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## Locating a New Collegiate Entrepreneurship Program, a Framework for a University Campus

Douglas H. Carter  
*University of South Florida, Parker5975@gmail.com*

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

by

Douglas H. Carter

A dissertation submitted in partial fulfillment  
of the requirements for the degree of  
Doctor of Business Administration  
MUMA College of Business  
University of South Florida

Co-Major Professor Dirk Libaers, Ph.D.  
Co-Major Professor Gilbert Gonzalez, D.B.A.  
Jennifer Cainas, D.B.A.  
Gert-Jan de Vreede, Ph.D.  
Delroy Hunter, Ph.D.

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# **Chapter One: Locating a New Collegiate Entrepreneurship Program, a Framework for a University Campus**

## Tagline

In an effort to understand where a university campus may want to establish a new collegiate entrepreneurship program, a study of existing programs both domestic and international would be beneficial to fill knowledge gaps in this field of study.

## Keywords

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

## Executive Summary

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 differentiates from typical business education. Entrepreneurial education must address the equivocal nature of business entry (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 knowledge gap.

## Introduction

Although entrepreneurial activity traces back to the early 18<sup>th</sup> century, contemporary entrepreneurship has emerged over the last three decades as arguable 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 locate 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 and determining if 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 or 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 nature of who develops and maintains the curriculum, which hires and supports the faculty, where budgets

are allocated, how to market the program for the recruiting of students and associated stakeholders.

## Protocol

Google Scholar was a helpful resource in finding materials to assist in developing and support the research topic. Databases, including IBISWORLD, 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 netted 1,190,000 articles, while the search for Universities Entrepreneurship Education resulted in 437,000 articles. Using the keywords

University Innovation Concept Centers 677 articles were found and the search using the keywords New Collegiate Entrepreneurship Programs resulted in 32,300 articles.

The articles and text chosen for the literature review, as detailed in Appendix A. Articles 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 and running university entrepreneurship programs.

### Literature Summary

(See Appendix A for Individual Source-Multiple Findings Table)

The literature reviewed supported the idea of establishing a new program within the College of Business, as well as offering 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 streams of entrepreneurship courses: those for business school majors and those for non-business majors” (Connors & Ruth, 2012, p. 63). Schools were not identified in this study; however, the article does illustrate a trend to attract students from disciplines other than business, while possibly maintaining the program within the College of Business. Additionally, an article published in the *Small Business Economics* validates the need for entrepreneurship education. As stated: “While individual characteristics are the main driver of students’ entrepreneurial behavior, our results still suggest that universities are able to influence students’ entrepreneurial activity to some degree” (Bergmann, Hundt & Sternberg 2016, p. 69).

In the 2013 *Journal of Business* article, *Institutions entrepreneurs, and communities: A special issue on entrepreneurship*, the authors focused on the sociological approach to entrepreneurship and the bridges between the institution, entrepreneurs, and communities. The authors, within the bounds of their introduction, provide a definition of entrepreneur that refers to not only the concrete, individual entrepreneur as agent, but the wider and less agentic networks of actors generating new ventures, such as entrepreneurial teams, investors, and others engaged in distributed entrepreneurship (Jennings, Greenwood, Lounsbury & Suddaby, 2013). The definition provided in this article applies to the stakeholder theory that will be applied later in the paper, a theory that speaks to the relationship between the entrepreneur and the circle of relationships that surrounds the student entrepreneur, program and new venture.

In addition to co-authoring the text *Entrepreneurship Programs and the Modern University*, Kuratko (2005) reviewed key issues in entrepreneurship education and discusses 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, providing support for 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 to support for 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 direction 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 minority and underserved populations. Sowmya et al. (2010) provide evidence in the increasing number of women attending universities and their participation in the labor force. 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, how they fit into the modern university, 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 – The Structure at Oklahoma State. 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 on how entrepreneurship education can be established within the University context. There was some insightful information for start-up programs in the *Conclusion: the ongoing revolution* of the text. The text concludes identifying a few issues to watch for in the future, identifying trends and developments in: 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 as wither being more scholarly and research focused, or being more applied and engagement focused, will find both happening in tandem. The relationship 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 states: “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).

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 nonlinear 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 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 and Their Relationship to “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 is the 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 on 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 are the students themselves who will gain valuable skills that enable them to fulfill their dreams of pursuing a career as entrepreneur, either as founder of an independent venture or as an entrepreneur within an existing organization. A third important stakeholder is 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 is society at large that stands to benefit if more students trained in entrepreneurship will initiate new scalable, high growth ventures or create new divisions within existing organizations and thereby create new, well-paying jobs which is beneficial to society as a whole.

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 Office of the President,

Provost, Dean(s) and Institutional Development. Outside of the University, sources of funding include individual contributions from alumni and corporate philanthropist. These individuals may have a specific motivation for their gift and could influence the decision making process of where to locate a new program. Among 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: that a core objective of entrepreneurship education is that it differentiates from typical business education (Solomon, Duffy & Tarabishy, 2002). 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). Thus,

substantiating a 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 by focusing the entrepreneurship program in a business school it 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) is to create 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, by which the student needs 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 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 on where to put an entrepreneurship program depends on who among your stakeholders has the biggest weight and it depends on 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 be beneficial to better understand 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 interdisciplinary subjects such as bioinformatics, nanotechnology, and biomedical engineering. The College of Business imparts procedural knowledge. They offer tools and

frameworks on how to create 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.

## **Chapter Two: Empirical Findings: Locating a New Collegiate Entrepreneurship Program, a Framework for a University Campus**

### Tagline

The primary objective of this research project is to assist in the understanding of and appreciation for the role a university has in locating a new collegiate entrepreneurship program.

With the expansion of entrepreneurship programs, where should a new program be placed for the purpose of producing graduates and launching new ventures?

### Keywords

Entrepreneurship Education, Collegiate Entrepreneurship Program, Entrepreneurship Education Demographics, Centers of Entrepreneurship

### Executive Summary

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). Specifically, where within the university organizational structure should entrepreneurship programs be best embedded to deliver the most impact? This study will

examine best practices from an international perspective, taking under consideration the location of a new collegiate entrepreneurship program in relationship with measurements of success, the number of trained graduates in entrepreneurship, as well as, the number of successful student ventures. Lead faculty and Program Directors were surveyed and interviewed in relationship to the programs that they either created or champion. The data resulting from the study could be suggestive to any one entering a discussion of locating a new program in entrepreneurship on a university campus. Reviewing best practices from a variety of existing programs suggest that there is opportunity to reflect on what could be as opposed to what is. The what could be aligns with the ideation of creating a contemporary program which addresses the issues of today's university's and students.

## Introduction

With the increasing number of entrepreneurship programs offered by universities nationwide and across the globe, a vexing question remains; where would such entrepreneurship programs best be housed if one's objectives are to train many students in entrepreneurship and to create new ventures? This question is important for several reasons. First, depending on the mission, objectives and anticipated short-and long-term impacts such programs have been found in a variety of settings; Colleges of Business (e.g. University of Florida, Northeastern University), Colleges of Engineering ( e.g. University of California, Santa Barbara and Berkeley; Stanford University) as programs attached to a university-wide, autonomous Center for Entrepreneurship (Hofstra University), in Colleges of Medicine ( e.g. University of California, San Francisco) or even in a separate School for Entrepreneurship ( Oklahoma State University) (Hornsby et al, 2018; Kuratko, 2005; Morris et al, 2018). Second, colleges that have a significant number of

faculty members teaching and researching entrepreneurship-related topics may drive the choice. Third, a recent trend is to embed programs in colleges where new products, technologies and services are being pioneered, such as Colleges of Engineering, design, or (interdisciplinary) sciences, the logic being that technically trained people are easier to be taught principles of entrepreneurship rather than business school students being taught the intricacies of developing new technologies (Turner and Gianiodis, 2018). Fourth, entrepreneurship programs are drawing significant attention from governmental funding agencies, wealthy donors, and alumni who like to support such programs, given the economic and social impact they may have on the local region. As such, one can expect donor-driven decisions to impinge on where to locate a collegiate entrepreneurship program. And fifth, many research universities have developed a pronounced third mission besides teaching and performing research, namely, contributing to local economic development (Etzkowitz, 2003). One way to accomplish this objective is to diffuse entrepreneurship education as widely as possible across curricula offered by all colleges in the university, and perhaps offered by a university-wide center for entrepreneurship.

Further elaborating on this last point, that of the university as an engine of innovation and economic growth, many universities and other key stakeholders (e.g. federal, state and local governments, taxpayers; the business community; faculty, students and parents; etc.) view the training of graduates in entrepreneurship and the creation of new ventures as key mechanisms to stimulate innovation and economic growth in the university's local and wider community (Fayolle et al, 2006). This leads us to two distinct, yet related research questions that this research paper seeks to address; 1) What are the best practices in terms of locating an entrepreneurship program (College of Business, College of Engineering, etc.) in a university to

train students in entrepreneurship?, and 2) What are the best practices in terms of locating an entrepreneurship program in a university to create new ventures?

Since Colleges of Business have traditionally taken the lead as providers of entrepreneurship education, starting with small business management in the early seventies and eighties (Vesper and Gartner, 1997), we like to further investigate what the precise functional role is of the College of Business if the best practices suggest that entrepreneurship programs are best located in Colleges of Business, given the two key objectives of training entrepreneurship graduates and creating new ventures. With functional role of the College of Business, we refer to the College's role in curriculum development and ownership, staffing and marketing of the entrepreneurship program. Conversely, this study aims to uncover the functional role of the College of Business in the event that the best practices suggest that Colleges of Business are not the best location to house a collegiate entrepreneurship program. This leads us to two additional research questions:

1) If best practices indicate that the College of Business is the best location to host an entrepreneurship program to achieve the outcomes specified outcomes above, what is the functional role of the College of Business in operating the program. and, 2) If best practices indicate that the College of Business is not the location to host an entrepreneurship program to achieve the specified outcomes above, what is the functional role of the College of Business relevant to other colleges within the University, in operating the program?

Our empirical research and key relationships tested in this research paper is informed by stakeholder theory and resource based theory. The traditional view of an organization in general and a company in particular is that shareholders and owners are the only actors that matter and

that the company has a fiduciary duty to put the interests and needs of shareholders first, and increase value for these shareholders (Lazonick and O’Sullivan, 2000; Smith, 2003). In contrast, stakeholder theory suggests that other parties are involved whose interests must be addressed and who must derive value from what the company does (Freeman, 2001). The resource-based theory argues that firms can obtain a competitive advantage based on the resources they own and exploit. However, not all resources are equal in their ability to create a sustainable competitive advantage. Firms that own and exploit resources that have the following characteristics; valuable, rare, imperfectly imitable, and non-substitutable, can deploy these resources to achieve a sustainable competitive advantage. (Barney, 2001). We draw on these theories to hypothesize and predict where entrepreneurship programs are best be housed given the objectives of training a large number of students in entrepreneurship and of creating new ventures.

## Literature Review

The literature reviewed supported the idea of establishing a new program within the College of Business, as well as offering 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 streams of entrepreneurship courses: those for business school majors and those for non-business majors” (Connors & Ruth, 2012, p. 63). Schools were not identified in this study; however, the article does illustrate a trend to attract students from disciplines other than business, while possibly maintaining the program within the College of Business. Additionally, an article published in *Small Business Economics* validates the need for entrepreneurship education. As stated: “While individual characteristics are the main driver of students’ entrepreneurial behavior, our results still suggest that universities are able to influence students’ entrepreneurial activity to some degree” (Bergmann, Hundt & Sternberg 2016, p. 69).

In a 2013 *Journal of Business Venturing* article, *Institutions entrepreneurs, and communities: A special issue on entrepreneurship*, the authors focused on the sociological approach to entrepreneurship and the bridges between the institution, entrepreneurs, and communities. The authors, within the bounds of their introduction, provide a definition of entrepreneur that refers to not only the concrete, individual entrepreneur as agent, but the wider and less agentic networks of actors generating new ventures, such as entrepreneurial teams, investors, and others engaged in distributed entrepreneurship (Jennings, Greenwood, Lounsbury & Suddaby, 2013). The definition provided in this article applies to the stakeholder theory that will be applied later in the paper, a theory that speaks to the relationship between the entrepreneur and the circle of relationships that surrounds the student entrepreneur, program and new venture.

In addition to co-authoring the text *Entrepreneurship Programs and the Modern University*, Kuratko (2005) reviewed key issues in entrepreneurship education and discusses 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, providing support for 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 this paper. 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 to support for 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 direction 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 minority and underserved populations. Sowmya et al. (2010) provide evidence in the increasing number of women attending universities and their participation in the labor force. 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, how they fit into the modern university, and how 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 – The Structure at Oklahoma State. 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 on how entrepreneurship education can be established within the University context. There was some insightful information for start-up programs in the *Conclusion: the ongoing revolution* of the text. The text concludes identifying a few issues to watch for in the future, identifying trends and developments in: 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 as whether being more scholarly and research focused, or being more applied and engagement focused, will find both happening in tandem. The relationship 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 states: “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).

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 nonlinear 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 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?

### Theory and Hypotheses

In a university context, where multiple stakeholders vie for power and seek to generate and appropriate value, Colleges of Business stand out when considering locating an entrepreneurship program. The value we consider in this research paper is the number of students trained and graduated in entrepreneurship and the number of new ventures created by students attending or graduating from that program. Historically, Colleges of Business as a stakeholder in offering and benefiting from an entrepreneurship program had a relative outsize power compared to other colleges in the university or a centralized unit. This relative power advantage of the College of Business as a value creator and appropriator is the fact that it had some faculty that taught small business management. This expertise later developed, starting in the 90s as scholars started to examine the Dotcom boom, and in the 2000s in full-fledged programs focused on

entrepreneurship. This evolution in entrepreneurship as a field of study was accompanied by a rise in academic journals focused on entrepreneurship and the celebration of successful entrepreneurs in the popular media.

From a resource-based perspective, it is clear that colleges of business have superior resource endowments when it comes to entrepreneurship programs; faculty, adjunct faculty, faculty in related and relevant disciplines like marketing, finance and operations, in some cases unique resources like a business incubator or accelerator, new venture competitions, and crucially important, business students that have a strong interest in entrepreneurship. As such, business schools are very well positioned to excite, recruit and train students in entrepreneurship than other colleges who suffer from critical resource deficiencies in terms of faculty, a history of teaching small business management, and students in closely related disciplines. Furthermore, and again from a resource-based perspective, much of the entrepreneurship and business curricula force students to work in teams, participate in business plan or model competitions where frequently seed funding is awarded. In addition, more and more Colleges of Business operate a business incubator or accelerator that offers space, mentor support and other services to selected ventures created by students (Ahsan et al, 2018). In addition, from a stakeholder perspective, Colleges of Business have developed traditionally strong ties with the local business community who often recruit students from the College, serves as guest or keynote speakers on business-related topics, send executives for further training offered by many Colleges of Business' executives programs, and have strong donor or sponsorship-based relations with the College. While this is also the case for Colleges of Engineering, but often to a lesser extent, such stakeholder relationships between other Colleges (e.g. Education, Liberal Arts, Medicine, Law)

and the local business community are far more sparse. As such, Colleges of Business often find themselves in preferential positions in their relation with the local business community, and donors from the business community are frequently seen endowing a Centre for Entrepreneurship, a Chair or a program in entrepreneurship in Colleges of Business, through a major donation. This is another reason why we expect that Colleges of Business train more students in entrepreneurship and create more new ventures relative to other colleges with a university. Based on arguments from stakeholder and resource-based theory, we therefore expect that:

H1: Based on stakeholder and resource-based theory, entrepreneurship programs located in a College of Business train more students in entrepreneurship.

H2: Based on stakeholder and resource-based theory, entrepreneurship programs located in a College of Business create more new ventures.

Qualitative research, in the form of structured interviews were conducted to test the following hypotheses.

H3a: If best practices indicate that entrepreneurship programs are best located in a College of Business, what is the functional role of the College of Business in terms of curriculum development/ownership, staffing, and marketing the program?

H3b: If best practices indicate that entrepreneurship programs are best located in a College other than Business, what is the functional role of the College of Business in terms of curriculum development/ownership, staffing, and marketing the program?

#### Data and Research Method

A mixed methods approach was utilized for collecting data to assist with the research associated with this paper. A survey was constructed and distributed at the European Management Association Conference in Reykjavik, Iceland. The survey addressed several areas of interest to this study. In addition, the survey probed for some general information about the university, its location and its constituent components, the colleges. The survey can be found in the appendices at the end of this paper (Appendix G). The survey was distributed to attendees who were associated with or lead Entrepreneurship programs at their home universities. Upon completion of the survey, the participants were asked if they thought that there were any additional questions that should be added to survey, and they were asked if any question(s) on the survey should be eliminated. Receiving no suggestions on either inquiry, the survey was input into an online survey format so it could be distributed via email to additional faculty contacts.

After Reykjavik, the survey was distributed to all of the faculty members participating with the European Innovation Academy (EIA). The EIA provided a mailing list of international entrepreneurship faculty that was participating in the 2018 program. Hard copies of the survey were also available for those who wished to complete it in person.

Additional surveys were provided at the 2018 Experiential Classroom XIX workshop at the University of Tampa, and the NSF I-Corp Summit in Washington, DC. These surveys were available in the hard copy format. The electronic version of the survey was emailed contacts provided by faculty member at the University of South Florida.

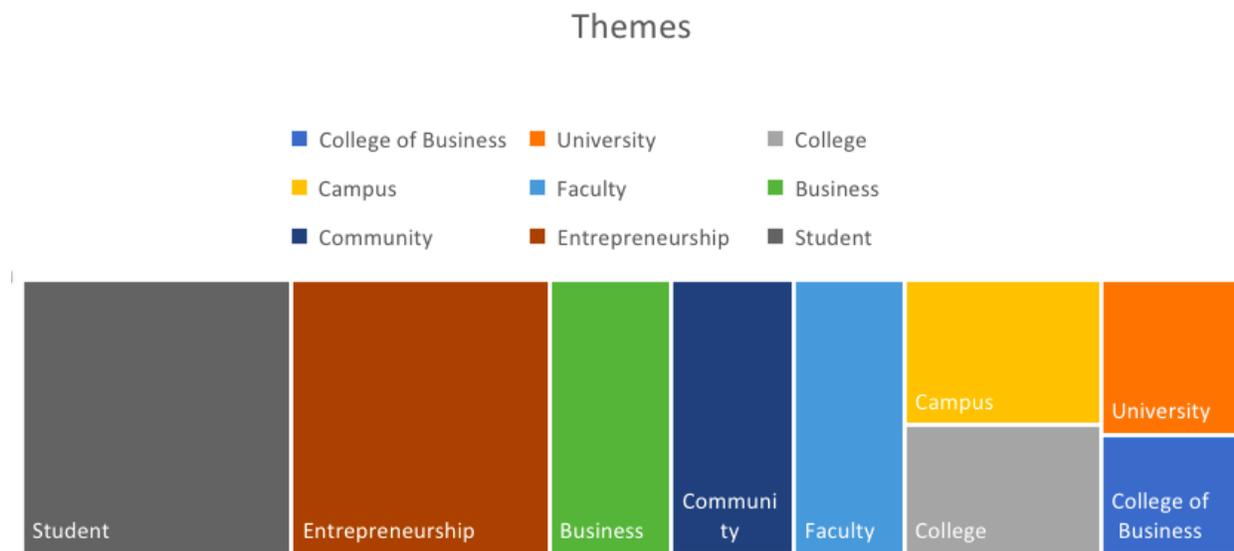
*Table 1: Survey Respondents Broken Out by Continent*

North America	72.50%
Europe	15.70%
Asia	5.90%
Africa	2.00%
Australia	3.90%

The surveys were collected between June 2018 and September 2018. All of the respondents were professors of entrepreneurship or program directors, both domestic and international. Respondents included faculty members from five different continents. The breakout is illustrated in Table 1.

In terms of qualitative research component, several interviews were conducted with individuals in charge of Entrepreneurship programs and Entrepreneurship Center Directors. Interviews were conducted with open-ended questions, gathering data related to programs specifics. All but one interviews was conducted in person and the interviews were recorded and later transcribed for analysis. The interviews were conducted between the end of June 2018 and the middle of October 2018. After reviewing the transcripts, there were nine themes that appeared to have significance with the respondents. The breakout is illustrated in Table 2.

Table 2: Significant Themes as Identified by Survey Respondents



### Findings

To address RQ1a: What are the best practices in terms of locating an Entrepreneurship Program (Colleges of Business, Colleges of Engineering, Centers for Entrepreneurship, etc.) in a University to train students in Entrepreneurship? A survey among entrepreneurship educators involved in or leading entrepreneurship programs in US or foreign universities was conducted.

### Descriptive statistics

Below in Table 3 the descriptive statistics are depicted:

Table 3. Statistical Results Generated from the Survey, when the DV Equals the Average Number of Students Graduated in Entrepreneurship

Variable	Obs	Mean	Std. Dev.	Min	Max
# students graduated in ENT 2015	30	2.833333	1.464131	0	4
# students graduated in ENT 2016	33	2.848485	1.349102	0	4

# students graduated in ENT 2017	33	2.939394	1.344884	0	4
Average # students graduated in ENT	32	2.890625	1.310017	0	4
# student ventures in 2015	28	1.535714	1.2013	0	4
# student ventures in 2016	39	1.153846	1.113044	0	4
# student ventures in 2017	39	1.358974	1.135253	0	4
#Average number of student Ventures	39	1.252137	1.104134	0	4
Program Based in College of Bus	51	.745098	.4401426	0	1
Program Based in College of Eng	51	.1176471	.3253957	0	1
Program Based in Center for ENT	51	.1568627	.36729	0	1
Program Cross-Disciplinary	51	.5294118	.5041008	0	1
Population of City	51	3.098039	1.603183	1	5
North America	51	.7254902	.4507075	0	1
Europe	51	.1568627	.36729	0	1
Asia	51	.0588235	.2376354	0	1
Africa	51	.0196078	.140028	0	1
Australia	51	.0392157	.1960392	0	1
<i>Table 3 continued</i>					
Traditional ENT focus	51	.6078431	.4930895	0	1
Technology ENT focus	51	.2352941	.4284033	0	1
Social ENT focus	51	.1568627	.36729	0	1
Size of the University	51	3.254902	1.163497	1	4
Age of Program	51	9.117647	8.024081	1	40
Access to funding	42	1.47619	.8621611	0	3

Size of College of Bus	46	3.76087	1.551842	16	
Budget of College of Bus	32	2.71875	.6342064	1	3
Size of College of Eng	27	3.962963	1.343975	1	5
Budget of College of Eng	17	2.823529	.5285941	1	3
Size of College of Medicine	16	3.1875	1.682013	1	5
Budget of College of Medicine	11	2.909091	.3015113	2	3
Size of Center for ENT	28	1.464286	1.070899	1	5
Budget of Center for ENT	31	1.741935	.8932242	1	3
Startup Incubator	48	.625	.4892461	0	1

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The scales for the #students graduated in ENTXXX and the # student ventures in XXX are ordinal scale variables with 4 categories. Almost 75 % of entrepreneurship programs are embedded in Colleges of Business, roughly 15 % in a separate Center for Entrepreneurship and 11% are based in a College of Engineering. 3 % of programs are cross-disciplinary in nature, and most universities are located in fairly large cities. Roughly 72% of programs are based in North American universities, just over 15 % are based in Europe, almost 6 % is based in Asia, and the remainder are based in Africa (almost 2%) and Australia (almost 4 %). Most entrepreneurship programs have a Traditional Entrepreneurship/Small Business focus (60%), about 23.5% have a technology entrepreneurship focus, and just over 15% have a social entrepreneurship focus.

Most entrepreneurship programs are based in large universities, and the average age of an entrepreneurship program is 9 years. Most programs reported relatively moderate access to

venture funding in their locales. Just over 62.5% of universities reported to have a startup incubator on campus.

*Regression results*

Based on the survey data, an ordered logit regression analysis was selected to analyze the data, and the results suggest that there were three statistically significant coefficients, when the reference category for location of the programs is based in Colleges of Engineering and the reference category for Focus of the programs is Social Entrepreneurship. The regression results for the relationship between program location and number of students graduated in ENT are depicted in Table 4 below.

*Table 4: Statistical Results Generated from the Survey , when the DV Equals the Average Number of Students Graduated in Entrepreneurship Adding an Odds Ratio for Clarification*

*DV = Average number of students graduated in ENT*

Ordinal logits Odds ratio

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Program based in College of Bus.	-0.611 (-0.06)	.5427 (5.205)
Program based in Center for ENT	40.95***	6.06e+17*** **
Program Cross Disciplinary	(4.21) -1.766 (-1.14)	(5.90e+18) .1710 (.266)
Population of City	0.505 (0.78)	1.656 (1.065)
Traditional ENT focus	4.086* (2.33)	59.528* (104.48)
Technology ENT focus	1.683* (2.39)	5.383* (3.793)

*Table 4 continued*

Size of the University	0.274 (0.14)	1.315 (2.646)
Age of Program	0.125 (1.41)	1.132 (.100)
Access to funding	1.615 (0.95)	5.026 (8.535)
Startup incubator	4.037 (1.20)	56.65 (190.66)

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N (# of observations)	26	26
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t statistics in parentheses for ordered logits, robust standard errors in parentheses for odds ratios \*  
p<0.05, \*\* p<0.01, \*\*\* p<0.001

In the table the regression coefficients are both reported as ordered logit coefficients and odds ratios. To ease interpretation, we will use the odds ratios. Based on 26 observations, the results suggest three statistically significant coefficients; Programs based in Center of ENT; Traditional ENT focus and Technology ENT focus.

The results suggest that entrepreneurship programs embedded in Center for Entrepreneurship have very significantly higher odds (6.06 e17) of training and graduating more students in Entrepreneurship than programs embedded in Colleges of Engineering, the reference category. Since the coefficient on the variable ‘Programs based in the College of Bus’ is not significant, we conclude that there is no statistically significant difference between programs located in the College of Business and Colleges of Engineering in terms of producing graduates trained in entrepreneurship. Therefore we reject H1.

Furthermore, entrepreneurship programs with a traditional entrepreneurship/Small business management focus have much higher odds (59.28) to train and graduate more students in entrepreneurship than entrepreneurship programs with a focus on social entrepreneurship. Additionally, entrepreneurship programs with a technology entrepreneurship focus are higher odds (5.38) than entrepreneurship programs with a focus on social entrepreneurship in training and graduating more students in entrepreneurship.

To test H2, we ran a regression with the number of new ventures created by students in the entrepreneurship program as dependent variable. The results are depicted below in Table 5.

*Table 5. Statistical Results Generated from the Survey, when the DV Equals the Average Number of Student Ventures Created over the Period Ranging from 2015-2017 Adding an Odds Ratio for Clarification*

DV: Average of student ventures 2015-2017

	Ordered logits	Odd ratios
Program based in College of Bus.	-3.666*** (-3.45)	.0255*** (.027)
Program based in Center for ENT	-3.810*	.0221*
	(-2.21)	(.038)
Population of the City	-0.123 (-0.40)	.8840 (.273)

*Table 5 continued*

Traditional ENT focus	2.137 (0.46)	8.472 (39.17)
Technology ENT focus	-0.131 (-0.03)	.8772 (4.48)
Size of the University	-0.0791 (-0.22)	.9239 (.337)
Age of Program	0.142* (2.06)	1.152* (.079)
Access to funding	0.433 (0.60)	1.541 (1.11)
Startup Incubator	1.796† (1.85)	6.028† (5.845)

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N	29	29
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t statistics in parentheses for ordered logits; robust standard errors in parentheses for odds ratios

†p<0.10 , \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

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Again, for the sake of ease of interpretation, we will use the odds ratios instead of the ordered logit coefficients. The results in Table 4 suggest that Program location significantly affects the average number of new ventures created by students in the entrepreneurship program.

Specifically, entrepreneurship programs embedded in both Colleges of Business and Centers of Entrepreneurship have lower odds (0.0255 and 0.021, respectively) than entrepreneurship programs embedded in Colleges of Engineering to create a higher average number of new ventures over the three year period considered (2015-2017). Therefore we can reject H2 which posited that entrepreneurship programs located in Colleges of Business created more new ventures than those located in other Colleges.

Other results indicate that older entrepreneurship programs tend to generate a higher average number of new ventures than younger programs. The odds increase by 1.15 each year. Having a startup incubator also helps in creating a higher average number of new ventures since the odds for generating a higher average number of new ventures is 6.028 higher for universities with a startup incubator compared with those that don't have a startup incubator.

In conclusion, and based on a small sample, the results suggest that:

1. In terms of training and graduating students in Entrepreneurship, there is no difference between programs located in Colleges of Business and Colleges of Engineering
2. Programs located in Centers of Entrepreneurship are better at training and graduating more students in Entrepreneurship than Colleges of Engineering
3. Programs with a focus on Traditional/Small Business or Technology Entrepreneurship are better for graduating more students in Entrepreneurship than programs with a focus on Social Entrepreneurship

4. Programs located in Colleges of Business or Centers for Entrepreneurship are far less effective at generating large numbers of student ventures than Colleges of Engineering
5. Older programs in Entrepreneurship are better at generating larger numbers of student ventures
6. A startup incubator significantly helps producing more student ventures

In terms of qualitative research component, several interviews with Entrepreneurship Center Directors or individuals in charge of Entrepreneurship programs were conducted. Interviews were conducted with open-ended questions, in a semi-structured format to gather data related to two of our Research Questions.

RQ2a: If best practices indicate that the College of Business is the best location to host an entrepreneurship program to achieve the specified outcomes of training and graduating students, what is the functional role of the College of Business in operating the program?

RQ2b: If best practices indicate that the College of Business is not the location to host an entrepreneurship program to achieve the specified outcomes, what is the functional role of the College of Business relevant to other colleges with the University, in operating the program?

When best practices indicated that the College of Business was the best location to host an entrepreneurship program to achieve the specified outcomes of training and graduating students, the College of Business was: the genesis of the program where it grew out of Management

courses; the host of the program and responsible for curriculum development; the host of a center for entrepreneurship within the College, where the college is responsible for courting donors, sponsorships and curriculum development; and, host to a program aligned with a STEM focus where the college is responsible for teaching a business model canvas. Two concepts that were shared during the interview process was that you “decide what your primary mission is and say no to everything else” and “we do rely heavily on our community to partner in learning.”

When best practices indicated that the College of Business is not the location to host an entrepreneurship program to achieve the specified outcomes, the functional role of the College of Business relevant to other colleges with the University, in operating the program was: to develop fundamental business curriculum while providing space for a business development center with a focus on community engagement; provide basic business curriculum and create some opportunities for stakeholder engagement; and, provide a faculty member to develop curriculum and develop a cadre of high impact individuals to be coached as mentors. Similar to the interviews conducted with programs that reside in the College of Business, there were two concepts that were shared during the interviews where the program existed outside of the College of Business. “To serve the needs of the entire community” was one theme, while another program focused on “knowing your students first.”

The research results suggest that whether the program is located in the College of Business or not, the College of Business is responsible for fundamental curriculum development and community engagement.

## Discussion

With the expansion of the Entrepreneurship Programs on University Campuses, we seek answers to the questions of where the optimum location is to build the program to produce more trained graduates and launch more student ventures. Our goal is a first attempt in establishing best practices as to where university administrators best locate entrepreneurship programs if their objective is to train as many students in entrepreneurship and to create as many new ventures as possible.

The empirical data collected during this study was limited in scope and would benefit from more data points resulting from additional surveys and interviews from key faculty and program directors. The initial intent of this research project was to develop an understanding of best practices worldwide. We were able to collect survey results from five continents, as illustrated in Table 1, however additional data from universities on each of these continents would benefit the understanding of current best practices.

The data suggest that many of the existing programs for Entrepreneurship are in the College of Business, however the majority of programs producing more graduates in Entrepreneurship are located on campuses where there is a dedicated Center for Entrepreneurship. Complicating our assessment for success of such programs, is the data that suggest that Colleges of Engineering are generating more student ventures, while the presence of a startup incubator also significantly assist in producing more student ventures. This bifurcated result is interesting and has important policy implications. The choice in locating an entrepreneurship program diverge based on the objectives administrators seek to achieve. If administrators are interested in planting the seed and

mindset of entrepreneurship in as many students as possible, creating a separate, autonomous Center for Entrepreneurship that offers a program for business and non-business students or a hybrid program, would be the best option. However, if administrators would like to have a more direct impact on economic development and the fulfillment of the university's third mission, it appears that locating an entrepreneurship at a College of Engineering is a smart choice if the objective is to create many new ventures. It is in the College of Engineering that many new technologies are being developed that may add value to customers in the market. Several prominent examples of universities who have made this choice, and who also happen to have world-class Colleges of Engineering are Stanford University, UC Berkeley, UC Santa Barbara and UC Santa Cruz.

This leaves us with the question. What would be a role of the College of Business given our preliminary results on best practices for locating an entrepreneurship program? Is it hybrid programs? Is it joint appointments with a Center for Entrepreneurship and/or College of Engineering? Our qualitative research attempts to shed more light on these issues.

There were a series of interviews conducted with Lead Faculty, Chairs or Directors of several entrepreneurship programs. The interviews were conducted in a semi-structured format, to allow the respondents the time and opportunity to share their insights into locating an entrepreneurship program. The results of the interview indicate that 56% of the respondents were associated with an Entrepreneurship Program that resides in the College of Business. One program exist as an independent center within the College of Business and one is closely associated with a College of Engineering. Of the remaining 44% of the respondents, one is independent and resides under

the Office of the Provost and 48% of the students are declared business majors. Another program is independent and resides under the Office of the Vice Chancellor of Research. One is a stand-alone and co-curricular with business faculty, where the Center Director is not a faculty member, while one program is independent and co-curricular with a vocational program.

Issues not addressed in this research project, but with potentially beneficial data related to locating collegiate entrepreneurship programs could include: how are we tracking trained graduates; can we create an avenue to track graduates from traditional programs that enter the workforce directly upon graduating from college who later create a startup; and, can an independent startup culture on campus create not only more graduates, but make it easier to track them by creating a nurturing entrepreneurial university?

This study is only the first one to address the issue of entrepreneurship program location in a university context and suffers from several limitations that can be addressed in future studies. Future studies should collect much larger samples to validate our findings, include other measures as dependent variables or as outputs of the entrepreneurship programs, do in-depth thick case studies on several successful and not so successful entrepreneurship programs located in a variety of settings to study the dynamics and to identify commonalities and differentiators, success factors.

## Conclusions

In this study we sought to assess how the location of entrepreneurship programs are correlated with two outcomes frequently desired by university administrators; number of students graduated

from an entrepreneurship program, and the number of new ventures created by students in that program. The preliminary results based on a small sample suggest that housing a program in a Center for Entrepreneurship yields the best results if the administrators objective is to train as many students in entrepreneurship as possible relative to programs in Colleges of Business and Engineering, whereas entrepreneurship programs embedded in Colleges of Engineering are more suited in creating a larger number of new ventures than those in either Colleges of Business or a Center for Entrepreneurship. The results should be interpreted with caution due to the small sample on which the analysis is based. We propose avenues for further exploration in future studies, since the location of an entrepreneurship program is a strategic decision given its potential for local economic impact, as a vehicle for fundraising and as a relatively new and exciting field of study for students.

## **Chapter Three: Original Theory: Appreciative Inquiry, a Systematic Approach to Developing and Locating a Collegiate Entrepreneurship Program**

### Tagline

During a time of considerable expansion of entrepreneurship programs on university campuses, a new model of where to organizationally locate such a program that focuses on a dialogue of organizational strengths, resources, and capabilities is proposed.

### Keywords

Entrepreneurship Education, Centers for Entrepreneurship, Appreciative Inquiry, Stakeholder Relations, Campus Resource Allocation, Resource Based View

### Executive Summary

Entrepreneurship has emerged over the last three decades as arguably the most potent economic force the world has ever experienced. In a recent article, support of the economic impact of entrepreneurship is succinctly stated: the enormous benefits that capitalism inspires in creative entrepreneurs to deliver daily, and with disproportionate generosity, to the masses (Boudreaux, D.J., 2018). 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). Specifically, where within the university organizational structure should entrepreneurship programs be best embedded to deliver the most impact? Although we have drawn on stakeholder and resource-based theories in the second paper of this dissertation, there is a clear need for a new conceptual framework to guide university administrators in locating entrepreneurship programs in a university.

## Introduction

Entrepreneurship programs at institutions of higher learning have proliferated over the past three decades, Morris, Kuratko & Cornwall note that in the past 35 years courses related to entrepreneurship has grown from a handful to over 3000 today, and have been accompanied by organizational innovations such as Centers for Entrepreneurship, Business Plan Competitions, Business Incubators and accelerators and a whole raft of academic and practitioner journals that publish the latest developments in the field of entrepreneurship. Yet, for universities planning to offer entrepreneurship programs, a vexing question remains, where best to locate this program? A cursory assessment through a traditional website search of entrepreneurship programs indicates that entrepreneurship programs can be found in a wide variety of settings. Most entrepreneurship programs can still be found in Colleges of Business, but more recently, entrepreneurship programs are offered by Colleges of Engineering, Colleges of Design, and Colleges of Medicine or through a university-wide entity that seeks to cater to all students in the university. No theory or conceptual framework has been proposed to date to guide the location of an entrepreneurship program, and the extant literature is quite fragmented on the topic.

However, for policymakers such as university administrators the location of an entrepreneurship program is a strategic decision. This is so for many reasons. First, entrepreneurship programs and the students they train can have a significant impact on the local economy. Second, entrepreneurship programs are excellent vehicles to raise funding from government agencies, large corporations, successful entrepreneurs or other wealthy donors that are eager to associate their brand or name with a program, center or other entrepreneurship-related initiative. Third, several constituent colleges and centers can contribute to the design and delivery of entrepreneurship programs, and as such a multi-stakeholder approach is likely most appropriate. However, far more theoretical development is needed to more precisely predict where to locate entrepreneurship programs. This article proposes a new idea for such a conceptual framework built on Appreciative Inquiry that will be presented in the following sections.

#### Review of Research

The concept of Appreciative Inquiry was developed as a tool to implement effective change management, change management executed in a positive and inclusive nature (Cooperrider & Srivastva, 1987; Cooperrider & Whitney, 2001). Throughout a review of the existing literature, there was no reference made of the application of Appreciate Inquiry being incorporated into the development of a new program, or into anything other than creating a positive approach to organizational change management.

I believe that by researching the components and application of the 4-D cycle model of Appreciative Inquiry (Whitney & Cooperrider, 2011), an adaptation can be proposed that would be beneficial in establishing a new program where resources are limited, and a successful launch

is imperative. Within the realm of higher education, we are aware that resources are limited, and student success is paramount. A new systematic approach to developing a program, acknowledging data and not conflicting motivations, would be a reasonable use of resources, while providing a positive opportunity for success.

Through existing literature, it can be determined that there has been success within organizations who utilize the techniques detailed in the Appreciative Inquiry approach (e.g. Whitney & Trosten-Bloom, 2010; Cooperrider & Whitney, 2001). The Appreciative Inquiry approach to change management creates avenues for organizations to work collaboratively by connecting to their positive core, resulting in organizations who have cocreated processes to: create a common-ground vision and strategy for the future, create dialogue to foster shared meanings, work towards sustainability and build dynamic relationships and high-performance teams to facilitate change (Cooperrider, Whitney & Stavros 2008), however there is no indication that this model has been incorporated into a model for establishing a new program, a change from nothing to something.

### The Proposed Theory

We propose Appreciative Inquiry, as a systematic approach to developing a Collegiate Entrepreneurship Program which was originally introduced by David L. Cooperrider and Diana Whitney. Every organization was created as a solution designed in its own time to meet a challenge or satisfy a need of society. Even more fundamentally, organizations are centers of vital connections and life-giving potentials: relationships, partnerships, alliances, and ever-

expanding webs of knowledge and action that are capable of harnessing the power of combinations of strengths. (Cooperrider & Whitney, 2005).

As entrepreneurship programs continue to expand and develop, it is imperative that they reflect the needs and desires of the entire campus community. The Appreciative Inquiry approach expands upon the stakeholder theory by incorporating a systematic exploration of stakeholder interests and needs. Stakeholders are those parties who have direct or indirect influence or are influenced by the organization (Freeman, 1984). Stakeholders are not only those parties or individuals affected by the profitability of an organization, but also include those who have vested interests in the success of a nonprofit organization as well. In the context of higher education in general, and entrepreneurship programs, we can identify several variables.

Stakeholders in this context are the university leadership; the various colleges of the university; the students; the local community; potential employers; the teaching and support staff of the entrepreneurship programs; potential investors, etc.

In addition to its association with the stakeholder theory, appreciative inquiry expands upon the Resource-Based Theory. This theory examines performance differences of organizations based on their resources (Peteraf & Barney, 2003). In our specific context, resource holders are the university as a whole, colleges, resources embedded in the local community like investors who hold financial resources; the local labor supply; the knowledge base of local companies and the university; lawyers and consultants who provide specific expertise in entrepreneurship-relevant domains like intellectual property, creating legal entities, business transactions, financing, etc.

The Appreciative Inquiry Theory, as introduced by Cooperrider & Whitney in their 2005 *Appreciative Inquiry, A Positive Revolution in Change* book, can be illustrated in a 4-D cycle: Dream; Discovery; Design; and, Destiny.

**Discovery:** (Appreciating) Mobilizing the whole system by engaging all stakeholders in the articulation of strengths and best practices. Identifying “The best of what has been and is.”

**Dream:** (Envisioning Results) Creating a clear results-oriented vision in relation to discovered potential and in relation to questions of higher purpose, such as, “What is the world calling us to become?”

**Design:** (Co-constructing) Creating possibility propositions of the ideal organization, articulating an organization design that people feel is capable of drawing upon and magnifying the positive core to realize the newly expressed dream.

**Destiny:** (Sustaining) Strengthening the affirmative capability of the whole system, enabling it to build hope and sustain momentum for ongoing positive change and high performance.

Organizations that have incorporated Appreciative Inquiry initiatives into their management style, as identified in the *Appreciative Inquiry Handbook for Leaders of Change* by Cooperrider, Whitney & Stavros (2008) include:

City of Longmont, Colorado: Longmont completed the Appreciative Inquiry Core Project of the Year by the International Association for Public Participation and was awarded “All American City” by the National Civic League (2006),

Imagine Chicago: Utilized Appreciative Inquiry intergenerational interviews to discover civic engagement and to nurture hope. Imagine Chicago has received many awards and is helping to spawn “Imagine” projects on six continents focused on long-term sustainable development in large cities,

EcoLogic Development Fund: The EDF guided a participative strategic planning process that made it a world leader in collaborative, community-led conservation of biological and cultural diversity,

ANZ Bank, Melbourne, Australia: ANZ Bank launched an inquiry into its purpose, involving more than 1,000 people-the largest engagement activity ever at the bank. Within a month, the bank crafted its purpose and had it adopted by the board of directors,

And, Hunter Douglas Window Fashion Division: The company created shared vision and re-instilled the ‘positive core’ factors (creativity, flexibility, intimacy, and sense of community) that had contributed to the division’s original success, while building a sustainable leadership with the organization. It was ranked in the “Top Ten Places to Work” in Denver, Colorado (2004) and in Colorado (2006).

## Applications of the Theory

In the event that an opportunity arises to create a new or relocate an entrepreneurship program at a university, a systemic approach incorporating the proposed Appreciative Inquiry Theory has the potential of being an effective design mechanism for the development and location of an engaging and successful program, from ideation to launch. For instance, walking through a hypothetical case study, we can start to envision the application of the Appreciative Inquiry, as a systematic approach to developing and locating a Collegiate Entrepreneurship Program.

There is a young university campus located in the southwestern region of the United States. The university is in a major metropolitan area, with a population exceeding 1 million inhabitants. The metropolitan area is home to only 2 companies in the Fortune 500 listing for 2017; however, ranked 6<sup>th</sup> nationally for metro startup activity in 2016. The environment is full of small to medium size enterprises and gives the appearance of being a positive environment for entrepreneurs. There are 5 other comprehensive universities within the city limits, all of which are mature and entrenched in the city and the communities in which they serve: regionally, statewide, nationally and internationally.

The mission of the new university is to create a positive economic impact on the local community and state, while creating opportunity for students from a historically underserved population. Demographic data related to the student body indicates that the campus is a commuter campus, predominately first generation, and with a significant minority (Hispanic) population. The university is an independent, stand-alone campus, associated with a significant university system. The university has a robust business college, led by a creative Dean who has

been instrumental in launching new and innovative academic and support programs for nearly a decade. The Dean has been with the university since its inception and has a thorough appreciation for the mission of the university, the student population and the community that the university serves. Complementing the Dean is a relatively new Provost with a keen interest in curriculum development, community engagement, and scholarly activities. The Provost is desirous of launching a major initiative to establish and locate an entrepreneurship program within the university. The leadership team is championed by a President with the insight and desire to engage with and address the needs of the community, and other stakeholders including donors, potential donors, city officials, the state legislatures and the system office.

Historically, new programs were introduced through initiatives launched by the Office of the President and/or Provost, by creative Deans and Department Chairs, or by Faculty members who have a specific subject matter expertise that might be unrelated to the students' interests or the needs of the community.

Within this scenario, a conversation occurs that mentions the opportunity to create a new Entrepreneurship Program that would include various disciplines within the College of Arts & Sciences, College of Engineering, and the College of Business. With a plethora of internal stakeholders (Program Directors, Department Chairs, Deans, Provost, and President, along with engaged Faculty, the Office of Institutional Development and Facility Coordinators), all with potentially different external stakeholders (City/Office of Economic Development and County Officials, Industry Researchers, Donors, Alumni, Micro-Financiers, other local Universities, existing Incubators and the NSF) , there is a multitude of interested parties who could contribute

to the design and introduction of the new program. Through the introduction of the Appreciative Inquiry Theoretical Approach, we can create a solution designed in its own time to meet a challenge to satisfy a need of society, whereby recognizing that organizations are centers of vital connections and life-giving potentials: relationships, partnerships, alliances, and ever-expanding webs of knowledge and action that are capable of harnessing the power of combinations of strengths (Cooperrider & Whitney, 2005).

Resources are limited, with funding coming from a state budget that is calculated based on enrollment, two years in arrears and some special item(s) allocations. Additional resources might be available through Institutional Advancement activities (donors, naming rights, foundations, etc.) and potential state and federal grant monies. Within a matter of time, the opportunity to develop a new program becomes complex with many and varied parties of interests. Some stakeholders' objectives are aligned, others are in competition. It's also easy to observe the relative political strengths of stakeholders as these forces will also come into play when considering the design and location of the new entrepreneurship program.

Through the *Discovery* stage of Appreciative Inquiry, a comprehensive assessment of the overall strengths and best practices of the entire stakeholder community would be conducted. The data collected from community charrettes, interviews, surveys and an economic analysis of the city, county and region identifying economic environments (clusters) that are prevalent and have the potential for growth, are the driving force that frame the Discovery stage of program development. These environments present in the hypothetical case being considered include: a major military presence, a large tourism environment, cyber security, bio-medical research,

advanced manufacturing and energy. In addition to an in-depth analysis of what is, a review of what can be would benefit the data collection utilizing data from recent Foreign Direct Investment reports for the city/county and interest collected by visiting trade delegations and various foreign consulates. The Discovery stage is the engagement and data collection process through which an organization can proceed to the Dream stage.

After the comprehensive stakeholder engagement process (Discovery), the formulation of the *Dream* becomes more data driven and less subjective. With data in hand, the University (curriculum designers, strategic planner(s), program developer(s), and Cabinet Leadership), along with key stakeholders (existing Incubators, City/County Leadership and financiers), develops and locates a program plan based upon the student, community and donor input. The creative process that unfolds is based upon capitalizing on the positive nature of the Discovery interaction and drives towards the higher purpose of the process and program that derive from the original stakeholder engagement.

A creative vision, framed by the data collected and through the Dream of what can be, is channeled through the *Design* process of the Appreciative Inquiry theoretical approach. Program design, directed through the Dream, is the creative process manifested through data driven decision making while incorporating the vision of the contributors that creates an amplified buy-in from the associated stakeholders. The Design process will also, which in our case is the focus of interest, guide the program planners in where *to locate* the entrepreneurship program given what has permeated through the Discovery and Dream stages of the 4-D Cycle framework. The

co-constructing Design is the culmination of the tenants' common intellectual prowess and interests, and possibly financial and emotional engagement in the program creation and location.

The positive relationships that emerge, as a result of a comprehensive and executable Appreciative Inquiry approach, transcend individual desires and focuses on the sustainable nature of the collective desires of those involved. The sustainability factor for a new program is enhanced by the vision of a shared Destiny. A destiny that has the positive buy-in, resulting from a comprehensive and unbiased approach to development that listens, processes, dreams and builds. The proposed application of the Appreciative Inquiry Theoretical Approach can be replicated in the future to maintain the programs fit with stakeholder's interests, which may change over time, along with resource availability. Internal and external environments may change over time, resulting in the need to periodically adjust the program to be adaptive to the current situation and its desire to be a sustainable program. The location of the program within a university context may also contribute to the sustainability of the initiative, as programs located within a particular college or associated with a university-wide entity have a different potential in recruiting a sustainable flow of students, grant money, donations, and maintaining sustainable ties with the local community, other colleges, and businesses, vis-a-vis other colleges or entities within the university.

The application of the Appreciative Inquiry theory to developing and locating a Collegiate Entrepreneurship Program, creates a stakeholder-focused program, incorporating data while seeking buy-in, sharing a realistic vision of the future, provides a template that is both tangible and practical while maintaining a positive and sustainable relationship that is mission driven

between the University and its' stakeholders. The impact created by a thoughtfully designed program, complemented with the knowledge of available resources and synergistic expectations, has the implied potential of creating tremendously positive results.

Figure 1 (below) illustrates the Appreciative Inquiry model and the shared relationships between the 4-D Cycle and the Affirmative Topic (Developing and locating a Collegiate Entrepreneurship Program). The Discovery phase focuses on the best practices within a specific topic domain and context; the Dream phase encompasses the envisioning of the possibilities and deciding upon the primary objectives for the organization, given the resources and political strengths and objectives of all stakeholders involved; the Design phase creates prototypes of what should be and crafting a program and selecting a location for that program within the university; and the Destiny phase concerns itself on innovating and improving fresh sustainable solutions for the design and location of the program (Steenbarger, B. 2015).

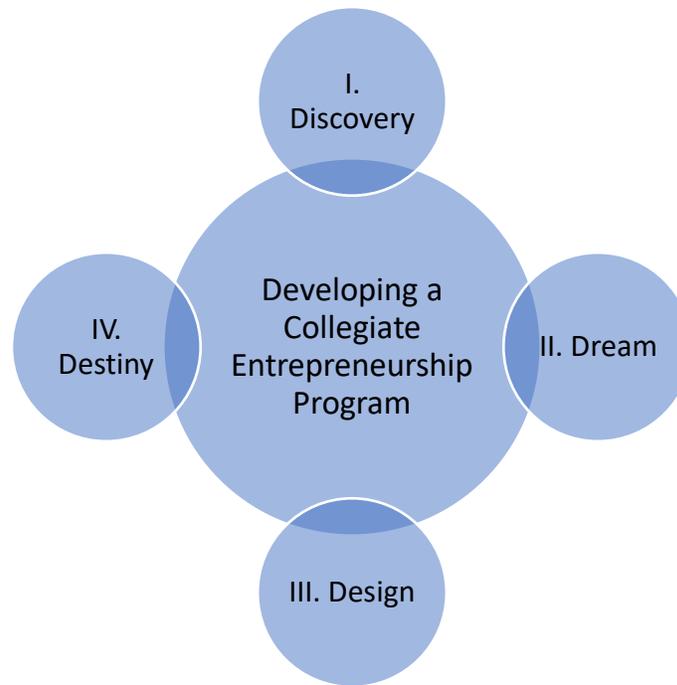


Figure 1: Proposed Model The 4 D's of Appreciative Inquiry and Their Relationship to Developing a New Program

## Discussion

The relationship between a new organization and the stakeholder relationships that develop during the design process, along with expected resources required for the development, location, launch and sustainable nature of the new project, suggest a new theory based on positive change that can be incorporated into the parameters of creating and locating a new program to educate entrepreneurs. Given the complexities of the status of Universities and Colleges, program developers need to be mindful of the desires and capabilities of the students and the community in which they coexist.

While gathering data for Chapter Two, Empirical Findings: Locating a New Collegiate Entrepreneurship Program, a framework for a University Campus, I interviewed several program directors and lead faculty; after reviewing the transcripts, three quotes stood out.

Dr. Rebecca White, Director of the John P. Lowth Entrepreneurship Center, James Walter Chair of Entrepreneurship, University of Tampa, September 2018 "...understanding your fit with your students and your community."

Dr. Tiffany Rogers Bussey, Founding Director of the Entrepreneurship Center, Morehouse College July 2018 "...have a social walk with our students. We will talk about what problems we see as we walk and then come back and ideate around those and then formulate start-up businesses to fix those issues."

Dr. Michael Morris, holds the George and Lisa Etheridge Professorship at the University of Florida, where he is the Academic Director of the Entrepreneurship Program July 2018 "...you build entrepreneurship programs. You develop entrepreneurship programs around five pillars. The pillars include: Degree Programs and Curriculum, Scholarly research, Co-Curricular programming, Cross-campus entrepreneurship and Community Engagement."

By having a structured approach, we reduce the risk of wasting valuable time and finite resources, chasing opportunities without vetting their desirability. The proposed approach would be beneficial in addressing fit with student needs, external stakeholders, along with enhanced community engagement.

That said, alternative explanations for locating an entrepreneurship program must be acknowledged. In a university context for instance, a new entrepreneurship program and its ‘home’ might be a pet project of a Provost or some Senior Vice President or even the President. These individuals might have a special preference in terms of college, department or centralized center for entrepreneurship to assign the program to. Alternatively, a donor that is considering making a significant naming gift to an entrepreneurship program may have his or her own preference for where the entrepreneurship program must be located and administered. This individual might be an alum from a specific college in the university or even department, and the donor’s preference will weigh heavily in deciding where to house the new entrepreneurship program.

Overall, the Appreciative Inquiry approach is a very useful framework for designing and locating new educational programs in a fierce multi-stakeholder environment, such as is the case for entrepreneurship programs. A key strength of the Appreciative Inquiry approach can also be easily understood and adopted by practitioners, as has been demonstrated above in a previous section.

## Conclusions

Appreciative Inquiry, developed as a tool to assist with positive organizational change, has attributes that can be utilized in the thoughtful creation of new organizations: in particular, due to the deep dive in the discovery process that exist within Appreciative Inquiry and stakeholder

engagement. The 4-D cycle: Dream; Discovery; Design; and, Destiny. (Cooperrider & Whitney, 2005), along with their associated actionable constructs of: Appreciating, Envisioning Results, Co-constructing, and Sustaining, creates an opportunity for stakeholder engagement from the onset of a new project the development and location of a new Collegiate Entrepreneurship Program.

The Appreciative Inquiry Theoretical Framework, in relationship to new program development, is an untested concept. In this paper we contribute to this framework by applying it to the development and location of a new entrepreneurship program in a young university. The opportunity for additional research in the application of the proposed framework is rich and encouraged. Assessment of the results of its application would provide data from which further studies could developed and implemented.

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## Appendix A: Individual Source-Multiple Findings Table

*Table A1: Individual Source-Multiple Findings*

	Source	Findings
	Authors, (year) and title of the article	<ul style="list-style-type: none"> <li>• Listing of the findings from the specific article.</li> <li>• Use bullet point format where appropriate.</li> </ul>
1	Conners, S. E., & Ruth, D. (2012). Factors Influencing Success in an Introductory Entrepreneurship Course.	<ul style="list-style-type: none"> <li>• Study the effect of curriculum sequencing on the success of students in entrepreneurship program</li> <li>• Students who take entrepreneurship later in their program, as indicated by the coefficient on Semester of Program, tend to perform better in Entrepreneurship 100</li> <li>• Both business and non-business students were equally successful in the course.</li> <li>• 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.</li> <li>• As a result of this unique position in many colleges, entrepreneurship courses often have a large percentage of non-business students.</li> <li>• In some colleges, business schools have created two separate streams of entrepreneurship courses; those for</li> </ul>

Table A1 continued

		<ul style="list-style-type: none"> <li>• business school majors and those for non-business majors.</li> <li>• Entrepreneurship as a discipline has found its way into most business school curricula but its place within those curricula varies.</li> </ul>
2	<p>Politis, D., &amp; Winborg, J. (2010). Exploring the resource logic of student entrepreneurs.</p>	<ul style="list-style-type: none"> <li>• Review of literature on academic entrepreneurship and student entrepreneurs</li> <li>• Examines differences between student entrepreneurs and non-student entrepreneurs</li> <li>• Swedish entrepreneurs</li> <li>• Looking at resource logic (effectuation, causation, bootstrapping and traditional resource acquisition)</li> <li>• Some methodological issues; did not collect information from failed entrepreneurs</li> </ul>
3	<p>Jennings, P. D., Greenwood, R., Lounsbury, M. D., &amp; Suddaby, R. (2013). Institutions, entrepreneurs, and communities: A special issue on Entrepreneurship.</p>	<ul style="list-style-type: none"> <li>• Draws on sociological research which can further enrich entrepreneurship studies of institutions, entrepreneurs, and communities</li> <li>• Among these clusters, the authors identified, three were directly related to sociology and cultural studies: 1) networks and entrepreneurs, 2) institutions and institutional entrepreneurship, and 3) societal consequences of entrepreneurship.</li> </ul>

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Table A1 continued

		<ul style="list-style-type: none"> <li>• 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).</li> <li>• Divides the framework into 3 areas: Local and Regional communities, industry and sector communities, and national and transnational communities.</li> <li>• Limitations of the framework are discussed.</li> <li>• By entrepreneurs, we refer not only 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.</li> </ul>
4	Kuratko, D. F. (2005). The Emergence of Entrepreneurship Education: Development, trends, and challenges.	<ul style="list-style-type: none"> <li>• 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.</li> </ul>

		<ul style="list-style-type: none"> <li>• 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.</li> <li>• Second, entrepreneurial firms are the essential mechanism by which millions enter the economic mainstream.</li> </ul>
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*Table A1 continued*

		<ul style="list-style-type: none"> <li>• 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!</li> <li>• 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.</li> <li>• Topics covered in entrepreneurship programs: venture financing, corporate entrepreneurship, strategies, risk and tradeoff, women &amp; minority entrepreneurs, economic and social contributions of entrepreneurs, ethics.</li> </ul>
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		<ul style="list-style-type: none"> <li>• 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 &amp; Vesper, 1994); entrepreneurial education must address the equivocal nature of business entry (Gartner, Bird &amp; Starr, 1992). To this end, entrepreneurial education must include skill-building courses in negotiations, leadership, new product development, creative thinking, and exposure to</li> </ul>
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*Table A1 continued*

		<ul style="list-style-type: none"> <li>• technological innovation (McMullan &amp; Long, 1987; Vesper &amp; McMullan, 1988).</li> </ul>
5	Uy, M. A., Foo, M.-D., & Ilies, R. (2015). Perceived progress variability and entrepreneurial effort intensity: The moderating role of venture goal commitment.	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> </ul>

		<ul style="list-style-type: none"> <li>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</li> </ul>
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*Table A1 continued*

		<ul style="list-style-type: none"> <li>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).</li> <li>This study shows that variations of progress perceptions matter in the goal striving 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</li> </ul>
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		attenuates the negative relationship between perceived progress variability and entrepreneurial effort intensity.
6	Turner, T. & Gianiodis, P. (2018). <i>Entrepreneurship Unleashed: Understanding Entrepreneurial Education outside of the Business School</i>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• ...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).</li> </ul>

*Table A1 continued*

7	Chia, R. (1996). <i>Teaching Paradigm Shifting in Management Education: University Business Schools and the Entrepreneurial Imagination.</i>	<ul style="list-style-type: none"> <li>• ...for modern management educators, the very attempt to reduce the complex phenomena of successful managers and entrepreneurs in order to facilitate pedagogical priorities violates against the very essence of entrepreneurial thinking.</li> <li>• 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.</li> <li>• The unique contribution university business schools can make to the business community is not through the vocationalizing</li> </ul>
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		of business/management programmes. Rather, it is through adopting a deliberate educational strategy which privileges the “weakening” of thought processes so as to encourage and stimulate the entrepreneurial imagination.
8	Finkle, T. (2007). A Comparative Analysis of U.S. versus International Entrepreneurship Centers	<ul style="list-style-type: none"> <li>• 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.</li> <li>• International schools have a much larger contingent of entrepreneurship students and graduate programs in entrepreneurship.</li> <li>• Undergraduate entrepreneurship degrees focused more so on concentrations and minors versus majors.</li> <li>• Undergraduate Programs and Courses offered in Entrepreneurship: Introduction to Entrepreneurship; Business</li> </ul>

*Table A1 continued*

		<ul style="list-style-type: none"> <li>• Plan Development; Entrepreneurial Finance, Entrepreneurial Growth; Small Business Management; Entrepreneurial Field Project; Entrepreneurial Marketing, Feasibility Analysis; Law &amp; Entrepreneurship; Internships, Creativity &amp; Innovation; Family Business; Product Development; Corporate Entrepreneurship; Franchising; and, Technology Transfer.</li> </ul>
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9	Martz, W.B., Neil, T.C., Biscaccianti, A., Williams, R.J. (2003). Student Perception of Entrepreneurs: A Cultural Perspective	<ul style="list-style-type: none"> <li>• Entrepreneurship has been defined in broad and ambiguous ways.</li> <li>• The comparisons have been conducted at global levels and at country levels.</li> <li>• The comparisons have been made looking for unique characteristics of entrepreneurs.</li> <li>• 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.</li> </ul>
10	Ridley, D. (2016). Developing an Entrepreneurial Mindset across the University Curriculum.	<ul style="list-style-type: none"> <li>• Until recently, most American university management programs focused on the development of students for work in corporate settings with little focus on entrepreneurial skills.</li> <li>• The need for graduates with an entrepreneurial mindset has grown.</li> <li>• A framework for developing students campus-wide with an entrepreneurial mindset across the management education</li> </ul>

*Table A1 continued*

		<ul style="list-style-type: none"> <li>• 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</li> </ul>
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		<p>plan and case competitions. Finally, students apply the concepts and theories via student-run companies housed within business, science, engineering and technology incubators.</p>
11	<p>Bergmann, H., Hundt, C., &amp; Sternberg, R. (2016). What makes student Entrepreneurs?</p> <p>On the relevance (and irrelevance) of the university and the regional context for student start-ups.</p>	<ul style="list-style-type: none"> <li>• Student start-ups are a significant part of overall university entrepreneurship.</li> <li>• 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.</li> <li>• Empirical studies usually find university graduates to be more likely to enter self-employment after having gained industry experience rather than directly after graduation.</li> <li>• Offering entrepreneurship courses does not only affect the participants themselves but also other students from the same faculty, presumably resulting from social interactions and observations of ones' peers.</li> <li>• Regional economic prosperity, which has been found to be an important driver of a region's start-up activity, in general,</li> </ul>

*Table A1 continued*

		<ul style="list-style-type: none"> <li>• does not seem to affect students' propensity to take first action for starting a business.</li> </ul>
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		<ul style="list-style-type: none"> <li>• Independent from its location, universities can foster student’s first steps towards becoming an entrepreneur by offering entrepreneurship courses and motivating students to attend.</li> <li>• 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.</li> </ul>
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"> <li>• The worldwide recognition of the importance of nonlinear thinking in entrepreneurial cognition is driving curriculum change efforts in degree and non-degree programs.</li> <li>• It would appear that effective entrepreneurial thinking would tend to employ a balance in both nonlinear and linear thinking style dimensions.</li> <li>• 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</li> </ul>

*Table A1 continued*

		<ul style="list-style-type: none"> <li>• 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 linear and nonlinear thinking skills of graduating students.</li> </ul>
13	<p>Sowmya, Damodharan  Varadarajam., Majumdar,  Sudipa, &amp; Gallant, Monica  (2010). Relevance of  education for potential  entrepreneurs: an  international investigation.</p>	<ul style="list-style-type: none"> <li>• Education is the clearest path to individual opportunity and societal growth, and entrepreneurship education is especially vital to fueling a more robust global economy.</li> <li>• Entrepreneurship has become and needs to be sustained as a social movement.</li> <li>• There is evidence that academically educated entrepreneurs are more important in developing regional economies than entrepreneurs with a lower level of education.</li> <li>• 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.</li> <li>• Studies have found a positive impact of entrepreneurship education courses/programs at universities on perceived attractiveness and feasibility of new venture initiation than entrepreneurs with a lower level of education.</li> <li>• Despite the recognition that education and prior entrepreneurial experiences influence people's attitudes</li> </ul>

Table A1 continued

		<ul style="list-style-type: none"> <li>• towards starting their own business, the impact of entrepreneurship education on intentions to found a business has remained relatively untested.</li> <li>• Studies have found a positive impact of entrepreneurship education courses/programs at universities on perceived attractiveness and feasibility of new venture initiation.</li> </ul>
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"> <li>• The program combines traditional classroom learning with extensive, practical out-of-class entrepreneurial experiences, both domestic and international.</li> <li>• 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 beyond their comfort zones, thus significantly strengthening their skills and confidence levels.</li> </ul>

Table A1 continued

15	<p>Hallam, C., Leffel, A., de la Vina, L., &amp; Agrawal, M. (2014). Accelerating Collegiate Entrepreneurship (ACE): The Architecture of a University Entrepreneurial Ecosystem Encompassing an Intercollegiate Venture Experience.</p>	<ul style="list-style-type: none"> <li>• 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).</li> <li>• Entrepreneurship education should be specific to the culture and climate of the university and its local community.</li> <li>• 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.</li> <li>• 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</li> <li>• To truly understand the impact we can have on the next generation of entrepreneurs we linked the theory of entrepreneurial intent to the student academic curricula and related activities.</li> <li>• ACE Model: Accelerating Collegiate Entrepreneurship model</li> </ul>
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		<ul style="list-style-type: none"> <li>• Unlike many universities that attempt to drive entrepreneurship by the launch of new classes and programs,</li> </ul>
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*Table A1 continued*

		<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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 into reality while preparing for the tech competition.</li> <li>• Co-sponsorship between the Dean of the College of Business and the Dean of the College of Engineering.</li> </ul>
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"> <li>• There are significant positive interactive effects by gender, university type, and study major on the relationship between the entrepreneurship education and EI (entrepreneurial intention).</li> </ul>

17	Katz, J.A., Hanke, R., Maidment, F., Weaver, K.M., & Alpi, S., (2014). Proposal for two model undergraduate curricula in entrepreneurship.	<ul style="list-style-type: none"> <li>• 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</li> </ul>
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*Table A1 continued*

		<ul style="list-style-type: none"> <li>• and/or Marketing departments in schools and colleges of business.</li> </ul>
18	Morris, M. H., Kuratko, D. F., & Cornwall, J.R., (2013). Entrepreneurship Programs and the Modern University, Edward Elgar Publishing Limited.	<ul style="list-style-type: none"> <li>• 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.</li> <li>• The movement toward more experientially based learning will find entrepreneurship programs more heavily engaged with the community, including work with both nascent and existing entrepreneurs.</li> <li>• 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</li> </ul>

		well as formal academic co-departments, departments and schools of entrepreneurship.
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## **Appendix B: The Research Topic for Chapter One**

The question that eventually became the topic of this research project started out of curiosity related to my position at Texas A&M University-San Antonio and being challenged with the task of creating an academic program with a focus on Entrepreneurship. As a start-up campus, we have minimal resources, but a great deal of desire. We live in the seventh largest city in the United States and have no Fortune 100 companies headquartered in our city. We are a city and region of small businesses with an entrepreneurial spirit. Having started four companies myself, without any formal entrepreneurial education, the topic became even more interesting by providing insight into the entrepreneurial mindset and the deconstruction of formal boundaries of traditional business education.

As a professor of entrepreneurship, the research topic became an important question for the writer. What's more, the research results can be shared with faculty, administration, students and external stakeholders, when the topic is appropriate. As the professor who has been challenged with creating a new program, I have found this research to be incredibly interesting.

## **Appendix C: The Research Protocol for Chapter One**

Google Scholar, JSTOR, IBISWORLD and EBSCO data bases were utilized to locate articles for the literature review conducted in association with this RQR. In addition to articles found through various data base searches, Dr. Dirk Libaers provided articles and a text to review as well. The text by Morris, Kuratko & Cornwall was suggested by Dr. Libaers and substantiated by Dr. Morris during his interview.

- What was the process through which articles for review were chosen?

Articles were chosen from the queries based upon the implication of their applicability to the research topic. Articles were cross checked against the “Management and Organization Journal Listings” provided by Dr. Gill.

If an interesting article was reviewed and not found on the journal list, it was subjectively evaluated by this author.

- What was the process through which a summary on each article was prepared?

The summary of each article was prepared by reviewing its abstract and the highlights/notations made by this author during its initial review. The summary of each article reflects points of support related to the research topic. Articles were sought out to

provide support or counter-points to the research topic and its' associated research questions.

## **Appendix D: The Discussion and Conclusions for Chapter One**

The Discussion and Conclusion were the result of researched comparison of the article summaries and the research topic. There was an attempt to validate the question by referring to the academic articles and text selected during the literature review.

The RQR, protocol and literature review resulted from an extended 9 month effort, including the invaluable recommendations made through the initial proposal process. I appreciate all of the feedback, related to academic quality and formatting suggestions during the dissertation proposal process.

After reviewing my work and the comments provided to me, I believe that there is a significant knowledge gap associated with knowledge related to locating a new collegiate entrepreneurship program on a start-up campus.

## **Appendix E: Permissions**

All interviewees were asked permission to record the interview session for purposes of accuracy, and record, prior to beginning the interview. All subjects were advised they were being asked questions regarding their thoughts and perception of Collegiate Entrepreneurship Programs and that their answers were being used in a paper being written in fulfillment of the requirements for the authors' DBA degree. All subjects agreed.

## **Appendix F: The EFA Question**

Entrepreneurship has emerged over the last three decades as arguable 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 locate and offer Entrepreneurship programs. Some argue that we should locate it in the traditional business school, others believe we need a dedicated School for Entrepreneurship, others believe we need to locate it in the College of Engineering where the ideas and technologies are generated. Still 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: that a

core objective of entrepreneurship education is that it differentiates from typical business education (Solomon, Duffy & Tarabishy, 2002). 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). Thus, substantiating a claim that entrepreneurship education should be in the College of Business, but in a separate department.

Robert Chai concludes that an entrepreneurship program should reside in a College of Business, but the College of Business should be more entrepreneurial. Chai indicates that the unique contribution university business schools can make to the business community is not through the vocationalizing of business/management programmes (sic), but through adopting a deliberate educational strategy which privileges the “weakening” of thought processes so as to encourage and stimulate the entrepreneurial imagination (Chai, 1996).

In the book, *Entrepreneurship Programs and the Modern University*, which was co-authored by Kuratko, another argument is made for an interdisciplinary approach to entrepreneurial studies. The authors explain that by focusing the entrepreneurship program in a business school it constrains the scope and impact of the program and its ability to 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 Bertha Jimenez, New York University Tandon School of Engineering, is to create a co-curricular program to nurture student entrepreneurs through action learning and the use of student based competitions (Jimenez 2016).

From a theoretical perspective, this decision on where to put an entrepreneurship program depends on who among your stakeholders has the biggest weight and it depends on 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.).

## Appendix G: Survey Questions from Chapter Two

### Section 1: Graduates and New Ventures

1. At your University, how many students graduated from an Entrepreneurship Program (as a major) in 2015?

- A. \_\_\_ N/A
- B. \_\_\_ 1-10
- C. \_\_\_ 11-25
- D. \_\_\_ 26-50
- E. \_\_\_ More than 50

2. At your University, how many students graduated from an Entrepreneurship Program (as a major) in 2016?

- A. \_\_\_ N/A
- B. \_\_\_ 1-10
- C. \_\_\_ 11-25
- D. \_\_\_ 26-50
- E. \_\_\_ More than 50

3. At your University, how many students graduated from an Entrepreneurship Program (as a major) in 2017?

- A. \_\_\_ N/A
- B. \_\_\_ 1-10
- C. \_\_\_ 11-25
- D. \_\_\_ 26-50
- E. \_\_\_ More than 50

4. How many student ventures were generated by the Entrepreneurship Program (or major) in 2015?

- A. \_\_\_ N/A
- B. \_\_\_ 1-10
- C. \_\_\_ 11-25
- D. \_\_\_ 26-50
- E. \_\_\_ More than 50

5. How many student ventures were generated by the Entrepreneurship Program (or major) in 2016?

- A. \_\_\_ N/A
- B. \_\_\_ 1-10
- C. \_\_\_ 11-25
- D. \_\_\_ 26-50
- E. \_\_\_ More than 50

6. How many student ventures were generated by the Entrepreneurship Program (or major) in 2017?

A. \_\_\_ N/A

B. \_\_\_ 1-10

C. \_\_\_ 11-25

D. \_\_\_ 26-50

E. \_\_\_ More than 50

## Section 2: Location of the Entrepreneurship Program

7. Please indicate the location of your University Entrepreneurship Program (please check all that apply):

\_\_\_ College of Business

\_\_\_ College of Engineering

\_\_\_ College of Medicine/Health

\_\_\_ Center for Entrepreneurship

\_\_\_ Other (please specify): \_\_\_\_\_

8. Is your program cross-disciplinary?

\_\_\_ Yes

\_\_\_ No

\_\_\_ If yes, please identify who shares the program: \_\_\_\_\_

### Section 3: General University Information

9. What is the population of the City in which your University is located?

Less than 100,000

100,000-250,000

250,001-500,000

500,001-1,000,000

More than 1,000,000

10. On which continent is your University located.

Africa

Antarctica

Asia

Australia

Europe

North America

South America

11. What is the nature of the Entrepreneurship Program at your University?

Social Entrepreneurship

Technology Entrepreneurship

Traditional/Small Business Entrepreneurship

12. What is the size of the student population (enrollment) at your University?

Less than 5,000

5,001-7,500

7,501-10,000

More than 10,000

13. What is the age of your Entrepreneurship Program (in which year range did it originate)?

2015-2017

2010-2014

2005-2009

2000-2004

Before 2000

14. What access does your program have to venture capital and local funding?

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15. What is the size (enrollment) of your College of Business?

Less than 500

501-1,000

1,001-1,500

1,501-2,000

More than 2,000

16. What is the budget of your College of Business?

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17. What is the size (enrollment) of your College of Engineering?

Less than 500

501-1,000

1,001-1,500

1,501-2,000

More than 2,000

18. What is the budget of your College of Engineering?

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19. What is the size (enrollment) of your College of Medicine/Health?

Less than 500

501-1,000

1,001-1,500

1,501-2,000

More than 2,000

20. What is the budget of your College of Medicine/Health?

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21. What is the size (enrollment) of your Center for Entrepreneurship?

Less than 500

501-1,000

1,001-1,500

1,501-2,000

More than 2,000

22. What is the budget of your Center for Entrepreneurship?

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23. Is there a start-up incubator at your University?

Yes

No

24. If there is a start-up incubator at your University, where is it located?

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## Appendix H: Research Performance for Chapter Two

*Table A2: Statistical Results Generated from the Survey, when the DV Equals the Average Number of Students Graduated in Entrepreneurship*

Log pseudolikelihood = -29.481363	Wald chi <sup>2</sup> (10)	=	2255.86
	Prob > chi <sup>2</sup>	=	0.0000
	Pseudo R <sup>2</sup>	=	0.3269

dummycolle~s	-6.110502	9.59082	-0.06	0.949	-19.40871	18.18661
dummyforce~i	40.94579	9.728844	4.21	0.000	21.87761	60.01397
programcro~y	-1.765625	1.555174	-1.14	0.256	-4.81371	1.28246
/cut1	6.2006	15.72296	-24.61584	37.01704		
/cut2	7.69944	15.43793	-22.55834	37.95722		

DV = Average number of students graduated in Entrepreneurship

Program based in Colleges of Business	-0.611
	(-0.06)
Program based in Centers for Entrepreneurship	40.95**

(4.21)

*Table A2 continued*

Cross Disciplinary Programs	-1.766	(-1.14)
Population of City	0.505	(0.78)
Traditional/SB Entrepreneurship Focus	4.086*	(2.33)
Technology Entrepreneurship Focus	1.683*	(2.39)
Size of the University	0.274	(0.14)
Age of Program	0.125	(1.41)
Access to Funding	1.615	(0.95)
Startup Incubator	4.037	(1.20)
N	26	N 26

t statistics in parentheses, robust standard errors

\* p<0.05, \*\* p<0.01, \*\*\* p<0.001

*Table A3: Statistical Results Generated from the Survey , when the DV Equals the Average Number of Students Graduated in Entrepreneurship Adding an Odds Ratio for Clarification*

DV = Average number of students graduated in ENT

Ordinal logits Odds ratio

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Program based in College of	-0.611	.5427
	(-0.06)	(5.205)
Program based in Center for ENT	40.95***	6.06e+17 ***
	(4.21)	(5.90e+18)
Program Cross Disciplinary	-1.766	.1710
	(-1.14)	(.266)
Population of City	0.505	1.656
	(0.78)	(1.065)
Traditional ENT focus	4.086*	59.528*
Table A3 continued		
	(2.33)	(104.48)
Technology ENT focus	1.683*	5.383*
	(2.39)	(3.793)
Size of the University	0.274	1.315
	(0.14)	(2.646)
Age of Program	0.125	1.132
	(1.41)	(.100)
Access to funding	1.615	5.026
	(0.95)	(8.535)
Startup incubator	4.037	56.65
	(1.20)	(190.66)

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N    26    N    26

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t statistics in parentheses for ordered logits, robust standard errors in parentheses for odds ratios \*  
 p<0.05, \*\* p<0.01, \*\*\* p<0.001

*Table A4: Statistical Results Generated from the Survey, when the DV Equals the Average Number of Student Ventures Created over the Period ranging from 2015-2017 adding an Odds Ratio for Clarification*

Here the dependent variable is the average number of students ventures created over the period 2015-2017.

Wald chi2(9) = 28.94  
 Prob > chi2 = 0.0007  
 Log pseudolikelihood = - Pseudo R2 = 0.1703

	Robust				
	Coef	Std. Err	z	P> z	[95% Conf. Interval]
averagenu_20					
dummycolle~s	-3.666207	1.061227	-3.45	0.001	-5.746173 -1.586241
dummyforce~i	-3.810063	1.725019	-2.21	0.027	-7.191039 -.429087
var6	-.1232237	.3088386	-0.40	0.690	-.7285363 .4820888
dummyfortr~t	2.136813	4.624173	0.46	0.644	-6.926399 11.20003
dummyforte~t	-.1309244	5.110394	-0.03	0.980	-10.14711 9.885264
sizeoftheu~y	-.0790824	.3654942	-0.22	0.829	-.795438 .6372731

/cut1	-1.190861	4.700154	-10.40299	8.021272
/cut2	-.8338727	4.718793	-10.08254	8.414792
/cut3	-.2386646	4.724455	-9.498426	9.021097
/cut4	1.555182	4.859696	-7.969646	11.08001
/cut5	2.24807	4.92385	-7.402499	11.89864
/cut6	0.773163	4.952925	-6.934392	12.48072

*Table A4 continued*

DV: Average of student ventures 2015-2017

	Ordered logits	Odd ratios
Program based in College of Bus.	-3.666*** (-3.45)	.0255*** (.027)
Program based in Center for ENT	-3.810* (-2.21)	.0221* (.038)
Population of the City	-0.123 (-0.40)	.8840 (.273)
Traditional ENT focus	2.137 (0.46)	8.472 (39.17)

Technology ENT focus	-0.131 (-0.03)	.8772 (4.48)
Size of the University	-0.0791 (-0.22)	.9239 (.337)
Age of Program	0.142* (2.06)	1.152* (.079)

*Table A4 continued*

Access to funding	0.433 (0.60)	1.541 (1.11)
Startup Incubator	1.796† (1.85)	6.028† (5.845)

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N 29

N 29

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t statistics in parentheses for ordered logits; robust standard errors in parentheses for odds ratios

†p<0.10 , \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

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## **Appendix I: Theory Development for Chapter Three**

From a theoretical perspective this decision on where to put an entrepreneurship program depends on who among your stakeholders has the biggest weight and it depends on 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.). With the appreciation that stakeholders and resources are the key indicators of the development and placement of a new collegiate entrepreneurship program, the need for a comprehensive evaluation of the combination of these two factors could be developed through the Appreciative Inquiry approach.

In conjunction with a review of the Appreciative Inquiry process one could envision a creative appreciative organization. (Cooperrider & Whitney, 2005) Through the Discovery Process, developers of a new program inquire into the call and capacities to create a new organization; uncover multiple and diverse stakeholder strengths; and align strengths for collective potential. The Dream Process allows those involved to image a better world; engaging large numbers of stakeholders in creating a compelling shared vision and values. Crafting a clear purpose and set of organizing principles and crafting a charter of relationships, roles and responsibilities is the Design Process. Ultimately, the Destiny Process drives the program to living the purpose, principles and charter of the new program, while encouraging continuous organizational innovation in alignment with the vision and values established throughout the process.



### **Appendix J: The NI Protocol for Chapter Three**

A number of searches were conducted in a systematic search for existing research related to Appreciative Inquiry and Entrepreneurship.

A search utilizing Google Scholar generated 95,900 results when Appreciative Inquiry was selected as key words. Results of a secondary Google Scholar search, adding the term “Organizational Life” reduced the number of articles to 50,800. A third search incorporating “Relational Constructionist Perspective “reduced the number of published articles to 172. After reviewing a number of these articles, it became apparent to me that there was no relationship between these three searches and the area of interest I was pursuing. Two additional searches were conducted through Google Scholar, these searches included “Appreciative Inquiry in Entrepreneurship” resulting in identifying 19,200 articles and “Appreciative Inquiry in/and Entrepreneurship Education resulting in 17,200 articles. These articles appeared to site Cooperrider & Whitney and maintained the relationship between Appreciative Inquiry and Change Management, with a focus on existing organizations.

JSTOR searches using “Appreciative Inquiry and Entrepreneurship Education resulting in 159 articles, while a secondary search on JSTOR “Appreciative Inquiry and Stakeholder relationship” resulted in 116 articles. In line with the searches conducted using Google Scholar,

the articles did not address the relationship of Appreciative Inquiry and the development of a new organization.

Advance Searches using “Appreciative Inquiry, Entrepreneurship Theory & Practice, Stakeholder Theory” resulted in 208 articles. “Appreciative Inquiry, Stakeholder Management” resulted in 1901 articles while a final search “Appreciative Inquiry, Stakeholder Relations” resulted in 759. The literature resulting from the Advance Searches provided similar insight into Appreciative Inquiry and incorporating the theory into an existing organization, however the provided no insight into utilizing the theory and the development of a new organization.

### **Appendix K: The Discussion and Conclusions for Chapter Three**

Throughout the discovery process involved with collecting and analyzing empirical data related to my Empirical Findings paper, “Locating a New Collegiate Entrepreneurship Program, a framework for a University Campus” (see Paper 2); I was interested in established best practices for creating a new program. A knowledge gap was identified as a result of a rigorous literature review (see Paper 1), which provided historical information on how programs had been established in the past. The literature review provided insights into established programs that were created in well-established Universities; however, there was little data relatable to new programs. With the growth of new programs, both domestically and internationally, I was desirous of uncovering data on best practices related to stakeholder relations and resource allocation, in an attempt to create an appreciation for the factors involved in creating and launching a successful program based upon students graduating and successful ventures launched.

Focusing on the two success factors of students graduating and successful ventures, one could conclude that the better aware a new program is to the needs and desires of the students and the support available through the local community, the buy-in required from the stakeholders would be forthcoming. A more systematic approach to the thoughtful design of a new program could result from the incorporation of the Appreciative Inquiry approach of data collection, design, and sustainability.

A systematic approach to launching a new Entrepreneurship Program could be developed, assessed, and through published academic papers the design and results shared with the collegiate community.