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COMPARATIVE ANALYSIS OF CENTERS FOR ENTREPRENEURSHIP AT TWO
CENTRAL FLORIDA UNIVERSITIES

by

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A dissertation submitted in partial fulfillment of the requirements
for the degree of Doctor of Education
in the College of Education and Human Performance
at the University of Central Florida
Orlando, Florida

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Major Professor: David N. Boote

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ABSTRACT

Studies have attempted to explain the linkage between achieving success in the field of entrepreneurship and the pedagogy instituted to teach the skills entrepreneurs need to achieve success in their chosen endeavors. It is widely known and well documented that people have experienced entrepreneurial success with limited, and sometimes no formal entrepreneurial training. The ever present question of “can entrepreneurship be taught” has been debated from many varying perspectives. The late Peter Drucker pragmatically once said “The entrepreneur mystique? It’s not magic, it’s not mysterious, and it has nothing to do with the genes. It’s a discipline. And, like any discipline, it can be learned” (Drucker, 1985).

A study conducted by the Center for College Affordability and Productivity recently determined that almost half of Americans with college degrees are overqualified for their jobs. Many studies have also concluded that college graduates accumulate greater lifetime earnings than non-college graduates. Yet the escalating costs of attending college and the diminishing prospects of job security after attaining a college degree have brought the cost of education to the precipice of a potential “education bubble”. Student loan debt exceeds One Trillion Dollars and the typical student loan needs to be repaid over ten years at nearly seven percent interest. Similar to the recently experienced “housing bubble” there is a genuine concern, as it relates to education, that today’s populace is paying too much for something that yields limited value. Therefore, the question of “can entrepreneurship be taught” should be supplanted with “can entrepreneurship be learned?” “Are graduates capable of applying their academic training to produce tangible results?”

If there are too many academic degrees being generated that are unable to be absorbed into a stagnant job market, it would stand to reason that a college degree, from a business school

or any co-curricular discipline, without significant concentration in the study of entrepreneurship, serves only a limited purpose in a growing, capitalistic society that is predicated on job growth. Centers for entrepreneurship provide an excellent foundation for invigorating new college graduates from multiple academic disciplines with the motivation and desire to achieve success in business as entrepreneurs. This comparative analysis of two thriving and vibrant Centers for Entrepreneurship at major universities in the growing central Florida region examines their best practices and compares them to current national guidelines established by the Global Consortium of Entrepreneurship Centers, a 200 + member organization domiciled in the Kelley School of Business at Indiana University in Bloomington, Indiana that serves as the key junction for university-based entrepreneurship centers across the United States to collaborate, communicate and jointly advance excellence in entrepreneurship (www.globalentrepreneurshipconsortium.org).

The evaluator and author of this dissertation implemented procedures similar to those used in accreditation reviews and applied professional judgment techniques to design a connoisseurship evaluation of entrepreneurship centers at two major universities --- The Center for Entrepreneurship at the University of South Florida in Tampa, FL and The Center for Entrepreneurial Leadership at the University of Central Florida in Orlando, FL.

We have all heard the Horatio Alger “rags to riches” stories of entrepreneurs who “bootstrapped” their business ideas without benefit of any formal business or entrepreneurial education. But it is just as great a likelihood in the coming years that we will admire those who give the credit for their success to the concepts they mastered in an entrepreneurial studies program and how their alma maters provided mentors through their centers for entrepreneurship who saved them from committing an abundance of mistakes by trial and error as they transported

their business ideas from conceptualization to realization.

This research will assist centers of entrepreneurship as they strive to incorporate standards of excellence to benefit students who endeavor to become business and job creators in the future.

To my deceased mother, Ann Harding Blencke, a widowed single parent who took two buses each day from our apartment in the projects to work at a low paying job so that she could earn \$10.00 a week more than she would have received on welfare. Her actions as a role model had a greater impact than words alone could ever have expressed. The values she conveyed through her acts of self-sacrifice have served as my inspiration.

ACKNOWLEDGMENTS

Since my musical tastes are stuck in the 1970s (it was, after all an excellent decade for music), there is a line from Olivia Newton-John's 1976 song *Don't Stop Believin'* which epitomizes the academic excursion that I have followed in my quest to achieve a terminal degree. It is "you never chase your dreams, they find you." During my first meeting with Dr. David Boote, who served as coordinator for the Ed.D. Program in 2007, I felt excited and apprehensive but believed that, under his tutelage, I could navigate my way along this journey of academic exploration that might potentially culminate in attainment of a degree that I often thought was beyond my reach. Now, almost six years and 77 credit hours later I find myself at the threshold of fulfilling a dream that I thought was elusive, and after chasing it, I realize that I was fortunate to actually have the dream find me.

Perhaps I am most grateful to my employer --- the University of Central Florida for giving me the opportunity to join the faculty at the College of Business Administration, for allowing tuition waivers for many of my classes and, of greatest value, granting me this semester of Professional Development Leave to complete my dissertation. The time freedom this leave afforded me has provided the opportunity to devote fulltime effort while immersing me in the research required undertaking this arduous task.

So, I asked myself, how can I show my gratitude? What would be the best way to repay UCF's kindness? Without question, during the short term, I can fulfill my teaching obligations to the best of my ability for the remaining years that I will be teaching at this institution. In the here and now, I can continue to expand my knowledge through intellectual inquiry and improve at my profession by advancing my teaching and research skills. But there must be more that I can do. What about my legacy? So I decided, posthumously, to donate my body to the UCF College

of Medicine for medical research. Hey, after all, I can't give any more than that! Worn and broken down as this old body may be, I have filed the paperwork and revised my will to fulfill this final request. I just hope it is an obligation that I don't have to honor any time soon.

Additionally, I have named UCF as a beneficiary for a percentage of my life insurance proceeds. UCF has given me more than I ever could have imagined. The least I can do is return some of that generosity when I pass to the great beyond.

I can say that, figuratively, I stand on the shoulders of giants... I have encountered many wise and influential people during my lifetime who have had a major impact on my life. During my early academic career I had many teachers and coaches who were exceptional role models. The most prominent person who shaped my business career came into my life when I was still in my twenties and continues to be a mentor for me today. Frank Strickland recruited me for a job in 1976 and promised "come work for me and you will drive a nicer car and live in a better neighborhood than you can ever imagine". He fulfilled every promise and exceeded my expectations. He has proven himself time and again to be an intuitive thinker of superior intellect who will effortlessly outthink the best and brightest of us all while making it look easy. Frank taught me about business, and what it means to be a true business professional.

During my second life---this career in academics, I owe a debt of gratitude to Dean Kenneth Stanley and Dr. Phyllis Holland, Department Chair of the Management Department for the Langdale College of Business at Valdosta State University. They hired me for a temporary one year position as an instructor and graciously extended my one year assignment into a second, extremely rewarding academic year. Thank you for helping to launch my academic career.

I would be remiss if I overlooked the significant contributions of my Dissertation Committee comprised of Chair Dr. Boote, Co-Chair Dr. Stephen Sivo, and Dr. Conrad Katzenmeyer and

outside member Dr. Cameron Ford.

The inimitable Dr. Boote, chair of my “dream team”, has been my academic adviser and professor for many of my cohort classes. His wide ranging experience, from being an IBM programmer to a respected academic researcher, have made him an ideal person for me to relate to both professionally and academically. He is exceptionally knowledgeable on a wide variety of topics and that expertise always made for enlightening classroom sessions. I often thought, is there possibly a topic upon which this man is not a leading authority? Thank you for your patience and understanding as I muddled through my path from candidacy to dissertation. I lost my way on more than a few occasions but you have been there to reel me in.

During the one cohort class I had the good fortune to take with Dr. Sivo, he not only impressed me with his technical knowledge but I was equally impressed with his caring and considerate approach to teaching. By offering a formative evaluation of a semester long project he provided extensive feedback while coaching and nurturing me toward a better understanding of how mixed methods can be adapted for evaluations. Although I attempt to emulate your teaching style, I do not know if I can ever duplicate the sincere compassion you have for your students. I thank you for providing examples that I can strive to match.

If there should happen to be anything about the topic of program evaluation that the distinguished Graduate Faculty Scholar Dr. Katzenmeyer does not know, I would be very surprised; and it is probably not worth knowing. He is among the leaders in the field of program evaluation and an expert in his profession. He has been a regular contributor to research in program evaluation and is widely recognized among his peers as a skillful practitioner. On a personal level, I have found you to be among the most genuine and caring people I have ever encountered. You have always given generously of your time and I value the meetings we

shared when you dispensed your wisdom in an effort to help me expand my knowledge of this field in which you are an acknowledged guru.

When I learned that I could invite a committee member who is not in the College of Education, I immediately thought of Dr. Cameron Ford. During the seven years I have been at UCF I have always viewed Dr. Ford as a high energy, high-achieving “mover and shaker” at the College of Business. He works tirelessly on many committees and outside projects that enhance the visibility of both the College of Business and UCF in the community. In my early days at UCF it was evident that Dr. Ford was the driving force behind the Center for Entrepreneurship and Innovation, which he has re-named the Center for Entrepreneurial Leadership. With limited budget and lacking both time and resources, it was apparent to me that Dr. Ford would not be deterred in his quest to make the center a point of pride at UCF. His passion for entrepreneurship and his devotion to the center are on track to establish a sustainable reputation for greatness at UCF. Dr. Ford has single-handedly brought the center to prominence by attracting world-class speakers and competitions that excite student entrepreneurs while encouraging community involvement. Dr. Ford’s father was a Dean at the College of Human Development. at Penn State University and the Donald H. Ford building is named after him. I expect our Dr. Ford will enjoy similar recognition for his many accomplishments at UCF. It is often said that if you need something to get done give it to the busiest person you know. And that is why I recruited Dr. Ford for my committee. I like to align myself with winners and Dr. Ford certainly fills that criteria.

Sadly, my “dream team” lacks diversity. I am very conscious of this failure to be inclusive. It was not my intention to form a homogeneous committee. When seeking out committee participation I recruited the most qualified people in their field, and the resulting

composition of the committee unintentionally failed to achieve the objective of diversity.

When I embarked upon this academic adventure in 2007, on Dr. Boote's advice, the first class I took was Curriculum Theory with Dr. Michael O'Malley. What a great way to delve back into higher education. Dr. O'Malley brought curriculum theory to life for me and made my academic experience so enjoyable that I looked forward, with great anticipation, to future classes. And there were many enjoyable and rewarding classes where I acquired valuable knowledge from many great professors, both adjunct and full time faculty members. The interaction and exchanges I had with fellow students, many of them accomplished teachers and administrators in higher education are also experiences I will cherish.

I cannot overlook the contributions made by my wife of forty years, Judy, my partner, my confidant and my banker who asked me many times when I was overburdened with work and classes "why are you doing this?" My answer was always "to set an example for our sons and my students". I hope I have accomplished that mission.

In my first cohort class, the Research Cluster Seminar during the summer of 2009, Dr. Carolyn Hopp had some great advice when she prompted me to begin thinking about my dissertation topic. She told me to "look for the red thread that ties it all together". That red thread was very elusive. Even though it was red it was not visible for a long while. But when I narrowed my focus and expanded my research skills it finally started to come in to view. I offer my sincere thanks and gratitude to all of my mentors who helped me along this path of enlightenment.

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CHAPTER ONE: INTRODUCTION

The Problem and Its Significance

Social and behavioral scientists regularly debate educational theories and academic pedagogy in light of available resources. Theories are postulated, gain support or favor, and then seek practical applications. The field of entrepreneurship and the curriculum that serves as entrepreneurship education can be traced to Myles Mace who taught the first entrepreneurship course in the United States at Harvard's Business School in 1947. It drew 188 of the 600 second-year MBA students (Katz, 2007). From that first class in 1947, an American entrepreneurial studies infrastructure has emerged consisting of more than 2,200 courses at over 1,600 schools, with 277 endowed positions, and 44 English-language refereed academic journals (Katz, 2007). The topic, and its inherent value to the sustainable success of American business, continues to receive an abundance of attention both inside and outside of academia. A January, 2013 policy paper from the Center for College Affordability and Productivity entitled "Why are Recent College Graduates Underemployed?" states that political leaders, prominent foundations, and college presidents argue that the nation must increase the proportion of adults with college degrees in order for America to remain competitive in the global market (Vedder, Denhart, and Robe, 2013). Referenced in that policy paper is a quote by President Barack Obama from his first Address to the Joint Session of Congress whereby he states "by 2020 America will once again have the highest proportion of college graduates in the world by achieving a 60 percent college attainment rate for workers aged 25 to 34".

Indicative of a shrinking job market, however, are the data provided by the Bureau of Labor Statistics which recorded, in 2011, that 36% of laid-off workers under age 34 were jobless for more than six months while 53% of workers age 45 and older remained jobless for at least six months after being laid off (www.bls.gov). A vast majority of these workers are underemployed college graduates, who, despite accumulating a variety of skills and experience are still challenged when finding a suitable job match. More optimistic job growth has been recorded by the U.S. Department of Labor recently as it announced monthly job growth that not only exceeded their projections of 153,000 monthly job gains but eclipsed those estimates with actual monthly job growth of 175,000 in 2011 and 181,000 in 2012 (www.dol.gov). Of even greater significance is the growth in productivity and output which measured 1.8% in 2010 and 0.6% in 2011. Essentially, in the most recent weak economy that began in late 2007, job gains have remained stagnant while productivity has improved modestly. These trends are part of the business mantra of doing more with less which poses a difficult challenge for business leaders now and in the future.

As of 2011, college graduates earned \$34,470 per year more than their counterparts who only attained a high school education (www.census.gov). Younger and more recent college graduates, often referred to as the millennial cohort, who graduated in the 21st Century, have not attained the financial gains experienced by their older college graduate contemporaries who completed college during the late 20th Century. Although many jobs held by college graduates have not changed significantly in scope and responsibility, the basic fact is that those who positioned themselves to move into areas of responsibility while the millennial cohort was still

attending college have secured those jobs, weathered the bad economies of the 21st Century and have managed to hold onto those positions, thereby blocking the path for advancement required by more recent college graduates.

Despite the abundance of new college graduates who are seemingly underemployed, administrators at institutions of higher learning are perplexed by the declining graduation rates of students. The six year graduation rate for the University of Central Florida is 62.5 percent (www.ucf.edu) while the same six year analysis at the University of South Florida is 52 percent (www.usfca.edu). These lower graduation rates may be attributable to the many students who work full or part time jobs and are unable to take all of the classes they need to graduate in a timely fashion. It may also be indicative of admissions policies at state schools that support standards for transfer students that are not as stringent as the entry requirements imposed upon incoming freshmen.

Then how is it that Ivy League schools boast nearly perfect graduation rates? In contrast, Ivy League private colleges typically experience graduation rates at or near 90%. Factors that contribute to that high percentage might be the strict admissions standards which ensure a fully capable student body, the possibility that many students do not have to divide their time with the burdens of work and the reality of small class sizes with individualized attention which contribute to the potential for undemanding grading standards.

Another variable to consider is that the graduation rate at military service academies is slightly lower than 80%. Although admission standards at service

academies are exceptionally high, the workload and expectations are so demanding that the dropout rate due to attrition is quite understandable. A higher graduation rate would symbolize a reduction in rigor that would not meet the requirements of our military defense system.

Nonetheless, graduation rates are an important consideration for both prospective students as well as their parents who are often times financing their children's education and taking on the responsibility of student loan debt.

To compound the problem, student loan debts, and the corresponding loan defaults, are at an all-time high. Many students are being threatened with legal action for nonpayment of tuition and other bills. According to Purdue University's Center for Career Opportunities, 50 percent of students change their majors before graduation. At Yale University, the graduation rate is 98 percent and the school only allows students to be enrolled for eight semesters.

These depressing statistics are alarming because, by many estimates, academic rigor is declining and student enrollments are at record levels. According to Richard Arum of the New York Times, in his article Student Evaluations and Academic Rigor, he identifies the reason for decline in academic rigor as being "the principal evaluation of faculty performance comes from student evaluations at the end of the semester". Those evaluations, Arum says, tend to coincide with the expected grade that the student thinks he or she will receive from the instructor (Arum, 2011). In 2012, the University of Central Florida ranked #1 by Newsweek magazine as being the *least* rigorous

university (Newsweek, August, 2012). Four other Florida universities were ranked among the top 25 least rigorous schools. Despite the lack of academic rigor, six year graduation rates are not meeting the standards expected of students, faculty, administrators and politicians. Of course, on the subject of education, there are many stakeholders and most view themselves as experts in the field of education.

In an effort to promote educational advancements in Florida, Governor Rick Scott is proposing a \$1.2 Billion increase in educational spending for the 2013 budget year which would expand the state's education budget to a record of \$10.7 billion dollars. Another recommendation proposed by Governor Scott is that Florida's state colleges should provide bachelor's degree program that cost a total of less than \$10,000. That is correct, not \$10,000 per year but \$10,000 for an entire degree. Governor Scott believes that lowering the cost of higher education should not affect the quality of education. Furthermore, there is government support in Florida for the establishment of differential tuition rates for programs of study that are in greatest demand in the job market. Typically referred to as the S.T.E.M. subjects for science, technology, engineering and math, the prevailing belief is that students who pursue these areas of study should pay a lower tuition rate than students who pursue the arts and other academic endeavors.

Florida is beginning to diversify its economy and return to prosperity through targeted investment in entrepreneurial activity. Universities in Florida have been asked to help achieve this objective by educating more students in the S.T.E.M. disciplines and imbuing them with the entrepreneurial skills and acumen that will lead to the

creation of scalable businesses that will become pillars of a new economy (Jarley, 2013). It should be obvious that many of these recommendations are dichotomous and operate at cross purposes to the attainment of quality academic initiatives.

In a report contracted by the Small Business Administration's Office of Advocacy, Bradley Schiller makes a case for recognition of the concept known as developing "human capital" which equates directly to acquiring labor market experience (Schiller, 2010). In his report entitled "Small Business and Self-employment as Income Mobility Mechanisms, Schiller studied relative income mobility among young workers during the 15-year period from 1989 to 2004 and found that not just education, but the pursuit of entrepreneurial opportunities constituted the greatest improvement in human capital during the shortest period of time. His studies concluded that the incidence of income mobility is highest for individuals with self-employment experiences. This study reaffirms the pervasiveness of small business exposure in the U.S. labor market (Schiller, 2010).

In the most recent, 2008 Small Business Profile provided by the Small Business Administration's Office of Advocacy, Florida has 1.9 million small businesses providing economic opportunities to diverse groups of people and bringing innovative products and services to the marketplace. On a national scale, small firms represent 99.7 percent of all employer firms. It would appear obvious that institutions of higher learning should provide not only the academic skills to achieve success in business but that they should further stimulate interest in business formation by creating centers for entrepreneurship where students can collaborate and benefit from the guidance and experience of like-minded professionals. The exposure that centers for

entrepreneurship generate also proves valuable as an outreach opportunity to expand beyond the barriers of business schools and extend influence to other programs on campus while establishing sustainable bonds in the communities which they serve.

According to educational researchers and academic experts, it is logical to surmise that entrepreneurs are motivated to create jobs and today's students, in general, are not convinced that studying entrepreneurship will guarantee employment in a stagnant job market nor will it assure them of becoming a successful business owner. It is from the positioning of this belief that it is deemed necessary and worthwhile to conduct a thorough comparative analysis of the Center for Entrepreneurial Leadership at the University of Central Florida's College of Business Administration in Orlando, Florida and the Center for Entrepreneurship at the University of South Florida in Tampa, Florida using expert judgment found in the connoisseurship model of program evaluation techniques that incorporate process evaluation designs with a goal-based approach to propose expansion of entrepreneurial curricula as an interdisciplinary field of study.

Since the study of entrepreneurship has experienced significant expansion at most academic institutions during the last 40 years, growing from 16 programs nationwide in 1970 to nearly 2,000 programs currently (Academy of Management Learning and Education), the time has come to spread the direct measures of learning attributed to these academic programs throughout many co-curricular programs with the intent of facilitating entrepreneurial literacy and developing the student outcomes of entrepreneurial competency. The emphasis on expansion of entrepreneurship education as a foundation for achieving a high performing workforce in the 21st Century global economy should be of paramount importance to educators as well as business leaders. By emphasizing these competencies, institutions of higher learning will demonstrate the importance of

entrepreneurship to all academic disciplines across their campuses.

Many researchers have promulgated that during the current weak economic climate, as depicted by increased employee downsizing and the absence of corporate recruiters on college campuses, that there will be a resurgence of small business startups (Moore, 2002). Furthermore, members of Generation X, Generation Y and the Millennial Cohort no longer perceive launching a business as a risky career path. Many theorists believe today's college students are part of the most entrepreneurial generation in history. Yet the proportion of the U.S. population that is starting businesses isn't growing; in fact, it might be shrinking. The data show that the rate of entrepreneurship in this country has been flat or declining over the past twenty years (Shane, 2008). Scott Shane, the author of *The Illusion of Entrepreneurship* claims there is no "entrepreneurial surge". In fact, he states that the image of a young, venture capital financed Silicon Valley enterpriser, operating in a hive of innovation, which takes a venture public or is acquired in a mega-buyout is not the norm. The typical entrepreneur is a married white male in his forties who attended but did not finish college and has lived in the U.S. his entire life. He starts a business because he does not want to work for someone else. The business he might create would be a low-tech venture such as a construction company or an auto repair shop which is financed with \$25,000 of his own savings and a bank loan that he personally guarantees (Shane, 2008).

In today's society, a nation's prosperity is directly related to economic growth and a sustainable pattern of business innovation and market growth. Innovation is a key driver in stimulating entrepreneurial growth and American small businesses play a vital role in

sustaining the nation's competitive advantage in a global economy. Although studies in entrepreneurship education have examined the need for offering entrepreneurship education as an interdisciplinary field of study, this research has not addressed the critical importance of building cross-functional skills to support small business ownership in the 21st Century global economy.

The intent of this study is to analyze the program requirements needed to inculcate a higher degree of entrepreneurial literacy throughout many academic disciplines in an effort to further the career opportunities of future students.

Conceptual Framework of the Study

As the title indicates, this is a comparative analysis which will employ the use of program evaluation standards and apply a connoisseurship model evaluation design to compare centers for entrepreneurship at two central Florida Universities. The Center for Entrepreneurial Leadership is domiciled at the University of Central Florida, and supports the main campus in Orlando, Florida, its 12 colleges and its ten regional campuses. Founded in 1963, UCF is the second largest university in the nation, by student population, offering 177 bachelors and master's degrees and 30 doctoral programs. The Center for Entrepreneurship is located at the University of South Florida in Tampa, Florida. Founded in 1956, the University of South Florida is the eighth largest university in the nation by student population and serves more than 47,000 students at its campuses in Tampa, St. Petersburg and Sarasota-Manatee, Florida. USF offers 86 bachelors, 104 master's degrees and 44 doctoral programs.

The social research program evaluation methods most commonly used in program evaluation are heavily concentrated in extracting a designed process evaluation which is goal oriented. Consideration was given initially to adopting these traditional methods to evaluate the two entrepreneurial centers. The program evaluation methods developed at Western Michigan University in Kalamazoo, Michigan by Daniel L. Stufflebeam are exemplary methods of evaluation. The seven components of the Evaluation Plans and Operations Checklist devised by Dr. Stufflebeam include: Conceptualization of Evaluation, Sociopolitical Factors, Contractual/Legal Arrangements, Technical Design, Management Plan, Moral/Ethical Imperatives and Utility Provisions. The logical designs of Stufflebeam's evaluation methods include elements that commonly apply to a wide range of evaluation assignments and alternative evaluation approaches (Stufflebeam, 2004). Upon further reflection, however, it was deemed necessary to choose a more relevant and expedient evaluation methodology known as the connoisseurship model of evaluation developed in 1975 by Elliot W. Eisner. A connoisseurship study's purpose is to describe, critically appraise, and illuminate a program's merits. The principles of a connoisseurship evaluation are more closely aligned with the comparative analysis adopted for this study.

The intent of evaluation is to first elicit discussion between evaluators and their clients regarding the content of evaluative reports and secondarily to provide formative feedback to report writers (Miron, 2004). With education reform in the forefront and accountability a key issue, community involvement in education has greatly evolved in the past few years. As a result, the makeup of education stakeholders has also changed dramatically (Gangopadhyay, 2002). The intent of this study is to follow the established

guidelines of professional evaluation in an effort to arrive at a summative evaluation of the two entrepreneurship centers that are being evaluated. Much like the role taken by a consultant during a consulting engagement, evaluators are tasked with the responsibility of helping clients seek the best options from a suitable number of alternatives. Both consultants and evaluators require the ability to cope with uncertainty and ambiguity while designing suitable interventions that bring value to a process that results in favorable outcomes. The process is very results-oriented for both consultants and evaluators. By using summative evaluation methods, outcomes will be evaluated in respect to their ability to achieve intended goals. As an extension of the study it is conceivable that decisions might be implemented to expand the outreach of the entrepreneurship centers on a broader scale.

The Global Consortium of Entrepreneurship Centers (GCEC) presently grants eight awards each year to Entrepreneurship Centers that demonstrate excellence in such areas as: Advancing the Discipline of Entrepreneurship, Emerging Center, Enterprise Creation, Entrepreneurship Across Disciplines, Entrepreneurship Research, Specialty Entrepreneurship Education, Entrepreneurship Teaching and Pedagogical Innovation and the NASDAQ Center of Entrepreneurial Excellence (www.gcec). Some of the criteria used in the evaluation of these awards are also incorporated in the evaluation methodology used in this study.

In 2006, The Journal of Small Business Management published a seminal study of entrepreneurship centers titled An Examination of Entrepreneurship Centers in the United States: A National Survey. The survey was conducted by Todd A. Finkle, Donald F. Kuratko and Michael G. Goldsby who are influential directors of

entrepreneurship centers, leaders in entrepreneurship research and members of the Executive Board of the Global Consortium of Entrepreneurship Centers. The survey included 47 questions and responses were received from 94 of 146 entrepreneurship centers for a 64% response rate. Of the 94 respondents, 13 were from nationally ranked centers and 81 were from unranked centers (Finkle, Kuratko and Goldsby, 2006). Some of the same investigative inquiries contained in the Finkle, Kuratko, and Goldsby survey have been included in this study.

The Finkle, Kuratko, Goldsby research was also devised, in part, from earlier research conducted in 1997 by Nancy Upton who was at that time the Director of the John F. Baugh Center for Entrepreneurship and Ben Williams Professor of Entrepreneurship at Baylor University in Waco, Texas. Dr. Upton led a project for the National Consortium of Entrepreneurship Centers and conducted research on “Successful Experiences of Entrepreneurship Center Directors” that was funded by the Ewing Marion Kauffman Foundation, a leader in support for entrepreneurial leadership. Upton’s comparative analysis of nine major programs established a foundation for Best Practices in Entrepreneurship that will also be adopted for this study. The Upton report identified four primary areas of best practices: Best Practices in Starting a Center or Program, Best Practices in Directing a Start-Up Program / Center, Best Practices in Funding and Best Practices in Managing and Marketing (Upton, 1997). Upton’s analysis of best practices in entrepreneurship has proved to be valuable while establishing survey criteria for this study.

Significance of the Study

As a result of the research required to implement this study, it became evident that, although there are many established evaluative processes, and they have been applied successfully to many academic models, there appeared to be no tangible evidence of an evaluation checklist that might be used by the Global Consortium of Entrepreneurship Centers to standardize any type of best practices initiatives which they might be able to propose to their 200+ member centers. Furthermore, there were no established accreditation practices that might be adopted for consideration in evaluating new and emerging centers for acceptance that might apply for membership in the Global Consortium of Entrepreneurship Centers. For these compelling reasons it was deemed necessary to undertake this study and apply a rational methodology to two of the largest universities in the nation (UCF is the second largest university in the nation and USF is the eighth largest university in the nation as ranked by student population). Entrepreneurship education spans many scalable academic boundaries at a time when the demand for business creation has never been greater. Integrating an appreciation for the study and adoption of business formation concepts across all academic disciplines should be of paramount importance to all educators because today's students are tomorrow's leaders. Whether they plan to practice a profession, become a leader in a corporation, run a not-for-profit organization, return to a family business or work in government, students see value in learning what is taught in entrepreneurship classes: opportunity recognition and analysis, leadership, teamwork, and creative problem-solving (Streeter, Jaquette, Hovis, 2002).

Evaluation Questions

The evaluation questions identified for this study will be explored in depth for the two centers of entrepreneurship being evaluated in this comparative analysis. Inferences may be derived from this analysis that may apply to the wider population of centers for entrepreneurship, particularly as it relates to membership in the Global Consortium of Entrepreneurship Centers:

1. To what extent do centers of entrepreneurship expand enrollment in entrepreneurship courses for the Colleges of Business Administration at the University of Central Florida and the University of South Florida?
2. In what ways do entrepreneurship centers at the University of Central Florida and the University of South Florida stimulate interest in business creation across multiple academic disciplines at the two respective universities?
3. By what standard of measurement do the entrepreneurship centers at the University of Central Florida and the University of South Florida meet the needs of their respective constituents?

Limitations and

Delimitation

For the purpose of this study it is necessary to disclose the limitations and delimitations of the research. Since limitations are those elements over which the

researcher has no control (<http://bold-ed.com/delimitations.htm>) it can be deemed as accurate that the more than 200 centers for entrepreneurship, listed as members of the Global Consortium of Entrepreneurship Centers, have not been evaluated for the purpose of this evaluation. As an inclusionary delimitation, the evaluation is delimited to the Center for Entrepreneurial Leadership at the University of Central Florida's College of Business Administration in Orlando, Florida and the Center for Entrepreneurship at the University of South Florida in Tampa, Florida. An extensive evaluation beyond the two schools identified in this comparative analysis would be counterproductive and would exceed the scope of comparing both the second largest and eight largest universities in the nation which, coincidentally, serve the same geographic region, compete for the same resources and strive to meet the needs of the same business demographic.

Definition of Terms

A series of key terms will be defined and explained within the context of their application throughout the course of this study. In certain cases, citations will be used to support the foundational attributes of the definition. In other cases the interpretation will be devised by the study's author:

Educational assessment is a term often used synonymously with evaluation (Alkin, 2011). Educational assessment as a theoretical framework is referenced in the context of this study to define the quantifiable terms that determine the defined outcomes of the evaluation methods adopted to establish the summative evaluation of the entrepreneurship centers identified in the study.

References are made within this study to the concept of an economic bubble. For comparison purposes, the educational bubble is compared to the housing bubble. A

bubble is defined as any speculative market or stock in which the values rise very rapidly and then fall sharply. A bubble is where prices are excessively overvalued (Shim, 2006).

Comparative analysis involves an item-by-item comparison of two or more comparable alternatives, processes, products, qualifications, sets of data, systems, or the like.

An evaluation model used frequently in accreditation reviews and promotion/tenure committees is known as the connoisseurship model of evaluation because it uses evaluators with expert level experience who rely upon professional judgment.

The definition of entrepreneur has an interesting derivation. A google.com search of the word entrepreneur produces 114,000,000 results. The term originated from the French term “entreprendre” or someone who undertakes and has been applied to French undertakers or people who attend to the dead. The term is loosely credited to Richard Cantillon, an Irishman born around 1680 who later became a French banker. Cantillon amassed a sizeable fortune but had been accused of acquiring much of his wealth through some shady and disreputable dealings (Matlay, 2005). The word entrepreneur and its many variations translate clearly across many cultures and their many inherent languages. The American interpretation and usage proves to be an interesting twist on a French term that relates to death being usurped in the American lexicon as a phrase that more often connotes birth of a business or enterprise.

Perhaps the most cogent modern day definition of entrepreneur is attributed to Dr. Donald F. Kuratko who is considered a prominent scholar and national leader in the field of entrepreneurship. Dr. Kuratko defines entrepreneurship as 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 the needed resources; the fundamental skill of building a solid business plan; and, finally, the vision to recognize opportunity where others see chaos, contradiction and confusion (Kuratko, 2007).

For the purpose of this project, an entrepreneur could be viewed as an individual or group of individuals who possess unique personality characteristics and drive that are conducive to generating jobs and profits. Nonetheless, dictionaries typically define entrepreneur as a risk- taking business person who initiates or finances new commercial enterprises. Entrepreneurs are sometimes referred to as sole proprietors of their own careers (Streeter, Jaquette, Hovis, 2002).

The Dictionary of Business Terms defines entrepreneur as a visionary self-starter who loves the adventure of a new enterprise. Entrepreneurship creates new jobs. These jobs are created by an absolutely unique partnership---the marriage of money and work. The money comes from a unique system of venture-capital financing. The work comes from the driving force of the entrepreneur (Shim, 2006).

There are theorists who have been challenged to offer a clear definition of entrepreneur. Hornaday, in 1992 wrote “there is no accepted definition, working or otherwise, of the terms entrepreneur or entrepreneurship. There is a lack of consensus that ensnares nearly every empirical or theoretical research effort” (Hornaday, 1992).

Entrepreneurs do not always need to be the founders and executive managers of a

business. Entrepreneurs are often thought of in the context of business startups. But rather than always being the sole proprietor and originator of a business, they may collaborate with business partners or acquire and grow an existing business. As an expansion of the terminology, business leaders in a large enterprise may also be viewed, correctly, as entrepreneurs when their mindset is one of expansion and innovation. Entrepreneurs can be found in government agencies and not-for-profit business as well, which expands the typical essence of entrepreneurship.

Experiential learning represents an integral portion of mastering concepts inherent in entrepreneurial comprehension. Although entrepreneurial education occurs mostly in the classroom, the hands on familiarity that is gained through internships, externships and other academic practicums enhances and accelerates the entrepreneurial learning experience. An eloquently worded quote by John C. Huie provides an excellent explanation of experiential education “experiential education is elusive, often paradoxical, a multifaceted jewel with ethical, aesthetic, spiritual, physical social and psychological dimensions. Psychological mountain climbing may be the right phrase for what we mean by experiential education”.

Externship is an experiential learning opportunity that is similar to an internship but more often than not is closely supervised through the auspices of an educational environment.

Generation X is the term used to define the generation of people born from 1965 to 1980 in Western countries. The group has been categorized as disillusioned, cynical and apathetic.

The Global Consortium of Entrepreneurship Centers (GCEC), formerly the National Consortium of Entrepreneurship Centers (NCEC), was founded in 1996. The intent of the organization is to provide a coordinated vehicle through which participating members can collaborate and communicate on the specific issues and challenges confronting university-based entrepreneurship centers. The GCEC current membership totals 200+ university-based entrepreneurship centers ranging in age from well-established and nationally ranked to new and emerging centers. Each year a global conference is held on the campus of a GCEC member school (<http://www.globalentrepreneurshipconsortium.org/index.cfm>). Upon first reference the full name will be used. On second and future references the acronym GCEC will be used.

Often programs are formed to accomplish specific goals. Goal-based evaluation assesses the extent to which programs meet goals and how they could progress in the future. If your organization wants to evaluate progress towards a goal, this method may be best.

The Handbook of Entrepreneurship defines those who pursue high-impact entrepreneurship (HIE) as activities necessary to create or carry on an enterprise where not all the markets are well established or clearly defined and/or in which the relevant parts of production are not completely known (Acs, 2010). This class of entrepreneur is widely acknowledged as having skills of creativity and leadership that help to create and forge new markets and industries. This classification of entrepreneur is often referred to in reverent terms.

The website InvestorWords.com defines human capital as the set of skills an

employee acquires on the job, through training and experience, and which increase that employee's value in the marketplace many workers acquire human capital at the expense of an employer and then leverage those skills to become entrepreneurs.

An internship is typically defined as a student or recent graduate undergoing supervised practical training.

The website Investopedia defines intrapreneurship as acting like an entrepreneur within a larger organization. The term is a hybrid of the prefix "intra" for internal coupled with the existing terminology used in entrepreneur. Conceivably, an intrapreneur exhibits many of the traits of an entrepreneur but practices those skills in a larger, more bureaucratic organization which does not allow singular decision making. In many respects, the intrapreneur is insulated from many of the high risk decisions faced by many entrepreneurs because a corporate structure places more resources at the disposal of the intrapreneur and risk is more widely dispersed in a larger organization. Jack Welch, Ph.D. the former CEO of General Electric, who was hailed as the Manager of the 20th Century by Fortune Magazine, was an acknowledged intrapreneur throughout most of his GE career. In his 2005 book titled *Winning*, Welch defines intrapreneur as "an entrepreneur with a big bank in their back pocket". The major difference between an entrepreneur and an intrapreneur is that where an entrepreneur has a free will and acts upon his or her whims, an intrapreneur may have to seek the permission of management before pursuing a particular course of action (entrepreneurship-and-vs-intrapreneurship).

Locus of control of reinforcement is a concept that was developed originally by Julian Rotter in the 1950s and it represents a collaboration of concepts developed in both

behavioral and cognitive psychology. Locus of control refers to an individual's perception about their destiny and direction in life. If one believes that they control their own destiny they are considered to have an internal locus of control. Essentially, they believe that they are the masters or mistresses of their own domain and that they personally shape their own destiny. Entrepreneurs are usually independent thinkers who strive to “make their own luck” and would gravitate toward possessing an internal locus of control of reinforcement. In the mind of an entrepreneur every day brings new questions and opportunities to find solutions since entrepreneurs see change for the growth opportunities that they bring. The opposite of this belief would be an external locus of control. People with an external locus of control believe that fate and forces outside of their control are predestined to have a causal effect, often with negative consequences, on their everyday activities.

Investopedia defines microenterprise as a small business that employs a small number of employees, usually fewer than 10 people and is started with a small amount of capital. A microenterprise business usually provides goods and services only in their local area (www.investopedia.com/terms).

The Millennial Generation Cohort or Generation X is the demographic grouping that follows Generation X and was born after 1980. Many representatives of this demographic comprise today's college age students.

A novice entrepreneur is one who has no prior business ownership interests but currently owns an equity stake in an economically active firm (Matlay, 2005).

Opportunity cost is defined by Investopedia as the cost of an alternative that must be forgone in order to pursue a certain action. Put another way, it represents the benefits you

could have received by taking an alternative action. In terms of entrepreneurship, it means the difference in return between a chosen investment of one's time and energy (perhaps working as an employee) as opposed to capitalizing on an opportunity for your own benefit. It is often quantified as the difference between working for yourself and working for someone else.

Entrepreneurship is often referred to as creating value and within that context the resulting outcome is usually organization creation. The reference to organization creation in this context relates to establishing organizational structure and a sustainable organizational structure from which a business originates. The concept of creating value can pertain to both intrinsic and extrinsic value as conceptualized in both a business that is conceived as a for profit venture and also as a not-for-profit business entity.

The portfolio entrepreneur depicts an admirable level of accomplishment that many people who pursue business ownership hope to achieve. A portfolio entrepreneur is one who simultaneously owns equity stakes in two or more economically active firms (Matlay, 2005).

A practicum is often defined as a college course in a specialized field of study that is intended to provide students a supervised application of a previously studied theory.

Process evaluation is a variation of program evaluation that concentrates on what services are provided to whom and in what ways. It is defined as using empirical data to assess the delivery of programs. Process evaluation verifies what the program is and whether it is being implemented as designed (Bliss and Emshoff 2002).

Program evaluation is defined as the systematic application of scientific methods to assess the design, implementation, improvement or outcomes of a program (Rossi, et al,

2003).

A serial entrepreneur is the term applied to one who currently owns an equity stake in a single economically active firm, and has previously sold or closed down a similarly owned business (Matlay, 2005).

Organization of Study

The design of this study follows a standard five chapter format.

Chapter one, the introduction, follows a global approach to the topic of entrepreneurship and positions the role of centers for entrepreneurship as they relate to the field of study as an emerging academic discipline. The intention for this chapter is to explain how the research conducted for this study factors in to a better understanding of the role centers for entrepreneurship play in the expansion of opportunities for students demonstrating an interest in business formation and their roles in becoming successful entrepreneurs. Beginning with a detailed statement of the problem and its significance, the chapter evolves into an explanation of the conceptual framework behind the decision to undertake this study. An attempt is made to position the study in such a way that it contributes to existing research while exploring new areas of development in the adoption of standards by which centers for entrepreneurship might be evaluated in the future. The chapter also establishes research questions, definitions of key terminology unique to this study and explains limitations/delimitations inherent in the study.

Chapter two, the review of related literature, is intended to summarize and further

synthesize the extent of current research related to entrepreneurial studies, the advancements in evaluation of academic programs along with the benefits and advantages associated with trends identified at entrepreneurship centers.

The findings in chapter three, the methodology, include information related to the design of the program evaluation methods selected, the process evaluation design plan structure with its outcome based goal oriented expectations and operational checklists that were employed in the collection of data along with its respective analysis. While professional evaluation and research are both forms of disciplined inquiry, they do not combine to seek the same outcomes. Social science research, in and of itself, does not fully address all of the components intended for analysis in the evaluation process. Unlike social science research, evaluation is more intuitive and might pursue multiple paths of reasoning to arrive at a summative assessment. Whereas research seeks conclusions, professional evaluation leads to increased knowledge and awareness that should result in better decisions (Alkin, 2011).

Chapter four unveils the results of the study in relation to the exploration of the three research questions.

Finally, chapter five summarizes the conclusions reached in the study along with recommendations and potential implications that should be taken into consideration for future studies.

CHAPTER TWO: REVIEW OF RELATED LITERATURE

Introduction

This chapter addresses a review of related literature and research in three topic areas that are relevant to the comparative analysis of the two centers for entrepreneurship that are profiled in this evaluation. Over one hundred journal articles on the topics of entrepreneurship, entrepreneurial education, program evaluation and entrepreneurship centers dating from 1971 to 2013 were evaluated for inclusion in this review of related literature. Six handbooks of entrepreneurship research and program evaluation methods from 2003 to 2010 were reviewed and findings were extracted for this research. Nine textbooks on the topics of entrepreneurship and program evaluation were employed in the preparation of this review. Additionally, information was extracted from newspapers as well as numerous internet searches which uncovered web sites and blogs that contributed to this research.

The approach that will be taken in this analysis of related literature is that of an abstract conceptual review that will synthesize areas of conceptual knowledge which should contribute to a better understanding of the issues (Jesson, Matheson and Lacey, 2012). A review of literature builds an argument pertinent to theoretical orientations and assumptions that are relevant to development of evaluation questions. Information contained in this review of related literature advances the need for greater emphasis in promoting entrepreneurship education as an interdisciplinary field of study and expanding the outreach of centers for entrepreneurship as a vehicle for expanding business creation. The review of related literature found in this chapter will summarize

the findings of scholars in their respective fields while integrating a synthesis of the three major topic areas in a manner by which the reader might achieve a better understanding of the depth and breadth of the subject matter.

The first section of this three-pronged chapter reviews a partial history of the field of entrepreneurship as an academic discipline and a historical timeline that traces its expansion to where it is now a nearly ubiquitous curricula offering at many Colleges of Business Administration that are fully accredited by AACSB International – The Association to Advance Collegiate Schools of Business. The second section reviews literature that supports the study of program evaluation, with particular emphasis on process design concepts that support the connoisseurship model of evaluation. This methodology constitutes recent advancements in the field of social research. Literature reviewed in this section supports summative evaluation as an evaluation protocol that is widely accepted by social science scholars. The third component of this review of related literature codifies the support that has emerged in recognition of centers for entrepreneurship and the manner in which centers of entrepreneurship have enhanced the field of entrepreneurial studies and contributed to business creation in the areas they serve.

Historical Perspective of Entrepreneurship Education

The chronology of entrepreneurship education in America can be traced to 1876 when the influential theorist Francis Walker first published *The Wages Question* which represented the first major work by an American university academic that considered the business ownership role of an entrepreneur (Katz, 2007). In the 137 years since that

introduction, entrepreneurship courses have expanded greatly, particularly in higher education, and entrepreneurial studies have become omnipresent at many levels of academia. Katz demonstrates that along with the proliferation of academic programs focused on entrepreneurial studies, the number of post graduate programs have become more specialized and are growing rapidly. The number of academically qualified faculty members has increased dramatically. The number of English- language refereed journals in entrepreneurship and small business expanded from a small handful in the 1970s to 44 by 1999. And in all of these growth areas the expansion has been exceeded by the corresponding improvements in quality. Rarely used outside of academic circles until a few decades ago, the term entrepreneur and entrepreneurial education has become a common term in today's business vocabulary.

With the demand for entrepreneurial training progressing at an ever increasing rate during the second half of the 20th century, it is no wonder that academic programs grew exponentially as educators made a sincere effort to meet the demand of a growing student population that was increasingly uncertain of the assurance of finding suitable jobs after college during fluctuating periods of economic uncertainty. The prevailing belief of many business students during the last four decades has been one of uncertainty and concern that a bachelor's degree is no longer the path to success in business and that it may even lead to missed opportunities in the business marketplace. Amid this climate of concern, many students view entrepreneurial studies as affording them the flexibility to acquire business knowledge in an academic setting while still allowing them the ease of movement to transition into a microbusiness, business or franchise ownership role that is better suited to controlling their own destiny.

As recently as 1987, in an article by W. Ed McMullen and Wayne A. Long, the field of entrepreneurship education was being viewed as part of a new strategy for job creation along with business incubators, innovation centers, technology transfer offices, science parks and venture capital operations. All of these entrepreneurial outreach assistance programs have capitalized on the entrepreneurial movement with a variety of successful outcomes. It is acknowledged that entrepreneurship is a topic that cannot simply be conveyed with textbooks in a classroom environment but that it needs to also involve a level of experiential learning. David A. Kolb, adapting theories postulated earlier by John Dewey, Kurt Lewin and Jean Piaget, determined that experiential learning involved four stages: concrete experience, reflective observation, abstract conceptualization and active experimentation.

(<http://www.learningandteaching.info/learning/experience.htm>).

In response to the query “why is entrepreneurship education important?” McMullen and Long respond with a rather trite, yet accurate retort “In a word--- economics. It Pays!” The authors presented four compelling justifications for expanding entrepreneurship education in 1987 that are still viable 26 years later. First, the payoffs are both long term and short term. Secondly, the payoffs are substantial, both in student contributions to the community and also in job creation. Third, and here is where the experiential learning component enters the equation, there is value created by providing future leaders for the new venture creation infrastructure. And fourth, a strong educational factor, there is additional knowledge generated and banked in a fact-starved field for the benefit of all community participants (McMullen and Long, 1987).

Entrepreneurial pursuits constitute a significant portion of a society’s economic

vibrancy. Entrepreneurship and capitalism cannot be separated and are mutually reinforcing. As economies embrace competition, firms must become more competitive and opportunities for entrepreneurs open up (McGrath and Desai, 2010).

Another unique value proposition that can be derived from entrepreneurial studies is its contrast to the existing business management curriculum. The Industrial Revolution of the early 20th century created demand for middle managers and staff support personnel to administer the growing workforce that migrated from an agrarian society where they lived off the land to a city environment where they could generate greater earning power but would become more dependent upon others for their goods and services. During the post-World War II era of global economic expansion, America's institutions of higher learning contributed to our nation's long term economic strength by training more middle managers and many technically skilled engineers who pioneered breakthroughs in products that led to America's economic supremacy. During the postwar era, which was still less than two decades removed from the Great Depression, there was still fear and trepidation about investing in business ownership because of the inherent risks taken by speculators during the depression. It was not until the vibrant 1970s that the fears that lingered from an economic collapse and the pall cast by the aftereffects of a war began to subside and optimistic attention was directed to business creation and a rekindled sense that business creation, with its potential for wealth creation was a viable option to a career in the corporate world. A contributing factor to that realization was that the corporate world was no longer the safe haven that it once was.

As workers began demonstrating their disloyalty to corporations by abandoning the security of corporate America and launching their own business ventures, many time taking intellectual capital and client billings along with them; corporations reacted by

replacing defined benefit pensions with defined contribution retirement plans. Public policy supported these initiatives by instituting the Employee Retirement Income Security Act of 1974 (ERISA) which does not require employers to provide retirement benefits nor does it require the employer contribute to pension plans. The ERISA act clearly shifted the responsibility for retirement planning from the employer to the employee. And, inevitably, widespread corporate layoffs were instituted as cost-saving measures to maintain profitability. If employees were not interested in demonstrating their loyalty, then neither were corporations going to be generous and provide the “lifetime” employment that had been a hallmark of American business. It was a natural evolution in the educational process that the best and brightest of students with both business management and technical engineering skills would want to enhance their growth opportunities by pursuing entrepreneurial studies so that they might be better suited to create value for themselves through business ownership.

Unlike traditional academic programs at institutions of higher learning that evaluate their programs by achieving high graduation rates, students pursuing entrepreneurial studies should determine their success through a variety of other milestones. Entrepreneurship programs provide a viable socioeconomic impact that is not often experienced by other academic programs. As McMullen and Long illustrate, entrepreneurship programs contribute immensely to companies and jobs being created. Often these companies are in high demand technology sectors that experience accelerated growth rates and promote international expansion while the residual effect is often experienced in a positive economic impact for the local community.

To meet the demands of modern day entrepreneurship students, the curriculum

for these programs should include much of the traditional business core curriculum but needs to evolve with a much different academic track. McMullen and Long proposed that entrepreneurship education needs to be differentiated in such a way that it promotes venture development over the typical college of business focus on functional expertise. Taking a strategic development approach, the authors propose courses that feature ten essential competencies: opportunity identification, market feasibility analysis, new venture planning, new venture finance, production design and organization, new market development, standardizing operations, expansion strategies, professionalizing middle management and institutionalizing innovation (McMullen and Long, 1987).

Although there is no empirical evidence, it would appear obvious that the typical entrepreneur, in view of their efforts to strive for success in both the for profit and not-for-profit sectors, could easily be categorized as a high-achiever or an over-achiever. In general, people with these high-achieving aptitudes also excel in their educational pursuits. In a 1976 study by Merrill E. Douglass, it was determined that entrepreneurs are more educated than the general population. By replicating much of an earlier 1971 study conducted by John Hornaday and John Aboud while reporting on characteristics of 153 successful entrepreneurs in the publication *Personnel Psychology*, it was determined the subjects in their study, all successful entrepreneurs, reflected a much higher rate of college graduates than the general population. When isolating an analysis by racial background, it was determined that 32% of blacks and 82% of whites in the study of successful entrepreneurs, achieved college degrees. When Douglass conducted his study of 96 successful entrepreneurs in 1976, he refined the subjects not only by race but also by gender. Douglass found that over half the respondents had attended college

and over a third had graduated from college. Fourteen of the 96 entrepreneurs had graduate degrees. In general, blacks had slightly more formal education than whites and considerably more graduate education. Black female entrepreneurs were the most highly educated of all the sample subgroups. Douglass concludes that although entrepreneurs possess more formal education than the general population, education alone does not equate directly to business success. He further concludes that business school graduates are typically not as successful as other college majors, and college graduates are not as successful as nongraduates (Douglass, 1976).

In view of the educational levels uncovered by Douglass, it gives rise to the question: do people with higher levels of education start more businesses than people with less education and does that additional education ensure an entrepreneur's potential for success? In a study found in the *Journal of Business Venturing* by Peter Robinson and Edwin Sexton in 1994, it was determined, using a large scale sample, that self-employed workers had more years of formal education than all other workers by a significant margin. Self-employed workers in the study had 14.57 years of education compared to wage and salaried workers who possessed only 13.58 years of education. The authors concluded that education has a strong positive influence on entrepreneurship in terms of becoming self-employed and achieving success. It was further determined that experience has a similar relationship though not as strong (Robinson and Sexton, 1994). A lingering question that arises from the analysis of these studies is the concern that perhaps education helps only capable entrepreneurs stay in business and that; perhaps, they might achieve success more quickly if they did not take the time necessary to acquire an education. Did the entrepreneurs sacrifice

opportunity cost while pursuing an education? And, if so, is the potential to build a business and accumulate wealth more valuable than education?

Interestingly, these findings support some of my own suppositions. Although my entrepreneurial ventures have spanned a wide range of technical and non-technical businesses, it has always been my contention that my academic accomplishments (18+ years of formal education) allowed me to maintain a comfortable lifestyle in the corporate world, despite the fact I was always working for someone else. While my entrepreneurial exploits were typically part time ventures, outside of my corporate life, but not always complementary to my business experience; I often felt that without the comfort of my academic background and rewarding corporate existence, I would have been more committed to attaining success as an entrepreneur. It is my contention that if not for my extensive education and experience, I would have been more driven for success as an entrepreneur with limited formal education because I would have wanted to compensate for my lack of academic proficiency. The high-achiever mentality inherent in many entrepreneurs, and to a lesser degree within me, would have required a substitute in the form of business success to offset the perceived lack of formal education. Nonetheless, the educational accomplishments that I have achieved have afforded even more than a monetary value to me and are, in a sense priceless and therefore irreplaceable.

The average wage returns, as of 2012, based on educational attainment are illustrated on the following page:

Educational Attainment	Mean	HS	SC	DEG	BA	MAST	PhD
Less than High School (LTHS)	\$22,698	\$6,058	\$4,043	\$12,482	\$23,095	\$33,889	\$46,569
High School (HS)	\$28,756		-\$2,015	\$6,423	\$17,037	\$27,831	\$40,510
Some college (SC)	\$26,741			\$8,439	\$19,052	\$29,846	\$42,526
College degree (DEG)	\$35,180				\$10,613	\$21,407	\$34,087
Bachelor's degree (BA)	\$45,793					\$10,794	\$23,474
Master's degree (MAST)	\$56,587						\$12,680
Doctorate degree (PhD)	\$69,267						

Figure 1 Average Wage Returns for Additional Educational Attainment

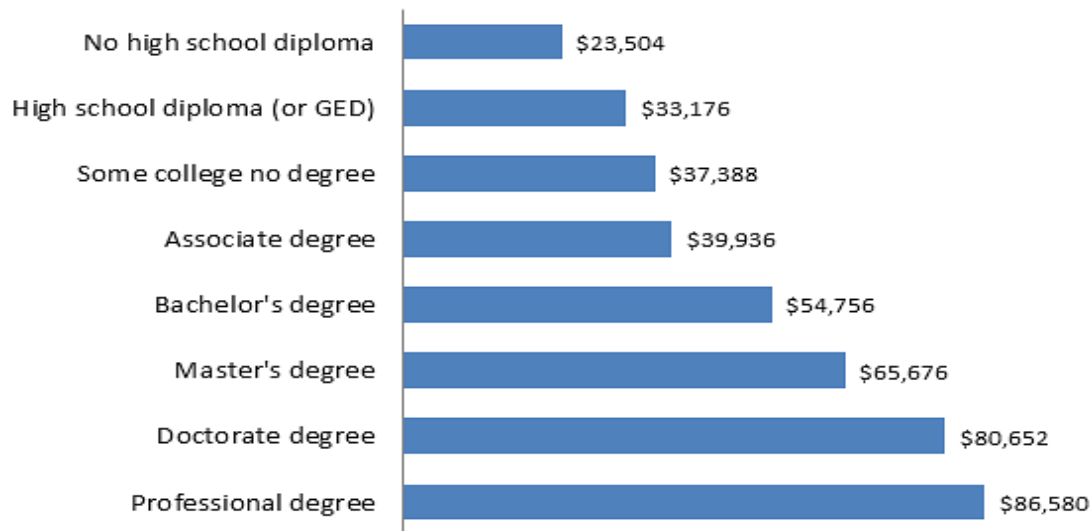
Source: Bureau of Labor Statistics, Current Population Survey

Many studies have found a positive relationship between educational attainment and increased income. As the tables below illustrate, unemployment rates decrease dramatically and earning potential rises proportionally with educational attainment:

Table 1 - Education Pays

Unemployment Rate	Education Attained	Median Weekly Earnings in 2011 (Dollars)
2.5%	Doctoral degree	\$1,551
2.4	Professional degree	1,665
3.6	Master's degree	1,263
4.9	Bachelor's degree	1,053
6.8	Associate degree	768
8.7	Some college, no degree	719
9.4	High School Diploma	638
14.1	Less than a high school diploma	451
7.6	All Workers	797

Source: Bureau of Labor Statistics, Current Population Survey



**Figure 2 - Median Annual Earnings of Adults Age 25 and Over (Full-Time Workers)
2011**

Source: Bureau of Labor Statistics, Current Population Survey, Annual Social and Economic Supplement. Last Modified Date: March 23, 2012

In a world of passionate, driven entrepreneurs, the question often arises... can and should entrepreneurship be taught? It should come as no surprise that many entrepreneurs have achieved unparalleled success without any formal business training and, in some cases, may not even be able to spell the word entrepreneur. In today's dynamic, cosmopolitan world entrepreneurs may still evolve and achieve success without the advantages and benefits of formal business / entrepreneurial training. In and of itself, training does not fill all of the knowledge gaps required to fully understand and master business skills. Educational enhancement and academic training for an entrepreneur is an iterative process whereby the individual builds competencies on an as needed basis. This is why nascent entrepreneurs often overlook the value of gaining financial expertise until such time as they start to focus on strategy and need to establish budgets because

venture capitalists or investors demand it of them.

There will always be experts, in particular accountants and lawyers, who supplement the entrepreneur's established set of skills with specialized knowledge. It would be shortsighted and misguided to believe that as an entrepreneur you might be expected to serve as the subject matter expert on all topics. So, until someone creates a pill or inoculation that can magically transform a person into a knowledgeable entrepreneur, it is imperative that scholarly pursuits into the field of entrepreneurial studies continue to expand and augment the knowledge acquisition experience of future generations of entrepreneurs.

Another variation of the "can entrepreneurship be taught" controversy is the discussion that questions whether entrepreneurship is a profession? The overwhelming need to define education as a precursor to professionalism represents our rigid society's demands to categorize professions and assign some respectability by order of hierarchy. If lifelong learning and becoming skilled at your craft represent professional legitimacy then most entrepreneurs qualify as professionals. One of the most interesting terms associated with professions is the manner in which they are inherently "practiced". We practice law, we practice medicine. These professions rarely refer to the application of their skills as a finished product. Yet the terminology inherent in the term "practice" connotes that one has not yet mastered their craft but, instead, are continuing to learn through practical (practice) experience. In many respects entrepreneurs are also continually learning through practical experience as well. Yet, with so little standardization and testing certification to quantify the skills of an entrepreneur, the field

of entrepreneurship might be better served by using the terminology of occupation. In some cases, entrepreneurship might be defined as one's avocation or their calling. But since true professions such as law, medicine and accounting require certified testing and licensing then perhaps they should be distinguished as true professions and entrepreneurship might be better categorized as a vocation, which is not so much one's calling or quest in life but more their pursuit through a field of employment. Borrowing again from the French language, from which the term *entreprendre* evolved into the modern term entrepreneur; perhaps the word *métier*, a French derivation of the Latin *ministerium* which implies a specialty one is especially suited for by way of talent and temperament might clarify the role of the entrepreneur. If entrepreneurs are not considered professionals, certainly it can be stated accurately that entrepreneurs are especially suited for their occupation by nature of their inclination toward talent by way of innovation and temperament by way of persistence.

Amid all the ambiguity of entrepreneurship, it might be reasonable to question why people pursue this field of study and continue to demonstrate exuberance for the profession. There has been much research and conjecture devoted to the topic. In the Handbook of Entrepreneurship Research, Zoltan J. Acs explains that studies indicate some 80% of entrepreneurs (much like me) start their businesses when they are still employed. He has adopted a formula that takes into consideration that expected wage earnings depend on current wage earnings, education, job tenure, and wage experience. Expected entrepreneurial wages, the potential unknown, depend only on limited education and experience (Acs, 2010). In support of Acs's theory, I can attest that I often found myself in a situation where the only "relatively safe" way to launch a

venture, and still retain an income stream through my “real” job was to test the waters of a new venture, in my spare time while I was still employed in the corporate world. These perfunctory efforts at high risk multi-tasking, however, usually resulted in a diminished quality of performance both on the job and in the world of new venture business formation that rarely resulted in job creation or wealth accumulation.

Supporting my beliefs, along with those of Douglass, is an article by P. Jyothi in the publication *Advances in Management* that is titled *Revisiting Linkages between Entrepreneurship and Education* (Jyothi, 2009). Jyothi borrows from earlier work by Jeffrey A. Timmons that encapsulates ten characteristics commonly attributed to entrepreneurs: tenacious, able to handle ambiguity while managing resources well, a taker of moderate risks, result-oriented, skilled at detecting opportunities, practical and realistic, committed, energetic, self-confident and independent (Timmons, 1978).

The early classical contributors to entrepreneurial education, principally Joseph Schumpeter, David Blau, William Brock and David Evans from the 1950s to the 1980s paved the groundwork for the more current seminal contributors. The field of research on industry dynamics from the late 1980s to modern day has been dominated by Robert Lucas, Richard Kihlstrom and Jean-Jacques Laffont. These authors analyze the development and expansion of primarily emerging growth firms since these businesses create a majority share of new jobs in the service driven economy.

Evans and Leighton (1989) utilized longitudinal data that analyzed seven key findings ranging from the necessity of complementary experience in the business venture to recent trends whereby self-employed people increase in number up to the age

of forty and then remain constant until retirement years. Another finding that has been substantiated in later research, uncovered that men who believe their performance depends largely on their own actions (as determined by a psychological test known as the Rotter Scale) have an internal locus of control and have a greater propensity for business startup success.

Since entrepreneurship courses are typically an elective course of academics, a study by Finkle and Deeds (2001) evaluated the demand for faculty to fill entrepreneurial studies positions as an indicator of growth in the field of entrepreneurship. They determined it to be a more valid indicator of program growth than the previous variable related to increases in student population being the primary driver of program growth. It was determined that faculty growth was a more acceptable barometer of program growth since faculty positions are influenced by external forces that reflect an increase in the popularity of entrepreneurship and the corresponding status accorded to entrepreneurs.

As recently as 1988, entrepreneurship education was deemed to be in its embryonic stages, still a venture in itself and facing resistance from university administrators (Hills, 1988). Much of the opposition to entrepreneurial studies came from traditional management faculty at colleges of business administration who felt threatened by curricula that might infringe upon their academic domains. Even educators have turf wars when it comes to allocation of resources and availability of class time. The one facet of pedagogy that business educators were in agreement on was that entrepreneurial studies would be more experientially oriented than traditional

business management classes. Pioneering work in entrepreneurship education addressed the key concern of whether entrepreneurship can be taught. Twenty-five years later that issue is still being bandied about in academic circles and is often subject to investigation because the opposite has absolutely been proven to be true--- without any formal academic training many entrepreneurs have achieved great success. The consensus, however, is that possessing many of the ten characteristics identified by Timmons, as previously stated, coupled with some academic foundation related to the topic of entrepreneurship, along with exposure to role models who have achieved entrepreneurial accomplishments, will inevitably improve the chances for success.

Entrepreneurship, as a subject at formal universities gained significant traction in the last two decades of the 20th Century and continues to gain momentum exponentially every year. Advancing the timeline to the 21st Century, German entrepreneurship theorist Christine Volkman concludes that entrepreneurship can be taught and learned but only to a certain degree. Volkman questions who is best suited to teach entrepreneurship? She debates whether traditional academic theorists are qualified to communicate the subject matter if they have never birthed a successful business enterprise other than their own occasional consulting assignments. In contrast, however, she also questions that successful entrepreneurs have the academic qualifications to convey the pedagogy required to position courses in entrepreneurship as being legitimate experiences in research and education. Volkman is critical of the myriad of ranking systems that ultimately do not lead to any conclusive outcomes. In fact, administrators at some schools have disparaged the rankings by admonishing that once you gain a high ranking the pressure builds to maintain that status and it can become a distraction to building a reputable program. Volkman concludes that rather than establishing rankings using

different criteria, it would be better to establish a comparative analysis of concepts and models that discerns their particular advantages and disadvantages (Volkman, 2004). In support of this belief the comparative analysis of centers for entrepreneurship at two central Florida Universities was undertaken.

While publications such as Success Magazine, Entrepreneur Magazine and the more formidable Business Week along with U.S. News and World Report have established rankings of entrepreneurship programs, there is no consensus for the rankings. Some are ranked by class size and others are ranked by graduation rates. Some are ranked by number of faculty and endowed chairs while others are ranked by financial operating budgets. The 2002 working paper by Deborah Streeter, John P. Jaquette, Jr. and Kathryn Hovis at Cornell University adopted an interesting approach to analyzing entrepreneurship programs by strata levels. Studying only 38 of the top entrepreneurship programs they ranked the programs as being either focused or university wide. They deemed a program to be focused if its faculty, students and staff are located exclusively in the academic area of business, or in the combined areas of business and engineering (Streeter, et al, 2002). Examples of such programs would be Ball State, Columbia, Duke, Harvard and University of Maryland.

The two programs being evaluated for this study---the Center for Entrepreneurial Leadership at the University of Central Florida's College of Business Administration in Orlando, Florida and the Center for Entrepreneurship at the University of South Florida in Tampa, Florida would be examples of focused programs. In contrast to focused programs, the authors further distinguished university-wide programs which may include courses aimed at those in arts and sciences or in physical sciences along with the

traditional business and engineering programs. Examples of these programs would be Babson (customarily ranked #1 in most surveys) Cornell, MIT and Stanford where a concerted effort is made to extend the opportunity for entrepreneurship education to all students campus-wide. A further delineation of entrepreneurship education was proposed by Streeter, Jaquette and Hovis when they coined the terms magnet and radiant models of education. The magnet model involved classes being taught at the traditional locations, i.e. colleges of business and/or engineering but open to students throughout the university. In contrast, the radiant model disseminated the availability of entrepreneurship classes throughout the entire campus and embedded entrepreneurship as an academic offering available at all levels and schools within the college or university. Magnet programs were found to be very centralized while radiant programs were determined to be more decentralized. The University of Central Florida's College of Business Administration in Orlando, Florida would be considered a mixed model because it retains a focused approach but strives to develop radiant opportunities by encouraging students throughout the university to pursue a minor or a certificate in entrepreneurship.

Since entrepreneurial studies are in such a nascent state of development and research in the field is continuing to progress, entrepreneurial curriculum will continue to evolve and mature as an acknowledged field of study. Many studies have concluded that entrepreneurship needs further theoretical development because the function of entrepreneurship in society has spanned many existing theories (O'Connor, 2012). In the 2011 American Journal of Applied Sciences article entitled On Becoming an Entrepreneurial Leader: A Focus on the Impacts of University Entrepreneurship

Programs, the authors Afsaneh Bagherei and Zaidatol Akmaliah Lope Pihie conclude that “there is little knowledge on how entrepreneurship programs shape students’ entrepreneurial capabilities and specifically entrepreneurial capabilities.” The authors go on to claim “despite the extensive development of entrepreneurship education, there is no consensus among entrepreneurship scholars on definition and theoretical foundation of the concept.”

Australian entrepreneurship theorist Allan O’Connor wrote in a 2012 article in the Journal of Business Venturing that the established theories of Joseph Schumpeter who, in 1961 argued that entrepreneurs are individuals whose function is to create new combinations of ideas, products and markets for an economy and this activity he termed was enterprise. O’Connor explains that Schumpeter’s version of enterprise has evolved. The author proceeds to explain that Schumpeter’s early work distinguished between *enterprise* as a source of innovation and disruption of markets compared to *business* which involved production within existing markets. O’Connor believes these distinctions are still evident today.

An enterprise-wide approach is one that should encompass all of the organizational components from top to bottom. This is often referred to as viewing the business from 30,000 feet above, as in in the view from a jet airplane. When observing the view from above, some skilled executives have the unique ability of being able to see how all of the pieces of the puzzle fit together. Since most people who reach the highest levels of an organization usually ascend to their positions of authority by demonstrating expertise in a particular business discipline, i.e. finance, marketing, etc. it is truly the

uniquely talented entrepreneur who has the global sense to build upon their skills in a functional area of expertise while acquiring the skills necessary to be competent in other ancillary business functions. It can be said that many times a skill entrepreneurs acquire is the ability to at least “know” or be aware of what you “don’t know”. Oddly enough, being cognizant of your own limitations allows one to be realistic in their own abilities and avoid the hubris that results in overestimating one’s infallibility.

Among the inherent skills an entrepreneur or intrapreneur needs to embrace an enterprise- wide point of view is the ability to figuratively see around corners. This illustrates an entrepreneur’s ability to anticipate the unknowns that arise in business. Issues such as the anticipation of a competitor’s next product launch, the fluctuation of currency valuations in global markets; these are indicative of having the ability to see around corners. Entrepreneurial excellence is not achieved by igniting isolated sparks of market interest but by mass-market explosions. Entrepreneurs many times have inherently been gifted with a propensity to excel in these areas, while others find a way to build and acquire these skills through experience and astute observation.

Dr. Donald F. Kuratko is considered a prominent scholar and national leader in the field of entrepreneurship with over 180 articles on aspects of entrepreneurship and corporate innovation and he is a member of the Executive Board of the Global Consortium of Entrepreneurship Centers. In his book *Entrepreneurship: Theory, Process, Practice* he clarifies entrepreneurship’s growing role in the global economy. As of 2005, Kuratko quantified the role of entrepreneurship education to include 220 endowed faculty positions, 44 refereed journals and over 100 funded or endowed centers

for entrepreneurship. Despite the phenomenal growth of entrepreneurship as a field of study during the first decade of the 21st century, Dr. Kuratko believes the field of entrepreneurial studies is still in its early stages and will require a great deal more development in order to achieve the level of acceptance enjoyed by many other core business programs. A regular collaborator of Kuratko's is Dr. Jerome Katz who does not share Kuratko's views on this matter and claims that entrepreneurial studies are fully mature as a field of acknowledged business studies (Katz, 2008). Although both of these leading entrepreneurial thinkers are not in agreement as to the maturity level of the field of study, they agree that some degree of legitimacy has been achieved in the field as of late 2008 and that its legitimacy by way of ongoing intellectual inquiry continues to evolve. Katz explains that the major consequence of entrepreneurship's full maturity is identified as the growing centrality of the business-school based discipline of entrepreneurship in relation to the emerging entrepreneurship efforts across campuses (Katz, 2008). It is apparent that the curriculum established for entrepreneurial studies at both of the Florida universities in this comparative study have evolved to a state of full maturity while neither is stagnant; however, the efforts to expand the discipline of entrepreneurial studies through both the Center for Entrepreneurial Leadership at the University of Central Florida and the Center for Entrepreneurship at the University of South Florida are still evolving as they both aspire to expand entrepreneurial awareness across their respective campuses.

The Kaufman Center for Entrepreneurial Leadership is a recognized leader in research attributed to the phenomenon of entrepreneurship. They are relentless in their efforts to promote entrepreneurial advancements at institutions of higher learning. The

efforts of the Kaufman Center for Entrepreneurial Leadership are: to advance entrepreneurship education and training efforts, to promote entrepreneurship-friendly policies, and to better facilitate the commercialization of new technologies by entrepreneurs and others, which have great promise for improving the economic welfare of our nation. In its 2013 State of Entrepreneurship Address delivered by President and CEO Tom McDonald it was reported that community colleges and four-year institutions combined to offer more than 5,000 entrepreneurship programs (Kauffman Foundation State of Entrepreneurship Address, February 5, 2013).

Putting it in Context --- Characterization of Entrepreneurs

Based upon all of the misconceptions related to the ideal profile of an entrepreneur, it would seem the field of entrepreneurial studies is in a state of confusion. Entrepreneurial scholars cannot reach agreement on whether entrepreneurial skills can be taught effectively. The general populace cannot even agree that entrepreneurship, as a field of study can be learned without experiential interventions. There is one “converging approach” to entrepreneurship that bridges the most obvious aspects of empirical discord and it is proposed by Harry Matlay in his “viewpoint” article for the Journal of Education and Training. Matlay logically suggests that we stratify entrepreneurs into three identifiable categories: novice, serial and portfolio. These terms deserve widespread acceptance. According to Matlay, a novice entrepreneur is one who has no prior business ownership interests but currently owns an equity stake in an economically active firm. The failure rate of business ventures by novice entrepreneurs is, understandably, very high. This category represents the majority of entrepreneurs.

The novice entrepreneurs are the people who like to cook and have never owned a restaurant but think they can achieve success in the food services industry.

A serial entrepreneur (a term commonly used in the U.S. because of this person's propensity for always seeking new business opportunities) is one who currently owns an equity stake in a single economically active firm, and has previously sold or closed down a similarly owned business. Serial entrepreneurs are usually great idea people who are capable of possessing a vision that allows them to generate an abundance of ideas, many times in rapid fire succession. They bounce from one hot business interest to another looking for the next "big" thing. They sometimes find success but, more often than not, success eludes them because they do not have the dedication to commit to a project and see it through to completion because they are distracted by new and different ventures. The portfolio entrepreneur, as described by Matlay, is one who simultaneously owns equity stakes in two or more economically active firms (Matlay, 2005). Generally, a portfolio entrepreneur is more mature, and has weathered the storms of entrepreneurship while encountering some successes and some failures. In many cases the portfolio entrepreneur has learned the value of committing to a particular industry or market and has been wise enough not to neglect their core business values.

Although many novice and serial entrepreneurs achieve great success, the likelihood of long term success is greater for a portfolio entrepreneur who is seeking to nurture and build businesses, in whole or in part, that will sustain them over time. Although not entirely accurate by today's standards, Dr. Kuratko put these entrepreneurial stratifications in perspective when he provided some statistics related to

the business climate of the late 20th century. Kuratko claims that 807,000 new small firms were established in 1995, which, at that time, was an all-time record. From 1980 to 1995 Fortune 500 companies lost more than five million jobs. Collectively the Fortune 500 accounted for 20% of employment in the United States in 1970; by 1996 this share had dropped to 8.5% (Carlsson, 1999). The resurgence of small businesses and the revival of entrepreneurship during that time period contributed to creation of 1.6 million new jobs in 1996. To better understand the impact of entrepreneurship in relation to job creation, Kuratko proclaims that fifteen percent of the fastest-growing new firms accounted for 94% of the net new job creation (Kuratko, 2005).

As a measure of comparison, the small business sector, stimulated by rampant entrepreneurial spirit, is as vibrant in Canada as it is in the United States. In 2001, over 2.5 million firms in Canada were categorized as small businesses, representing over 98 percent of the total number of Canadian businesses. As a group, Canadian small businesses employ nearly 60 percent of the work force and produce 45 percent of the gross national product, along with approximately two-thirds of new jobs (Ibrahim and Soufani, 2002). As of 2002, there were 53 Canadian universities offering courses in entrepreneurship (32 of the universities had entrepreneurship centers) and 40 percent of those who attended courses started their own business while 30 percent joined family businesses. The remaining 30% took their skills to corporate ventures (Upton, et al, 1995).

David McClelland, best known for his research in acquired needs theory, developed a test, in 1987, which would predict a person's potential for succeeding as an

entrepreneur. He found that those who score high in a need to achieve have a greater probability of success and are more likely to benefit from business training courses (McClelland, 1987). There was also support for the belief that possessing an internal locus of control is advantageous for entrepreneurial success. In a very interesting application of this theory, McClelland successfully implemented this study in the country of India and was able to successfully predict, based upon high scores in need for achievement, which subjects might have the greatest potential for success as entrepreneurs. The remarkable twist to this assessment method is that it was successfully tested in India, a country with an established caste system where individualism and risk taking are widely discouraged. The caste system in India discourages class-structured mobility. In India, if you are born poor, you will more than likely die poor while working and living in poverty and neglect. Yet McClelland was able to uncover business people who were able to launch successful business ventures despite their rigid class system.

A category of entrepreneur that is often referred to in reverent terms is the high impact entrepreneur (HIE). The goal of the high impact entrepreneur is more than growth and change -- it is different from other domains primarily because it operates with leverage as its outcome. The HIE is innovation driven and operates in a highly uncertain environment (Acs, 2010).

The high achieving HIE is admired because they are often inventors and innovators who are often first to market with their product offerings and overcome challenges of great risk and uncertainty. HIEs are often skilled at the commercialization

of innovation. The HIE has the wherewithal to bring product and service innovations to market. These are the people who relentlessly search out innovations that can be transformed into unique products. In the mind of the HIE, celebrating your accomplishments demonstrates satisfaction in achieving your goals. That mindset encourages a sense of complacency and that attitude is detrimental to embarking upon future success. The HIE gains little satisfaction in scaling a mountain as long as there is an even higher mountain that has not yet been conquered. Entrepreneurship is both “alertness to new opportunities and the actions following the “discovery” of an opportunity (Koppl and Minniti, 2010). Learning is involved in both aspects. When the entrepreneur’s alertness produces a discovery, the entrepreneur then learns about an opportunity. The language of alertness enables an entrepreneur to see with clarity that there is a single explanation for all market movements (Kirzner, 2009).

As the millennial cohort of students begin to embrace their educational pursuits, they find themselves as a generation whose parents probably did not enjoy much job security if they were plying their trades in corporate America. No doubt they heard older family members share their laments that there is no longer any job security in today’s “what have you done for me lately” business environment. Perhaps the millennial cohort even experienced their family’s need to scale back their household spending and make sacrifices as the result of a parent or parents’ job loss. These negative occurrences have a significant impact on academic pursuits and career planning whether the reality of these experiences affected them personally or by way of their acquaintances. Just as it has been documented that many famous comedians developed their comedic skills as coping mechanisms to overcome unfortunate circumstances, it can also be said that

entrepreneurial interests often stem from experiences that have been the result of negative consequences in one's life that were outside of their control. A family's financial setbacks often galvanize a person's resolve so that they are driven to accumulate enough personal wealth and success that they never experience similar financial hardships. Fear of failure is a powerful motivator. Of course, positive motivation is also a known accelerator toward goal achievement. But a combination of striving to meet and surpass goals while being repulsed by failure can be an excellent recipe of ingredients to propel a person toward success in entrepreneurial ventures.

Aspiring entrepreneurs do not have the patience to wait 20 years or more to reach a level of success in a corporate hierarchy. The internal drive that guides people to pursue entrepreneurship is usually not a drive that accepts delays and is intolerant in its quest to attain success. Many times these driven entrepreneurs postpone the attainment of their educational pursuits until later in life. They are the successful people who return to school later in life after they have attained success and aspire to learn for their own edification and not just to mark time in a classroom. At the other end of the spectrum, there are hyper-ambitious students, who know at an early age that they want to be entrepreneurs and seek out entrepreneurship programs that can better meet their needs such as institutions that allow students to compress a traditional four year degree into a rigorous three year program. These are usually entrepreneurs who are anxious to launch their careers and are willing to make short term sacrifices in order to achieve long term gains. Even though there are educational programs designed to accommodate the accelerated needs of students who want to progress academically as rapidly as possible, it seems, however, that administrators at institutions of higher learning are many times a

generation behind in their design of academic programs. A transformative education is about how to create, analyze and use concepts and tools to make sense of the world, expand your horizons and construct a better future (Jarley, 2013).

Interdisciplinary & Co-Curricular Entrepreneurial Studies

Largely because academic programs often resemble the model of academic programs administrators followed when they were students, it requires creative strategies to be proactive and formulate academic programs that meet the needs of a changing student demographic. Entrepreneurial programs need to rethink their strategies and be more receptive to the demands of students who want to fast track their educational pursuits, extract all of the pertinent information they need to achieve success, and press on with their more financially rewarding pursuits. If that means compressing the traditional four year education into a streamlined three year program then that should be an option. If the traditional four year degree program needs to be expanded into a lengthier program than involves internships and study abroad then those alternatives also need to be explored. The student is the consumer in the academic equation and the consumer needs to be served.

A common form of comparison that is applied to many branches of knowledge, academic and otherwise, can be found in the query “is the discipline an art or a science?” This is debated often in the study of management and leadership and the logic is as inconclusive as the nature v. nurture and heredity v. environment arguments. To the extent that one believes skills found inherently in a person contribute to exceptional leadership abilities and success in the field of management, the term leadership trait or

prototype is applied should you believe one is born to lead or manage. With these inherent skills, one might believe that the “art” of management and leadership is a result of choosing your parents wisely in order to inherit the right genes. Should you believe skills are not necessarily inherent but learned, you would then align with the nurture side of the argument which supports environment over heredity.

The question of is entrepreneurship an art or a science and depending on one’s point of view, then how should it be taught, is examined in *The Practical Side of Liberal Education: An Overview of Liberal Education and Entrepreneurship* by Samuel M. Hines, Jr. In Hines’ 2007 article, he supports the belief that entrepreneurship is a legitimate area of scholarly inquiry and a curricular component that need not be limited to certain departments or schools or to colleges of business. He supports an enlightened view that the fundamental elements of liberal education are essential to the development of an entrepreneurial mindset. Ideally, Hines would like to see a greater connection between the study of liberal arts and its applications to the field of entrepreneurship. In a sense, Hines supports the belief that although entrepreneurs achieve success by understanding technologies and market changes, at heart, entrepreneurs are grounded in the humanities and to a greater degree, entrepreneurs are artists. This profound advice should serve as the cornerstone for designing programs for entrepreneurial studies that promote a co- curricular, interdisciplinary approach to entrepreneurial studies.

There is support for the belief that the greatest need for entrepreneurship courses and curricula exists in academic disciplines outside of the business school (Levenburg, et al, 2006). The authors contest that a new venture requires the mastery and blending of skills that are different from those required to maintain ---or even grow--- an established

business. Generation X, and in many respects Generation Y, known also as the millennial cohort, are not as risk averse as previous generations and have been referred to as “the most entrepreneurial generation in history” (Zimmerer and Scarborough, 2002). Briga Hynes, authored an article in the Journal of European Industrial Training Entrepreneurship education and training -- Introducing entrepreneurship into non-business disciplines that promoted support for promoting entrepreneurship education to nonbusiness as well as business students (Hynes, 1996).

A pedagogical conundrum that must be overcome in entrepreneurship education is how to integrate an understanding of risk assessment in a classroom environment. Since risk cannot be fully understood until an entrepreneur puts their own sweat equity and sometimes investment capital on the line in their own business venture, a dominant question should be how can we, as educators, prepare future entrepreneurs for the inevitability of risk in business?

UCF’s Dean of the College of Business, Paul Jarley, writes a weekly blog that recently addressed the topic of “Teaching Students to take Risks”. He begins his February 27, 2013 posting by quoting another blogger Courtney Johnson as she laments that although she did all of the right things in college (had a job, did her homework and followed the rules) her college courses failed to teach her how to take risks so that she could make her dreams a reality. She claims that the inherent nature of syllabi and grading scales are anti-risk-taking mechanisms.

Our pioneering Dean Jarley has demonstrated that he is very sensitive to this academic issue and he indicates “she is right” and that the issue has been troubling him

for a while. Jarley states “we teach people how to quantify, analyze, and mitigate risk. But what we don’t do is teach students to actually take risks in their professional lives”.

“Frankly, most students come to us with a conservative mindset” Jarley goes on to say. “Once students get here, we stress skill development, getting things precisely right, and conforming to professional norms. We tell them what to do in lectures, challenge their ability to provide the ‘right answers’ in exams, manuscripts, and oral presentations, and penalize them with poor grades when they get it wrong”.

Dr. Jarley summarizes his concerns and positions the topic of risk taking as an important aspect of entrepreneurial education when he declares “we all know that a key to entrepreneurship (and life) is risk taking. At some point, we all have to be willing to give up a sure thing in the pursuit of something of potentially greater value”. The Dean goes on to say “I have never met an entrepreneur who didn’t tell me a story about how they went to bed one night after striking out in a new direction fearing that their new venture wouldn’t be viable in the morning”.

Dean Jarley concludes by saying “the core of the university experience rightly focuses on intellectual development, but I also want to help students nurture their entrepreneurial talents, among them the willingness to take professional risks. The challenge is to create an environment that develops and tests for strong analytic, technical and inter-personal skills but also demands that students take risks, that they sometimes fail and that they learn from failure”. Jarley goes on to suggest some recommended ways in which students can step out of their comfort zones and learn how to adapt and perform in new and stressful situations (Jarley, 2013).

Although Dean Jarley's ideas are posted on his blog and not as yet published in any distinguished journal, the Dean has made a valued and timely contribution to the review of related literature in this dissertation that resonates and expands the key findings of this literature review. Entrepreneurs encounter risk. As a process of academic inquiry there is minimal evidence that this valuable skill is being considered as a component of entrepreneurial curriculum.

What does one need to know if they are to become a successful entrepreneur? When should we first begin teaching this knowledge? How should this knowledge be conveyed? These three open-ended, multi-part questions were posed to 100 leading executives by Jacqueline Hood and John Young at the University of New Mexico in 1993. A majority of respondents believed that entrepreneurship should be taught in public schools as early as elementary school. In the U.S. this need was recognized by the Consortium for Entrepreneurship Education which was formed in 1980 at the Ohio State University and promotes the incorporation of entrepreneurship education across all levels of career-technical, academic education, and community-based programs, through infusion within existing courses and by the support of separate courses and programs developed in entrepreneurship. Another program designed to cultivate the next generation of entrepreneurs is also targeted at the younger school age children in low income environments. Founded in New York City in 1987, The Network for Teaching Entrepreneurship provides programs that inspire young people from low income neighborhoods to stay in school and recognize business opportunities that will allow them to prepare for successful futures. To date, the Network for Teaching

Entrepreneurship has worked with more than 500,000 young people from low income communities in programs across the U.S. and around the world. Of the many skills deemed to be essential for entrepreneurial success, leadership skills ranked the highest in the study, followed by self-motivation. Among the academic areas of study that were determined to be the most crucial for entrepreneurial success, marketing and market related content knowledge were valued the most, followed by finance and cash management (Hood and Young, 1993).

Entrepreneurs have definite ideas about how they learn and what they want to learn. In a 1997 article found in the *Journal of Business Venturing*, it was determined that using cash flow to make business decisions and financing growth were overwhelmingly of greatest importance to growth-oriented entrepreneurs. And since they are more often than not pressed for time they most preferred the learning environments of a business roundtable discussion limited to a maximum half-day seminar (Sexton, et al, 1997). If the value of the education and training results in a transformative learning experience that demystifies the field of entrepreneurship, then the participants will value the time they spent in training. Since this article was published before the rampant proliferation of computers and online distance learning, a replication of this study today might find a greater preference for learning by using self-paced instruction through online learning modules.

Magnus Klofsten, writing in the *Journal of European Industrial Training*, believes that at least three basic activities should be addressed at every university to stimulate interest in entrepreneurship. At first, there should be activities that create and maintain a

university-wide enterprising culture. Secondly, there should be specialized courses in entrepreneurship where students can master the subject itself. And finally, there should be training programs for individuals who would like to start their own business (Klofsten, 2009). Centers for entrepreneurship, by virtue of their campus presence, usually become the bellwether for an enterprise culture. The offshoot of many entrepreneurship programs also culminates in the creation of business incubators that often collaborate with Small Business Development Centers (SBDCs), under the auspices of the Small Business Administration, which provide a wide array of technical assistance to small businesses and aspiring entrepreneurs supporting business performance and sustainability while enhancing the creation of new businesses entities.

Summary of Findings from Entrepreneurial Studies

Entrepreneurship education, much like all forms of higher learning, should be viewed in a long term longitudinal sense whereby entrepreneurs continue to build upon both their academic and practical knowledge to promote a commitment to lifetime learning. Opportunity recognition and the drive to transform an idea into a reality are the justifying forces behind the indomitable entrepreneurial spirit. Small business ventures create jobs. When managed effectively, small businesses blossom into mid-sized and possibly large scale business enterprises, all of which strengthen economies and reinforce the foundation of society.

Much has been written about the academic discipline known as entrepreneurial studies. It has been identified as a field of study that can be traced to Harvard Business School in 1947. It gained traction and emerged as a legitimate field of academic inquiry

in the 1970s. There is substantive support for the field of entrepreneurial education being best served when delivered in a co-curricular, interdisciplinary environment spearheaded by entrepreneurship centers.

In summation, the formal study of entrepreneurship has contributed to the success of many entrepreneurs yet many successful entrepreneurs never undertook any academic training. Entrepreneurs have been analyzed and studied to ascertain the secrets to their success. Many of the attributes found in entrepreneurs have been deemed to be inherent while others have been determined to be learned from experience. The prototypical rags to riches entrepreneurial success story we like to glorify does not always result in exorbitant wealth and riches. Studies have documented the typical entrepreneur to be a white male in his forties who has financed a business with \$25,000 of his own money or debt financing. That same profile of a typical entrepreneur denotes that he/she creates a business with which they have familiarity and experience and, often times have taken on the challenge after losing a job or trying to escape an intolerable situation. The successful efforts of entrepreneurs result in commercialization of technologies, new business opportunities and job creation.

Defining Program Evaluation Methodology

A Google search of the term program evaluation produces 148,000,000 results. Dr. Michael Scriven is a Distinguished Professor at the School of Behavioral and Organizational Sciences at Claremont Graduate University. He has taught in the United States, Australia, and New Zealand, in departments of mathematics, philosophy, psychology, the history and philosophy of science, and education, including twelve years

at the University of California/Berkeley. He is an ex-President of the American Educational Research Association, and of the American Evaluation Association, and he is the recipient of the American Evaluation Association's Lazarsfeld Medal for contributions to evaluation theory. As an acknowledged expert in the field of program evaluation, he defines it in the following manner “program evaluation finds out exactly what a program does, to whom, when, and where, and how it does--- and whether these procedures and outcomes are ethical, cost-feasible, comparatively cost- effective, generalizable, and intended”. Business dictionary.com defines program evaluation as the detailed assessment of the outcome of a program, against established measured or expected results to determine if it achieved its objectives (businessdictionary.com). This is a very straightforward and sensible definition but it seems to focus solely on the past and present aspects of program evaluation while overlooking the future implications of the subject. Incorporated within the definition should be its orientation toward future considerations to include: judgments about the program and its short term/long term viability, improvements that should be implemented to improve the program’s effectiveness, and the ability to shape the future direction of the program by offering informed decisions about its future scope and direction.

As Marvin Alkin clarifies in his book *Evaluation Essentials: from A o Z*, evaluations address the here and now and attempt to provide insights that might lead to interventions which might later result in program improvement decisions (Alkin, 2011). An intended goal of evaluation should be the determination of a program’s value or worth in relation to its intended outcomes. In its strictest sense, evaluation should require adherence to standards, meeting established criteria of accountability and

achieving outcome goals.

A lesser known, but distinguished contributor to the field of program evaluation for higher education was Don E. Gardner, a coordinator of information systems at Arizona State University, who devised five evaluation frameworks in 1977. Gardner's five frameworks are: evaluation as professional judgment, evaluation as measurement, evaluation as the assessment congruence between performance and objectives (or standards of performance), decision- oriented evaluation and goal free/responsive evaluation (Gardner, 1977). Gardner acknowledged, however, that hybrid mixes of the five standard evaluation methods are widely used.

Evaluation as professional judgment is widely used by accreditation teams, Doctoral Review Committees and Promotion Tenure Committees because the members of the team are acknowledged experts in their respective fields of endeavor. If one believes that the best method of evaluation is to undergo a review by a panel of experts then evaluation by professional judgment is the most appropriate evaluation design. For the purpose of this comparative analysis, it would be reasonable to determine, based upon the review of related literature on the field of entrepreneurial studies and program evaluation, that the author of this dissertation is professionally qualified to evaluate both the Center for Entrepreneurial Leadership at the University of Central Florida's College of Business Administration in Orlando, Florida and the Center for Entrepreneurship at the University of South Florida in Tampa, Florida.

In 1985, Clifton F. Conrad and Richard F. Wilson, published *Academic Program Reviews: Institutional Approaches, Expectations and Controversies* and reviewed a number of program evaluation techniques that were widely accepted in higher education.

Their research into Academic Program Reviews for Higher Education expanded Gardner's earlier work and reframed the concept of evaluation as professional judgment to be known as the *connoisseurship model* of evaluation. The justification for this repositioning and renaming of an existing evaluation model was because the authors felt that because of training and background, the connoisseur is by definition the individual best able to appreciate the subtleties and nuances of what is encountered (Conrad and Wilson, 1985). In the educational connoisseurship model, the outcomes and goals are structured in accordance with those served by the evaluation. This reasoning further supports the author of this dissertation as being professionally qualified to evaluate both the Center for Entrepreneurial Leadership at the University of Central Florida's College of Business Administration in Orlando, Florida and the Center for Entrepreneurship at the University of South Florida in Tampa, Florida.

In order to establish a historical timeline of the progression in the field of program evaluation, the table below identifies the leading theorists and their intellectual contributions.

Table 2 – Taxonomy of Evaluation Models

Model	Proponents	Model Organizer	Evaluation Questions
Goal-based Model	Tyler 1949 (Behavioral Objectives) Provus, 1971 (Discrepancy Model) Popham, 1975	Goals and Objectives	To what extent is the program achieving its objectives?
Responsive Model	Scriven, 1973 (Goal-free Model) Stake, 1975 (Responsive Model) Parlett and Deardon, 1977 (Illuminative Evaluation Model) Guba and Lincoln, 1981 (Naturalistic	Concerns and issues of stakeholders	What are the activities and effects of the program? What does the program look like from a variety of perspectives?
Decision-making Model	Stufflebeam, et al, 1971 (Context-Input-Process- Product Model) Alkin, 1972	Decision making	To what extent is the program effective? In light of alternative decisions, what is the worth of the program?
Connoisseurship Model	Eisner, 1975 (Connoisseurship Model)	Critical review and professional judgment by expert/connoisseur	How do critics interpret and evaluate the program?

Adapted from Academic Program Reviews: Institutional Approaches, Expectations, and Controversies

Defining Process Evaluation Methodology

As it relates directly to the design of process evaluation, this evaluation methodology analyzes the early development and actual implementation of a program and assesses the empirical data to determine

that the program is being implemented as intended. The value of process evaluation is contained in its ability to identify gaps, if any, between the intended objectives of a program and evaluate them in light of actual outcomes.

The intent of evaluation is to determine the relevance of a program and to determine if objectives are being met. During the course of an evaluation, as a program is being viewed through a fresh set of eyes, the view from that lens might very well uncover some unnecessary functions that might result in a duplication of efforts. If that occurs, it would be circumspect to propose efficiencies whereby processes might be streamlined for greater effectiveness. Recommendations for improvement should be proposed with the intent of formalizing new procedures that will result in long term sustainability.

Process evaluations are intended to provide sufficient information regarding how a program operates and whether it produced the intended results. Evaluators need to understand process as well as content, thereby reviewing form as well as substance. This manner of evaluation usually begins with how a program currently operates. It then usually evolves through five phases: Initiation, Planning, Execution, Monitoring and Closure. The initiation phase describes the program environment that is providing the data. The planning phase describes the processes that will be used to design and implement the program. The execution stage evaluates the program's operations and proposed alterations. The monitoring phase identifies any events that may impact implementation and the intended outcomes. Finally,

the closure stage documents all of the ongoing activities, including all correspondence and memoranda that were generated during the evaluation process.

Defining Goal-Based Evaluation Methodology

The aim of goal-based evaluation is to determine whether the predetermined goals and objectives of the evaluation have been achieved. Goal-based evaluations are established to meet one or more goals. The true intentions of this evaluation method are to obtain the information that will prove to be most useful and to gather the information in an accurate yet cost-effective manner. Since goals are high-order objectives that should improve a particular program, it is important that the goals are measurable and attainable. Outcomes are based upon the attained short and long term results that improve performance upon implementation of recommended interventions. The ultimate outcomes of goal-based evaluation are determined at the end of a project and are presented in a summative manner which addresses the outcomes of the study.

Perhaps one of the most influential American educators was Ralph W. Tyler (1902 – 1992). Tyler transformed the idea of measurement into a concept that he called *evaluation*. The Tylerian approach designed a rationale for curriculum planning that still has vitality today. Much of Tyler's work was goal-based and used educational objectives to achieve expected outcomes.

Connoisseurship as an Evaluation Model

As both a form of professional judgment and as a method of constructive criticism,

Don Gardner, a coordinator of information systems at Arizona State University, devised what has come to be known as the connoisseurship model of evaluation. It assumes that certain experts in a given substantive area are capable of in-depth analysis and evaluation that could not be done in other ways (Stufflebeam, 2001). As connoisseurship connotes, one should have some particular expertise in a given area. Emanating from connoisseurs who cultivated a long-standing appreciation of the arts, music or literature, and became skilled enough to identify subtle imperfections to the degree that they could offer a critical voice, the field of evaluation has adopted this methodology as an acceptable form of evaluation. The connoisseurship model of evaluation, according to Elliott W. Eisner, one of its earliest adherents, is a discipline that in virtually all cases requires time, experience, and an ability to surrender oneself to a topic in order to let it speak. Connoisseurship evaluation requires an active intelligence and the application of refined schemata (McLaughlin and Phillips, 1991).

In the words of Daniel Stufflebeam, a connoisseurship study's purpose is to describe, critically appraise, and illuminate a particular program's merits. The methodology includes systematic use of the evaluator's perceptual sensitivities, past experiences, refined insights and abilities to communicate their assessments. The evaluator's judgments are conveyed in vivid terms to help the audiences appreciate all of the program's nuances (Stufflebeam, 2001).

The uniqueness of using the connoisseurship model of evaluation is that it can be both a blessing and a curse. It is truly a blessing if the evaluator is knowledgeable, experienced and has in depth familiarity with the subject matter. Conversely, it can be a curse if the evaluator lacks the skills and experience necessary to conduct an effective

evaluation. According to Eisner, connoisseurship is related to the possession of perceptivity and when criticism is warranted it should be a private affair as the aim of criticism is the enlargement of perception.

Comparative Analysis Using Program Evaluation Techniques

Comparative analysis involves an item-by-item comparison of two or more comparable alternatives, processes, products, qualifications, sets of data, systems, or the like. In accounting, for example, changes in a financial statement's items over several accounting periods may be presented together to detect the emerging trends in the company's operations and results (<http://www.businessdictionary.com>). Comparative analysis has been used in the social sciences as well as business and is ideally suited for micro-analysis, particularly in the case of two similar programs of illustrative value. When conducting a systematic review of the Center for Entrepreneurial Leadership at the University of Central Florida's College of Business Administration in Orlando, Florida and the Center for Entrepreneurship at the University of South Florida in Tampa, Florida it became readily apparent that the similarities, i.e. comparable alternatives, far outweighed the dissimilarities.

German theorist Max Weber was a political economist and sociologist who is considered one of the founders of the modern study of sociology and public administration. His major works deal with rationalization in sociology of religion and government, but he also wrote much in the field of economics. Much of Weber's work regarding the comparative method of evaluation was predicated on his belief that there was an *ideal type* and that the evaluator was instrumental in formulating the necessary

probing inquiries to guide the research. Since the person conducting the evaluation in this case is knowledgeable in the field of entrepreneurship, entrepreneurship education and the role of entrepreneurship centers at institutions of higher learning, the criteria for understanding an ideal type has been met.

Components of Successful Entrepreneurship Centers

Since the emergence of entrepreneurship centers at institutions of higher learning is a relatively new phenomena that has only come into existence with fervor during the last 25 years, there is only minimal research into the field and the literature that is available is somewhat fragmented. The most comprehensive compilation of data related to entrepreneurship centers can be found in Dr. Nancy Upton's 1997 tome entitled "Successful Experiences of Entrepreneurship Directors" which produced an extensive comparative analysis of nine top ranked centers for entrepreneurship and cataloged their respective best practices (Upton, 1997).

A more recent study of 146 entrepreneurship centers was conducted in 2006 and published in the Journal of Small Business Management (Finkle et al, 2006). The key determinants evaluated at the 146 entrepreneurship centers were: number of years the center had been established; whether entrepreneurial studies were concentrated primarily in the institution's College of Business and, if so whether it fell under the auspices of Departments of Management, Marketing, an Independent Department or mixed within the College of Business; and a profile of the center's directors and the composition of its faculty members as well as its staff. Many of these variables were used in the comparative analysis of the Center for Entrepreneurial Leadership at the University of

Central Florida's College of Business Administration in Orlando, Florida and the Center for Entrepreneurship at the University of South Florida in Tampa, Florida.

Some of the challenges the researchers found among directors who started their own centers were: top-ranked centers had great difficulty in finding qualified faculty while non-ranked programs experienced the greatest challenges to be funding, recruiting students and achieving legitimacy by support and participation. A typical director was male, 51.7 years old with a Ph.D. Only 26% of centers held endowed chairs. Seventy-six percent of the directors were former entrepreneurs and on average had 9.9 years of entrepreneurial experience (Finkle, et al, 2006).

Among the most commonly found activities at the 146 centers in the study were: business plan competition (77%); internships (77%); and student entrepreneurship clubs (76%). The most popular external outreach programs at the 146 centers were: seminars/workshops (93%); guest speakers (90%) and grants (58%) (Finkle, et al, 2006).

The most successful entrepreneurship centers shared a common goal by faculty and administrators to be student-focused and strive to achieve common goals. Faculty measures of success at top-ranked centers were prioritized in order of student evaluations, recognition, number of graduates and number of students in the program. Administrators held a slightly different view when they ranked recognition, number of students in the program, number of graduates and student evaluations as their order of significance (Finkle, et al, 2006).

Table 3 - Problems Encountered in the Administration of an Entrepreneurship Center

Adopted from Finkle, Kuratko and Goldsby's Order of Significance¹

Problem Area	Score
Time	5.1
Funding	4.5
Finding Qualified Faculty	4.1
Legitimacy	4.0
Rewards	3.1
Faculty Jealousy	3.6
Administration	3.1
Lack of Focus	2.9
Recruiting Students/Enrollment	2.9
Measures of Success	2.9
Control of Program	2.6
Obsession With Ranking	2.5
Faculty Burnout	2.3

¹(Likert Scale where 1 is the least problematic and 7 is the most troublesome). Sampling of 146 Entrepreneurship Centers in Order of Significance

The best practices that were evaluated by Upton in the review of “Successful Experiences of Entrepreneurship Center Directors” included: best practices in starting a center or entrepreneurship program, best practices in directing a start-up program or center; best practices in funding (for both endowed chairs and curriculum funding); and best practices in managing and marketing entrepreneurship centers. The nine top schools that were evaluated in the study were: Babson College, Baylor University, Carnegie Mellon University, IC2 Institute at the University of Texas, Rensselaer Polytechnic Institute, University of Colorado Boulder, University of Maryland College Park and University of Pennsylvania – Wharton School (Upton, 1997).

Table 4- Types of Center Models

Types of Center Models
The External Center (focused on Outreach)
The Extra Curricular Center (Campus-wide Involvement)
The Niche Center (technology, women, rural initiatives)
The Research Center
The Academic Center
The Comprehensive Center
Hybrid Centers

Launching a center for entrepreneurship, in and of itself, is a massive undertaking that might be considered an entrepreneurial venture in its own right. In most cases, entrepreneurial curriculum is already established and there should already be a groundswell of momentum propelling the creation of a center into existence. Any prospective center director should seek out high-level administrators (Deans and higher) to champion the cause and secure the necessary funding. Also some measure of implementation should be in progress to the extent that some competitive program events have already been conducted and well received. These events would be business plan competitions and other new venture business formulation events (with prize money and awards) that attract students, faculty and administrators who are receptive to the value of entrepreneurship. An ideal timeline for launching a new center for entrepreneurship would be: seek (American Association to Advance Collegiate Schools of Business) - AACSB International approval to include entrepreneurship as approved course offerings. Staff, faculty and administrators should be hired to support the program. After about two years of successful course offerings, faculty advocates should be recruited who will inspire students to form entrepreneurship groups. Some of the most popular groups have common themes related to new venture opportunities, business planning and market identification.

Careful consideration should be given to the ramifications that arise when selecting a particular entrepreneurship center model. Depending on the type of model and its mission a significant impact arises in terms of matching the staff and their respective skills to the mission that the center is attempting to deliver. In light of available resources, sometimes compromises must be made to accommodate existing requirements. Decisions need to be made regarding the involvement of stakeholders and how much influence they will have when deciding key policies at the center. Another question to be decided is whether there will be an advisory board and how much power and influence they may wield.

Since the launch and acceleration plan for a center is an iterative process that transcends from each academic year to the next, it is crucial that goals and success measures be established for accountability. In so doing, decisions need to be made and monitored that will establish measures of achievement and benchmarks to ensure success.

Among the most vibrant international groups involved in developing entrepreneurial skills is Students in Free Enterprise (S.I.F.E.) a global, non-profit organization funded by contributions from corporations, entrepreneurs, foundations, government agencies and private individuals. Partnering with colleges and universities, SIFE promotes student teams on college campuses and develops projects that address market economics, success skills, entrepreneurship, financial literacy and business ethics (<http://enactus.org/who-we-are/our-story/>). In the Journal of Entrepreneurship Education article entitled Developing Entrepreneurial Competencies: A Student Business, faculty members at Valdosta State University in Valdosta, Georgia explain how their SIFE students created a business on campus in 2005 called Business Bites that caters to the needs of commuting students (Plumly et al, 2008). Having taught at the Langdale College of Business at that time I can attest to the energy and effort that the students put into that project as well as the abundance

of faculty guidance (some provided by me) that helped the project achieve success. SIFE students at Valdosta State University also have done exceptionally well at national SIFE competitions, perennially placing among the top five schools in national competition.

Once approval has been granted to launch a center for entrepreneurship and site selections have been determined (typically centers are housed within either the College of Business or College of Engineering complexes – but can be located elsewhere to foster interdisciplinary co-curricular participation) a search should be conducted to appoint a capable center director. In the early stages of center development this is often a faculty member from entrepreneurial studies who embraces the administrative duties of the center director. The time line for this should be established in accordance with a school's academic calendar.

The Steps Involved in Launching a Center

Before a center's launch, the business principles inherent in any launch of a new venture should address whether there is sufficient demand to justify a center. Some measure of analysis should be invoked to assure there is sufficient need for a center. If entrepreneurship courses have met with favorable results then demand for a center should be at a level of acceptance. It is undeniable that the pattern in business indicates transformation of business processes through technological advances that create numerous opportunities for entrepreneurial interventions.

In terms of a timeline, it would be advisable in the fall semester, a year in advance, to host some high profile entrepreneurship guest speakers --- legitimate, successful, local, regional and national entrepreneurs who have achieved tangible success. After successful launch of a speaker series, with exceptional attendance by students, faculty, staff and the

surrounding community, it would be advisable to establish some media contacts that might be able to publicize the success of the programs. The next activity would be to begin soliciting financial contributors who might serve as judges and donate cash prizes for competitive events such as business plan competition and new venture business ideas.

Conducting these events in the early spring, i.e. early to mid-March, is usually a favorable time of year. Since many companies who will be contributing have usually started their new year's budget allocations seeking them out early and often usually ensures a successful series of competitive events. As winners of the events are determined, be sure to market and publicize their achievements. Exposure in the press is invaluable and these are "feel-good" positive stories to tell.

Table 5- Key Variables Defining a Center Model

Eight Key Variables Defining a Center Model
Structural or tie-in with academic department
Within or outside of Business School
Budgetary independence
Involvement of tenure track faculty
Responsibility for curriculum
Involvement of students
Responsibility for applied academic research
Engagement on campus versus off campus
Involvement or participation in venture start-ups

Adapted from 2004 National Consortium of Entrepreneurship Centers Conference

Late in the spring semester, if not already announced, the center director and staff should be in place and if not already physically housed in the center of entrepreneurship, the finishing touches for the site should be within easy reach. With the director and staff in place, they can begin preparing to work through the summer developing projects and activities so that the new academic year can begin with programs in place that will make it a success.

Launching a center is only part of the process. Adding value and assuring the future sustainability and growth of a center is of even greater importance. To achieve success a nascent center needs to have sustainable infrastructure that is predicated on a clearly defined and well-focused mission statement that articulates an inspiring vision. Entrepreneurship must be conveyed as a philosophical mindset. A mission statement is usually only a paragraph long, but it has specific, measurable outcomes and a deadline for accomplishing those outcomes. The mission statement should resonate in the hearts and minds of your constituents and stakeholders. Measureable goals drive continuous momentum and attaining tangible milestones reflect in a positive way for the administration responsible for authorizing the center. Finally, meaningful buy-in from administration and faculty by way of their participation and involvement is essential for success of a center.

CHAPTER THREE: METHODOLOGY

Conceptual Framework

The conceptual framework for this study is predicated upon the professional judgment approach devised in 1977 by Don. E. Gardner, a coordinator of information systems at Arizona State University known as the connoisseur evaluation model. Using the skills of professional judgment, the evaluator, acting as a connoisseur of the subject matter, conducted a comparative analysis and systematic review of the Center for Entrepreneurial Leadership at the University of Central Florida's College of Business Administration in Orlando, Florida and the Center for Entrepreneurship at the University of South Florida in Tampa, Florida.

Procedure

The Center for Entrepreneurial Leadership is domiciled at the University of Central Florida, and supports the main campus in Orlando, Florida, its 12 colleges and its ten regional campuses. Founded in 1963, UCF is the second largest university in the nation, by student population, offering 177 bachelors and master's degrees and 30 doctoral programs. The Center for Entrepreneurship is located at the University of South Florida in Tampa, Florida. Founded in 1956, the University of South Florida is the eighth largest university in the nation by student population and serves more than 47,000 students at its campuses in Tampa, St. Petersburg and Sarasota-Manatee, Florida. USF offers 86 bachelors, 104 master's degrees and 44 doctoral programs.

Both schools actively compete for the same resources. Academically qualified

students apply to both schools where entrance requirements are identical and rates of acceptance are comparable. Located within 70 miles of each other, both schools compete for the same funding allocations, the same faculty, staff and administrators. The two schools maintain comparable graduation rates over four and six year academic timeframes. Graduates compete for similar jobs in the central Florida region. New business ventures that evolve from both schools seek many of the same venture capitalists and banking relationships. And both schools compete athletically in the same athletic conference.

Using professional contacts and persistence, the evaluator was able to obtain a series of meetings with the center directors at both schools to gather information for the evaluation. The web sites for both centers were exceptionally comprehensive and permissions were granted by officials at both centers to reproduce copyrighted materials.

Design of the Study

The study employs a qualitative methodology that extracts data from experts, the center directors at the two respective institutions. With permission from the participants, the interviews were recorded for accuracy and further review. Due to the potential fallibility of memory and recall the evaluator supplemented recordings with field notes. Observational notes were also taken to uncover the actual circumstances and surroundings of the interviews. Although professional judgment is a major component of the connoisseurship evaluation model being employed in this study, the principles of accuracy and rigorous discipline were used extensively to document the collection of recordings and field notes to ensure that the research maintained exactness at all times.

An analysis was conducted to determine any correlations that could be established from the data that was collected.

Based upon key findings from the Review of Related Literature in Chapter Two, a set of interview questions were developed to address pertinent topics at the entrepreneurship centers. Since the intent of the interviews was to uncover the participants' experiences, feelings, beliefs and convictions about the role that entrepreneurship centers play in developing the next generation of business leaders, the use of open-ended, unstructured questions was essential. As the evaluator, using the connoisseurship evaluation model, the method of inquiry was not intended to seek answers as much as it was intended to uncover areas of exceptionality and areas of deficiency by which the evaluator's professional judgment might conceive a thorough comparative analysis. In an effort to achieve some measure of triangulation, the findings were then compared to established criteria published by the Global Consortium of Entrepreneurship Center in its *Model for Entrepreneurship Centers*, a compendium of best practices collected from its membership.

Data Collection

Data for the study was collected between January, 2013 and March 2013. The evaluator made several revisions throughout the process as a result of refining the scope of the study and as a consequence of guidance provided by members of the dissertation committee.

Requests for consent to participate in the evaluation were obtained from center directors after an extensive review of literature and electronic content devoted to each of

the center's history, background and accomplishments. Both of the centers in the comparative analysis have devised comprehensive web sites that address many of the topics reviewed for comparison. Telephone calls and e-mails were sent to the respective center directors to acquaint them with the researcher and to explain the purpose and intent of the requested meetings. Designated representatives for both centers agreed to sign release letters presented by the researcher that provided authorization to reprint information found both in print and on web sites that might be reproduced in this dissertation. Those letters can be found in Appendix A. Interviews were recorded with a digital recorder and field notes were used to accurately recount the topics discussed.

Interviews were conducted at the entrepreneurship center's facilities using open-ended, unstructured questions that allowed the evaluator to guide the conversation in a logical format while still allowing for a free flowing dialog. The intent of the interviews was to uncover the foundational aspects that contributed to the early stages of each center's existence and to track the substantive underpinnings of those cornerstone principles over time to the present day. In an effort to eliminate bias, a sincere effort was made to elicit both successes and failures from the respondents. The interviews were heavily weighted toward recognition of future activities that might contribute to the success of the centers. While the early stage questioning was intended to determine the center's ability to plan and establish its mission, the latter portion of the sessions were intended to uncover the vision and strategies that are in place to perpetuate a sustainable entrepreneurship center.

Data Analysis

Interviews were transcribed into a Microsoft Word document and analyzed for common themes. The common themes were then interpreted in light of the established evaluation questions: To what extent do centers of entrepreneurship expand enrollment in entrepreneurship courses for the Colleges of Business Administration at the University of Central Florida and the University of South Florida? In what ways do entrepreneurship centers at the University of Central Florida and the University of South Florida stimulate interest in business creation across multiple academic disciplines at the two respective universities? By what standard of measurement do the entrepreneurship centers at the University of Central Florida and the University of South Florida meet the needs of their respective constituents?

Table 6 – Evaluation Overview

Conceptualization Questions

Program	Context	Inputs	Process
How is the Center for Entrepreneurial Studies meeting the school's standards?	Is the Center responsive to student needs and school standards?	Is the mission of the Center being carried out according to plan?	To what extent are stakeholders benefitting from the Center?
	Who are the students targeted as gaining benefits from the Center?	Is the Center better than alternatives implemented at other schools?	Are there modifications planned for the future of the Center?

Program	Context	Inputs	Process
	What goals should the Center develop now to benefit students in the future?	Are the goals of the Center understood and accepted by those who are responsible for carrying out its mission?	Is there a need to further train staff to execute the mission of the Center?
	To what extent are the goals of the Center in need of revision?	Are the goals of the Center achievable and affordable?	Does the Center provide sufficiently for assessment of its process and delivery of its services?
	Are the objectives of the Center based on the assessed needs of the students who are served by the Center?	Is the strategy for the Center responsive to the needs of the students?	Have the goals for the Center been implemented adequately?
	Have the goals for the Center been appropriately revised as the needs of the students continue to change?	Are the goals for the Center fully functional, affordable, acceptable to the staff, and workable?	Is the staff adequately trained to carry out the goals for the Center?

In addition to the three evaluation questions stated earlier, Table 8 provides an overview of the topic areas that were addressed during the interview process. As previously indicated, the tone of the questions were designed to elicit candid responses related to the early stage development of the centers and the expectation was that the evaluator would guide the respondents toward greater openness and spontaneity when discussing the vision and future direction for the centers.

CHAPTER FOUR: FINDINGS

Results of the Study



This comparative analysis of comparable entrepreneurship centers that serve as academic support programs for students at two central Florida universities addresses the centers' capabilities and readiness to deliver quality guidance and entrepreneurial preparedness to students from all academic disciplines. The framework used to analyze the centers' capabilities and program readiness is derived from the professional judgment and constructive criticism method of evaluation known as the connoisseurship model. It is a discipline that requires time, experience and an ability to surrender oneself to a topic in order to determine its advantages as well as its disadvantages.

In addition to the evaluation questions devised for this study, a series of other findings were pursued in the evaluation to gather data for future analysis:

1. To what group of students were the goals of the centers primarily directed – Business Students, Engineering Students, Digital Media Students, Technology Students, Medical Research Students or Other Students?
2. Did the goals of the centers achieve their objectives in a manner that was reflective of their university's intended goals and objectives?
3. Are the programs and objectives of the centers sustainable for a minimum of ten years in their present form without major modifications?
4. Can the design that encapsulates the conceptual framework of the centers be transported seamlessly to satellite campuses?

Presentation of Demographic Data

Table 7 - Comparative Backgrounds

	
Center Director – Cameron M. Ford, Ph.D.	Center Director – Michael W. Fountain, Ph.D.
Established in 2003	Established in 2002
<p>UCF's Center for Entrepreneurship and Innovation seeks to educate, empower and excite the entrepreneurial spirit of the UCF community. Our goal is to ensure that our community has the best educational, experimental and tactical support available to create and realize opportunities. In doing so, the CEI serves as a nexus connecting the College of Business Administration to academic disciplines across campus and business interests throughout the Central Florida region.</p> <p>The Center for Entrepreneurship and Innovation (CEI) is UCF's hub for educating and empowering the entrepreneurial spirit. The center is an initiative developed by the College of Business Administration. It is designed to be a focal point for those in all disciplines and professions seeking to create value with innovative business ventures. The CEI offers a range of opportunities to cultivate entrepreneurial thinking within every member of the UCF community including courses, competitions, clubs, connections and coaches.</p> <p>The CEI is a strong believer in the notion that "UCF Stands For Opportunity" and is working diligently to build and maintain university, business and government partnerships necessary to realize opportunities in the Central Florida region. Entrepreneur</p>	<p>The USF Center for Entrepreneurship is a multidisciplinary, campus-wide center focusing on entrepreneurial education, training, and research. By using innovative, interdisciplinary approaches, the center provides opportunities for students in the fields of business, engineering, health sciences, and sustainability.</p> <p>These partnerships leverage the strengths of all participants to create a nationally recognized program, which enables students to develop the critical skills necessary to imagine creative solutions and transform those ideas into successful endeavors.</p> <p>The Center for Entrepreneurship is nationally ranked by the Princeton Review as one of the top entrepreneurship graduate programs in the country since 2007; the Center has also received the top three awards from the United States Association for Small Business and Entrepreneurship (USASBE): Best Specialty Program 2004, Most Innovative Course 2005, and Most Innovative Teaching Pedagogy 2006.</p>






	
<p>Magazine touts Orlando as being “one of the most highly coordinated entrepreneurial engines in the country” and credits this success to our “intergovernmental and private sector’s ability to cooperate and sidestep development turf wars that often hobble other metro areas.” The CEI is an important part in this engine.</p>	
<p>Founded in 1963, the University of Central Florida is the second largest university in the nation, by student population, offering 177 bachelors and master’s degrees and 30 doctoral programs.</p>	<p>Founded in 1956, the University of South Florida is the eighth largest university in the nation by student population and serves more than 47,000 students at its campuses in Tampa, St. Petersburg and Sarasota-Manatee, Florida. USF offers 86 bachelors, 104 master’s degrees and 44 doctoral programs.</p>

Table 8- Comparison of Academic Programs

	
<p>The Entrepreneurship business minor offers students the opportunity to foster a strong business acumen that is essential to success in any career. The diverse classes available allow business under-graduates to explore the many career paths including self-employment, contracting, starting a company, working in small business, and leading corporate innovation and change initiatives.</p>	<p>The two entrepreneurship minors are innovative and interdisciplinary programs available to all undergraduate USF students (who meet qualifications). Most courses in the minor program are offered online. Whether students would like to increase their entrepreneurial business skills, pursue their own business ideas, or learn ways to bring innovation into existing positions and businesses, an entrepreneurship minor teaches</p>

 <p>UCF CEI Center for Entrepreneurship & Innovation College of Business Administration</p>	  <p>USF UNIVERSITY OF SOUTH FLORIDA</p> <p>CENTER FOR ENTREPRENEURSHIP</p>
	<p>valuable skills. At least nine hours of the required 12 credit hours must be taken in residence at USF Tampa.</p>
<p>Minor Admission Requirements - None Minor Requirements - None Prerequisite Courses - None</p>	<p>Business and Industrial Engineering Majors</p> <p>(12 Hours)</p> <p>Required Courses: Venture Formation and Creativity and Technology</p> <p>Choose two electives from the following:</p> <p>New Product Development</p> <p>Venture Capital</p> <p>Entrepreneurship and Small Business Management</p> <p>Small Business Management Counseling</p>
<p>Required Courses (15 hrs.) GEB 4110 Business Plan Preparation 3 hrs. GEB 4111 New Venture Finance 3 hrs.</p> <p>MAN 3301 Mgt. of Human Resources 3 hrs. MAN 4802 Entrepreneurship 3 hrs.</p>	<p>Non – Business/Engineering Majors</p> <p>(15 Hours)</p> <p>Required Courses: Principles of Business, Venture Formation and Creativity and Technology</p> <p>Choose two electives from the following:</p> <p>New Product Development</p> <p>Venture Capital</p> <p>Entrepreneurship and Small Business Management</p> <p>Small Business Management Counseling</p>






 <p>Center for Entrepreneurship & Innovation College of Business Administration</p>	 <p>UNIVERSITY OF SOUTH FLORIDA</p> 
<p>Select 1- 3 hrs. MAR 3391 Professional Selling or 3 hrs. MAR 3765 Entrepreneurial Marketing 3 hrs.</p>	
<p>Restricted Electives (3 hrs.) Any 3000 or 4000 MAN course not in COB core or the following course: BUL 4540 Employment Law 3 hrs.</p>	
<p>No Foreign Language Requirements Total Semester Hours Required</p>	
<p>Other Requirements A minimum GPA of 2.0 is required in all courses used to satisfy the minor. Grades below “C: (2.0) or “S” grades from other institutions are not accepted. Courses taken at community colleges do not substitute for upper division courses.</p>	
<p>Courses transferred must be formally evaluated for equivalency credit. The student must provide a course syllabus and any other supporting information with his/her petition for this evaluation. At least nine hours used in the minor must be earned at UCF within the department.</p>	

Table 9- Comparison of Faculty

	
<p><i>Cameron Ford</i></p> <p>Cameron earned his Ph.D. in Business Administration from Penn State University before joining UCF. Cameron’s scholarly interests focus on creativity and entrepreneurship by describing how novel ideas evolve, gain legitimacy, and attract resources during the new venture emergence process. His research has appeared in over 60 academic papers including publications in journals such as the Academy of Management Review, Journal of Management, Journal of Organizational Behavior, Journal of Applied Behavioral Science, and IEEE Transactions on Engineering Management.</p>	<p><u>Michael W. Fountain, PhD, MBA</u></p> <p>Director, Center for Entrepreneurship, John & Beverley Grant Endowed Chair in Entrepreneurship Professor, Industrial & Management Systems Engineering Professor, Department of Psychiatry & Behavioral Medicine</p>
<p><i>Michael Ciuchta » <u>mciuchta@bus.ucf.edu</u> «</i></p> <p>Michael recently joined the Strategy and Entrepreneurship faculty at UCF as an Assistant Professor in Fall 2010. Mike received his PhD. in Management & Human Resources from the University of Wisconsin-Madison. His research interests involve innovation and commercialization, especially among high-tech start-ups. Prior to academia, Mike spent a number of years in commercial banking.</p>	<p><u>Sean Lux, PhD, MBA</u></p> <p>Assistant Professor</p> <p>Sean Lux is an assistant professor teaching graduate-level courses in entrepreneurship at the USF Center for Entrepreneurship. Lux currently teaches Venture Capital and Private Equity, Business Planning, Advanced Topics in Entrepreneurship, and Strategies in Technology Entrepreneurship to MS in Entrepreneurship and Applied Technology and MBA students.</p>

Erwin Danneels » edanneels@bus.ucf.edu

Erwin Danneels is Associate Professor of Strategy at UCF. He earned his Ph.D. in Business Administration from Penn State University. His teaching focuses on commercialization of new technology, and he researches the growth and renewal of corporations, particularly in the face of changing technological environments. He has published in top academic journals such as the Journal of Product Innovation Management and the Strategic Management Journal, and he is a member of the Editorial Boards of the Journal of Product Innovation Management, Strategic Management Journal, Organization Science, Journal of Management Studies, and Strategic Entrepreneurship Journal.

Stephen R. Budd, MBA

Instructor, Undergraduate
Entrepreneurship
Programs

Steve Budd is an Instructor with the Center for Entrepreneurship's undergraduate entrepreneurship program. He has significant experience leading, developing, and growing highly successful programs that provide entrepreneurship education and comprehensive assistance to early-stage businesses.

Budd has held numerous leadership and teaching positions since joining the University of South Florida in 1997. He was founding Associate Director of the USF Center for Entrepreneurship and was part of the founding team of the USF Tampa Bay Technology Incubator. He started the Entrepreneurship and Venture Planning program at USF Polytechnic and was founding director of USFP's Blue Sky Incubator program.



Kathie Holland » kholland@bus.ucf.edu «

Kathie has been a full time instructor in the Management Department at UCF since 2001 and an adjunct instructor since 1986. Kathie's areas of expertise include entrepreneurship, consulting and training. She holds several certifications in business consulting and diversity training and also serves as the faculty advisor to the CEO Knights at UCF and is a certified volunteer business analyst for the Florida Small Business Development Center Network.

Thomas Zimmerer, PhD

Entrepreneurial Scholar in Residence

Zimmerer serves as an adjunct professor in the University of South Florida's Center for Entrepreneurship. Over his 42 year career in academics he has held endowed chairs in management as well as serving as the dean of two the School of Business at two universities. Dr. Zimmerer was the co-founder of Clemson's Emerging Technology Center. In that capacity he actively was involved in the creation of Clemson's High technology Incubator and the creation of South Carolina's first venture capital conference.

Michael O'Donnell »

modonnell@mail.ucf.edu «

Michael has 38 years of business experience and a long history of entrepreneurial involvement including company founder, private equity financing, lease financing, debt and equity placement, equipment asset management, business plan development, manufacturing management, and business consulting. He has served on the Board of Directors for financing entities in the US, UK, Germany and Australia. Michael recently joined UCF as the Executive in Residence for the Center for Entrepreneurship and Innovation. He is an instructor for the Department of Management in the College of Business Administration, teaching New Venture Finance in 2010.

Lei Zhang, PhD

Assistant Professor, Center for Entrepreneurship

An assistant professor in the Center for Entrepreneurship, Lei Zhang teaches graduate-level courses in Fundamentals of Venture Capital and Private Equity, Strategic Entrepreneurship, and Advanced Topics in Entrepreneurship.

Her research interests include entrepreneurship, social network, and global strategies. She has presented her research at several conferences, including at the Academy of Management Annual Meeting, the Strategic Management Society Annual Meeting, and the INSEAD Network Evolution Conference.

Tom O'Neal » oneal@mail.ucf.edu «

Tom is the Associate Vice President of Research at UCF and the Founding Director of the UCF Incubator Program. Tom has a long history as an entrepreneur and has assisted in the formation of several spin-off companies for technologies developed at UCF. His Incubator Program was recently named Incubator of the Year by the National Business Incubator Association.

Lawrence Howard, M.D.

Sr. Managing Director of Hudson Ventures

Dr. Howard has been the Senior Managing Director of Hudson Ventures since 1996. After practicing medicine from 1981 to 1988, he co-founded Presstek, Inc., a publicly held graphic arts technology company whose market value grew from \$12 million to over \$800 million under his direction. Dr. Howard served as President and CEO of Presstek from 1987 until 1992. He has been credited as one of the key architects behind Presstek's success and supervised its initial private financing, public offering in 1989 and subsequent private financing

Table 10 – Comparison of Competitive Events

	
<p>Business Model Competition</p> <p>February 22</p> <p>Win Cash & Compete at Harvard</p>	<p>Innovative Technology Challenge</p> <p>Held every spring, the Innovative Technology Challenge is a semester-long interdisciplinary class where teams of students are immersed in creating, thinking, and cultivating new product prototypes, along with commercialization and marketing strategies, for specific industries. The theme of the challenge changes every year, keeping up with entrepreneurship's evolving trends and needs.</p> <p>Representatives from the Tampa Bay business community judge and provide critical feedback to each team regarding creativity, functionality, and potential for taking to market. In the past, teams have even applied for patent licenses for their prototypes.</p>
<p>Joust</p> <p>Business Plan Tournament Every</p> <p>April Dueling for \$25,000</p>	
<p>Cornerstone Social Entrepreneurship Competition</p>	

Table 11- Responses to Evaluation Question #1




<p>Evaluation Question #1</p>		
<p>To what extent do centers of entrepreneurship expand enrollment in entrepreneurship courses for the Colleges of Business Administration at the University of Central Florida and the University of South Florida?</p>	<p>By way of example, Dr. Ford explained the enrollment increase over the last ten years. During the first year there were 124 students in two classes. Current enrollment is 1,650 students at the undergraduate and graduate level. Overall, Dr. Ford believes that entrepreneurial education “is more strategically relevant to the College of Business and provides greater upside potential and more meaningful connectivity to other academic units throughout the university than other alternatives”.</p>	<p>Response from Michael W. Fountain - Carl,</p> <p>Thank you for your inquiry. Unfortunately, I do not currently have the time to adequately address your request for information. I wish you well as you attempt to collect information for your research. Feel free to use any of our publically available information found on our Center’s website or in our disclosures to the public. Best regards, Michael</p>  <p>Michael W. Fountain, Ph.D., MBA Director, USF Center for Entrepreneurship, John & Beverley Grant Endowed Chair in Entrepreneurship, Professor USF Industrial Management and Systems Engineering, Professor USF Psychiatry and Behavioral Neurosciences, and Executive Director, Tampa Bay Research and Innovation Center at The Center for Advanced Medical Learning and Simulation</p> <p>University of South Florida</p> <p>Center for Entrepreneurship 4202 E. Fowler Avenue, BSN 3403, Tampa, FL</p>

Table 12 - Responses to Evaluation Question #2



Evaluation Question #2	 <small>Center for Entrepreneurship & Innovation College of Business Administration</small>	 <small>UNIVERSITY OF SOUTH FLORIDA</small>
<p>In what ways do entrepreneurship centers at the University of Central Florida and the University of South Florida stimulate interest in business creation across multiple academic disciplines at the two respective universities?</p>	<p>Dr. Ford believes that “the primary way that the center stimulates interest in business creation by introducing entrepreneurial thinking skills to people in non-business disciplines.” The programs at the center “open students’ eyes to alternative employment pathways.” “Students from technical disciplines see value because they realize that if you are writing a grant, people who are deciding on that investment are other subject matter experts outside of your academic domain.”</p>	<p><i>See Appendix C</i></p>

Table 13 - Responses to Evaluation Question #3






Evaluation Question #3		 
<p>By what standard of measurement do the entrepreneurship centers at the University of Central Florida and the University of South Florida meet the needs of their respective constituents?</p>	<p>The constituents served by the Center for Entrepreneurial Leadership are, first and foremost, the students. Beyond that, other stakeholders would be the other academic interests at UCF. Principal among them are The College of Engineering which has benefited greatly from services provided by the center over the past few years. Their participation in the recent business model competition represented some 60% of the participants. Digital Media is another stakeholder in the process. Dr. Ford added an interesting quote that characterizes the role of the center “we add ‘zing’ to the interests of our academic stakeholders. We are like the condiment, which, when added to the existing ingredients (academic discipline) adds more flavor”.</p>	<p><i>See Appendix C</i></p>

Table 14 – Entrepreneurship Student Organizations

	
<p>CEO Knights</p> <p>UCF’s Collegiate Entrepreneurship Organization (CEO) chapter is UCF’s primary student entrepreneurship organization. It offers all students from across campus, majors, minors and degrees the opportunity to become socialized in UCF’s culture of entrepreneurship.</p>	<p>The Bulls' New Frontier of Entrepreneurship is a student organization that seeks to connect entrepreneurship students with other schools, civic groups, business leaders, and community members throughout the Tampa Bay area, helping to bridge the gap between academic theory and real-world practice.</p> <p>The student organization helps future entrepreneurs build business connections and establish mentoring relationships with other successful business leaders. By providing networking opportunities, student entrepreneurs will gain valuable advice, information, and support from established area business owners and executives. In turn, the executives find a new generation of entrepreneurs and an excellent resource to recruit creative and well-trained candidates.</p>
<p>Global Business Brigades (GBB)</p> <p>The Global Business Brigades (GBB) is a socially conscious network of business students who bring their skills and a passion for change to developing communities around the world. UCF's GBB chapter was the first, and currently the only, GBB in the state of Florida. GBB is a student-led community outreach program that empowers business students with the material, know-how and support to assess and deliver sustainable micro-enterprise solutions to impoverished villages.</p>	<p>The Women in Entrepreneurship and the Entrepreneurship Alumni Society organizations are divisions of Bulls' New Frontier of Entrepreneurship.</p>



Young Entrepreneur Scholar (YES) Scholarship Program

UCF has been awarded a \$600,000 scholarship by the National Science Foundation entitled ‘Young Entrepreneur and Scholar (YES) Scholarship Program’. The YES Program is designed to produce a network of well-educated students who are pursuing B.S. degrees in Engineering, Computer Science, Physics, Chemistry, Forensic Science, Biology, Biotechnology, Molecular and Micro Biology, Statistics, and Math. The YES scholars will be exposed to educational opportunities that will advance their knowledge and expertise far beyond the typical curriculum. The YES program provides 24 scholarships a year (typically of \$5,000 each) to junior and senior EXCEL students who qualify.

College DECA

College DECA is a great opportunity for students interested in entrepreneurship to participate in competitive events against other students from all over the world. The prepared Entrepreneurship Event is an example of one opportunity, in which students come with developed business plans and present their idea in front of a panel of judges. An opportunity at the international level is the Entrepreneurship Challenge, where interested students find out the topic of the challenge and have two days to create a new business concept based on that challenge.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

This chapter summarizes the study's conclusions, its implications, deductions drawn from the data collected, and recommendations for future research. The comparative analysis was conducted to contrast the role of entrepreneurship as a co-curricular, multidisciplinary offering being delivered at two centers for entrepreneurship in central Florida.

Analysis

As determined by the review of related literature in Chapter Two, the field of entrepreneurship is an ever evolving area of study that has increased dramatically as a focus of higher education during the past 40 years. Entrepreneurial studies have gained acceptance as a legitimate field of academic inquiry that is supported by research and journal publications. Separate and apart from the core academic disciplines found at Colleges of Business Administration, such as Accounting, Economics, Finance, Management and Marketing, Entrepreneurship has gained acceptance to the degree that a major institution of higher learning would be embarrassed not to offer and support an entrepreneurship program. On a more positive note, some academic institutions are so well recognized for their entrepreneurship programs that they are the flagship offering for the college or university.

What Does the Analysis Corroborate?

In an effort to determine whether the two entrepreneurship centers that were analyzed have met the standard of excellence set forth by the Global Consortium of Entrepreneurship Centers it was determined that the University of South Florida's ranking of #11 by The Princeton Review is certainly worthy of exemplary performance. But further exploration should be advanced to unequivocally determine what does it take to be recognized as a leader in the field of entrepreneurial studies? The programs that are perennially ranked among the best by Business Week, U.S. News and World Report excel in research, curriculum, and outreach. They develop outstanding internship programs, they emphasize the importance of technology as it relates to business formation and they support business incubators that nurture new business ventures. Some of the leading academic institutions require study abroad. Many institutions foster mentoring programs with community leaders and entrepreneurial-minded alumni. Still others excel in preparing future business leaders with specialized skills in technology, engineering and medicine. But one constant found at all leading schools is the inclusion of a vibrant, pulsating and energetic entrepreneurship center that reaches out to all students and the community to act as the connection that bonds theory with practice. In many respects, both the Center for Entrepreneurship at USF and the Center for Entrepreneurial Leadership at UCF meet the criteria of being multidisciplinary and inclusive with proven records of attaining success.

As stated in the beginning of this dissertation, we have all heard the rags to riches story of highly motivated entrepreneurs who "bootstrapped" their business ideas to

become ultra- successful creators of wealth and achievement. Many even touted their need to drop out of college in order to have the time to execute their business ideas. But it is just as great a likelihood in the coming years that we will admire those who give the credit for their success to the concepts they mastered in an entrepreneurial studies program and how their alma maters provided mentors through their centers for entrepreneurship who saved them from committing an abundance of mistakes by trial and error as they transported their business ideas from conceptualization to realization.

As stated in Chapter One, almost half of Americans with college degrees are overqualified for their jobs. Based upon comments conveyed from leaders at both entrepreneurship centers, as well as my own interview with a former student, it was determined that the percentage of students who pursued entrepreneurial studies as an undergraduate track were not equal to half the graduates being overqualified. This is largely due to the fact that as entrepreneurs they are constantly developing new skills.

Student loan debt, which exceeds One Trillion Dollars on a national scale, was found to be consistent for entrepreneurship students as well as non-entrepreneurship students.

As Centers for Entrepreneurship strive to incorporate standards of excellence there appears to be a need for greater emphasis on specialization for the varying levels of entrepreneurial interest. Programs lack the sophistication to segment the varying degrees of entrepreneurial sophistication in order to address their specific needs at the novice, serial and portfolio levels of refinement. The same level of refinement should be developed to meet the needs of entrepreneurs who are more skilled in the S.T.E.M. disciplines than the business disciplines. Most programs are directed, at best, toward

students of business and, perhaps, engineering but deficient in meeting the needs of other disciplines---music majors may want to start a business too!

When I stated, in Chapter One “it is logical to surmise that entrepreneurs are motivated to create jobs and today’s students, in general, are not convinced that studying entrepreneurship will guarantee employment in a stagnant job market nor will it assure them of becoming a successful business owner” I am still of the belief that today’s millennial cohort of students do not enroll in college level classes with the distinct intention of pursuing a course of study that will result in immediate employment prospects upon graduation. It is the rare student who has that clarity of reasoning during their college years. Instead, one of the ancillary benefits of entrepreneurship centers would be to introduce students to the ways and means of self-employment as a career alternative.

I stand behind another statement I made in Chapter One when I opined “the emphasis on expansion of entrepreneurship education as a foundation for achieving a high performing workforce in the 21st Century global economy should be of paramount importance to educators as well as business leaders”. As an avowed capitalist, who admittedly is not skilled in any other economic model, I continue to support the following quote by Milton Friedman *“so that the record of history is absolutely crystal clear, that there is no alternative way, so far discovered, of improving the lot of the ordinary people that can hold a candle to the productive activities that are unleashed by a free enterprise system.”* Free enterprise, and the free market system, in my lifetime have proven to be the most viable approach to developing an economically viable and self-reliant society. In today’s society, a nation’s prosperity is directly related to economic growth and a sustainable pattern of business achievement, coupled with the commercialization of innovation stimulates market growth.

In further support of the study of business formation concepts, I cited proof of this approach in Chapter One when quoting Streeter, Jaquette, Hovis, who stated “because today’s students are tomorrow’s business leaders, whether they plan to practice a profession, become a leader in a corporation, run a not-for-profit organization, return to a family business or work in government, students see value in learning what is taught in entrepreneurship classes: opportunity recognition and analysis, leadership, teamwork, and creative problem-solving”. Since many of these skills cannot simply be conveyed through textbooks and Massive Online Open Courses (M.O.O.C.) it is important that entrepreneurship centers continue to foster the opportunities and training to accomplish our academic objectives. Entrepreneurship centers are designed to deliver entrepreneurial education in such a way that it can be differentiated from traditional academic disciplines to deliver the concepts of venture development. Can there be a better argument for teaching the skills inherent in entrepreneurial studies?

Implications for Practice

Based on the findings in Chapter Four, several inferences can be offered as suppositions. Both centers are comparable in age. The Center for Entrepreneurship at the University of South Florida was established in February, 2002 while the Center for Entrepreneurship and Innovation, recently renamed the Center for Entrepreneurial Leadership, was launched in August of 2003. Also, both Center Directors are Founding Directors and have served in their respective roles since the inception of the centers.

Both centers recognize the importance of extending their impact throughout their

campus environments in an inclusive, multidisciplinary manner. Although the College of Business Administration is where both centers are domiciled, the non-College of Business Administration academic disciplines that are most active at the two schools vary significantly.

The University of South Florida's Center for Entrepreneurship has achieved success not only with business students and engineering students but also in the areas of health sciences and sustainability. Largely as the result of the extensive background Dr. Fountain has in creating, financing, and growing biotechnological, medical device and life science companies, the USF Center for Entrepreneurship is at the forefront in leadership of commercialization of engineering and medical technologies. The USF Center for Entrepreneurship has been recognized as a Top Entrepreneurial Graduate Program by The Princeton Review and has climbed consistently in the rankings from #25 in 2010, to #19 in 2011 and most recently rising to #11 in the rankings by Princeton Review.

UCF's Center for Entrepreneurial Leadership has expanded beyond the confines of business and engineering to include collaboration with student entrepreneurs at the university's Digital Media center where aspiring students have accelerated their progress by gaining valuable insights from Dr. Ford and the center's affiliates.

After reviewing the findings of the comparative analysis, neither the faculty comparison nor the academic programs comparison revealed any inordinate discrepancies. However, at the USF Center for Entrepreneurship there is greater emphasis on medical technologies with medical doctors Lawrence Howard serving as Entrepreneur-in-Residence and William Marshall serving as assistant directors.

Additionally, the Advisory Board at USF's Center for Entrepreneurship consists of 31 influential members while the Advisory Board at UCF's Center for Entrepreneurial Leadership is not as extensive.

A proud legacy of mentoring would benefit both institutions. Many of the top ranked entrepreneurial institutions are supported by high profile, philanthropically-minded benefactors. Their name recognition and support provide instant recognition and credibility for programs seeking to attract motivated students and investors alike.

Mentoring programs can be phased in by attracting local entrepreneurs, perhaps graduates of the same institution, to work with a small group of students. Eventually, as a group of entrepreneurs with a breadth and depth of expertise that students have not yet mastered, they can begin to allocate resources on a more individualized basis.

The following is an excerpt from a recent interview I conducted with a former entrepreneurship student who has expanded a golf-related business for which I serve on their Board of Advisors. I am impressed with the level of knowledge this young man, Matt Pollitt, has attained since he has devoted himself to this effort on a full time basis.

Table 15 – Interview with Matt Pollitt

<p>Questions by Carl Blencke</p>	<p>Responses by Matt Pollitt, CEO of PTE – Professional Tour Enhancements</p>
<p><i>Having overcome many of the challenges of business formation and market development, what are some of the valuable lessons you have learned?</i></p>	<p>Some of the most valuable lessons that I have learned during my growth would be the importance of doing things properly. If you have employees, make sure you have workmen’s compensation insurance. Make sure you are filed with the federal, state, and local government with all of your licenses. If you’re starting a business with a partner of any kind, including family, make sure you have an operating agreement drafted by a lawyer from the start. Don’t download documents online and modify them yourself, that will only lead to more headache in the end.</p>
<p><i>What challenges did you face when building a reliable staff?</i></p>	<p>The challenge of building a staff is an ongoing issue that has no end. Employee turnover is inevitable. While no one wants to lose a key employee, if the decision to hire or keep someone doesn’t make financial sense for the company, do what is best for the company first and foremost, otherwise neither you nor your staff will have a job in the end.</p>

Questions by Carl Blencke	Responses by Matt Pollitt, CEO of PTE – Professional Tour Enhancements
	<p>My initial challenge was keeping employees who were about to or just had graduated college. As a general rule, after multiple years of turnover, it seemed that it is best to hire someone who is on their third job. The first job someone gets, they think the grass is always greener. Then, they get to their second job and realize that money may not be everything, they may be unhappy with the job even with the increase in pay. So, at about that point they are ready to look for a compromise between the two, time and money.</p>
<p><i>Was the hard work of bringing a business to profitability as difficult as you anticipated?</i></p>	<p>Our company was thankfully profitable from year one. However, since that’s not the norm, we had to be prepared to not make a profit for at least two years and have those living expenses set aside. As long as you make a good business plan, in writing, with a budget and a forecast that includes a “best” and “worst” scenario, and you’re making money still at the “worst” case scenario, then it makes sense to go forward. Don’t rely on one big job to be profitable for the year. Likewise, someone can always rip you off and try to do what you’re doing. What sets you apart there is your service level.</p>

Questions by Carl Blencke	Responses by Matt Pollitt, CEO of PTE – Professional Tour Enhancements
<p><i>What lessons have you learned about establishing banking relationships?</i></p>	<p>Banking has been rapidly changing as our economy has gone into decline. The days of walking into a bank with a business plan and getting a loan are long gone. Unless you're willing to put up your house as collateral, there's almost zero chance of you getting money for a startup. That's where you want to rely on the 3 F's, Friends, Family, and Fools. Once your business is profitable however, that is the time to ask for money from the bank. Banks only want to loan you money when you don't need it. So when you're at the peak of your season, that would be the best time to ask for a line of credit, even though you don't need it or may not even use it for years to come. Once you find yourself in a situation of being undercapitalized, it's too late; the banks won't be there to help. I also highly recommend establishing rapport with your local business banker at the financial institution that will be holding your money. If you move all of your personal accounts over to the same bank, and have a point of contact at the bank who you have met in person, a lot of doors can be opened that someone walking in from the street would never get.</p>

Questions by Carl Blencke	Responses by Matt Pollitt, CEO of PTE – Professional Tour Enhancements
<p><i>Have you found it easier to meet your clients' demands since you have brought some of your facilities "in house"?</i></p>	<p>Bringing our embroidery and other aspects of the company in house, when it made financial sense, has been an invaluable piece of why we are successful. If you rely on others to produce everything in a timely manner and something goes wrong, they won't always be able to solve your problems. Whereas now that we have brought all production in house, we can control the timing of orders, we can handle rush jobs with ease, and we get to check every product before it goes out the door to ensure no one is receiving a subpar product.</p>
<p><i>What opportunities do you see on the horizon for continued growth?</i></p>	<p>In the future I see our company expanding laterally into other markets that need the same or similar products. We are working on new techniques to make this transition possible. It's a lot easier to sell a product you already make to a new market, rather than creating a new one for a new market. Half the work is already done. I've brought the company from having just one product to now having 15, all designed in house. Eventually, you're going to run out of ideas.</p>

As an instructor in the Management Department at the University of Central Florida, I can say that knowing Matt as a student and now as a successful entrepreneur has been a very rewarding experience. I have observed many students who have realistic

and, unfortunately, some very unrealistic business ideas. The Center for Entrepreneurial Leadership provides advice and coaching on a regular basis for students of all academic disciplines at UCF. The Center for Entrepreneurial Leadership sponsors many competitive events for business plan competition and new business venture opportunities.

Taking the support and nurturing of aspiring entrepreneurs to another level, The Center for Entrepreneurial Leadership at UCF has recently embarked upon a new advocacy for entrepreneurs that will be called UCF's Venture Central. This consolidation of innovation and support is in the process of being implemented by Dr. Cameron Ford, in his capacity as academic director of the newly formed Venture Central initiative. Serving as an oversight facilitator, Venture Central will serve as the hub that will direct its new business minded constituents to the entrepreneurial support program that best suits entrepreneurs at their particular stages of development.

UCF's Venture Central is a joint partnership between the UCF College of Business Administration and the Office of Research and Commercialization. Venture Central will unite and form connections between six active programs instrumental in fostering new business enterprises in their nascent state of development. They are: UCF's Office of Technology Transfer, the Venture Lab (a new business accelerator program), Business Incubation Program, GrowFL, the Center for Entrepreneurial Leadership and the Small Business Development Center.

As entrepreneurship centers continue to shape the facilitation of new business ventures, the concept of coordinating and delivering expeditious services will fill a critical void for harried entrepreneurs who are often frustrated in their efforts to rapidly bring business ideas to the commercialization stage. Dr. Ford saw the need for this

business model and stressed that “the goal is to improve the university’s ability to coordinate between entrepreneurial initiatives. In doing so, it will increase the visibility of the university, ultimately providing more access to additional resources that will support community entrepreneurs”.

The new Blackstone LaunchPad project is another step toward the commercialization of business ideas that benefit our university, provide jobs and stimulate the local economy. Cameron Ford is the director of the Blackstone LaunchPad at UCF and recently identified three primary goals that he envisions for the LaunchPad.

1. “First is to primarily let people at UCF know that entrepreneurial pursuits are viable career options.
2. Secondly, we want to empower students throughout the campus with entrepreneurial thinking skills.
3. Third, we want to help students start ventures if they are so motivated”.

Students such as Matt Pollitt provide an exceptional example of our entrepreneurial efforts in action. And best of all, Matt is sharing his knowledge and experience with others to expand his sphere of influence as a UCF graduate.

A comparison of competitive events at the two respective centers was also inconclusive. Both centers support events that are directed at the needs of their constituents. The events continue to increase in popularity, inclusion of multidisciplinary participants and the prize money continues to escalate. As it relates to entrepreneurship student organizations, both schools connect with their respective school’s mascots. UCF’s mascot is a knight and the center supports a CEO Knights

student organization. USF’s mascot is the bull and their center fosters the Bulls’ New Frontier of Entrepreneurship.

An area that the UCF Center for Entrepreneurial Leadership needs to address, in the near term, is to achieve greater collaboration with UCF’s College of Medicine and the Burnham Institute for Medical Research which opened in 2007 and graduated its first class in May, 2013. Future participation with medical researchers intending to commercialize their newest technologies will be of paramount importance for the future growth and sustainability of the Center for Entrepreneurial Leadership.

Table 16 - Recommended Pedagogical Methods

Pedagogical Recommendations to Enhance Entrepreneurial Programs
Increase experiential learning
Foster greater student involvement through group exercises
Expand the use of technology in the classroom and for assignments
Encourage student internships and externships
Provide “Study Abroad” Opportunities
Expand multidisciplinary advancements
Involve Local Entrepreneurs and Business Leaders as Mentors
Devise ongoing program evaluations on annual basis.

This chapter summarizes the study’s conclusions, its implications, deductions drawn from the data collected, and recommendations for future research. The comparative analysis was conducted to contrast the role of entrepreneurship as a co-curricular, multidisciplinary offering being delivered at two centers for entrepreneurship in central Florida.

Discussion

As determined by the review of related literature in Chapter Two, the field of entrepreneurship is an ever evolving area of study that has increased dramatically as a focus of higher education during the past 40 years. Entrepreneurial studies have gained acceptance as a legitimate field of academic inquiry that is supported by research and journal publications. Separate and apart from the core academic disciplines found at Colleges of Business Administration, such as Accounting, Economics, Finance, Management and Marketing, Entrepreneurship has gained acceptance to the degree that a major institution of higher learning would be embarrassed not to offer and support an entrepreneurship program. On a more positive note, some academic institutions are so well recognized for their entrepreneurship programs that they are the flagship offering for the college or university.

What does it take to be recognized as a leader in the field of entrepreneurial studies? The programs that are perennially ranked among the best by Business Week, U.S. News and World Report excel in research, curriculum, and outreach. They develop outstanding internship programs, they emphasize the importance of technology as it relates to business formation and they support business incubators that nurture new business ventures. Some of the leading academic institutions require study abroad. Many institutions foster mentoring programs with community leaders and entrepreneurial-minded alumni. Still others excel in preparing future business leaders with specialized skills in technology, engineering and medicine. But one constant found at all leading schools is the inclusion of a vibrant, pulsating and energetic entrepreneurship center that reaches out to all students and the community to act as the

connection that bonds theory with practice.

As stated in the beginning of this dissertation, we have all heard the rags to riches story of highly motivated entrepreneurs who “bootstrapped” their business ideas to become ultra- successful creators of wealth and achievement. Many even touted their need to drop out of college in order to have the time to execute their business ideas. But it is just as great a likelihood in the coming years that we will admire those who give the credit for their success to the concepts they mastered in an entrepreneurial studies program and how their alma maters provided mentors through their centers for entrepreneurship who saved them from committing an abundance of mistakes by trial and error as they transported their business ideas from conceptualization to realization.

Based on the findings in Chapter Four, several inferences can be offered as suppositions. Both centers are comparable in age. The Center for Entrepreneurship at the University of South Florida was established in February, 2002 while the Center for Entrepreneurship and Innovation, recently renamed the Center for Entrepreneurial Leadership, was launched in August of 2003. Also, both Center Directors are Founding Directors and have served in their respective roles since the inception of the centers.

Both centers recognize the importance of extending their impact throughout their campus environments in an inclusive, multidisciplinary manner. Although the College of Business Administration is where both centers are domiciled, the non-College of Business Administration academic disciplines that are most active at the two schools vary significantly.

The University of South Florida’s Center for Entrepreneurship has achieved success not only with business students and engineering students but also in the areas of

health sciences and sustainability. Largely as the result of the extensive background Dr. Fountain has in creating, financing, and growing biotechnological, medical device and life science companies, the USF Center for Entrepreneurship is at the forefront in leadership of commercialization of engineering and medical technologies. The USF Center for Entrepreneurship has been recognized as a Top Entrepreneurial Graduate Program by The Princeton Review and has climbed consistently in the rankings from #25 in 2010, to #19 in 2011 and most recently rising to #11 in the rankings by Princeton Review.

UCF's Center for Entrepreneurial Leadership has expanded beyond the confines of business and engineering to include collaboration with student entrepreneurs at the university's Digital Media center where aspiring students have accelerated their progress by gaining valuable insights from Dr. Ford and the center's affiliates.

After reviewing the findings of the comparative analysis, neither the faculty comparison nor the academic programs comparison revealed any inordinate discrepancies. However, at the USF Center for Entrepreneurship there is greater emphasis on medical technologies with medical doctors Lawrence Howard serving as Entrepreneur-in-Residence and William Marshall serving as assistant directors. Additionally, the Advisory Board at USF's Center for Entrepreneurship consists of 31 influential members while the Advisory Board at UCF's Center for Entrepreneurial Leadership is not as extensive.

A comparison of competitive events at the two respective centers was also inconclusive. Both centers support events that are directed at the needs of their constituents. The events continue to increase in popularity, inclusion of multidisciplinary participants and the prize money continues to escalate. As it relates to entrepreneurship

student organizations, both schools connect with their respective school's mascots. UCF's mascot is a knight and the center supports a CEO Knights student organization. USF's mascot is the bull and their center fosters the Bulls' New Frontier of Entrepreneurship.

An area that the UCF Center for Entrepreneurial Leadership needs to address, in the near term, is to achieve greater collaboration with UCF's College of Medicine and the Burnham Institute for Medical Research which opened in 2007 and is scheduled to graduate its first class in May, 2013. Future participation with medical researchers intending to commercialize their newest technologies will be of paramount importance for the future growth and sustainability of the Center for Entrepreneurial Leadership.

Reflections and Revelations

Upon reflection regarding the magnitude and the scope of this project, it is readily apparent that the lack of cooperation demonstrated by USF's Center for Entrepreneurship was not anticipated. After numerous attempts to reach the center's director and other prominent staff and faculty, all efforts were rebuffed. Being granted only a token consolation of an e-mail response authorizing use of public domain information was not at all foreseen. I certainly expected greater cooperation from academic collaborators in my quest for didactic edification. Therefore, a major limitation of the comparative analysis was the disproportionately asymmetrical outcome of the data collection. Whereas the insights provided by UCF were, understandably more thorough, the contrasting lack of collaboration from USF resulted in a distinct disparity in the presentation of outcomes and results.

APPENDIX A

SAMPLE COPYRIGHT PERMISSION LETTER



Department of Management

March 7, 2013

Dr. Michael W. Fountain
Founding Director
USF Center for Entrepreneurship
4202 East Fowler Avenue
Tampa, FL 33620-5500

Dear Dr. Fountain:

In light of my ongoing efforts during the last several weeks to schedule a meeting with you for the data collection phase of my doctoral dissertation at the University of Central Florida I would also like to ask your permission to reprint in my dissertation excerpts from the USF website featuring the Center for Entrepreneurship.

The requested permission extends to any future revisions and editions of my dissertation, including non-exclusive world rights in all languages. These rights will in no way restrict republication of the material in any other form by you or by others authorized by you. Your signing of this letter will also confirm that you or the University of South Florida owns the copyright to the above-described material.

If these arrangements meet with your approval, please sign this letter where indicated below and return it to me in the enclosed return envelope. Thank you for your attention in this matter.

Sincerely,

A handwritten signature in cursive script that reads "Carl J. Blencke".

Carl J. Blencke – Doctoral Candidate

PERMISSION GRANTED FOR THE USE REQUESTED ABOVE:

By: _____

Michael Fountain, Ph.D.

Date: _____

College of Business Administration
P.O. Box 161400 • Orlando, FL 32816-1400 • (407) 823-5569 • Fax: (407) 823-3725
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APPENDIX B
SAMPLE DEFENSE ANNOUNCEMENT

Announcing the Final Examination of Mr. Carl J. Blencke for the degree of Doctor of Education

Date: July 8, 2013

Time: 9:00 a.m.

Room: ED 306

Dissertation title: Comparative Analysis of Centers for Entrepreneurship at Two Central Florida
Universities

This study investigated two entrepreneurship centers using methodology known as the connoisseurship model of program evaluation. The evaluator and author of this dissertation implemented procedures similar to those used in accreditation reviews and applied professional judgment techniques to design a connoisseurship evaluation of entrepreneurship centers at two major Florida universities. This research will assist centers of entrepreneurship as they strive to incorporate standards of excellence to benefit students who strive to become business and job creators in the future.

Outline of Studies:

Major: Curriculum and Instruction

Educational Career:

A.B., 1972, Guilford College

M.B.A., 1976, Monmouth University

Committee in Charge:

Dr. David N. Boote

Dr. Stephen Sivo

Dr. Conrad G. Katzenmeyer

Dr. Cameron M. Ford

Approved for distribution by David N. Boote, Committee Chair, on June 27, 2013.

The public is welcome to attend.

APPENDIX C

RESPONSE FROM MICHAEL W. FOUNTAIN

Carl,

Thank you for your inquiry. Unfortunately, I do not currently have the time to adequately address your request for information. I wish you well as you attempt to collect information for your research. Feel free to use any of our publically available information found on our Center's website or in our disclosures to the public.

Best
regards,
Michael



Michael W. Fountain, Ph.D., MBA

Director, USF Center for Entrepreneurship,

John & Beverley Grant Endowed Chair in Entrepreneurship,
Professor USF Industrial Management and Systems Engineering,
Professor USF Psychiatry and Behavioral Neurosciences, and
Executive Director, Tampa Bay Research and Innovation Center at the Center for Advanced

Medical Learning and Simulation

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Phone: 813.974.7900 website: <http://www.entrepreneurship.usf.edu>

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e&d b=eric&AN=ED103327&site=eds-live&scope=site](http://ezproxy.lib.ucf.edu/login?URL=http://search.ebscohost.com/login.aspx?direct=true&d b=eric&AN=ED103327&site=eds-live&scope=site)

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