

Locating a New Collegiate Entrepreneurship Program, a framework for a University Campus

By

Douglas Carter, Texas A&M University-San Antonio

One of the youngest and most rapidly growing disciplines taught in today's business schools is entrepreneurship (Conners & Ruth, 2012).

A core objective of entrepreneurship education is that it deviates from typical business

education. Entrepreneurial education must address the equivocal nature of business entry

Where should a college place its entrepreneurship program? This study of existing programs, both domestic and international, serves to fill knowledge gaps in this field of study.

(Gartner, Bird & Starr, 1992). With this being stated, is a new collegiate entrepreneurship program best located within a College of Business or elsewhere on a University campus?

A study of the options available to Universities will help to fill this

Keywords: Entrepreneurship Education, Universities Entrepreneurship Education, University Innovation Concept Centers, New Collegiate Entrepreneurship Programs

Although entrepreneurial activity traces back to the early 18th century, contemporary entrepreneurship has emerged over the last three decades as arguably the most potent economic force the world has ever experienced. This economic expansion has paralleled rapid growth in the field of entrepreneurship education. Recent developments in curricula and programs devoted to entrepreneurship, new venture creation and corporate innovation have been remarkable. The number of colleges and universities that offer courses related to entrepreneurship has grown from a handful 35 years ago to over 3000 today. In the midst of this expansion lies the challenge of establishing and sustaining entrepreneurship programs in universities across the globe. (Morris, Kuratko & Cornwall, 2013)

University Entrepreneurship Programs reside in a variety of places within a Campus Community and as a result there is a debate in the academic and practitioner entrepreneurship literature as to where to place and offer Entrepreneurship programs. The purpose of this research is to better understand the placement of a new program on a university campus. Factors to consider when programming the placement of a new program include: What is the role of the College of Business in establishing an Entrepreneurship program? Is the College of Business is the correct venue for such a program? If it is determined that the College of Business is not the correct venue, then where should it be established? Is an interdisciplinary approach the best answer? Are there differences in US based programs and International programs and can best practices be identified and replicated? These factors address the question of who is to develop and maintain the curriculum which hires and supports the faculty, where budgets are to be allocated, and how the program should be marketed for the recruiting of students and associated stakeholders.

Literature Summary

The literature reviewed, summarized in Table 1, supported the idea of establishing a new program within the College of Business, and also offered support for locating a program in the other Colleges or disciplines, as well as more cross-disciplinary type programs. Articles were also selected in an attempt to provide a wealth of knowledge of both domestic and international programs and points of view.

In the Journal of Entrepreneurship Education, two authors from Purdue University, state: "In contrast to other disciplines, some schools have exerted effort to teach entrepreneurship campus-wide, moving beyond solely offering the courses to business students. As a result of this unique position in many colleges, entrepreneurship courses often have a large percentage of non-business students. In some colleges, business schools have created two separate In addition

Methodology

Google Scholar was a helpful resource in finding materials to assist in developing and supporting the research topic. Databases, including IBIS-WORLD, JSTOR and EBSCO, accessed through both the University of South Florida and Texas A&M University-San Antonio, were used to research articles. Additional materials were suggested by Dr. Dirk Libaers.

When researching the topic of "Locating a New Collegiate Entrepreneurship Program, a framework for a University Campus", one starts a literature review using various sources of academic resources. The literature review included searches utilizing Google Scholar, JSTOR, IBISWORLD and EBSCO data bases. In addition to articles found through database searches, Dr. Dirk Libaers provided articles and a text to review. The text by Morris, Kuratko & Cornwall was suggested by Dr. Libaers and substantiated by Dr. Morris during his interview.

Searches were conducted using the following keywords: Entrepreneurship Education; Universities Entrepreneurship Education; University Innovation Concept Centers; and, New Collegiate Entrepreneurship Programs.

The search using "Entrepreneurship Education" yielded 1,190,000 articles, while the search for "Universities Entrepreneurship Education" resulted in 437,000 articles. 677 articles were found using the keywords "University Innovation Concept Centers" and the search using the keywords "New Collegiate Entrepreneurship Programs" resulted in 32,300 articles.

The articles and text chosen for the literature review, were chosen for reasons including: factors influencing success in an introductory entrepreneurship class; exploring the resource logic of student entrepreneurs; the relationship between the institution, entrepreneur, and the community; development, trends and challenges related to the emergence of entrepreneurship education; understanding entrepreneurial education outside of the business school; a comparative analysis of U.S. versus international entrepreneurship centers; developing an entrepreneurial mindset across the university curriculum; the relevance of education for potential entrepreneurs; the role of entrepreneurship education; and, ultimately, a text was chosen due to its relevance to identifying best practices for running university entrepreneurship programs.

to co-authoring the text *Entrepreneurship Programs and the Modern University*, Kuratko (2005) reviewed key issues in entrepreneurship education and dis-

Table 1: Individual Source-Multiple Findings Table

	Source	Findings
	Authors, (year) and title of the article	<ul style="list-style-type: none"> • Listing of the findings from the specific article. • Use bullet point format where appropriate.
1	Conners, S. E., & Ruth, D. (2012). Factors Influencing Success in an Introductory Entrepreneurship Course.	<ul style="list-style-type: none"> • Study the effect of curriculum sequencing on the success of students in entrepreneurship program • Students who take entrepreneurship later in their program, as indicated by the coefficient on Semester of Program, tend to perform better in Entrepreneurship 100 • Both business and non-business students were equally successful in the course. • In contrast to other business disciplines, some schools have exerted effort to teach entrepreneurship campus-wide, moving beyond solely offering the courses to business students. • As a result of this unique position in many colleges, entrepreneurship courses often have a large percentage of non-business students. • In some colleges, business schools have created two separate streams of entrepreneurship courses; those for business school majors and those for non-business majors. • Entrepreneurship as a discipline has found its way into most business school curricula but its place within those curricula varies.
2	Politis, D., & Winborg, J. (2012). Exploring the resource logic of student entrepreneurs.	<ul style="list-style-type: none"> • Review of literature on academic entrepreneurship and student entrepreneurs • Examines differences between student entrepreneurs and non-student entrepreneurs • Swedish entrepreneurs • Looking at resource logic (effectuation, causation, bootstrapping and traditional resource acquisition) • Some methodological issues; did not collect information from failed entrepreneurs
3	Jennings, P. D., Greenwood, R., Lounsbury, M. D., & Suddaby, R. (2013). Institutions, entrepreneurs, and communities: A special issue on Entrepreneurship.	<ul style="list-style-type: none"> • Draws on sociological research which can further enrich entrepreneurship studies of institutions, entrepreneurs, and communities • Among the clusters identified by the authors, three were directly related to sociology and cultural studies: 1) networks and entrepreneurs, 2) institutions and institutional entrepreneurship, and 3) societal consequences of entrepreneurship. • Framework developed for organizing the special issues articles (this paper is the first in the call for papers in this journal special issue on Entrepreneurship). • Divides the framework into 3 areas: Local and Regional communities, industry and sector communities, and national and transnational communities. • Limitations of the framework are discussed. • By entrepreneurs, we refer not only to the concrete, individual entrepreneur as agent, but the wider and less agentic networks of actors generating new ventures, such as entrepreneurial teams, investors, and other engaged in distributed entrepreneurship.

4	<p>Kuratko, D. F. (2005). <i>The Emergence of Entrepreneurship Education: Development, trends, and challenges.</i></p>	<ul style="list-style-type: none"> • New business incorporations averaged 600,000 per year. Although many of these incorporations may have previously been sole proprietorships or partnerships, the trend still demonstrates the popularity of venture activity, whether it was through start-ups, expansions, or development. More specifically, 807,000 new small firms were established in 1995, which is an all-time record. • Entrepreneurial firms make two indispensable contributions to the market economies. First, they are an integral part of the renewal process that pervades and defines market economies. Second, entrepreneurial firms are the essential mechanism by which millions enter the economic mainstream. • One third of new entrepreneurs is younger than age 30, more than 60% of 18- to 29-year-olds say they want to own their own businesses, and nearly 80% of would-be entrepreneurs in the U.S. are between the ages 18 and 34! • Sources of information for entrepreneurs: Academic journals, textbooks on entrepreneurship, books about entrepreneurship, biographies or autobiographies of entrepreneurs, compendiums about entrepreneurs, news periodicals, venture periodicals, newsletters, proceedings of conferences, government publications, direct observation of practicing entrepreneurs, speeches and presentations by practicing entrepreneurs. • Topics covered in entrepreneurship programs: venture financing, corporate entrepreneurship, strategies, risk and tradeoff, women & minority entrepreneurs, economic and social contributions of entrepreneurs, ethics. • A core objective of entrepreneurship education is that it is different from typical business education. Business entry is fundamentally a different activity than managing a business (Gartner & Vesper, 1994); entrepreneurial education must address the equivocal nature of business entry (Gartner, Bird & Starr, 1992). To this end, entrepreneurial education must include skill-building courses in negotiations, leadership, new product development, creative thinking, and exposure to technological innovation (McMullan & Long, 1987; Vesper & McMullan, 1988).
5	<p>Uy, M. A., Foo, M.-D., & Ilies, R. (2015). <i>Perceived progress variability and entrepreneurial effort intensity: The moderating role of venture goal commitment.</i></p>	<ul style="list-style-type: none"> • Provides insights into what sustains entrepreneurial effort by highlighting the role of experiencing consistent, steady progress in motivating the entrepreneur to continue working on the business venture. • Subjects: recruited participants from three business incubators in Manila, Philippines. Among the 145 entrepreneurs who were in the incubators at the time of the study, 117 agreed to participate. Six entrepreneurs dropped out a week after the study commenced, leaving 111 entrepreneurs in the final sample. Participants were 53 women and 58 men, and all had a bachelor's degree.

	Uy, Foo, & Ilies (2015) (Continued)	<ul style="list-style-type: none"> • The industry categories represented were manufacturing (48%), food services (25%), wholesale and retail (16%), professional and technical services (8%), and others (3%). The majority (59%) of participants were of Malay ancestry, while the rest were Chinese (39%) and Hispanics (2%). At the start of this study, participants had been in the incubator for approximately eight months. Thirty-nine entrepreneurs (or 35% of the total participants) had prior entrepreneurial experience, while 26 entrepreneurs (23%) had relevant industry experience (i.e., work experience related to their current startup's industry category), and 24 (about 22%) of them had prior (general) work experience. More than half of them (53%) had experienced working in their family business (different from their current business ventures). • This study shows that variations of progress perceptions matter in the goal pursuing process. An implication of our study is that to understand persistence in long term pursuits, entrepreneurship researchers should use a process approach to explore the extent to which one is experiencing progress over time and the extent to which such progress varies. A third finding of our study is that venture goal commitment attenuates the negative relationship between perceived progress variability and entrepreneurial effort intensity.
6	Turner, T. & Gianiodis, P. (2018). Entrepreneurship Unleashed: Understanding Entrepreneurial Education outside of the Business School	<ul style="list-style-type: none"> • A growing trend in entrepreneurship education is the development of blended entrepreneurial programs (BEPs)-programs that merge entrepreneurial curriculum with a technical degree-located outside traditional business school settings. • ...the scholarship and pedagogy within the field of entrepreneurship education has matured considerably over the last 20 years, major gaps remain related to what content to teach, how to teach it, who qualifies to teach, and to what type of student (Greene, Katz, and Johannisson 2004; Piperopoulos and Dimov 2015).
7	Chia, R. (1996). Teaching Paradigm Shifting in Management Education: University Business Schools and the Entrepreneurial Imagination.	<ul style="list-style-type: none"> • ...for modern management educators, the very attempt to reduce the complex phenomena of successful managers and entrepreneurs in order to facilitate pedagogical priorities goes against the very essence of entrepreneurial thinking. • The experience of ambiguity, confusion and chaos are central to the relaxing (or weakening) of our boundaries of thought and the nurturing of the entrepreneurial imagination. • The unique contribution university business schools can make to the business community is not through the vocationalizing of business/management programs. Rather, it is through adopting a deliberate educational strategy which prioritizes the "weakening" of thought processes so as to encourage and stimulate the entrepreneurial imagination.
8	Finkle, T. A. (2007). A Comparative Analysis of U.S. versus International Entrepreneurship Centers	<ul style="list-style-type: none"> • International centers teach significantly more students than U.S. centers, have a larger percentage of founders that are current directors, and are significantly more likely to be located at public universities.

	Finkle, T. A. (2007) (Continued)	<ul style="list-style-type: none"> • International schools have a much larger contingent of entrepreneurship students and graduate programs in entrepreneurship. • Undergraduate entrepreneurship degrees focused more on concentrations and minors as opposed to majors. • Undergraduate Programs and Courses offered in Entrepreneurship: Introduction to Entrepreneurship; Business Plan Development; Entrepreneurial Finance, Entrepreneurial Growth; Small Business Management; Entrepreneurial Field Project; Entrepreneurial Marketing, Feasibility Analysis; Law & Entrepreneurship; Internships, Creativity & Innovation; Family Business; Product Development; Corporate Entrepreneurship; Franchising; and Technology Transfer.
9	Martz Jr, W. B., Neil, T. C., Biscaccianti, A., & Williams, R. J. (2003). Student Perception of Entrepreneurs: A Cultural Perspective	<ul style="list-style-type: none"> • Entrepreneurship has been defined in broad and ambiguous ways. • The comparisons have been conducted at global levels and at country levels. • The comparisons have been made looking for the unique characteristics of entrepreneurs. • Several areas of interest have emerged. These include demographic characteristics such as the perceived ability to succeed as an entrepreneur, the overall impression of entrepreneurs, the positive impression of the entrepreneurial lifestyles, and family experience.
10	Ridley, D. (2016). Developing an Entrepreneurial Mindset across the University Curriculum.	<ul style="list-style-type: none"> • Until recently, most American university management programs focused on the development of students for work in corporate settings with little focus on entrepreneurial skills. • The need for graduates with an entrepreneurial mindset has grown. • A framework for developing students campus-wide with an entrepreneurial mindset across the management education curriculum is proposed. First, foundational theories and concepts are introduced. Next, students learn, practice and reflect on skills necessary for entrepreneurship. Student entrepreneurial mindset is further developed through business plans and case competitions. Finally, students apply the concepts and theories via student-run companies housed within business, science, engineering and technology incubators.
11	Bergmann, H., Hundt, C., & Sternberg, R. (2016). What makes student Entrepreneurs? On the relevance (and irrelevance) of the university and the regional context for student start-ups.	<ul style="list-style-type: none"> • Student start-ups are a significant part of overall university entrepreneurship. • Because students typically have no or little industry experience, the university and regional context and their family background can be assumed to be more important for their entrepreneurial propensity than for people at a later stage of their professional career. • Empirical studies usually find university graduates to be more likely to enter self-employment after having gained industry experience rather than directly after graduation. • Offering entrepreneurship courses does not only affect the participants themselves but also other students who did not directly participate. This is presumably the result of social interactions and observations of one's peers. • Regional economic prosperity, which has been found to be an important driver of a region's start-up activity, in general, does not seem to affect students' propensity to take first action for starting a business.

	Bergmann, Hundt & Sternberg (2016) (Continued).	<ul style="list-style-type: none"> • Independent from their location, universities can foster students' first steps towards becoming entrepreneurs by offering entrepreneurship courses and motivating students to attend. • One might also argue that university programmes to support entrepreneurship among students are more effective when coordinated with respective strategies of the region the university is located in. As many regional governments have developed entrepreneurship support policies themselves (very often not explicitly addressing the local universities), a coordinated strategy of both parties - government and university - may be more successful than isolated efforts.
12	Vance, C. M., Groves, K. S., Gale, J., & Hess, G. L. (2012). Would Future Entrepreneurs Be Better Served By Avoiding University Business Education? Examining the Effect of Higher Education on Business Student Thinking Style.	<ul style="list-style-type: none"> • The worldwide recognition of the importance of nonlinear thinking in entrepreneurial cognition is driving curriculum change efforts in degree and non-degree programs. • It would appear that effective entrepreneurial thinking would tend to employ a balance of both nonlinear and linear thinking style dimensions. • Despite the previously described common criticisms of Western higher education (and particularly of professional schools, including undergraduate business education) in neglecting and even negating the development of creativity and other nonlinear thinking skills needed to support, in concert with linear thinking skills, effective entrepreneurial thinking, there is evidence in today's higher education of a concerted effort to enhance both the linear and nonlinear thinking skills of graduating students.
13	Varadarajam Sowmya, D., Majumdar, S., & Gallant, M. (2010). Relevance of education for potential entrepreneurs: an international investigation.	<ul style="list-style-type: none"> • Education is the clearest path to individual opportunity and societal growth, and entrepreneurship education is especially vital to fueling a more robust global economy. • Entrepreneurship has become and needs to be sustained as a social movement. • There is evidence that academically educated entrepreneurs are more important in developing regional economies than entrepreneurs with a lower level of education. • Despite the recognition that education and prior entrepreneurial experiences influence people's attitudes towards starting their own business, the impact of entrepreneurship education on intentions to found a business has remained relatively untested. • Despite the recognition that education and prior entrepreneurial experiences influence people's attitudes towards starting their own business, the impact of entrepreneurship education on intentions to found a business has remained relatively untested. • Studies have found a positive impact of entrepreneurship education courses/programs at universities on perceived attractiveness and feasibility of new venture initiation.

14	Johnson, J.E., & Envick, B.R., (2014). Assessing the Learning Goal Outcomes of an Interdisciplinary Entrepreneurship Cohort Program: A Comprehensive Survey Approach.	<ul style="list-style-type: none"> • The program combines traditional classroom learning with extensive, practical out-of-class entrepreneurial experiences, both domestic and international. • Students are exposed to other useful learning environments outside of the classroom; they are able to tap into the expertise of numerous business professionals besides their professors; the sponsorships provide the true means for them to engage in various educational business activities; linking two consecutive semesters together and utilizing the spring break for the international business trip provides more time for educational opportunities; and the international business trip allows students the chance to conduct business outside of their comfort zones, thus significantly strengthening their skills and confidence levels.
15	Leffel, C. H. A., & Agrawal, L. D. L. V. M. (2014). Accelerating Collegiate Entrepreneurship (ACE): The Architecture of a University Entrepreneurial Ecosystem Encompassing an Intercollegiate Venture Experience.	<ul style="list-style-type: none"> • According to the Kaufman Foundation in their recent report “Entrepreneurship in American Higher Education” (2009a) a number of conclusions were drawn regarding the status of entrepreneurship education, of which the most relevant is that a single approach to entrepreneurship education is both “unrealistic and unauthentic” (2009a, p3). • Entrepreneurship education should be specific to the culture and climate of the university and its local community. • Historically, surveys of academic programs showed that the most common elements in entrepreneurship courses were business plan writing, case studies, readings, and lectures by guest speakers and faculty. • The addition of business plan competitions to the academic entrepreneurship curriculum may be viewed as the beginning of a concerted effort to create a more expansive university entrepreneurship ecosystem • To truly understand the impact that can be had on the next generation of entrepreneurs, the theory of entrepreneurial intent was linked to the student academic curricula and related activities. • ACE Model: Accelerating Collegiate Entrepreneurship model • Unlike many universities that attempt to drive entrepreneurship by the launch of new classes and programs, we (UTSA) focused on bringing the technology entrepreneurship context into existing classes. By pairing seniors in engineering and business, our goal was to bring a new level of intercollegiate entrepreneurial thinking into the university and to create the final element in the entrepreneurial ecosystem. • The core classes in business and engineering and their deliverables did not change, however, the context of their work required the students to develop their work in a hands on environment while preparing for the tech competition. • Co-sponsorship between the Dean of the College of Business and the Dean of the College of Engineering.
16	Zhang, H., Duysters, G., & Cloudt, M., (2013). The role of entrepreneurship education as a predictor of university students’ entrepreneurial intention.	<ul style="list-style-type: none"> • There are significant positive interactive effects by gender, university type, and study major on the relationship between the entrepreneurship education and EI (entrepreneurial intention).

17	Katz, J. A., Hanke, R., Maidment, F., Weaver, K. M., & Alpi, S., (2016). Proposal for two model undergraduate curricula in entrepreneurship.	<ul style="list-style-type: none"> • Although close to 75% of the top 25 entrepreneurship programs in the US offer a major in entrepreneurship (Entrepreneur Magazine 2014), most other business school academic programs in Entrepreneurship at the undergraduate level are not majors in Entrepreneurship. Rather, they tend to be concentrations folded primarily into Business Management and/or Marketing departments in schools and colleges of business.
18	Morris, M. H., Kuratko, D. F., & Cornwall, J.R., (2013). <i>Entrepreneurship Programs and the Modern University</i> , Edward Elgar Publishing Limited.	<ul style="list-style-type: none"> • The future is one where universities are better able to connect courses and course content to experiential learning initiatives and to engagement with the entrepreneurial community. The ability to connect the dots and integrate all the facets of the program will become a priority. • The movement toward learning based more in experience will find entrepreneurship programs more heavily engaged with the community, including work with both nascent and existing entrepreneurs. • New hybrid structures will continue to emerge to coordinate the entrepreneurship efforts on campuses. There are independent centers that report to the provost or president, as well as formal academic co-departments, departments, and schools of entrepreneurship.

cusses the current state of educational programs focused on entrepreneurship. Kuratko's article, "The Emergence of Entrepreneurship Education: Development, Trends, and Challenges" lends credibility to the purpose of this research project. Due to the popularity of entrepreneurship in the media, the emergence of celebrated famed entrepreneurs and the realization by policymakers of its importance, educators have followed suit by offering more entrepreneurship programs. The article illustrates the growth of the number of colleges and universities that offer courses related to entrepreneurship, supporting the desire for new programs. The article goes on and provides a passage from another Kuratko publication which lends support for the use of both the stakeholder theory and the resource theory, theoretical approaches which will be applied in the second paper in this dissertation. Kuratko states: "Entrepreneurship is a dynamic process of vision, change, and creation. It requires an application of energy and passion towards the creation and implementation of new ideas and creative solutions. Essential ingredients include the willingness to take calculated risks—in terms of time, equity, or career; the ability to formulate an effective venture team; the creative skill to marshal needed resources; and fundamental skill of building solid business plan; and finally, the vision to recognize opportunity where others see chaos, contradiction, and confusion" (Kuratko, 2005, p. 578).

In a recent article, Turner and Gianiodis (2018) put forth an argument in support of a cross-disciplinary approach to entrepreneurship education on a college campus. These authors state that a growing trend in entrepreneurship education is the development of blended entrepreneurial programs – programs that

merge entrepreneurial curriculum with a technical degree – located outside traditional business school settings (Turner & Gianiodis, 2018). The authors provide current information regarding trends in entrepreneurship education on college campuses. The article proceeds, "The primary challenge of blended entrepreneurial programs is adopting an effective, cohesive entrepreneurial curricular, and instructional model to avoid potentially ad hoc, build-as-you-go programs" (Turner & Gianiodis, 2018 p. 132). With the growth of entrepreneurship programs at the university level, it is imperative that these programs are thoughtfully located and planned where they can be provided with the utmost of support and direction. If there are too many programs associated with an entrepreneurship program, it may be difficult to provide the structure and support needed for launching a sustainable program. Turner and Gianiodis provide additional research findings in their paper regarding the: What; How; By Whom-Leads; Whom-Audience; Whom-Delivered; and examples of active blended programs. This information provides thoughtful and deliberate advice for the development of blended or multi-disciplinary programs. Advice that could provide valuable guidance should it be determined that this approach is the right approach for the location of a new program on a university campus.

Desirous of a comprehensive approach to the literature review, a small sub-stream of the entrepreneurship education literature pertains to programs from the U.S., as well as, international programs. The articles examine the types of courses that are being taught, the size of various programs and the attractiveness of entrepreneurship studies for mi-

nority and underserved populations. Sowmya et al. (2010) provide evidence of the increasing number of women attending universities and participating in the labor force. Further, here's an interesting declaration made by Finkle: "International centers teach significantly more students than U.S. centers, have a larger percentage of founders that are current directors, and are significantly more likely to be located at public universities" (Finkle 2007).

The text, "Entrepreneurship Programs and the Modern University" (Morris, Kuratko & Cornwall, 2013), provides a comprehensive overview of contemporary offerings in entrepreneurship education and how they fit into the modern university, i.e. they may contribute to the third mission of a modern university-economic development and job creation. The text was very informative on how entrepreneurship education can be established within the University context. The authors identify a significant gap in entrepreneurship education that provides attractive opportunities for forward-thinking and progressive universities. "Pedagogy has tended to be preoccupied with teaching business planning and tools for small business management, with relatively less emphasis on the entrepreneurial mindset, mastery of the entrepreneurial process, and developing entrepreneurial competencies" (Morris, Kuratko & Cornwall, 2013; p. XI). Additionally, the authors provide a model for the Best Practice University, viz., the structure of Oklahoma State's School of Entrepreneurship. The structure of the School of Entrepreneurship includes five pillars: Creativity Institute, Core Entrepreneurship Faculty, Interdisciplinary Entrepreneurship Academy, Technology Entrepreneurship Initiative, and the Riata Entrepreneurship Center.

As previously mentioned, the text was informative regarding the ways in which entrepreneurship education can be established within the University context. There was some insightful information for start-up programs in the *Conclusion: the ongoing revolution* section of the text. The text concludes by identifying a few issues to watch for in the future, identifying trends and developments in the integration of program foci to become more comprehensive where the future is one where universities are better able to connect courses and course content to experiential learning initiatives and to engagement with the entrepreneurial community. The authors state that the general direction of entrepreneurship programs, whether being more scholarly and research focused or being more applied and engagement focused, will find both happening in tandem. The re-

lationship between various departments and disciplines may be enhanced by more cross-disciplinary collaboration, while hybrid structures will continue to emerge to coordinate the entrepreneurship efforts on campuses (Morris, Kuratko & Cornwall, 2013).

In a statement presented at the 2016 United States Association for Small Business and Entrepreneurship, Conference Proceeding, Dennis Ridley said: "Until recently, most American university management programs focused on the development of students for work in corporate settings with little focus on entrepreneurial skills. The need for graduates with an entrepreneurial mindset has grown. A framework for developing students campus-wide with an entrepreneurial mindset across the management education curriculum is proposed. First, foundational theories and concepts are introduced. Next, students learn, practice and reflect on skills necessary for entrepreneurship. Student entrepreneurial mindset is further developed through business plan and case competitions. Finally, students apply the concepts and theories via student-run companies housed within business, science, engineering and technology incubators" (Ridley 2016).

Specifically, very little empirical research has examined what the best practices are in locating entrepreneurship programs within a university context

The idea of a multi-disciplinary approach is discussed in a linear versus non-linear thinking model in a recent article by Vance et al (2012). The article states: "The worldwide recognition of the importance of non-linear thinking in entrepreneurial cognition

is driving curriculum change efforts in degree and non-degree programs" (Vance, Groves, Gale & Hess 2012; p. 129). The findings of the research conducted and reviewed in the Vance paper argues in support of a multi-disciplinary approach for the purposes of creating a balance between nonlinear and linear thinking.

Having reviewed the pertinent literature stream on entrepreneurship programs and where they are being offered within a university context, I have realized that there is a knowledge gap in the literature related to locating a new entrepreneurship program on a university campus. Specifically, very little empirical research has examined what the best practices are in locating entrepreneurship programs within a university context, given the specific objectives university leadership has in mind for entrepreneurship education. For instance, what are the best practices in locating an entrepreneurship program if one seeks to maximize the number of students trained in entrepreneurship, or the number of student ventures created?

Stakeholders: Where to locate?

A better understanding of where best to locate an entrepreneurship program within a university is of paramount importance for several stakeholders. The first stakeholder group consists of universities themselves as mission-oriented organizations. Universities nowadays are transforming themselves from 'ivory towers' where the research conducted and students trained are not very well geared to the needs of the society, to 'entrepreneurial universities' that carry out application-oriented research and where graduates possess the skills and expertise to make a tangible contribution to the local community and to society as a whole. Entrepreneurship programs impart useful skills in opportunity recognition, strategy crafting, team building, leadership and product development and commercialization that can be applied both in an independent venture context and in established corporate setting. Within universities several colleges are in a position to contribute to a vibrant and state-of-the-art entrepreneurship program and constitute another set of stakeholders. For instance, Colleges of Engineering, Science, the Arts and Medicine, to name a few can provide domain knowledge to students that enable them to craft inventions with great commercialization potential. The College of Business can equip students with 'procedural knowledge' regarding how the entrepreneurship process unfolds over time, and the skills and leadership required to identify entrepreneurial opportunities and effectively exploit them. Faculty developing and delivering the curriculum are another key stakeholder since they have a mandate to train the students in entrepreneurship. A second important stakeholder group consists of the students themselves who will gain valuable skills that enable them to fulfill their dreams of pursuing a career as an entrepreneur, either as the founder of an independent venture or as an entrepreneur within an existing organization. A third important stakeholder group consists of the local and national business community who are constantly on the lookout for people with entrepreneurial mindsets, skills and experience. Given the ever-changing competitive landscape, firms are looking for well-trained individuals that can drive entrepreneurial efforts within their organizations. A final key stakeholder group consists of society at large that stands to benefit if more students trained in entrepreneurship initiate new scalable, high growth ventures or create new divisions within existing organizations and thereby create new, well-paying jobs which are beneficial to society as a whole.

Within universities several colleges are in a position to contribute to a vibrant and state-of-the-art entrepreneurship program

The influence of donors cannot be overlooked. The University and/or University System can provide startup funding for the new program. It can be partially supported through tuition, student fees, grants, or by individuals and organizations outside of the university. Additionally, within the University there may be discretionary funding from the Offices of the President, Provost, Dean(s) and Institutional Development. Outside of the University, sources of funding include individual contributions from alumni and corporate philanthropists. These individuals may have a specific motivation for their gifts and could influence the decision making process regarding the location of the new program. Additional outside sources of support include both state and national initiatives, along with not-for-profit foundations.

The question of where to locate an entrepreneurship program to achieve certain specified objectives is of interest and affects all stakeholders identified above. That's the broad question this dissertation aims to address.

Conclusions

Research related to the question of where to "locate a new collegiate entrepreneurship program for a start-up campus" provides us with a variety of options. There are several arguments for the placement and administration of a new program. Some

argue that the program should be located in the traditional business school; others believe there needs to be a dedicated School for Entrepreneurship; others believe it should be located in the College of Engineering; and others believe that entrepreneurship should be offered through a university-wide centralized center.

Kuratko argues, utilizing data collected by Solomon, Duffy and Tarabishy, that an entrepreneurship program should be differentiated from the typical business education (Solomon, Duffy & Tarabishy, 2002). Business entry is a fundamentally different activity from managing a business (Gartner & Vesper, 1994); entrepreneurial education must address the equivocal nature of business entry (Gartner, Bird, & Starr, 1992) This substantiates the claim that entrepreneurship education should be in the College of Business, but in a separate department.

Robert Chia concludes that an entrepreneurship program should reside in a College of Business, but the College of Business should be more entrepreneurial. Chia indicates that the unique contribution university business schools can make to the business-community is not through the vocationalizing

of business/management programmes, but through adopting a deliberate educational strategy which privileges the “weakening” of thought processes so as to encourage and stimulate the entrepreneurial imagination (Chia, 1996).

In Morris et al. (2013), another argument is made for an interdisciplinary approach to entrepreneurial studies. The authors explain that focusing the entrepreneurship program in a business school constrains the scope and impact of the program and its ability generate resources, the degree of buy-in the program receives from key decision-makers on the campus, and the ability to create value for business students. The authors put forth the concept of “The Entrepreneurial University” (Morris, Kuratko, and Cornwall 2013).

Yet another model put forth in a recent dissertation by Jimenez, (2016) involves creating a co-curricular program to nurture student entrepreneurs through action learning and the use of student based competitions. Action learning is a context-sensitive approach that involves theory-based teaching with real-life problems, which requires the student to take action and reflect upon the results (Jimenez, 2016). The opportunity created in action learning lends itself to student based competitions. In her dissertation, Jimenez’s states: “Student business competitions (SBCs) have emerged as an essential component of entrepreneurial learning in higher education because they are seen as offering students an opportunity to bring their ideas to life while learning entrepreneurial skills” (Jimenez 2016, p. 10). Co-curricular programs encourage students to incorporate learning experiences with the actual college curriculum. Synergies can develop between disciplines and practice that create a learning environment that mirrors the ambiguity of the entrepreneurial experience.

From a theoretical perspective this decision regarding where to put an entrepreneurship program depends on who among your stakeholders has the biggest weight as well as the configuration of those stakeholders. It is also a resource story, in that offering and locating a program is in part determined by who holds the resources (financial, human capital, intellectual, etc.).

For the purposes of preparing and embedding future entrepreneurship programs, if one has specified objectives like training as many students in entrepreneurship as possible and stimulating the creation of new ventures, it would help one to gain a better understanding of this relationship.

The question of where to locate a new program on a University Campus creates an opportunity to research and make a case for various scenarios. Colleges of Engineering, Medicine, and the Sciences train and impart domain knowledge related to particular subjects, and have recently included interdis-

ciplinary subjects such as bioinformatics, nanotechnology, and biomedical engineering. The College of Business imparts procedural knowledge. They offer tools and frameworks for creating entrepreneurial action such as identifying attractive ideas and solutions to problems (ideation to launch), while assembling a team, developing a strategy and building a business model to capitalize on opportunities, thus providing a platform for the interaction of domain knowledge and procedural knowledge. Cross-disciplinary collaborative programs establish University-wide interdisciplinary centers creating hybrid structures that address solutions to specific issues. The flexible nature associated with cross-disciplinary programs creates unique structures related to the environment of the University itself, the disruptive nature of innovation, stakeholder demands and financial sustainability.

References

- Bergmann, H., Hundt, C., & Sternberg, R. (2016). What makes student entrepreneurs? On the relevance (and irrelevance) of the university and the regional context for student start-ups. *Small Business Economics*, 47(1); 53-76. <https://doi.org/10.1007/s11187-016-9700-6>
- Chia, R. (1996). Teaching paradigm shifting in management education: University business schools and the entrepreneurial imagination. *Journal of Management Studies*, 33(4), 409-428. <https://doi.org/10.1111/j.1467-6486.1996.tb00162.x>
- Conners, S. E., & Ruth, D. (2012). Factors Influencing Success in an Introductory Entrepreneurship Course. *Journal of Entrepreneurship Education*, 15, 63–73.
- Finkle, T. A., (2007). A comparative analysis of US versus international entrepreneurship centers. In *21st Proceedings of the Annual National United States Association for Small Business & Entrepreneurship Conference*. (Vol. 125).
- Gartner, W.B., & Vesper, K.H. (1994). Experiments in entrepreneurship education: Success and failures. *Journal of Business Venturing*. 9(3), 179-187. [https://doi.org/10.1016/0883-9026\(94\)90028-0](https://doi.org/10.1016/0883-9026(94)90028-0)
- Gartner, W.B., Bird, B.J., & Starr, J.A. (1992). Acting as if: Differentiating entrepreneurial from organizational behavior. *Entrepreneurship Theory and Practice*, 16(3). 13-32. <https://doi.org/10.1177/104225879201600302>
- Leffel C. H. A., & Agrawal, L. D. L. V. M. (2014). Accelerating collegiate entrepreneurship (ACE): The architecture of a university entrepreneurial ecosystem encompassing an intercollegiate venture experience. *Journal of Business & Entrepreneurship*, 95-116.

- Jennings, P. D., Greenwood, R., Lounsbury, M. D., & Suddaby, R. (2013). Institutions, entrepreneurs, and communities: A special issue on entrepreneurship. *Journal of Business Venturing*, 28(1), 1-9. <https://doi.org/10.1016/j.jbusvent.2012.07.001>
- Jimenez, B. (2016). *The entrepreneurial sandbox: The role of co-curricular programs in nurturing student entrepreneurs* (Doctoral dissertation, Polytechnic Institute of New York University).
- Johnson, J.E., & Envick, B.R., (2014). Assessing the learning goal outcomes of an interdisciplinary entrepreneurship cohort program: a comprehensive survey approach. *Journal of Entrepreneurship Education*, 17.
- 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. <https://doi.org/10.1007/s11365-014-0349-9>
- Kuratko, D. F. (2005). The emergence of entrepreneurship education: Development, trends, and challenges. *Entrepreneurship theory and practice*, 29(5), 577-597. <https://doi.org/10.1111/j.1540-6520.2005.00099.x>
- Martz Jr, W. B., Neil, T. C., Biscaccianti, A., & Williams, R. J. (2003). Student perception of entrepreneurs: A cultural perspective. *International Journal of Entrepreneurship*, 7, 67-86.
- Morris, M. H., Kuratko, Donald F., & Cornwall, J. R. (2013). *Entrepreneurship programs and the modern university*. Edward Elgar Publishing. <https://doi.org/10.4337/9781782544630>
- Politis, D., Winborg, J., & Dahlstrand, A. L. (2012). Exploring the resource logic of student entrepreneurs. *International Small Business Journal*, 30(6), 659-683. <https://doi.org/10.1177/0266242610383445>
- Ridley, D. (2016). Developing an entrepreneurial mindset across the university curriculum. In *United States Association for Small Business and Entrepreneurship. Conference Proceedings* (p. AG). United States Association for Small Business and Entrepreneurship.
- Solomon, G.T., Duffy, S., & Tarabishy, A. (2002). The state of entrepreneurship education in the United States: A nationwide survey and analysis. *International Journal of Entrepreneurship Education*, 1 (1), 65-86.
- Varadarajam Sowmya, D., Majumdar, S., & Galant, M. (2010). Relevance of education for potential entrepreneurs: an international investigation. *Journal of small business and enterprise development*, 17(4), 626-640. <https://doi.org/10.1108/14626001011088769>
- Turner, T., & Gianiodis, P. (2018). Entrepreneurship unleashed: Understanding entrepreneurial education outside of the business school. *Journal of Small Business Management*, 56(1), 131-149. <https://doi.org/10.1111/jsbm.12365>
- Uy, M. A., Foo, M. D., & Ilies, R. (2015). Perceived progress variability and entrepreneurial effort intensity: The moderating role of venture goal commitment. *Journal of Business Venturing*, 30(3), 375-389. <https://doi.org/10.1016/j.jbusvent.2014.02.001>
- Vance, C. M., Groves, K. S., Gale, J., & Hess, G. L. (2012). Would future entrepreneurs be better served by avoiding university business education? Examining the effect of higher education on business student thinking style. *Journal of Entrepreneurship Education*, 15(1), 127-141.
- Zhang, Y., Duysters, G., & Cloudt, M., (2013). The role of entrepreneurship education as a predictor of university students' entrepreneurial intention. *International Entrepreneurship and Management Journal*, 10(3), 623-641. <https://doi.org/10.1007/s11365-012-0246-z>

Review

This article was accepted under the **constructive peer review** option. For further details, see the descriptions at:

<http://mumabusinessreview.org/peer-review-options/>

Author



Douglas Carter has a B.A. in Communication Theory and Cross-Cultural Communications from The Ohio State University, an M.B.A. in International Business from National University and a DBA from the University of South Florida. Employed at Texas A&M University-San Antonio as an Assistant Professional Track in the College of Business, Douglas was formerly the Associate Vice President for External Affairs & Global Partnerships. Courses taught include: Global Management; Principles of Management; Business & Society; Labor Management and Collective Bargaining; Foundations of Entrepreneurship; Fundamentals of Entrepreneurship; Entrepreneurship-Business Plan; and Study Abroad.