurs who are optimistic are more likely to have failed ventures because they invest less effort on their own ventures.

H2a Nascent entrepreneurs' effort on their ventures mediates the effect of optimism on venture status. That is, nascent entrepreneurs who are optimistic are less likely to exert effort on their own ventures and thus are more likely to have failed ventures.

In addition to working on their own ventures, we argue that optimistic nascent entrepreneurs may spend their efforts on other entrepreneurial activities because more optimistic entrepreneurs are more likely to take entrepreneurial activities (Krueger, 2005). Specifically, optimistic entrepreneurs tend to see more opportunities everywhere they look (Segerstrom & Solberg Nes, 2006). They believe that they have the capabilities to achieve success. However, they may look for potential opportunities which are not realistically feasible. For instance, optimistic entrepreneurs are more likely to take risks on ventures (Gibson & Sanbonmatsu, 2004) and overestimate that their goals will be achieved. As a result, this effort on other ventures will cause entrepreneurs not to focus on their ventures, thus causing their own ventures' to fail.

H2b Nascent entrepreneurs' effort on other ventures mediates the effect of optimism on venture status. That is, nascent entrepreneurs who are optimistic are more likely to invest effort on other ventures and thus are more likely to have their own ventures fail.

METHOD

Samples

We used data from the Panel Study of Entrepreneurial Dynamics II (PSED II), which is a longitudinal investigation involving more than 100 entrepreneurship scholars. PSED II began to screen in 2005-2006 with two follow-up interviews. It studied a representative sample of the U.S. population using random digit dialing (RDD) (Gartner, Shaver, Carter, & Reynolds, 2004) and telephone survey interviews followed by a mail questionnaire. The PSED II surveyed 1,214 individuals from the U.S. mainland, aged 18 or older, who were randomly selected. The information obtained includes data on the nature of those active nascent entrepreneurs, the activities undertaken during the start-up process, and the characteristics of start-up efforts that become new firms, thereby mitigating potential survivorship and recall biases (Conway & Ross, 1984; Hawkins & Hastie, 1990).

PSED II consists of three phases. The first is the identification of a representative sample of those actively involved in the firm creation process, named nascent entrepreneurs. The second phase is initial detailed interview with nascent entrepreneurs. The third phase includes annual follow-up interviews. To identify nascent entrepreneurs, each respondent was asked a series of questions about his or her current activities. These three questions are: (1) Are you, alone or with others, currently trying to start a new business, including any self-employment or selling any goods or services to others? (2) Are you, alone or with others, currently trying to start a new business or new venture for your employer, an effort that is part of your normal work? (3) Are you, alone or with others, currently the owner of a business you help manage, including self-employment or selling any goods or services to others? A respondent could answer "yes" or "no" to each question, and those who responded "yes" to any or all of these questions are considered as potential nascent entrepreneurs. In addition, these nascent entrepreneurs were asked a series of three additional questions to determine if their ventures are true nascent ventures: they performed some start-up activity in the past twelve months, they own all or part of the new firm, and the nascent venture should not have experienced positive cash flow for a period of the past twelve months (Reynolds, 2011). According to these additional questions, those who meet these three criteria are considered nascent entrepreneurs and invited to participate in a detailed interview (Reynolds, 2011). Finally, those 188 respondents who answered yes to the above questions were considered eligible for the nascent entrepreneur interview. There are 105 males in this sample.

Measures

Optimism can influence human action from two different sets of cognitive factors: one factor originates from the perception and interpretations of the circumstances when and where action is to take place and the other starts from the cognitive "resources" that people bring to these circumstances, from their genetics to their knowledge and desire (Gregoire, Corbett, & McMullen, 2011). I use the PSED II to investigate nascent entrepreneurs' positive expectations about their venture growth, e.g., revenue and employees.

Optimism. Cassar (2010) used future sales and future employees as measures of expectations in the first full year of operation. Respondents were asked: "Once this new business is operational, what is the total revenue or income expected in the first twelve months of operation?" The other question describing optimism is number of employee: "During the first

year of operation, how many managers or employees, including exclusive subcontractors, will be working for this (new) business, not counting owners?" We make data into categorization and transformed data into 7-point scales (1 = *least optimistic* and 7 = *very optimistic*) according to nascent entrepreneurs' expectations on revenue and number of employees.

Effort. Since this paper focuses on psychical efforts that nascent entrepreneurs devoted, we use the questions asking hours invested in nascent entrepreneurs' own ventures and number of other ventures they put effort as indicators of effort. Regarding business hours, nascent entrepreneurs were asked: "How many hours in total have you devoted to this (new) business?" In addition, respondents were asked: "Besides the (new) business discussed in this interview, how many other business do you own?" Similar to optimism, we transform effort toward own ventures and effort invested in other ventures by 7-point scales (1 = *little effort* and 7 = *much effort*).

Venture status. Entrepreneurs self-reported whether the start-up was an operating business in the follow-up interviews at wave B, C, D, and E. They were asked to classify the current status of the start-up as a(n): (1) operating business; (2) active start-ups; (3) inactive start-up; or (4) no longer worked on by anyone. In this paper, we focus on two business statuses: operating and dead. Thus, those who reported operating business and actively involved in the business will be considered as operating businesses. Those who reported disengaged in the business will be viewed as inactive businesses. Those who no longer work on business and no other people are still involved are dead firms. We dummy code operating businesses firstly and dead businesses next.

Control variables. We only control gender because research has shown that males and females have different levels of optimism (Henry, 1994; Puri & Robinson, 2007). Gender is a dichotomous variable and was dummy coded as '1' for male and '0' for female.

Structural equation modeling

To test the hypotheses, we used AMOS to perform structural equation modeling (SEM). SEM is appropriate because it allows for simultaneous testing of multiple regression equations. In this study, we tested two mediators: effort on own ventures and effort on other ventures. Due to small sample size issue, we used bootstrapping in AMOS to enhance the power of tests. To estimate a complete structural model, we reported goodness-of-fit parameters, such as root mean square error of approximation (RMSEA), comparative fit index (CFI) (Bentler, 1990), Tucker-Lewis Index (TLI) (Tucker & Lewis, 1973), and chi-square. In general, Bentler's (1990) index is mostly used and TLI is commonly used as well (McDonald & Ho, 2002). The threshold of TLI and CFI above .90 and RMSEA less than .05 are considered as a "good" fit and RMSEA less than .08 is considered as "acceptable" fit (McDonald & Ho, 2002). The threshold criteria for each of the goodness-of-fit parameters are summarized in Table 1.

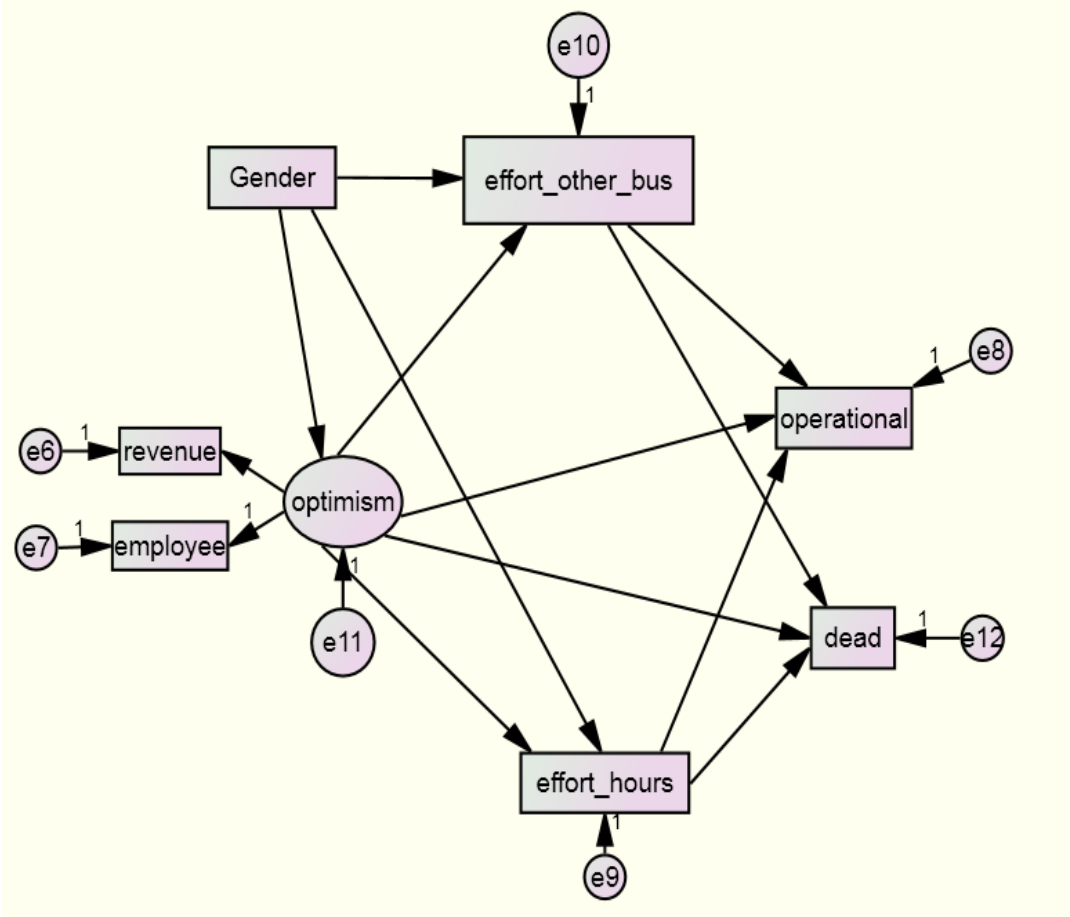
RESULTS

To see whether the proposed base model (Figure 1) is a model with good fit, we firstly examined a measurement model. We used three alternative and complementary fit indices: CFI (Bentler, 1990), TLI (Tucker & Lewis, 1973), and RMSEA to examine its model fit. The model has no Heywood case. Thus, we reported the evaluation of this model. The results of measurement model in Table 1 show that values for measurement model (CFI=1.00, TLI= .998,

RMSEA=.006) are consistently greater than their respective threshold (CFI=.90, TLI=.90, RMSEA=.05). Though chi-square = 4.026 and degree of freedom = 4 indicate that the model does not fit data well, the overall model still shows a good fit. Thus, we do not make any modification on measurement model.

Figure 1

BASE MODEL



In the second step, we added omitted paths to the base model. There were two paths, gender to operational business status and gender to dead business status. After running AMOS, however, we found that the model shows that the added specified paths are not statistically significant. In addition, chi-square difference between the base model and the model with added paths does not show statistical significance ($\Delta\chi^2 = 2.928$, $\Delta df = 2$). Thus, base model is better than the model with omitted path. We decided not to add two additional paths.

Third, after running the base model in AMOS, we found that according to modification indices, error term of operational business status and that of dead business status show the covariance = 5.832. Though it is less than 6.0, this covariance is still sizable and we correlated these two error terms and examined whether the model fit would be improved. Further, both

operational and dead exhibit business status, which is reasonable to correlate them. We ran the final model and the model fit indices suggest that the model is greatly improved. Additionally, chi-square difference between the base model and the final model shows that it is statistically significant ($\Delta\chi^2 = 6.048$, $\Delta df = 1$, $p < .05$). As a result, the final model (Figure 2) with lower degree of freedom is preferred. The results of each model were presented in Table 1.

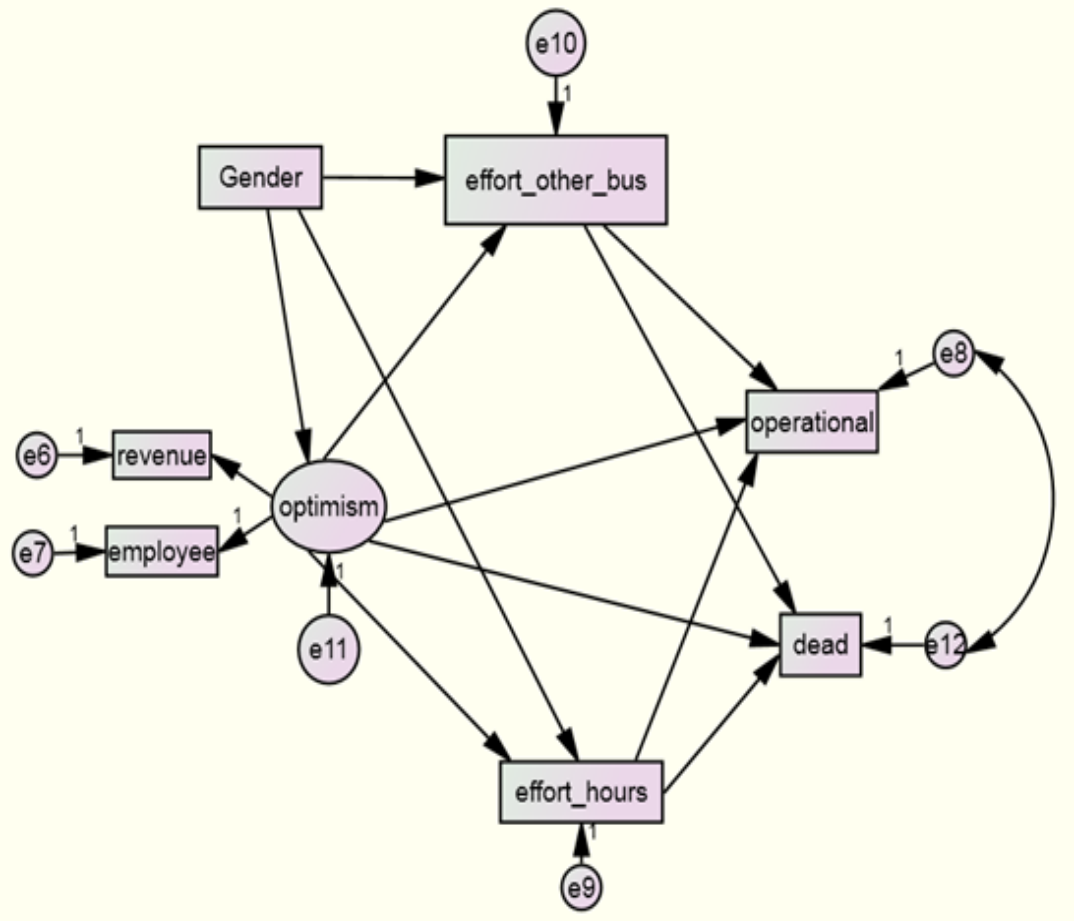
Table 1
MODEL COMPARISON

Models	Chi-square	df	CFI	TLI	RMSEA (CI)	Chi-square difference	df difference
Model 1: Measurement model	4.026	4	1.00	.998	.006 (.000 - .111)		
Model 2: Add omitted paths	10.131	6	.938	.783	.061(.000 - .123)		
Model 3: Base model	13.059	8	.924	.801	.58 (.000 - .113)	2.928	2
Model 4: Final model	7.011	7	.924	.801	.003 (.000 - .090)	6.048*	1
Goodness-of-fit threshold			>.90	>.90	<.05		

Note: CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; df = degree of freedom; RMSEA = root mean square error of approximation; CI = confidence interval.
*p< .05

Figure 2

FINAL MODEL



We used the final model to conduct SEM. In table 2, we presented descriptive statistics and sample correlations of each variable. On average, nascent entrepreneurs exert medium level of effort on their ventures. In addition, they also spend some effort on other businesses, showing that entrepreneurs search for other opportunities. The optimistic expectations toward venture revenue and number of employees are not as high as we expected.

Table 2
SUMMARY OF DESCRIPTIVE STATISTICS AND CORRELATIONS

Variable	Mean	S.D.	1	2	3	4	5	6	7
1. gender	1.44	.50	1.00						
2. effort-other ventures	1.46	.98	.04	1.00					
3. effort-own venture	3.94	1.66	.12	.003	1.00				
4. dead venture	1	.19	-.05	.02	-.01	1.00			
5. operational	1	.49	-.17	-.06	-.04	-.16	1.00		
6. optimism-revenue	2.27	1.08	.18	.27	-.02	.01	-.13	1.00	
7. optimism-employee	1.68	.91	.17	.27	.04	-.13	-.09	.43	1.00

Note: N=188

Next, we used AMOS to run SEM and used bootstrapping to examine the sample mediation effects. After examining standardized total effects, standard errors, and *p* value from AMOS results, direct, indirect, and total standardized effects were presented in Table 3. In addition, direct, indirect, and total unstandardized effects were shown in Table 4. From the results, we found most of the paths are not statistically significant. We found no statistical significance of optimism on venture status. In addition, effort has no mediating effect between optimism and venture status. Only the influence of optimism on effort invested on other businesses is statistically significant (p =.001). The estimated direct effect of optimism on effort invested in other ventures is .438, indicating that optimism is positively related to effort on other ventures. In other words, when nascent entrepreneurs have one unit increase in optimism, they will exert more effort on other ventures.

Table 3
STANDARDIZED EFFECTS (DIRECT EFFECTS, INDIRECT EFFECTS, AND TOTAL EFFECTS)

Variable	Direct effects			Indirect effects			Total effects		
	Estimate (90% CI)	SE	*p*-value	Estimate (90% CI)	SE	*p*-value	Estimate (90% CI)	SE	*p*-value
X1 on X4	-.195 (-.385~.001)	.121	.099	.009 (-.049~.095)	.048	.779	-.187 (-.338~.011)	.099	.073
X1 on X5	-.123 (-.314~.075)	.121	.322	.033 (-.025~.129)	.045	.334	-.090 (-.260~.079)	.104	.366
X1 on X2	-.019 (-.192~144)	.103	.823	.000 (.000~.000)	.000	...	-.019 (-.192~.144)	.103	.823
X2 on X4	-.040 (-.157~.091)	.074	.639	.000 (.000~.000)	.000	…	-.040 (-.157~.091)	.074	.639
X2 on X5	-.009 (-.127~.110)	.073	.883	.000 (.000~.000)	.000	…	-.009 (-.127~.110)	.073	.883
X1 on X3	.438 (.261~.609)	.110	.001	.000 (.000~.000)	.000	…	.438 (.261~.609)	.110	.001
X3 on X4	.018 (-.122~.181)	.093	.805	.000 (.000~.000)	.000	…	.018 (-.122~.181)	.093	.805
X3 on X5	.075 (-.064~.228)	.089	.377	.000 (.000~.000)	.000	…	.075 (-.064~.228)	.089	.377

Note: X1 = optimism; X2 = effort on own venture; X3 = effort on other ventures; X4 = operational venture; X5 = dead venture.

Table 4
UNSTANDARDIZED EFFECTS (DIRECT EFFECTS, INDIRECT EFFECTS, AND TOTAL EFFECTS)

Variable	Direct effects			Indirect effects			Total effects		
	Estimate (90% CI)	SE	*p*-value	Estimate (90% CI)	SE	*p*-value	Estimate (90% CI)	SE	*p*-value
X1 on X4	-.062 (-.142~.001)	.048	.103	.003 (-.016~.033)	.018	.777	-.060 (-.132~-.006)	.038	.062
X1 on X5	-.101 (-.260~.068)	.104	.310	.027 (-.021~.110)	.041	.335	-.074 (-.210~.075)	.088	.344
X1 on X2	-.052 (-.596~.393)	.307	.827	.000 (.000~.000)	.000	...	-.052 (-.596~.393)	.307	.827
X2 on X4	-.005 (-.018~.010)	.009	.632	.000 (.000~.000)	.000	…	-.005 (-.018~.010)	.009	.632
X2 on X5	-.003 (-.038~.032)	.022	.885	.000 (.000~.000)	.000	…	-.003 (-.038~.032)	.022	.885
X1 on X3	.723 (.397~1.154)	.265	.001	.000 (.000~.000)	.000	…	.723 (.379~1.154)	.265	.001
X3 on X4	.003 (-.024~.036)	.018	.801	.000 (.000~.000)	.000	…	.003 (-.024~.036)	.018	.801
X3 on X5	.037 (-.032~.115)	.045	.383	.000 (.000~.000)	.000	…	.037 (-.032~.115)	.045	.383

Note: X1 = optimism; X2 = effort on own venture; X3 = effort on other ventures; X4 = operational venture; X5 = dead venture.

DISCUSSION

Previous studies have confirmed that entrepreneurs are over optimistic, causing them face high failure rate. However, no studies have taken efforts toward other businesses into consideration. This study links optimism, as a cognitive attribute, with effort, and identify their influence on venture status. We predict that optimistic entrepreneurs may exert less effort on their own ventures and make effort on other venture opportunities, which explain why entrepreneurs fail. This study defines effort as work toward entrepreneurs' own ventures and work invested into other ventures. This perspective may well explain why nascent entrepreneurs fail their own ventures.

Although most of the hypotheses were not supported, this study shows an interesting finding that optimistic nascent entrepreneurs do invest efforts on other ventures. The more optimistic entrepreneurs are, the more efforts they will make on other businesses. This finding coincides with Segerstrom and Solberg Nes's (2006) argument that optimistic entrepreneurs tend to see more opportunities everywhere they look. Thus, this study implies that nascent entrepreneurs who are optimistic about their ventures' revenue and number of employee will exert efforts on other ventures. They will try to take more risks and look for other opportunities.

Limitations and future research

This study has several limitations. First, although this study takes longitudinal data source PSED II and uses optimism ex ante, effort at wave A and venture status at wave B, C, D or E, the influence of optimism and effort on venture status can be better understood if we could use specific performance at shorter time period. Venture status is a long run consequence and we think that shorter period performance may better reflect whether effort from optimism influences

venture performance. Entrepreneurs may adjust their level of efforts according to performance fluctuation.

Second, more items are required to describe optimism and effort. This study only considers optimism toward revenue and employees in the first twelve months of operation. However, there may be other optimism items which will influence effort and venture status. We suggest that future studies may consider using item scales and survey entrepreneurs to examine nascent entrepreneurs' optimism. In addition, CFA in SEM can help us obtain information on dimensions of optimism.

Third, more control variables are needed. Environment will be a factor that influences nascent entrepreneurs' optimism and effort. Optimism may be flexible and influenced by environment, thereby causing entrepreneurs' effort flexible. Future studies may control environmental factors to examine how optimism influences behavior and venture status. In addition, nascent entrepreneurs' self-efficacy may interact with optimism. Due to the limitation of data, we could not test this effect in this study. Future studies can incorporate more individual level variables in the study.

CONCLUSION

Based on the literature on optimism, we study the effect of optimism on nascent entrepreneurs' behavior, which is effort on their own ventures and on other ventures. Optimistic entrepreneurs will make less effort on their businesses while looking for other opportunities. Though this study does not support the relationship between optimism on venture status and effort on venture status, we reason that using venture performance in short period would be a better variable to test this relationship. In addition, effort and optimism can be extended into other categories. We think that research questions regarding entrepreneurs' optimism are important and should await more studies for further exploration.

REFERENCES

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: Freeman.

Bentler, P.M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107,* 238–246.

Bruner, J. (1990). *Acts of meaning*. Cambridge, MA: Harvard University Press.

Carver, C.S. & Scheier, M.F. (2001). Optimism, pessimism, and self-regulation. In E. C. Chang (Ed.), *Optimism and pessimism: Implications for theory, research, and practice (*pp. 31-51). Washington, DC: American Psychological Association.

Carver, C.S. & Scheier, M.F. (2003). Optimism. In S. J. Lopez, & C. R. Snyder (Eds.), *Handbook of positive psychological assessment: A handbook of models and measures* (pp. 75-89). Washington, DC: American Psychological Association.

Cassar, G. (2010). Are individuals entering self-employment overly optimistic? An empirical test of plans and projections on nascent entrepreneur expectations. *Strategic Management Journal, 31,* 822-840.

Conway, M., & Ross, M. (1984). Getting what you want by revising what you had. *Journal of Personality and Social Psychology, 47,* 738–48.

Cooper, A.C., Woo, C.Y., & Dunkelberg, W.C. (1988). Entrepreneurs' perceived chances for success. *Journal of Business Venturing, 3,* 97-108.

Csikszentmihalyi, M. (2004). *Good business: Leadership, flow, and the making of meaning*. New York: Penguin Group.

Douglas, E.J., & Shepherd, D.A. (2002). Exploring investor readiness: Assessments by entrepreneurs and investors in Australia. *Venture Capital: An International Journal of Entrepreneurial Finance, 4,* 219-236.

Edelman, L., & Yli-Renko, H. (2010). The impact of environment and entrepreneurial perceptions on venture-creation efforts: Bridging the discovery and creation views of entrepreneurship. *Entrepreneurship Theory and Practice, 34,* 833-856.

Fiske, S.T., & Taylor, S.E. (1991). *Social cognition.* New York: McGraw Hill.

Forbes, D.P. (2005). Are some entrepreneurs more overconfident than others? *Journal of Business Venturing, 20,* 623-40.

Gartner, W.B., Shaver, K.G., Carter, N.M., & Reynolds, P.D. (2004). *Handbook of Entrepreneurial Dynamics: The Process of Business Creation*. Thousand Oaks, CA: Sage Publications.

Gatewood, E.J., Shaver, K.G., Powers, J.B., & Gartner, W.B. (2002). Entrepreneurial expectancy, task effort and performance. *Entrepreneurship Theory and Practice, 27,* 187-206.

Geers, A.L., & Lassiter, G.D. (2002). Effects of affective expectations on affective experience: The moderating role of optimism-pessimism. *Personality and Social Psychological Bulletin, 28,* 1026-1039.

Gibson, B., & Sanbonmatsu, D.M. (2004). Optimism, pessimism, and gambling: The downside of optimism. *Personality and Social Psychological Bulletin, 30,* 149-160.

Gregoire, D., Corbett, A.C., & McMullen, J.S. (2011). The cognitive perspective in entrepreneurship: An Agenda for future research. *Journal of Management Studies, 48,* 1443-1477.

Griffin, D.W., & Varey, C.A. (1996). Towards a consensus on overconfidence. *Organizational Behavior and Human Decision Processes, 65,* 227-231.

Hawkins, S.A., & Hastie, R. (1990). Hindsight: biased judgments of past events after the outcomes are known. *Psychological Bulletin, 107,* 311-327.

Henry, R.A. (1994). The effects of choice and incentives on the overestimation of future performance. *Organizational Behavior and Human Decision Processes, 57,* 210-225.

Higgins, E.T. (1998). Promotion and prevention: regulatory focus as a motivational principle. In Zanna, M. P. (Ed.), *Advances in Experimental Social Psychology* (pp. 1-46). New York, NY: Academic Press.

Hmieleski, K.M., & Baron, R.A. (2009). Entrepreneurs' optimism and new venture performance: A social cognitive perspective. *Academy of Management Journal, 52,* 473-488.

Krueger, N.F. (2005). The cognitive psychology of entrepreneurship. In Z. J. Acs, & D. B. Audretsch (Eds.), *Handbook of entrepreneurship research: An interdisciplinary survey and introduction* (pp. 105-140). Netherlands: Kluwer Academic Publishers.

Latham, G. P., & Pinder, C. C. (2005). Work motivation theory and research at the dawn of the twenty-first century. *Annual Review of Psychology, 56,* 485-516.

Locke, E.A., & Latham, G.P. (1990). *A theory of goal setting and task performance*. Englewood Cliffs, NJ: Prentice Hall.

Locke, E.A., & Latham, G.P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American Psychologist, 57,* 705-717.

Lovallo, D., & Kahneman D. (2003). Delusions of success: How optimism undermines executives' decisions. *Harvard Business Review, 81*, 56-63.

Luthans, F., & Youssef, C.M. (2004). Human, social, and now positive psychological capital management: Investing in people for competitive advantage. *Organizational Dynamics, 33,* 143-160.

McDonald, R.P., & Ho, M.R. (2002). Principles and practice in reporting structural equation analyses. *Psychological Methods, 7,* 64-82.

Puri, M., & Robinson, D. T. (2007). Optimism and Economic Choice. *Journal of Financial Economics, 86,* 71-99.

Reynolds, P.D. (2011). Informal and early formal financial support in the business creation process: Exploration with the PSED II data set. *Journal of Small Business Management, 49,* 27-54.

Scheier, M.F., & Carver, C.S. (1985). Optimism, coping, and health: Assessment and implications of generalized outcome expectancies. *Health Psychology*, *4*, 219-247.

Scheier , M.F., Carver, C.S., & Bridges, M.W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A reevaluation of the life orientation test. *Journal of Personality and Social Psychology, 67,* 1063-1078.

Segerstrom, S.C., & Solberg Nes, L. (2006). When goals conflict but people prosper: The case of dispositional optimism. *Journal of Research in Personality, 40,* 675-693.

Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review, 25,* 217-226.

Simon, M., Houghton, S.M., & Aquino, K. (2000). Cognitive biases, risk perception, and venture formation: How individuals decide to start companies. *Journal of Business Venturing, 15,* 113-134.

Staw, B.M., & Barsade, S.G. (1993). Affect and managerial performance. A test of the sadderbut-wiser vs. happier-and-smarter hypotheses. *Administrative Science Quarterly, 38,* 304-333.

Trevelyan, R. (2008). Optimism, overconfidence and entrepreneurial activity. *Management Decision, 46,* 986-1001.

Tucker, L.R., & Lewis, C. (1973). A reliability coefficient for maximum likelihood factor analysis. *Psychometrika, 38,* 1–10.

PARACOSMIC THINKING: A NECESSARY COMPONET OF SUCCESSFUL ENTREPRNEURSHIP

John X. Volker, Austin Peay State University
Michael D. Phillips, Austin Peay State University

ABSTRACT

Research indicates a decline in adult and child creativity since 1990 in the United States. We examine a possible relationship between creative thinking and successful entrepreneurship in this paper. The link between paracosmic thinking and other factors in developing successful ventures is examined and a matrix model that we dub PE-EA of the construct is developed. We also develop a function that describes the entrepreneurial environment illustrated in our matrix. The concern expressed in this paper is that a decline in creativity scores will precede a subsequent decline in successful entrepreneurial ventures in the United States. We examine the possibility that increasing playing time and realism in video game play may preclude childhood paracosmic thinking and lower the creative capabilities of people who might have been inclined to generate ideas that could be transformed into successful ventures. We explain the need to incorporate creativity courses and activities that require creative thinking in business schools to help mitigate or even reverse some of the decline in creativity seen through testing.

INTRODUCTION

Kim (2011) discovered a disturbing trend; creativity scores of children and adults peaked in 1990 and have been declining since. We propose that creativity in the form of an ability to envision a paracosm is a necessary component of entrepreneurship and is vital to the development and sustainment of successful entrepreneurial business models. We further propose and develop a 2 x 2 matrix that illustrates the relationship between paracosm ideation and successful entrepreneurship. We discuss the implications of declining creativity scores to future entrepreneurship efforts and offer some suggestions for bringing creativity into business school classrooms.

LITERATURE REVIEW

A review of the entrepreneurship and small business literature reveals no evidence of a discussion or investigation of the role paracosmic thinking has in the entrepreneurial mind-set or of a connection between juvenile paracosmic thinking and subsequent entrepreneurial activity and success. However, the psychology and creativity literature contain articles that explore and refine the concept of paracosmic thinking as an ingredient in the development of creative activities in people. Root-Bernstein & Root-Bernstein (2006) found a positive connection between paracosmic thinking, or as they termed it world play, between the childhood lives of MacArthur Fellows and their subsequent adult creative lives. The link between creativity and entrepreneurship has been established by other scholars, i.e. (Audretsch & Belitski, 2013), (Campos, Rubio, Atondo, & Chorres, 2015), and (Daniel, Wennberg, & Berglund, 2016). Entrepreneurship is also discussed as a creative act by Amiable (1966) and Ward (2004). Root-

Bernstein & Root-Bernstein (2006) conclude the following: (1) world play, or paracosmic thinking, is more common than is thought and does appear to be prevalent in creative adult populations, (2) children participating in world play are, in reality, serving an apprenticeship in focus, discovery, persistence, synthesis, and modeling; all necessary for successful entrepreneurship, and (3) the act of world play provides exercises in problem solving that take place inside a self-consistent, alternate, modeled system. It does not matter how fantastical or realistic the world is. It is with the three points made by Root-Bernstein & Root-Bernstein (2006) that we develop the connection between world play and entrepreneurship.

Entrepreneurship scholars developed definitions that eclipse previous thinking and move entrepreneurship from the realm of small business management to a more unique and creative undertaking than just that of building a "little" big business. Berglund & Johansson (2007) introduce the idea of entrepreneurial activity as creation and good for society and further discuss entrepreneurship as futuristic industrial discourse. The theme of creativity as entrepreneurial activity is further supported by Daniel, Weinberg, & Berglund (2008). Baron (2000, p. 15) defines entrepreneurs as "individuals who identify opportunities and start new companies to develop them". The connection between entrepreneurship and creativity is further supported by Amiable (1997, p. 20) "the generation and implementation of novel, appropriate ideas to establish a new venture". Hunter (2012) notes that an individual's creativity enables them to detect patterns and relationships between unrelated things and that this pattern recognition can lead to the development of new products and services. Gartner (1990) noted that entrepreneurship could be perceived in two ways: (1) as a process and (2) as an outcome, both requiring creative and novel thinking. The theme of creativity as a necessary component of entrepreneurial endeavors is further supported by Audretsch & Belitski (2013) in their argument that creativity is a special kind of human capital. Their model:

$$d(A) = f(H, C)$$

demonstrates that (A) new knowledge is a function of traditional knowledge (H) and creativity (C) where the application of creativity to existing or traditional knowledge enables the creation of new knowledge. Murray (2012) notes in his critique of entrepreneurship, as hyped by popular media, the need for creativity at the beginning of the enterprise lifecycle and at its end as a means of enterprise renewal or regeneration. He also discusses creativity in its role as facilitator of opportunity recognition and mixing of components to create something new. Tan, Seow, & Toyofuku (2015) recognize that a future view of the world or market must be constructed for an enterprise to innovate and change. They indicate in their book *The Tao of Innovation: Nine Questions Every Innovator Must Answer* that a future view is necessary to determine the nature of change in an enterprise and that creativity is essential to move beyond the status quo and develop breakthrough ideas. Randal (2010) in his book *The Skinny on Creativity: thinking outside the box* says that technical skill and competence cannot be replaced or supplanted by creativity but that they are strengthened by it. Randal's statement is supported by research conducted by White & Smith (2001) in which they examine perceptions of creativity by different populations. They found that advertising executives and general populations had different views of the creativity demonstrated by an examined advertisement. Creativity for creativity's sake is not necessarily viewed as creative by all populations.

As outlined above the extant literature supports the notion that creativity is essential to successful entrepreneurial ventures. However, it is not just entrepreneurship that depends upon

creativity but also mainstream ventures as evidenced by a poll of Fortune 500 CEOs conducted by IBM. The CEOs polled indicated that creativity was the number one competency for leaders in the future (Bronson & Merryman, 2010). Although our research targets entrepreneurship, the discussion we are engaging in is equally relevant to the other business disciplines such as finance, accounting, marketing, and management. Bronson & Merryman (2010) express concern over the decline in creativity scores; declining creativity scores may well result in a mediocre marketplace of ideas when the challenges facing the world now and in the future demand a robust marketplace of ideas. They maintain that such a marketplace can only exist through constant refreshing with ideas and a market that is actively seeking new ideas. Eisenmann (2013) dissects the definition of entrepreneurship used by the Harvard Business School in a *Harvard Business Review* article. The definition used by HBS is "entrepreneurship is the pursuit of opportunity beyond resources controlled". While parsing the definition he maintains that "opportunity" is a collective term that indicates one or more of four characteristics of novelty. These four ways are: (1) product innovation (2) business model development (3) improvement of existing product and (4) finding new customers for an existing product; all of which require creativity. Eisenmen also discusses story-telling as a technique used by entrepreneurs to help potential customers visualize a world in which problems are solved by their venture; again, a very real use of creativity.

The preponderance of the literature reviewed indicates a strong association between creativity and entrepreneurship. We referenced Kyung Hee Kim at the beginning of this paper. Kim (2011) provides evidence of a significant decline in the creativity of youth in the United States through analysis of scores on the TTCT (Torrance Test of Creative Thinking) an established and accepted measurement of creativity in children and adults. According to Miller (2002) the TTCT is used throughout the world and has been translated into 32 languages. The TTCT is used in both the educational field and in the corporate world to measure creative thinking (Kim, 2011). Although research indicates an increase in IQ (intelligence quotient) both in the United States and worldwide over the past century (Flynn, 2007 & Flynn 1984) there has not been a corresponding increase in creativity scores (Kim, 2011).

METHODOLOGY

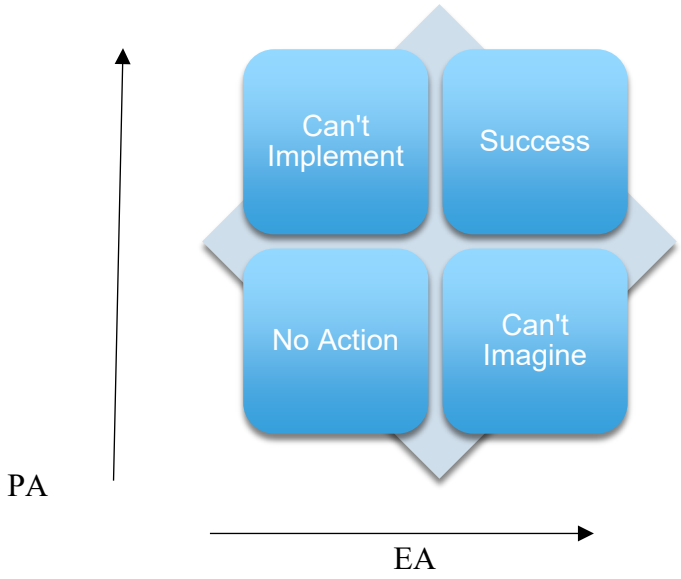
The connection between creativity and paracosmic thinking has been established by Root-Bernstein & Root-Bernstein (2006). We believe that successful entrepreneurs engage in a form of adult paracosmic thinking and probably engaged in world play as children. We have developed a success matrix based on entrepreneurial acumen and paracosmic ability to demonstrate our suggested connection. Figure 1 illustrates our proposed PC-EA relationship. One might question why we choose entrepreneurial acumen as one of the axis on our matrix instead of the more traditional business or entrepreneurial literacy terminology. Entrepreneurship literacy was defined by White, Hertz, & Koutroumanis (2012) as an understanding of an entrepreneurial lexicon obtained from various entrepreneurial textbooks and categorized by entrepreneurial educators. General agreement exists on an overall definition of literacy in it being a statement about an individual's depth of knowledge about a specific subject or field of endeavor. However, the act of entrepreneurship is one of creation and that requires something different than an in-depth knowledge of a specific field. We have chosen acumen as the action term and use it in this research as the sense of making correct judgments in a particular field.

Figure 1 illustrates our construct. The X axis indicates the strength of the subject's entrepreneurial acumen and the Y axis demonstrates the strength of the subject's paracosmic ability. Using the matrix illustrated by Figure 1 we demonstrate four states that an individual might occupy.

Quadrant IV (Can't Imagine) develops an environment in which an individual has entrepreneurial acumen (EA) but has a very low or non-existent paracosmic ability (PA). This combination of PA and EA can result in understanding the functioning of a business enterprise but a total absence of any ability to imagine a world within which the proposed business would solve an identified problem or provide any gain to a customer base. We propose that such a scenario results in a typical life-style business that provides the external environment nothing unique and provides a minimal financial return to the enterprise owner and manager.

The scenario depicted in Quadrant III (No Action) illustrates an environment in which the potential founder of an enterprise can't imagine a world in which the business would be a viable problem solution for a customer base and the potential founder is at a complete loss as what actions need be taken in order to develop a business idea into a successful business model; in Quadrant III the solution goes wanting due to a lack of both business acumen and paracosmic ability.

Figure 1.



PA to EA Relationship

The environment depicted in Quadrant II (Can't Implement) is one in which the founder has a clear image of the world in which the business idea would function and the problem it would solve. Lacking, however, is the business acumen to develop the idea into a viable business model. Quadrant II depicts a situation in which the potential founder talks excitedly about the future and the place for the business idea in that future world but never makes a move to implement the idea.

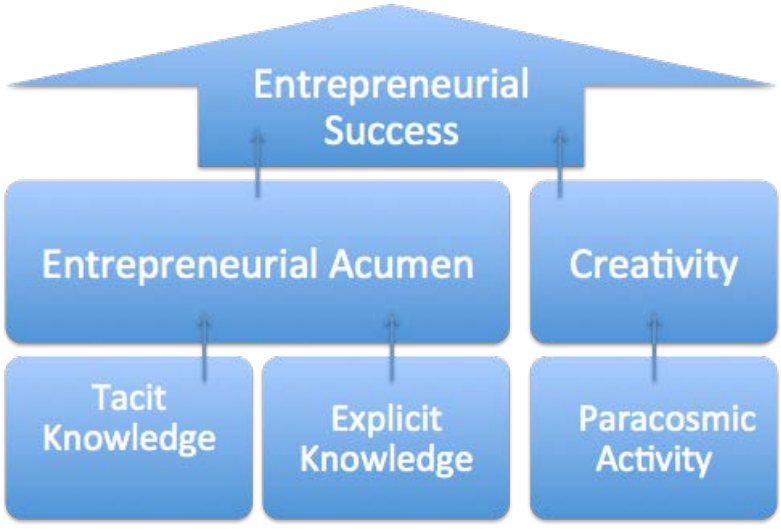
Quadrant I (Success) is the proverbial "sweet spot" in terms of entrepreneurial success. Here we find increasingly strong combinations of business acumen and paracosmic ability. The founder has a clear and strong vision of a future world in which the business is playing a dynamic role in solving specific problems and bringing value to the customer base. The founder also has the business acumen to develop and implement a business model that will accomplish the future that is envisioned.

We are of the opinion that our PA-EA matrix can describe most environments that can result in a successful entrepreneurial venture or its opposite; a failure or a solution gone wanting. The following function describes the entrepreneurial environment that we imagine using our matrix

$$d(E) = f(PA, EA)$$

where the success of the enterprise *E* is a function of *PA* (paracosmic ability) and *EA* (entrepreneurial acumen). Figure 2 illustrates the function. Using our function one may state the entrepreneurial exercise as existing in some degree of any one of the four states identified in the PA—EA matrix. One may develop several scenarios of entrepreneurship that can be explained by application of the PA—EA matrix.

Figure 2.



Graphical depiction of *d*(E) = *f*(PA, EA)

1. An individual has a valid idea with the potential to solve a problem for a customer base and that will create and capture value. The potential entrepreneur is able to visualize customers using the product to solve their problems (paracosmic thinking) but is unable to visualize the business model that would enable the product's delivery to the customer (business acumen). This is an environment that hopeful entrepreneurs find themselves within daily. Finding oneself in this environment should not preclude moving the idea forward. Individuals in this

quadrant (II) should avail themselves of assistance from governmental sources such as the SBA (Small Business Administration) and SBDC offices (Small Business Development Centers). Education and mentoring can overcome the lack of business acumen.

2. An individual wants to start a business using an existing skill set in order to provide a desired work environment. Michael Gerber (1986) identifies this type individual as a technician. This individual is determined to work alone and does not imagine the business as a component in a future vision that solves customer problems, creates value, and captures value. The business is a place where the technician can work. This situation can be found in quadrant III. Note the lack of paracosmic activity or a future vision of the business and the lack of business acumen that combined provide the technician a safe place to work but which will also guarantee failure as the business matures. Quadrant III may well be a dead, or at best, a zombie zone for entrepreneurial activity unless the technician undergoes a significant change in orientation to both future vision and needed business acumen.
3. The "manager" lives in quadrant IV. Here is the individual with business acumen obtained from both tacit and explicit knowledge. Lacking, however, is the vision of a future in which the entrepreneurial idea takes root and grows into a viable business. This individual is capable of managing resources and achieving goals for an organization. The manager works for an organization or can successful in developing an existing franchise operation which has been imagined by someone else.
4. The successful entrepreneur occupies quadrant I. Here we observe the strongest combination of entrepreneurial acumen and paracosmic activity. The entrepreneur has an idea that solves a problem and will both capture and create value. The future state of the enterprise is fixed clearly in the mind of the entrepreneur and the vision can be communicated to potential stakeholders and customers.

Our model illustrates the necessity for both entrepreneurial acumen and creativity to provide an environment for entrepreneurial success. We perceive business acumen as a combination of explicit knowledge (traditional understanding of the basics of finance, accounting, marketing, and management) and tacit knowledge (a sense of what works and when to act gained from experience and formal education) and which is necessary for success in the entrepreneurial venture. However, our model also requires creativity in the form of paracosmic activity in during which the aspiring entrepreneur can not only envision a solution to a problem but can readily see the business that will solve the problem and how it will interact in the future world. George Bernard Shaw (1921) said it quite succinctly in Back to Methuselah in Act I of In the Beginning: B.C. 4004 in which the serpent says to Eve "You see things and say "Why?" But I dream things that never were; and I say "Why not?".

DISCUSSION

We are concerned; Kim (2011) indicates that creativity scores are decreasing in the face of ever increasing intelligence scores. The 2014 GEM (Global Entrepreneurship Monitor) states that the birth rate of new enterprises in the United States averages 14.5 percent. The research generated by Root-Bernstein & Root-Bernstein (2006) report an incidence of world play or paracosmic thinking of 12 % in the general population. This supports our proposition that successful entrepreneurs probably engage in paracosmic thinking both as children and as entrepreneurs imagining a world in which their business idea solves a problem.

Our concern is generated by the reports of decreasing creativity scores in the general population. This same population from which entrepreneurs spawn. Increasing intelligence scores accompanied by decreasing creativity scores in the general population does not bode well for the continuation of a vibrant entrepreneurial community in the United States and, dare we say it, the world. Increasingly we read and hear about advancements in technology that will eliminate jobs for both white and blue collar workers. The elimination of jobs due to technical advances that make the worker redundant will not occur without massive repercussions within society. We hope that entrepreneurship as a calling will remain vibrant and will absorb some of the societal shock that occurs with ever increasing automation of jobs. However, a continuing decline in creativity scores could inhibit the ability of the entrepreneurial population in developing enterprises able to absorb a workforce deemed redundant. Our PA—EA matrix clearly demonstrates the necessity of creativity in successfully developing an entrepreneurial idea.

We postulate that creativity is essential to entrepreneurial success and that the individuals who develop successful entrepreneurial ideas have more creativity than do individuals who do not venture into the entrepreneurial arena. Jackleg (2015) recounts in her book the many ways that entrepreneurs in developing countries are solving problems by the creative use of resources available to them. This adult creativity is nurtured during childhood and in many cases through the teen years and into adulthood by world play or paracosmic thinking. We are concerned that the decrease in creativity scores is partially caused by an increase in video and other electronic game playing. Coves-Masfety, et al. (2016) indicate that video games account for more than five hours of activity each week for many children. Although their study investigated European children we are generalizing the results to the United States for purposes of argument in our paper. The results obtained by Coves-Masfety, et al. (2016) indicate that video game play is associated with greater intellectual functioning and achievement in the academic realm. However, they did not test creativity in their subjects as they were looking for potential mental health problems in the video game playing population. They found none.

We previously noted that intelligence scores continue to increase in the United States as creativity scores decrease. Our concern is that as video play becomes more sophisticated and virtual worlds become ever more realistic the creativity scores will continue to decrease. We suppose this because as these worlds become more defined the need for childhood creativity to flesh out these imagined worlds becomes less needed. The worlds that gamers are inhabiting are pre-defined by the game developers; there is no need for the player to exercise creativity in the sense of paracosmic thinking as the game designer developed the world and its rules as an internal part of the game play experience. The further removed children are from the need to develop their own paracosmic environments the less powerful will be their creativity.

There is hope for the future however. Muscle is often used as a analogy in explaining creativity. We must exercise our muscles in order to maintain fitness and to grow stronger; creativity increases through use in much the same way. Schools need to encourage creativity in students through offering ample opportunities for students to utilize creativity in safe and non-threatening environments. Business schools need to offer creativity courses in their entrepreneurship minors or majors; if not offered in the school courses in creativity need to be available to business students outside of their disciplines and the students need to be encouraged to enroll into them. Projects, papers, and presentations need to have an expectation of creativity in their assignment. The decline in creativity scores must be stopped and then reversed. Future business needs and problems are going to demand creative solutions to increasingly complex

problems and colleges of business will be looked to for graduates who can deliver those creative solutions. Let's help our students exercise that creative muscle by designing programs that will offer opportunities to be creative and by celebrating their creative accomplishments.

REFERENCES

Amabile, T. M. (1997). Motivating creativity in organizations: On doing what you love and loving what you do. *California Management Review, 40*(1), 39-58.

Amabile, T. M. (1996). *Creativity in context*. Boulder, Colo: Westview Press.

Audretsch, D. B., & Belitski, M. (2013). The missing pillar: The creativity theory of knowledge spillover entrepreneurship. *Small Business Economics, 41*(4), 819-836. doi:http://dx.doi.org/10.1007/s11187-013-9508-6

Baron, R. A. (2000). Counterfactual thinking and venture formation: The potential effects of thinking about what might have been *Journal of Business Venturing, 15*, 79-92.

Berglund, K., & Johansson, A. W. (2007). Constructions of entrepreneurship: A discourse analysis of academic publications. *Journal of Enterprising Communities, 1*(1), 77-102. doi:http://dx.doi.org/10.1108/17506200710736276

Bronson, P., & Merryman, A. (2010, The creativity crisis: For the first time, research shows that american creativity is declining. what went wrong-and how we can fix it. *Newsweek, 156.3*

Campos, H. M., Rubio, A. M., Atondo, G. H., & Chorres, Y. M. P. (2015). Relationship between creativity, personality and entrepreneurship: An exploratory study. *International Business Research, 8*(8), 59-71.

Coves-Masfety, V., Keyes, K., Hamilton, A., Hanson, G., bitfoi, A., Glitz, D.,Ceren, . . . Pez, O. (2016). Is time spent playing video games associated with mental health, cognitive and social skills in young children? *Social Psychiatry Psychiatric Epidemiology,* doi:10.1007/s00127-016-1179-6

Eisenmann, T. R. (2013, Entrepreneurship: A working definition. *Harvard Business Review,*

Flynn, J. R. (1984). The mean IQ of americans--massive gains 1932 to 1978. *Psychological Bulletin, 95*, 29-51.

Flynn, J. R. (2007). *What is intelligence? beyond the flynn effect.* New York: Cambridge University Press.

Gartner, W. B. (1990). What are we talking about when we talk about entrepreneurship? *Journal of Business Venturing, 5*, 15.

Hamidi, D., Yar, Wennberg, K., & Henrik, B. (2008). Creativity in entrepreneurship education. *Journal of Small Business and Enterprise Development, 15*(2), 304.

Hunter, M. (2012). On some of the misconceptions about entrepreneurship. *Economics, Management and Financial Markets, 7*(2), 55-104.

Is time spent playing video games associated with mental health, cognitive and social skills in young children? (2016). *Social Psychiatry Psychiatric Epidemiology,* doi:10.1007/s00127-016-1179-6

Jackleg, J. (2015). *Clay water brick: Finding inspiration from entrepreneurs who do the most with the least*. New York: Spiegel & Grau.

Kim, K. H. (2011). The creativity crisis: The decrease in creative thinking scores on the torrance tests of creative thinking. *Creativity Research Journal, 23*(4), 285.

Miller, G. W. (2002). *The torrance kids at mid-life: Selected case studies of creative behavior.* Westport, Conn: Ablex.

Randel, J. (2010). *The skinny on creativity: Thinking outside the box*. Westport, CT: Rand Media.

Root-Bernstein, M., & Root-Bernstein, R. (2006). Imaginary worldplay in childhood and maturity and its impact on adult creativity. *Creativity Research Journal, 18*(4), 405-425.

Shaw, B. (1921). *Back to methuselah*. New York: Brentano's.

Singer, S., Amoros, J., & Moska, D. (2014). *Global entrepreneurship monitor 2014 report.* (). London: London Business School.

Tan, T., Seow, H., & Toyofuku, S. T. (2015). *The tao of innovation: Nine questions every innovator must answer*. London: Imperial College Press.

Ward, T. B. (2004). Cognition, creativity, and entrepreneurship. *Journal of Business Venturing, 19*, 173.

White, A., & Smith, B. L. (2001). Assessing advertising creativity using the creative product semantic scale. *Journal of Advertising Research, 41*(6), 27.

White, R. J., Hertz, G. T., & Koutroumanis, D. A. (2012). Entrepreneurship literacy: The language of the new venture. *The Journal of Applied Business and Economics, 13*(5), 35-45.