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BUILDING ENTREPRENEURIAL SELF-EFFICACY (ESE):
HOW UNDERGRADUATE STUDENTS MAKE MEANING OF
THEIR ENTREPRENEURIAL EXPERIENCES

by

Amy Kurfist
B.S. August 2002, Boston University
M.B.A. May 2009, Indiana University

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Approved by:

Christopher R. Glass (Director)

Steve Myran (Member)

Karen Eagle (Member)

ABSTRACT

BUILDING ENTREPRENEURIAL SELF-EFFICACY (ESE): HOW UNDERGRADUATE STUDENTS MAKE MEANING OF THEIR ENTREPRENEURIAL EXPERIENCES

Amy Kurfist
Old Dominion University, 2019
Director: Dr. Christopher R. Glass

This qualitative, interview-based research study explores how undergraduate students at a single research university make meaning of their experiences in curricular and co-curricular university entrepreneurship programming. The study focuses on the developmental relationship between entrepreneurship education and feelings of entrepreneurial self-efficacy (ESE) and how feelings of ESE relate to future entrepreneurial intentions. I explore three of Bandura's (1977) predictors of self-efficacy: mastery experiences, vicarious experiences, and social persuasion interwoven with the six dimensions of ESE developed by De Noble, Jung, and Ehrlich (1999) to determine how undergraduate students make meaning of their entrepreneurial experiences.

Through the analysis of data collected through semi-structured interviews, the findings of this study shed light on the answer to the timely question of how undergraduate students who are developing future entrepreneurial intentions relate to their experiences in university entrepreneurship programming. As De Noble et al. (1999) endorsed the ability of entrepreneurship coursework and training to nurture the self-efficacy among students, the results of this research study can be used to improve or augment the current services provided by Southern Research University or serve as a guide for other colleges that currently have or are looking to create similar programmatic offerings.

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TABLE OF CONTENTS

	Page
LIST OF TABLES.....	vi
LIST OF FIGURES.....	vii
Chapter	
I. INTRODUCTION.....	1
BACKGROUND OF THE STUDY.....	3
SIGNIFICANCE OF THE STUDY.....	4
RESEARCH QUESTIONS.....	6
SUMMARY OF THE RESEARCH DESIGN.....	6
DELIMITATIONS AND SCOPE.....	8
SUMMARY AND OVERVIEW OF CHAPTERS.....	10
II. LITERATURE REVIEW.....	12
ENTREPRENEURSHIP BACKGROUND.....	13
UNIVERSITY ENTREPRENEURSHIP PROGRAMMING.....	16
SELF-EFFICACY AS PREDICTOR OF ENTREPRENEURIAL CAREER CHOICE...22	22
CHAPTER SUMMARY.....	26
III. METHODOLOGY.....	28
OVERVIEW OF THE METHODOLOGY.....	28
RESEARCH PARADIGM.....	29
SITE SELECTION.....	30
PARTICIPANT SELECTION.....	32
DATA COLLECTION.....	33
DATA ANALYSIS.....	36
ESTABLISHING CREDIBILITY.....	41
CHAPTER SUMMARY.....	42
IV. FINDINGS.....	43
MAKING MEANING OF ENTREPRENEURIAL EXPERIENCES.....	46
RELATING TO AN ENTREPRENEURIAL FUTURE.....	62
THE ROLE OF PARTICIPANT TYPE.....	67
THE PARTICIPANT AS AN ENTREPRENEURIAL INDIVIDUAL.....	70
CHAPTER SUMMARY.....	73
V. DISCUSSION.....	75
SUMMARY OF FINDINGS.....	75
DISCUSSION OF FINDINGS.....	76
CONTRIBUTIONS TO THEORY.....	79
IMPLICATIONS FOR PRACTICE.....	80

	Page
IMPLICATIONS FOR FUTURE RESEARCH.....	83
LIMITATIONS.....	85
CONCLUSION.....	86
REFERENCES.....	87
APPENDIX A.....	99
APPENDIX B.....	107
APPENDIX C.....	113
APPENDIX D.....	115
APPENDIX E.....	118
VITA.....	119

LIST OF TABLES

Table

1. Definition of Key Terms.....	10
2. Existing Definitions of Entrepreneurship and Entrepreneurship Education.....	14
3. Interview Blueprint.....	35
4. Research Questions in Relation to Data Collected.....	35
5. Structural Codes.....	39
6. Participant Characteristics.....	43
7. Dimensions of Entrepreneurial Self-Efficacy.....	45

LIST OF FIGURES**Figure**

1. Framework.....	27
2. The Role of Self-Efficacy in Making Meaning of Entrepreneurial Experiences	46
3. Dimensions of the Future Entrepreneur.....	62

CHAPTER I

INTRODUCTION

Over the past three decades, entrepreneurship has developed as one of the most prominent economic forces worldwide, with a global focus shifting heavily towards the support of entrepreneurial growth (Raposo & Do Paço, 2011). In their 2016 Job Creation Survey, EY affirmed that entrepreneurship continues to be a driving force of both job creation and global economic growth. Their findings indicated that sixty-seven percent of young entrepreneurs (defined as those under 35 years of age) expect growth in their staff contributing to a 14.4 percent net workforce growth (EY, 2016). Governments worldwide have recognized the role of entrepreneurship as a key force behind economic development, and as such, have dedicated funding to entrepreneurship education activities including entrepreneurship degree programs (Gedeon, 2017).

However, the lack of growth in self-employment among young entrepreneurs has been a concerning trend given the impact of entrepreneurs on economic growth (Alton, 2017; Ewing Marion Kauffman Foundation, 2017; Wilmoth, 2016). According to Patrick, Stephens, and Weinstein (2016), the link between entrepreneurship and economic growth is a particularly important motivator for understanding what leads to the choice of self-employment. Additionally, the push and pull factors for pursuing an entrepreneurial career may result in the most ambitious individuals avoiding the path of entrepreneurship (Patrick, et al., 2016). In analyzing over 20 years of research, Betz (2004) determined that among push and pull factors, “self-efficacy expectations do in fact significantly influence career choices, performance, and persistence” (p. 343).

Entrepreneurs from the Millennial generation, those born between 1980 and 1995, form a unique and impactful group of entrepreneurs known as “The Millenpreneurs” (BNP Paribas, 2016). As of 2014, the percentage of self-employed Millennials (less than 2%), was strikingly lower than those from Generation X (born 1963-1981) at 7.6%, and Baby Boomers (born 1944-1962) at 8.3% (Wilmoth, 2016). Additionally, the growth of Millenpreneurs is increasing at a considerably slower pace than previous generations, which is concerning given the importance of new businesses as a creator of jobs and innovation and the negative impact on economic growth (Wilmoth, 2016). Wagner (2012), discovered that students are not receiving the proper preparation in either high school or college to take on the role of innovator, and as such a shift in focus towards entrepreneurship education is necessary.

Entrepreneurial self-efficacy (ESE), a ‘spin-off’ of Bandura’s theory of self-efficacy, is defined as “the strength of a person’s belief that he or she is capable of successfully performing various roles and tasks of an entrepreneur” (Urban, 2010, p. 4). According to Urban (2010), ESE is distinctively salient to the career decision-making process of the potential entrepreneur. Hsu, Burmeister-Lamp, Simmons, Foo, Hong, and Pipes (2018) express the relevance of this finding. “What influences individual intent to become an entrepreneur is an important question for policymakers and educators alike because entrepreneurship contributes significantly to economic growth and societal well-being. The influence of entrepreneurial self-efficacy is an essential predictor of entrepreneurial intention” (Hsu et al., 2018, p. 14).

The ensuing study specifically addresses the way undergraduate students make meaning of their collegiate entrepreneurial experiences and the role of self-efficacy in this process. This was accomplished by examining the lived experiences of undergraduate students at Southern

Research University (SRU) through their participation in curricular and co-curricular entrepreneurship education programming.

Background of the Study

Entrepreneurship education has a positive impact on students from varying socioeconomic backgrounds as it encourages students to nurture their more unconventional skills and instills confidence (Rodov & Truong, 2015). The Kauffman Panel on Entrepreneurship Curriculum in Higher Education expressed the importance of entrepreneurship education on college campuses in their 2008 report *Entrepreneurship in American Higher Education*. In the report, they identified four main reasons why entrepreneurship belongs in a college:

First, entrepreneurship is critical to understanding and succeeding in the contemporary global economy. Second, entrepreneurship is already an expanding area of American college learning. Third, entrepreneurship is becoming a basic part of what universities themselves do. Fourth, entrepreneurship meets many of the goals of a quality American undergraduate education (Kauffman Panel, 2008, p. 6).

Over the past three years, SRU has illustrated a commitment to campus-wide entrepreneurship education through the building of an interdisciplinary entrepreneurship center and the inclusion of promoting an entrepreneurial culture in its latest Strategic Plan. Government officials and local leaders in SRU's metropolitan area have echoed this commitment in promoting entrepreneurship as a top regional priority. SRU has placed an increased focus on both curricular and co-curricular entrepreneurship education programs for students in every college campus-wide.

Significance of the Study

Entrepreneurship is a driving force for regional economic growth and development, and the importance of creating a regional entrepreneurial culture has been acknowledged by policy makers world-wide (Fritsch & Wyrwich, 2017). According to Audretsch, Belitski, and Desai (2015), “entrepreneurship has a strong and immediate positive impact on economic development in cities regardless of market size” (p. 48). The dedication to entrepreneurship as a means for advancing economic development is evident both within the university setting and in the local business and government communities.

Regardless of the importance and value placed on entrepreneurship as a growing field, entrepreneurship among the “Millenipreneurs” has not increased (BNP Baribas, 2016). Prior research suggests entrepreneurial self-efficacy presents an important factor in the career decision making process (Wilson, Kickul, & Marlino, 2007). However, according to the BNP Paribas Global Entrepreneurs Report (2016), this career choice is not one young people are making. This troubling trend begs the question: why do undergraduate college students choose to pursue or not to pursue entrepreneurial career paths? Further, for those that are pursuing an entrepreneurial career path, what educational factors motivate their choice to do so? The study of self-efficacy, and specifically the subset of entrepreneurial self-efficacy, when gained through participation in curricular and co-curricular university entrepreneurship program, may shed some light on the answers to these important questions.

Purpose Statement

As identified by Wilson, Kickul, Marlino, Barbosa, and Griffiths (2009) and Bullough, de Luque, Abdelzaher, and Heim (2015) there is a gap in the research surrounding the success of undergraduate students in entrepreneurship education programs, particularly regarding how these

programs can build their self-efficacy. Subsequently, as suggested by Herminio, de Moraes, Iizuka, and Pedro (2018) as a follow up to their quantitative study of the impact of self-efficacy on entrepreneurial intentions, further qualitative inquiry building upon the work of Zeldin and Pajares (2000) and Sweida and Woods (2015) is necessary on the connection between entrepreneurship education and entrepreneurial self-efficacy.

The purpose of this qualitative, interview-based study is to explore the shared lived experiences of undergraduate students in the throes of their college experience to understand how they make meaning of their participation in entrepreneurship programming, the role these programs play in their development of self-efficacy, and how their developing self-efficacy relates to their future entrepreneurial choices.

Professional Significance

Entrepreneurs are vital to the economy; however, the growth of Millennial entrepreneurs has dropped steadily (Wilmoth, 2016). Access to entrepreneurship education has the proven benefit of increasing entrepreneurial self-efficacy (Wilson et al., 2009); however, there is still a lack of understanding of the experiences of entrepreneurship students (Susetyo & Yuliari, 2018). According to Zhang (2017), “the progress of academic studies on entrepreneurship education has remained stagnant partially due to the insufficient fine-grained qualitative research on the impact of entrepreneurship education at the individual level” (p. 5). Additionally, Nabi, Walmsley, Liñán, Akhtar, and Neame (2018) in their study of first year higher education entrepreneurship students found that students often reacted differently to the same activity, and further research is necessary to understand the unique nuances of these differing reactions.

As De Noble, Jung, and Ehrlich (1999) endorsed the ability of entrepreneurship coursework and training to nurture the self-efficacy among students, the results of this study can

be used to improve or augment the current services provided by Southern Research University or serve as a guide for other colleges that currently have or are looking to create similar programmatic offerings. The results of this study are of value to practitioners in learning how undergraduate students at SRU make meaning of their participation in curricular and co-curricular entrepreneurship education programs and how they relate ESE to their future entrepreneurial intentions.

Research Questions

This interview-based study was guided by the following research questions:

Question 1: How do undergraduates make meaning of the role of entrepreneurship programming in the development of entrepreneurial self-efficacy?

Question 2: How do undergraduates relate their sense of entrepreneurial self-efficacy (ESE) and future entrepreneurial intentions?

Summary of the Research Design

As seen by in their study of undergraduate students participating in an entrepreneurship minor, Bilén, Kisenwether, Rzasa, and Wise (2005) espoused the benefit of collecting qualitative data to evaluate some of the difficult to measure constructs and gather rich and detailed information about participation in the minor. As such, the research design employed in the present study was a phenomenologically inspired, qualitative semi-structured interview study. Reasons for conducting a qualitative study include to learn about the unique views of individual participants and to acquire rich and detailed information about a few people (Creswell, 2012). The practice of phenomenological research, which inspired the nature of this inquiry, involves approaching the phenomenon in question (the development of entrepreneurial self-efficacy and

its role in shaping future entrepreneurial intentions) through the eyes of the participants (undergraduate students) as if the researcher is seeing it for the first time (Hays & Singh, 2012).

The research paradigm reflected in this study was social constructivism, also known as postmodernism, or the belief that “universal truth cannot exist because there are multiple contextual perspectives and subjective voices that can label truth in scientific pursuit” (Hays & Singh, 2012, p. 41). The hallmark of constructivist paradigm is the belief in a relativist ontology in which there are multiple realities as opposed to one and a focus on the how as opposed to the what of the information revealed (Denzin & Lincoln, 2018). Social constructivism examines how the environment plays a role in the lived experience of the participants and allows the researcher the opportunity to gain understanding of how the participants construct knowledge through social interactions (Hays & Singh, 2012). Given the nature of the research questions and the desire to understand the shared lived experience of building entrepreneurial self-efficacy, an interview-based study was the appropriate approach for this proposed study (Seidman, 2013).

To explore the lived experience of undergraduate students who have observed the development of their entrepreneurial self-efficacy, it was essential to identify undergraduate students who met the following criteria: expressed entrepreneurial interest and participation in at least one activity identified as curricular and or co-curricular entrepreneurship education programming.

Examples of co-curricular programming that align with predictors associated with Bandura’s theory of self-efficacy (mastery experiences, vicarious experiences, and verbal persuasion) include mentoring relationships with entrepreneurs, faculty and staff advising, guest speakers, business plan competitions, and topic focused workshops. Participation in curricular entrepreneurship programming was signified by registration in and completion of a course

designated as related to entrepreneurship by the SRU registrar's office. Key constituents including faculty and staff members assisted in identifying courses and participants. I further screened participants to ensure they met all relevant criteria for participation. This selection of criteria for participation represents purposeful sampling, through which the researcher intends to obtain information-rich examples of the phenomenon (Hays & Singh, 2012).

The main source of data for this study was the analysis of new data through semi-structured, one-on-one interviews. According to Seidman (2013) in-depth, phenomenological interviewing allows the interviewer to “explore complex issues in the subject area by examining the concrete experience of people in that area and the meaning their experience had for them” (p. 15). Semi-structured interviews utilize a prepared interview protocol to serve as a guide for the interview, however as compared to structured interviews, they allow the leeway to enable the knowledge-producing potential of dialogue to shape the flow and follow-up of the conversation (Denzin & Lincoln, 2018). The interview protocol was informed by Farhangmehr, Gonçalves, and Sarmiento (2016) mixed methods study of predicting the entrepreneurial motivation of university students and was further modified to specifically incorporate the components of the De Noble et al. (1999) characteristics of entrepreneurial self-efficacy.

Delimitations and Scope

Several choices were made in the design of this qualitative, phenomenological-inspired interview study. I determined that the study would be conducted at a single site, Southern Research University, and participants would be undergraduate students who have expressed an interest in entrepreneurship. My choice to exclude graduate students related to the nature of the programming offered and the timing and influences of career decision making as well as the

findings of Farhangmehr, et al. (2016) which uncovered that “entrepreneurship education is not relevant in improving the motivation of graduate students to become entrepreneurs” (p. 874).

I chose to define entrepreneurship programming to include curricular and co-curricular programming provided by SRU, which align with three of the predictors of self-efficacy according to Bandura’s theory – mastery experiences, vicarious experiences, and social persuasion. The choice to exclude the fourth predictor, psychological and emotional states, was informed by Sweida and Woods (2015) determination that only the first three can be attributed to the differing experiences in entrepreneurship education.

The three courses selected to represent the curricular programming were intentionally chosen to include traditional business entrepreneurship courses as well as an interdisciplinary entrepreneurship course which includes students from all fields across the university. The intent of including both types of course was to provide a variety of participants engaged in the early stages of the entrepreneurship-decision process while representing a diverse range of fields. Similarly, the co-curricular programming intentionally included participants from various fields of study. The importance of interdisciplinary representation among undergraduate entrepreneurship students is explored in Chapter Two.

Definition of key terms. Table 1 includes definitions of key terms used in this study.

Table 1		
<i>Definition of Key Terms</i>		
<u>Term</u>	<u>Definition</u>	<u>Source(s)</u>
Entrepreneurship	"Actions involved in identifying or creating an opportunity, marshaling resources, and providing leadership to create social or economic value", may include but is not limited to new-business creation	Brush (2014)
Millenipreneur	A new generation of entrepreneurs under the age of 35	BNP Paribas (2016)
Curricular Entrepreneurship Education Programming	Courses and certificates offered within the typical college classroom environment	Kauffman Panel (2008)
Co-Curricular Entrepreneurship Education Programming	Activities offered outside of the classroom environment including clubs, living/learning communities, and wrap-around services including networking, mentoring, workshops, and incubators	Kauffman Panel (2008) Bullough, de Luque, Abdelzaher, and Heim (2015)
Self-Efficacy	An individual's belief in his or her ability to complete behaviors necessary to produce specified performance achievements	Bandura (1977)
Entrepreneurial Self-Efficacy	The level to which individuals believe themselves capable of successfully performing the tasks and roles of entrepreneurship, based on six theoretical dimensions	Chen, Greene, and Crick (1998) De Noble, Jung, and Ehrlich (1999)

Summary and Overview of Chapters

In this chapter, I introduced the concepts of curricular and co-curricular entrepreneurship education programming, entrepreneurial self-efficacy, and the importance of increasing self-

efficacy among undergraduate students who have displayed an interest in entrepreneurship. I also highlighted the need for further qualitative exploration into how university entrepreneurship programming aids in the development of entrepreneurial self-efficacy and thus increases the likelihood to choose an entrepreneurial career path among undergraduate students.

In the following chapters, I present a more thorough discussion of the topics outlined in this chapter. In Chapter Two, I review the existing literature related to the research of entrepreneurship education programming and the role of entrepreneurship programming in developing entrepreneurial self-efficacy. This review helps to emphasize the importance of each of these topics and illuminate the gap existing between them, highlighting the relevance of this study. In Chapter Three, I establish how the two primary research questions, presented in this chapter, were answered using a qualitative approach. This involved utilizing semi-structured one-on-one interviews as the means for collecting rich data about how the individual participants make meaning of their lived experiences with entrepreneurship education programming and development of entrepreneurial self-efficacy. In Chapter Four I present the findings of my data collection and describe the themes that emerged from the recollection of the lived experiences of the participants. Finally, in Chapter Five I discuss my findings and their implications for current theory, practice, and future research.

CHAPTER II

LITERATURE REVIEW

In Chapter 1, I presented the outline of this study including a brief background on the significance of entrepreneurial self-efficacy and how it can be bolstered through entrepreneurship education, along with the methodological roadmap for this qualitative study. The purpose of this chapter is to review the existing literature on the various components of entrepreneurship and self-efficacy. Aspects I review include entrepreneurship as part of the higher education curriculum and co-curriculum, the role of entrepreneurship programming in developing entrepreneurial self-efficacy.

I have divided the literature review into three distinct sections: (a) background and history of entrepreneurship and entrepreneurship education, (b) university entrepreneurship programming, and (c) entrepreneurial self-efficacy. I begin with a brief overview of entrepreneurship, including why it is important as an industry and a topic of study, background on the philosophies of entrepreneurship and popular conceptions surrounding the teaching of entrepreneurship.

Next, I continue with an in-depth look at the current research exploring curricular and co-curricular entrepreneurship programming offered by universities throughout the world. In this section, I include an analysis of studies related to the importance of an interdisciplinary entrepreneurship curriculum and the prevalence of hubs of entrepreneurial activity on campus. I also discuss common means for the assessment of the goals and entrepreneurship programming and the unique experiences of females in relation to entrepreneurship education programming.

Finally, I include an analysis of the existing research on self-efficacy, highlighting the specific sub-segment of entrepreneurial self-efficacy. I address how this line of research

attempts to determine how self-efficacy differs among males and females, particularly around career choice. I conclude the literature review with a conceptual framework that links together each of the three segments of research and guides the direction of the present study.

Entrepreneurship Background

Matlay (2005), in the first of his series of conceptual pieces linking the concepts of entrepreneurship and entrepreneurship education, urged readers to recognize that entrepreneurs are not one homogenous unit and warned against the perception of entrepreneurship as a single event or activity. However, for this study, it was necessary to understand the definitions and theories associated with entrepreneurship and entrepreneurship education. For that reason, Brush's (2014) explanation of the Babson College definition of entrepreneurship, "actions involved in identifying or creating an opportunity, marshaling the resources, and providing leadership to create social or economic value" (p. 2), served as the guiding characterization of entrepreneurship for this study. Building upon Brush's explanation of the Babson definition of entrepreneurship, it was also necessary to define entrepreneurship education, particularly in the university setting.

What Entrepreneurship Education Is and Why It Matters

As explained by Raposo and Do Paço (2011), entrepreneurship education "seeks to propose people, especially young people, to be responsible, as well as enterprising individuals who became entrepreneurs or entrepreneurial thinkers who contribute to economic development and sustainable communities" (p. 454). Based on their studies of previous definitions of entrepreneurship education, they determined that there are four key types of core knowledge created via entrepreneurship education: (a) recognizing opportunities, (b) generating new ideas to

pursue these opportunities, (c) creating and operating a new firm, and (d) thinking in a creative and critical manner (Raposo & do Paço, 2011).

Entrialgo and Iglesias (2018) utilized their quantitative study of entrepreneurial role models in a University in Spain to expand upon this definition adding that entrepreneurship education programs “provide social experiences, such as opportunities to exercise significant responsibilities, to start one’s own business and to observe role models” (p. 4). Further, Kamovich and Foss (2017) distinguished between the narrow and wide definitions of entrepreneurship education with the narrow assuming the outcome of a business start-up while the wide emphasizing “making individuals more opportunity oriented, creative, self-reliant, proactive, and innovative” (p. 1). Table 2 includes a summary of definitions of entrepreneurship and entrepreneurship education contributing to those in this study.

Table 2	
<i>Existing Definitions of Entrepreneurship and Entrepreneurship Education</i>	
<u>Definition</u>	<u>Author/Year</u>
Entrepreneurship: "actions involved in identifying or creating an opportunity, marshaling the resources, and providing leadership to create social or economic value"	Brush, 2014
Entrepreneurship Education: “seeks to propose people, especially young people, to be responsible, as well as enterprising individuals who became entrepreneurs or entrepreneurial thinkers who contribute to economic development and sustainable communities”	Raposo and Paço, 2011
Entrepreneurship Education: “provide social experiences, such as opportunities to exercise significant responsibilities, to start one’s own business and to observe role models”	Entrialgo and Iglesias, 2018
Entrepreneurship Education: The narrow definition assumes the outcome of a business start-up while the wide definition emphasizes “making individuals more opportunity oriented, creative, self-reliant, proactive, and innovative”	Kamovich and Foss, 2017

Although the wording of each study's definition of entrepreneurship education varies, the importance of entrepreneurship as an educational subject is undeniable. The Kauffman Panel on Entrepreneurship Curriculum in Higher Education highlighted the importance of entrepreneurship as an interdisciplinary mainstream college subject experienced both within and outside of the classroom in their 2008 report *Entrepreneurship in American Higher Education*. Matlay (2006), in the second part of his conceptual series on the connections of entrepreneurship and education, concurred that the evidence found in existing research on entrepreneurship education points to the assumption that a higher education entrepreneurship curriculum can provide entrepreneurs the skills and knowledge they need to succeed while positively influencing their attitudes towards entrepreneurship. Kiyani (2017) argued that entrepreneurship education is particularly impactful concerning critical objectives including perceptions about pursuing an entrepreneurial career, self-confidence in the ability to practice entrepreneurship, and beliefs related to external environmental factors.

Teaching Entrepreneurship

Unlike many other mainstream college subjects, the teaching of entrepreneurship is not necessarily a traditional educational process, but instead a method by which educators help all types of students develop, practice, and understand the skills and techniques they need to become productive entrepreneurs (Neck & Greene, 2011). For example, Neck, Greene, and Brush (2014) emphasized the importance of incorporating the practice of play – a non-traditional classroom approach - in entrepreneurship education. Sukavejworakit, Promsiri, and Virasa (2018), through their quantitative study of the opportunity evaluation through experiential learning (OETEL) model, determined that “the findings supported the action based or experiential learning for entrepreneurship education over the traditional teaching style” (p. 9).

Yet this non-traditional, method-based style is often alienating to faculty members, particularly outside of the traditional business home of entrepreneurship education. This introduces the challenge of how to infuse the ideals of entrepreneurship into an interdisciplinary faculty that is largely unsure and skeptical (at best) or dismissive (at worst) of its values and applications (Roberts, Hoy, Katz, & Neck, 2014).

As Kuratko (2005) attested and Papagiannis (2018) affirmed, entrepreneurship can be taught, and certain facets of entrepreneurship – including venture capital, corporate entrepreneurship, psychological aspects of entrepreneurship, ethics, and the economic and social contributions of entrepreneurs – all belong in the college curriculum being taught by educators that possess the same innovative drive they expect of their students. To successfully integrate entrepreneurship education into a college curriculum, the long-perpetuated myth by scholars and business owners alike that entrepreneurs are born, not made, must be dispelled through the prevalence and recognition of entrepreneurship education as a college-level discipline, both within and outside of the classroom (Kuratko & Hodgetts, 2007).

University Entrepreneurship Programming

The type of entrepreneurship programming that takes place on a college campus can be divided into two categories: curricular offerings such as courses and certificates and co-curricular activities offered outside of the typical classroom environment through clubs, living/learning communities, and other non-credit providing opportunities (Kauffman Panel on Entrepreneurship Curriculum in Higher Education, 2008). Bullough et al. (2015) built upon this definition of co-curricular offerings to include so-called “wrap-around services” including networking, mentoring, workshops, and incubators while Arranz, Ubierna, Arroyabe, Perez, and Fernandez

de Arroyabe (2017) further identified business simulators/games, conferences and seminars, and visits to businesses as additional co-curricular entrepreneurship programming.

Much focus has been placed on interdisciplinary entrepreneurship education, including the strategic initiative to intersperse curricular and co-curricular entrepreneurial activities campus-wide. When examining interdisciplinary university entrepreneurship programming, particularly from the perspective of co-curricular activities, hubs of entrepreneurial activity such as entrepreneurship centers and incubators are an integral part of the conversation, as are the common methods through which the successes of university entrepreneurship programs are commonly measured.

Interdisciplinary Entrepreneurship Education

Because of its ability to bring together disparate subjects through a common lens, entrepreneurship education is a natural fit for the general education curriculum of a college (Morris, Kuratko & Cornwall, 2013). As such, entrepreneurship education does not belong to a unique college within the university but should permeate the institution (Kauffman Foundation, 2008). To further this point, in defining the entrepreneurial university, Morris et al. (2013) asserted that not only does an interdisciplinary approach provide credibility to the field of entrepreneurship studies, but also the most important reason to engage in university wide entrepreneurship education is to change the culture of the entire campus. While it is not necessary for one entity or college to own entrepreneurship on a campus for university-wide entrepreneurship programming to succeed, there must be direction and structure, which supports a deliberate unified approach, such as provided by a university's strategic plan (Morris, Kuratko, & Pryor, 2014).

As the Kauffman Foundation has promoted through their Kauffman Campus Initiative, entrepreneurship education belongs campus-wide with opportunities to participate in curricular and co-curricular offerings available to all (Torrance, 2013). Welsh and Tullar (2014) explored the benefits of interdisciplinary entrepreneurship education and determined that before and after participating in university entrepreneurship programming, students demonstrated an increase in risk taking, goal setting, and success motivation – all key characteristics for entrepreneurial success. Turner and Gianiodis (2018) analyzed so-called blended entrepreneurship programs (BEPs) within US universities to determine the unique aspects of their curriculum, materials, leadership, audience, and timing of delivery.

Both educators and the public have begun to recognize that entrepreneurial skills and mindset provide value in disciplines outside of business such as computer science and the arts, and that employers desire to hire those with abilities associated with the entrepreneurial mindset including problem solving, self-motivation, and resilience (Schulz, 2016). According to the 2008 report on Entrepreneurship in American Higher Education, “entrepreneurship is ideal for general education because it is a practice that applies to many fields and because it provides a revealing lens for studying how cultural values, social institutions, economic policies, and legal practices interrelate to shape human behavior” (Kauffman Foundation, 2008, p. 10).

In addition, students have expressed the desire for entrepreneurship education to be included in their course of study, regardless of their area of study. Cummins (2016) found through a quantitative study of undergraduate students that the perceived level of how important entrepreneurship should be to their education was almost equal among business and non-business students (58% and 54% respectively reporting that they believed entrepreneurship should be very important or important). However, the percentage of business students reporting

entrepreneurship is important in their current curriculum was only 36% with non-business students strikingly lower at only 17% (Cummins, 2016). With students expecting that entrepreneurship education should play a role in their education – both in business and non-business fields – it is essential that faculty members from a wide range of disciplines understand both the basics of entrepreneurship and how to include it in their curriculum (Cummins, 2016).

University-wide entrepreneurship programming, as defined by Streeter and Jaquette (2004) in their paper examining current trends towards university-wide entrepreneurship education programs, contains two distinct models – the magnet model and the radiant model. Each of the two models take a different approach to spreading entrepreneurship education and services throughout a campus. The magnet model involves programming centralized in a single entity, such as the business school, which is offered to students throughout the university, while the radiant model consists of the teaching entrepreneurship diffused throughout the schools and colleges of a university without a so-called home base (Streeter & Jaquette, 2004). There can be, however, a middle ground of a hybrid magnet-radiant model that can meet a university's financial and political needs while still disseminating the programming to a wide base of students.

Some previous studies have explored the unique experience of the female entrepreneur and the unique set of challenges she faces in and outside the classroom. Based on their findings, Westhead and Solesvik (2016) determined that while participation in entrepreneurship education among business students in the Ukraine was significantly associated with high intensity of entrepreneurial intention, when gender was introduced as a variable, female students showed a negative association with entrepreneurial intention. This indicated that entrepreneurship education (as defined by their study) did not benefit all participants equally. Similarly, in three

separate studies of gender beliefs and entrepreneurship (differing in geographical location and industry make-up), Thébaud (2015) determined that “participants held lower expectations for women entrepreneurs’ abilities and the viability of their business plans than for men entrepreneurs’ in general” (p. 79).

Entrepreneurship Centers and Incubators

While curricular offerings should be infused throughout a college, much of a university’s co-curricular entrepreneurial programming is often housed within the centralized hub of an entrepreneurship center or a business incubator. An example of the objective of a business incubator is “to facilitate the emergence of new market-led and knowledge-based companies in the region and to forge strategic links between the college and the world of industry and commerce” (Costello, 2016, p. 2422). Innovative process-based learning, market exploration, and identification of opportunities create a framework for entrepreneurial learning communities where collaborative and experiential learning can occur (Lugar-Brettin, 2013).

The entrepreneurship center, however, not only serves as the hub of entrepreneurial education, it can also aid the university as a source of revenue through grants, donations, endowments, and the commercialization of technology (Finkle, Kuratko, & Goldsby, 2006). To date, little research has been conducted regarding the successful functionality of the entrepreneurship center, and further qualitative research has been suggested to establish a best-practices model for successful entrepreneurship centers along with a catalogue of day-to-day behaviors and activities for their directors (Finkle et al., 2006; Finkle, Menzies, Kuratko, & Goldsby, 2013).

Assessment of Goals of University Entrepreneurship Programming

Once an interdisciplinary entrepreneurship agenda exists within a university, there are various internal and external stakeholders interested in the success of entrepreneurial programming. These include internal administrators, faculty, and students, as well as the external alumni, parents, donors, area entrepreneurs, hiring companies, and government officials. Each of these stakeholders often has a different opinion on the goals of the program in question (Duval-Couetil, 2013; Gedeon, 2017). With faculty representing various backgrounds and often conflicting views of the purpose of the curriculum, it is important to pre-establish and work towards common goals at both the course and program levels (Duval-Couetil, 2013).

In assessing the goals of university entrepreneurship programming at both the course and program level, there are two main areas of interest: student learning centered outcomes and business creation centered outcomes (Albornoz, 2013). By addressing the student needs and interests, providers of entrepreneurial education can impart business creation skills along with the general management and people skills necessary to succeed as an entrepreneur (Albornoz, 2013). In creating their Entrepreneurship Education and Training Effectiveness Framework, Bullough et al. (2015) identified goals, program elements, human factors, contextual environment, and funding as the first-order components with second order-components such as business success, entrepreneurial intentions, and leadership capabilities falling underneath the overarching goals. The success of an entrepreneurship program is measured not only in the number of businesses created, but also in the “evolution of students, attitudes, and mindset” (Fayolle, Gailly, & Lassas-Clerc, 2006, p. 715).

Self-Efficacy as Predictor of Entrepreneurial Career Choice

Given the importance of entrepreneurs to the global economy, it is necessary that in the formative college years, prospective entrepreneurs are receiving the knowledge, skills, and support they need from their university to pursue an entrepreneurial career. This is accomplished, in a part, using entrepreneurship education programming to increase the self-efficacy, and specifically entrepreneurial self-efficacy, of undergraduate students (Fellnhofer, 2017; Wilson et al., 2009).

Bandura's Theory of Self-Efficacy

Self-efficacy, as defined by Bandura (1977), comprises an individual's belief in his or her ability to complete behaviors necessary to produce specified performance achievements. Self-efficacy is both a personal and social construct, and self-efficacy beliefs contribute to the decisions of how much effort to put into a task, how long the individual will persevere at a task, and how resilient the person will be when faced with adverse situations related to the task (Schunk & Pajares, 2005). Self-efficacy is influenced by four main sources: mastery experiences (i.e. performance accomplishments), vicarious experiences (i.e. modeling by others), social persuasion (i.e. coaching and evaluative feedback), and psychological and emotional states (Bandura, 1977). Of the four predictors of self-efficacy, all except psychological and emotional states can be attributed to the differing experiences in entrepreneurship education, and as such, only the first three will be considered in this study (Sweida & Woods, 2015).

The most powerful predictor of the four is mastery experiences, or the interpretation of the results of one's previous performances (Schunk & Pajares, 2005; Usher, 2009). As interpreted by Zeldin and Pajares (2000), "Authentic mastery of a given task can create a strong sense of efficacy to accomplish similar tasks in the future. Alternatively, repeated failure can

lower efficacy perceptions, especially when such failures...cannot be attributed to lack of effort or external circumstances” (p. 216). In addition to (or in the absence of) personal mastery experiences, vicarious experiences are gained by observing others performing a task since “observing the successes and failures of others perceived as similar in capability contributes to individuals’ beliefs of their own capabilities” (Zeldin & Pajares, 2000, p. 216). Sweida and Woods (2015) noted the importance of having a model who is perceived by the observer to have similar abilities, particularly when the observer has little experience. The third predictor, social persuasion, arises from the messages (both positive and negative) one receives from others about their ability to accomplish a task, and the final (and least predictive) is the individual’s physical and psychological health (Sweida & Woods, 2015).

Personal capability beliefs associated with self-efficacy can predict behaviors and higher outcome expectations relating to college course selection, field of study, and even career choice (Usher, 2015). However, some career choices, such as those involved with pursuing an entrepreneurial path, have a different set of attributes than other types of careers, and subsequently relying on the strongest predictor - mastery experiences - to build self-efficacy may be less relevant or practical. For this reason, certain fields require a specialized view of the standard concepts of self-efficacy theory as articulated by Bandura (1977).

Entrepreneurial Self-Efficacy

Self-efficacy is task specific (as opposed to the more global nature of self-concept). To address the unique factors associated with entrepreneurship and how self-efficacy relates to the task of pursuing an entrepreneurial career path, Chen, Greene, and Crick (1998) proposed the construct of entrepreneurial self-efficacy (ESE). Building on the traditional measure of self-efficacy, ESE, as defined by Chen et al. (1998), can be assessed by their 22-item measure

consisting of five distinct factors specifically related to entrepreneurship: marketing, innovation, management, risk-taking, and financial control. Consistent with Bandura's (1977) application of self-efficacy, Chen et al. (1998) observed that, "even if people perceive an identical reality consisting of uncertainty, risks, and hardships, those with high ESE would feel more competent to deal with that reality than those with low ESE" (p. 301).

De Noble, et al. (1999), expanding upon the work of Chen et al., created their own measure of entrepreneurial self-efficacy. The resulting ESE scale included a 34-item self-efficacy measure categorized by the following six core theoretical dimensions: "risk and uncertainty management skills, innovation and product development skills, interpersonal and networking management skills, opportunity recognition, procurement and allocation of critical resources, and development and maintenance of an innovative environment" (De Noble, et al, 1999, p. 3-4).

In relation to future usage of their ESE scale, De Noble et al. (1999) cited the ability of entrepreneurship coursework and training to nurture self-efficacy among students, and as such, the scale could be used in the design of coursework and curriculum development. Kickul and D'Intino (2005) utilized both the Chen et al. (1998) and De Noble et al. (1999) ESE scales in their study of part-time MBA (Master of Business Administration) students at a large, Midwestern university. The findings indicated that ESE can be utilized to better understand and explain entrepreneurial intentions and the conditions under which such intentions may translate to actions (Kickul & D'Intino, 2005).

E-education as a predictor of self-efficacy and self-efficacy as a predictor of entrepreneurial intentions. Bilén et al. (2005) discovered through their qualitative study of participants in the Pennsylvania State University Engineering Entrepreneurship (E-SHIP) Minor

that “many students overwhelmingly emphasized the effects of the minor on their self-confidence to become an entrepreneur” (p. 239). Newman, Obschonka, Schwarz, Cohen, and Nielsen (2018) articulated the relationship between self-efficacy and entrepreneurship education and training. Specifically, they related mastery to the use of live case studies and business plans, vicarious learning to observation and interaction with successful role models, and social persuasion to mentoring and feedback received on assignments (Newman et al., 2018). Additional research has consistently shown the relevance of entrepreneurial self-efficacy across genders in that both males and females who report higher reported entrepreneurial self-efficacy also have stronger entrepreneurial career intentions (Hao, Seibert, & Hills, 2005; Wilson et al., 2009).

Susetyo and Yuliari (2018) found through their quantitative study of university entrepreneurship students in Indonesia that both entrepreneurial knowledge and entrepreneurial experiences significantly contribute to entrepreneurial self-efficacy which in turn significantly contributes to entrepreneurial intention. Similarly, Herminio et al. (2018) in their study of final year undergraduate business and engineering students confirmed that planning ability, leadership ability, and innovation ability all positively influence self-efficacy which then in turn positively influences entrepreneurial intention. Fuller, Liu, Bajaba, Marler, and Pratt (2018) in their examination of the roles of personality and self-efficacy in shaping entrepreneurial intentions came to a consistent conclusion in relation to entrepreneurship education. “Our findings...indicate that entrepreneurial education should focus upon increasing both creative self-efficacy and learning self-efficacy” (Fuller et al., 2018).

In analyzing specific predictors of self-efficacy, Zeldin and Pajares (2000) found, through a qualitative study of women in the field of mathematics, that self-efficacy beliefs were nurtured

through encouragement and vicarious experiences provided by family, peer, work-related, and academic influences. Entrialgo and Iglesias (2017) and Fellnhofer (2017) both emphasized the importance of exposure to successful entrepreneurial role models in building individual intent to become an entrepreneur, an activity which can serve as one or more of the predictors of self-efficacy as defined by Bandura (1977).

Chapter Summary

To understand what was already known about the components contributing to the study, I divided the literature three distinct sections: background and history of entrepreneurship education, university entrepreneurship programming, and entrepreneurial self-efficacy. As identified by Wilson et al. (2009) and Bullough et al. (2015), there was a gap in the research around how entrepreneurship education programs can help undergraduate students build self-efficacy. Subsequently, further research, building upon the qualitative work of Zeldin and Pajares (2000), was necessary to identify successful and replicable strategies of college entrepreneurship education programming which increase entrepreneurial self-efficacy among undergraduate students.

Reflecting the structure of the literature review, Figure 2.1 presents a framework, which I constructed, based on my identification of gaps in the existing research to guide this study. I began with the expressed entrepreneurial interest of undergraduate students. I continued with how these students make meaning of their participation in interdisciplinary curricular and co-curricular university entrepreneurship programming. I concluded with how the predictors of self-efficacy, as influenced specifically by the characteristics of entrepreneurial self-efficacy, relate to the entrepreneurial intentions of undergraduate students.

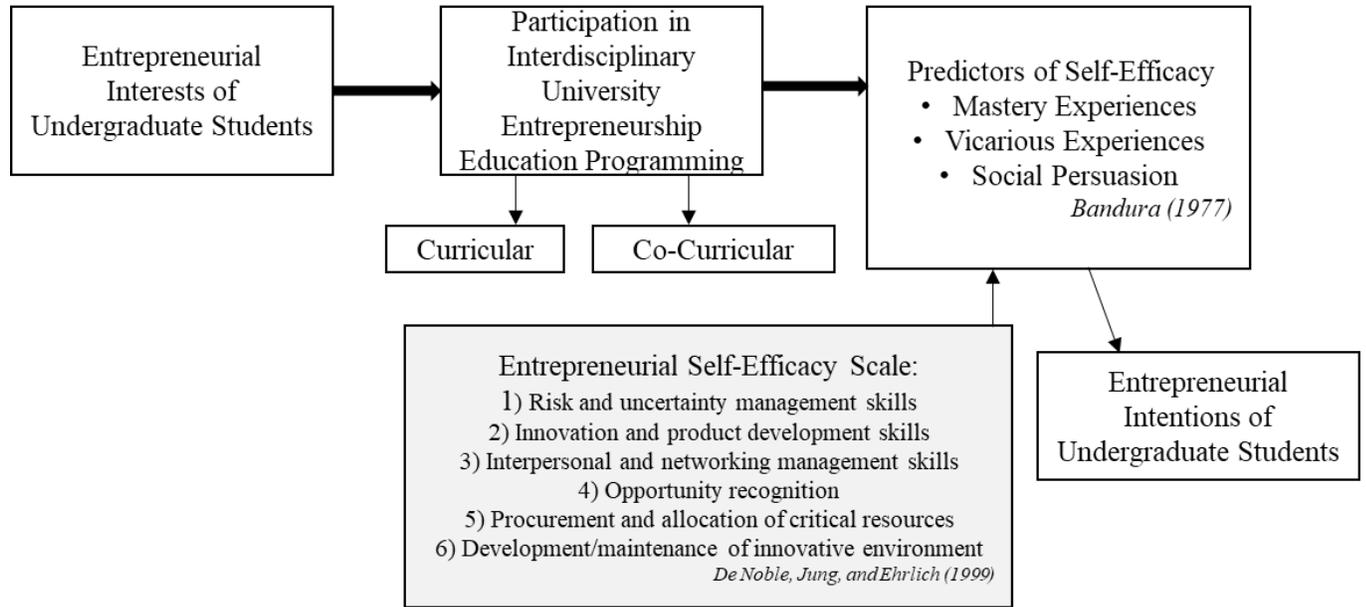


Figure 1 Framework

CHAPTER III

METHODOLOGY

The purpose of this qualitative, phenomenologically inspired interview study is to explore the shared lived experiences of undergraduate students to understand how they make meaning of their participation in entrepreneurship programming, the role these programs play in their development of self-efficacy, and how their developing self-efficacy relates to their future entrepreneurial choices. This chapter explains the methodology utilized in this study, and it is organized in the following way: overview of the research design, details of the site and participant selection, description of the data collection and data analysis procedures, and a discussion of the efforts that were taken to protect the anonymity, confidentiality, and privacy of the participants of the study.

Overview of the Methodology

Reasons for conducting a qualitative study include to learn about the unique views of individual participants and to acquire rich and detailed information about a few people (Creswell, 2012). To complete this research, I recruited 15 participants, enough to reach saturation, to partake in a semi-structured interview-based study. Saturation was achieved when no new information can be found by including additional participants (Hantash & Van Belkum, 2016). All contributors have participated in a minimum of one curricular and/or co-curricular entrepreneurial programs or experiences as defined by this study, but represented a diverse group of genders, fields of study, and school year. I identified participants based on their participation in selected curricular and co-curricular activities, as advised by experts in the field, and interviewed the selected participants following a semi-structured interview protocol.

Research Paradigm

The research paradigm reflected in this study was social constructivism, also known as postmodernism, or the belief that “universal truth cannot exist because there are multiple contextual perspectives and subjective voices that can label truth in scientific pursuit” (Hays & Singh, 2012, p. 41). Social constructivism examines how the environment plays a role in the lived experience of the participants and allows the researcher the opportunity to gain understanding of how the participants construct knowledge through social interactions (Hays & Singh, 2012). In understanding the application of social constructivism, it was necessary to appreciate both the ontology and the epistemology of the paradigm.

Ontology refers to the degree in which a universal truth is sought about a subject, and in the case of social constructivism, “there exist multiple realities rather than multiple conceptualizations of one reality” (Lee, 2012, p. 407). The hallmark of constructivist paradigm is the belief in a relativist ontology in which there are multiple realities as opposed to one and a focus on the how as opposed to the what of the information revealed (Denzin & Lincoln, 2018). Epistemology refers to the degree in which the research process constructs knowledge, or how we know what we know, and in the case of social constructivism, knowledge is co-constructed between both the participants and the researcher (Hays & Singh, 2012). Therefore, this study emphasized the understanding of each unique student’s experiences participating in curricular and/or co-curricular entrepreneurship programming and how this contributed to their feelings of entrepreneurial self-efficacy and the relation to their future entrepreneurial plans.

Phenomenological Influence

The purpose of a phenomenological study is to “discover and describe the meaning or essence of participants’ lived experiences, or knowledge as it appears to consciousness” (Hays &

Singh, 2012, p. 50). The practice of phenomenological research involves approaching the phenomenon in question (the development of entrepreneurial self-efficacy and its role in shaping future entrepreneurial intentions) through the eyes of the participants (undergraduate students) as if the researcher is seeing it for the first time (Hays & Singh, 2012). As such, the research design employed in the present study was a phenomenologically inspired, qualitative semi-structured interview study. In exploring what makes interviewing phenomenological in nature, Seidman (2013) identified four main phenomenological themes that can emerge through an interview study: “the temporal and transitory nature of human experience...subjective understanding...lived experience as the foundation of ‘phenomena’...and the emphasis on meaning and meaning in context” (p. 16-18).

As discussed by Creswell (2013), there are set procedures for conducting a phenomenological study which can be applied to the phenomenologically inspired interview study. These include collecting data from individuals who have lived the phenomenon; asking participants broad, general questions; and finally identifying significant statements and themes for the purpose of writing textural, structural, and composite descriptions. Given the nature of the research question and the desire to understand the shared lived experience of building entrepreneurial self-efficacy, a phenomenologically inspired study was the appropriate approach and was achieved through the completion of a semi-structured interview study.

Site Selection

The study was conducted at a single Carnegie Classified Doctoral Research University (Higher Research Activity) located in the Southeastern United States, known as Southern Research University (SRU). I chose this public research university for the study because it fit a set of criteria necessary for the study and because I could gain access to a sufficient number of

participants who also meet the criteria necessary to complete the study. The first criterion for the site selection was an institutional focus on entrepreneurship. SRU has followed the lead of many prestigious schools nationwide in embracing entrepreneurship as a top educational and cultural priority. The opening of the entrepreneurial center came at a time when senior leadership at SRU was affirming their commitment to campus-wide entrepreneurship as it coincided with the ratification of their latest Strategic Plan, which featured promoting an entrepreneurial culture as one of its five identified goals.

In addition to the entrepreneurship center on campus, SRU has also created an overarching Institute for Innovation & Entrepreneurship which contains additional centers and resources (located both on and off campus) for students, faculty, staff and members of the community. The IIE, led by the Associate Vice President for Entrepreneurship and Economic Development, exists for the dual purposes of strengthening the innovative ecosystem at SRU and acting as a liaison between SRU, the community in which is located, and local business and industry. The IIE provides resources specifically targeted to women and veterans as well as assistance with bidding on government contracts. The IIE also hosts events such as a business plan boot camp, SWaM certification information workshop, and a seminar on grant funding for new technology.

The second criterion was an abundance of available entrepreneurship programs from which students can choose to participate. In 2014, SRU opened an entrepreneurship center that serves as a distinct entity, not affiliated with a specific college or department, intended for the use of all students, faculty, staff, and alumni to support innovation on campus and in the local community. Another important piece of SRU's interdisciplinary entrepreneurship education programming was introduced in the fall of 2017. The undergraduate entrepreneurship certificate,

a centerpiece of the curricular entrepreneurship offerings at SRU, is housed in the management department of the business college, however it includes courses taught in all colleges at SRU. The proliferation of and commitment to campus-wide curricular and co-curricular entrepreneurship education made SRU a satisfactory site for the collection of data for this study.

Participant Selection

To explore the lived experience of undergraduate students who have made meaning of their participation in entrepreneurial programming at Southern Research University, it was essential to identify the students who met the criteria of expressed entrepreneurial interest and participation in at least one activity identified as curricular and/or co-curricular entrepreneurship education programming. The selection of criteria for participation represented purposeful sampling, through which the researcher intends to obtain information-rich examples of the phenomenon (Hays & Singh, 2012). In their analysis of 111 qualitative articles published in leading entrepreneurship journals over the past decade, Hlady-Rispal and Jousin-Laffitte (2014) identified purposeful sampling as the most common, appearing explicitly in 31 articles and inexplicitly in the majority of the 36 without an explicit sampling strategy.

Participation in curricular entrepreneurship programming was defined by registration in one of the selected courses designated as related to entrepreneurship by the SRU registrar's office and offered in the Fall semester of 2018 as determined by the SRU entrepreneurship area coordinator. Applicable courses included traditional business classes about new venture creation to engineering courses on design thinking and social entrepreneurship courses taught in a range of disciplines including criminal justice, cybersecurity, IT, psychology, sociology, and world languages and cultures. Relevant co-curricular programming was chosen to align with the predictors associated with Bandura's theory of self-efficacy (mastery experiences, vicarious

experiences, and verbal persuasion) and included mentoring relationships with experienced entrepreneurs, faculty and staff advising, guest speakers, business plan competitions, and topic focused workshops. Subsequently, participation in co-curricular entrepreneurship programming included, but was not limited to, membership in an entrepreneurship club, participation in an entrepreneurship competition, and attendance at an entrepreneurship related speaker or event.

During the third week of class in the 2018 fall semester, the approximately 100 students registered for the selected entrepreneurship courses received an in-class questionnaire (Appendix A) from their professor which established demographic details including age and gender, their experience with entrepreneurship (in and outside of the classroom), their self-perceptions of their entrepreneurial self-efficacy, and their willingness to participate in an online interview. The questionnaire included both closed and open-ended questions and was used to identify interested and qualified participants for the interview study. A similar questionnaire was distributed to participants in select co-curricular activities as recommended by the director of the entrepreneurship center (Appendix B). While the initial intention was to select a minimum of 16 participants, saturation as explained by Seidman (2013), “at some point, however, the interviewer may recognize that he or she is not learning anything decidedly new” (p. 59) was the true goal and was achieved through the 15 participants selected.

Data Collection

The main source of data for this study was the analysis of new data through semi-structured, one-on-one interviews. Semi-structured interviews utilize a prepared interview protocol to serve as a guide for the interview, however once the interview is underway, the interviewee has more influence over the flow of the conversation, as opposed to the structured interview where the pre-established pace and sequence of questioning is followed strictly by the

interviewer (Hays & Singh, 2012). According to Barriball and While (1993), semi-structured interviews “are well suited for the exploration of the perceptions and opinions of respondents regarding complex and sometimes sensitive issues and enable probing for more information and clarification of answers” (p. 330).

Interview Blueprint and Protocol

I conducted the interviews according to the protocol found in Appendix D, which contained not only the questions to be asked, but also the general procedures to be followed during the interviews (Yin, 2014). The protocol was based on the blueprint below in Table 3.1, which was informed by Farhangmehr et al. (2016) mixed methods study of predicting the entrepreneurial motivation of university students and was further modified to specifically incorporate the components of the De Noble et al. (1999) characteristics of entrepreneurial self-efficacy. The blueprint did not include any questions regarding participant background or demographics as these subjects were covered through the participant screening questionnaire. Instead, it moved directly into questions related to the three relevant predictors of self-efficacy (mastery experiences, vicarious experiences, and social persuasions) and how they relate to both developing feelings of entrepreneurial self-efficacy and the shaping of future entrepreneurial intentions.

Table 3		
<i>Interview Blueprint</i>		
	Developing Feelings of Entrepreneurial Self-Efficacy	Shaping of Future Entrepreneurial Intentions
Mastery Experiences Associated with University Entrepreneurship Programming	Q1	Q4
Vicarious Experiences Associated with University Entrepreneurship Programming	Q2	Q4
Social Persuasions Associated with University Entrepreneurship Programming	Q3	Q4

As seen in table 3.2, each question found within the preliminary interview protocol can be directly related to one of the two research questions guiding this study.

Table 4	
<i>Research Questions in Relation to Data Collected</i>	
Research Questions	Data Collected
How do undergraduates make meaning of the role of entrepreneurship programming in the development of entrepreneurial self-efficacy?	Interview: Q1, Q2, Q3, Q4, Q6
How do undergraduates relate their sense of entrepreneurial self-efficacy and future entrepreneurial intentions?	Interview: Q1, Q4, Q6

Interview Procedure

Once I confirmed that the interested participants were qualified, I invited them to participate in a one-on-one interview and provided them with the research participant informed consent form (Appendix C). In my initial contact with the participant - which occurred after the completion of the questionnaire - I provided a description of the study and its purpose and the

approximate length of the interview. If the selected participant expressed interest, I sent them the consent form via email and scheduled their interview. The additional details I confirmed via email include the time and date of the interview (including time zones where applicable) and the Zoom link which we used to complete the interview.

Due to the nature of the students' course scheduling and locations on and off campus, it was unlikely that all the participants would be available to meet in person on campus. To accommodate participants in various locations while maintaining the same interview experience, all interviews were conducted online via the web conferencing service Zoom. Prior to completing the interview, I collected and reviewed the signed consent form(s) via email and requested permission for the interviews to be digitally recorded. Through the Zoom conferencing service, both the video and audio content of interview was recorded for future viewing. Each individual interview was digitally recorded only once that participant had granted permission to do so. As appropriate, I took brief notes during the interview to provide myself with prompts when reviewing the interview recordings. I then completed a summary memo as detailed in the interview protocol (Appendix D) immediately after the conclusion of each interview. The memo included my initial thoughts and reactions as well as initial analysis that could expanded on through further analysis.

Data Analysis

In following the procedures of qualitative data analysis as laid out by Hays and Singh (2012), following the initial step of creating summary memos, I continued to organize the text, code, and identify themes and patterns. Transcription of the interviews was completed by the service Rev, and I listened back to each individual recording while reading along with the transcript to proofread for accuracy. I then moved on to the coding phase of data analysis. I

completed the coding using the qualitative data analysis software tool NVivo 12 Plus. Within NVivo, I was able to import each of the transcripts, create “cases” for each participant including their demographics, and begin to identify themes and relationships through the documentation of “codes” and “nodes”. Other useful features of NVivo included the ability to create memos, run and save search queries, and conduct key word searches throughout both the interview transcripts and imported literature.

Coding Strategy

As described by MacQueen, McLellen-Lemal, Bartholow, and Milstein (2008), “the code adds information to the text (rather than reducing the text) through the process of interpretation that simultaneously breaks the text down to meaningful chunks or segments” (p. 33). I used two types of codes which align with the research questions when analyzing the data: values coding (primary) and structural coding (secondary).

Values coding. In keeping with the social constructivism paradigm of this study, I used values coding as my primary coding strategy to allow “participant’s values, attitudes, and beliefs, representing his or her perspective or world view” to emerge (Saldaña, 2013, p. 110). Values coding was appropriate for studies such as this one that explore identities and participants’ lived experiences (Saldaña, 2013). Unlike structural coding, the values coding was not predetermined, but instead emerged from the values, attitudes, and beliefs expressed by the participants in their responses. As suggested by Saldaña (2013) when analyzing the transcripts to assign value codes, I looked for key words such as “It’s important that,” “I like,” “I love,” or “I need” as an alert to indicate what the participant values or believes (p. 113).

Through the process of employing values coding, words that expressed the ideals of the participants began to emerge. The most resonant words were not those that I had originally

searched for such as “I love” or “I like”, but instead words including want, need, and appreciate came to the forefront in expressing, in a uncategorized manner, what was important to the participants in relation to their participation in entrepreneurship education programming. In coding these theme words, similar sentiments began to take shape relating to the participants’ interaction with faculty members, classroom and out of classroom experiences, and hopes for the future. One difficulty I faced when using values coding was that the associated emotion and passion was not displayed by all participants equally and in some participants not at all. For some participants it was incredibly clear what was important and impactful to them. But for some participants, it was difficult to ascertain what, if anything at all, they believed about their experiences.

Structural coding. In the next stage of coding, I employed my secondary coding technique – structural coding. Structural coding was used to identify text associated with a distinct question and is especially useful for data created by the semi-structured interview (Haley et al., 2017; Saldaña, 2013). The process of structural coding both coded and initially categorized the data to identify commonalities, differences, and relationships (Saldaña, 2013). Structural codes for the analysis of the data collected, included in Table 3.3, interwove both Bandura’s (1977) predictors of self-efficacy and De Noble et al. (1999) six dimensions of entrepreneurial self-efficacy. Each of the structural codes was applied, as appropriate, to the coinciding interview questions. Structural coding by nature was more straightforward than values coding and required less interpretation of the participants’ meaning and beliefs. However, I did determine that there was considerable overlap between what was valued by the participant and what was included in the structural coding, indicating that the predictors of self-efficacy were important and relevant to the participants.

Table 5		
<i>Structural Codes</i>		
Predictor of Self-Efficacy	Entrepreneurial Self-Efficacy Sub-Scale	Structural Code
Mastery Experience	Risk and Uncertainty Management	Risk and Uncertainty Management skills gained through performance accomplishments
Mastery Experience	Innovation and Product Development	Innovation and Product Development skills gained through performance accomplishments
Mastery Experience	Interpersonal and Networking Management	Interpersonal and Networking Management skills gained through performance accomplishments
Mastery Experience	Opportunity Recognition	Opportunity Recognition skills gained through performance accomplishments
Mastery Experience	Procurement and Allocation of Resources	Procurement and Allocation of Resources skills gained through performance accomplishments
Mastery Experience	Development and Maintenance of Innovative Environment	Development and Maintenance of Innovative Environment skills gained through performance accomplishments
Vicarious Experience	Risk and Uncertainty Management	Risk and Uncertainty Management skills gained through modeling by others
Vicarious Experience	Interpersonal and Networking Management	Interpersonal and Networking Management skills gained through modeling by others
Vicarious Experience	Opportunity Recognition	Opportunity Recognition skills gained through modeling by others
Vicarious Experience	Procurement and Allocation of Resources	Procurement and Allocation of Resources skills gained through modeling by others
Vicarious Experience	Development and Maintenance of Innovative Environment	Development and Maintenance of Innovative Environment skills gained through modeling by others

Predictor of Self-Efficacy	Entrepreneurial Self-Efficacy Sub-Scale	Structural Code
Social Persuasion	Risk and Uncertainty Management	Risk and Uncertainty Management skills gained through coaching/evaluative feedback
Social Persuasion	Innovation and Product Development	Innovation and Product Development skills gained through coaching/evaluative feedback
Social Persuasion	Interpersonal and Networking Management	Interpersonal and Networking Management skills gained through coaching/evaluative feedback
Social Persuasion	Opportunity Recognition	Opportunity Recognition skills gained through coaching/evaluative feedback
Social Persuasion	Procurement and Allocation of Resources	Procurement and Allocation of Resources skills gained through coaching/evaluative feedback
Social Persuasion	Development and Maintenance of Innovative Environment	Development and Maintenance of Innovative Environment skills gained through coaching/evaluative feedback

Identifying Themes and Patterns

Once I coded the interview transcripts for both structural codes and value codes, themes and patterns began to emerge. Saldaña (2013) distinguishes between a code and theme by stating that a theme is an outcome of coding that is defined as “an *extended phrase or sentence* that identifies what a unit of data is *about* and/or what it *means*” (p. 175). In theming the data, I began to make the connections proposed in the conceptual framework created to guide this study. These connections included how undergraduate students make meaning of their participation in curricular and co-curricular programming, how their participation influences their developing feelings of entrepreneurial self-efficacy, and how their developing ESE relates to their future entrepreneurial intentions. Basic categorization served as the tactic through which I looked at how the identified themes were similar and different and what patterns existed between them, keeping in mind that themes could also be found not only in what is said, but what is not said.

This was most apparent in connecting, as expressed by the participants, certain predictors of self-efficacy with certain aspects of entrepreneurial self-efficacy and identifying how these emerged in either curricular or co-curricular programming – or in many cases both. See Appendix E for a snapshot of the code book used to identify themes.

Establishing Credibility

There were two main strategies that I used to ensure the credibility of the findings for the present study: reflexive journaling and member checking.

Reflexive Journaling

The keeping of a reflexive journal involved recording my thoughts about how I am being impacted by the research as it is ongoing to monitor biases and subjectivity. The importance of this process was related to the “several moments throughout the research process wherein researchers need to reflect upon how the participants, data collection, and data analysis are impacting them personally or professionally” (Hays & Singh, 2012, p. 205). In these handwritten thoughts, I included reactions to participants, my hunches about emerging findings, and suggestions-to-self for future adjustments.

Member Checking

When including participants in a research study, it is important to address their desire to be understood and validate the importance of their responses to the research process. Member checking was used to achieve this purpose. Member checking is defined as “the ongoing consultation with participants to test the ‘goodness of fit’ of developing findings” and includes involving the participants in the research process to ensure the accurate portrayal of their thoughts and feelings (Hays & Singh, 2012, p. 206). To achieve this, I utilized strategies including allowing participants to review a summary memo of preliminary findings to confirm a

faithful depiction of their voice and feelings and asking follow-up questions via email to elaborate on responses related to the emerging themes (Hays & Singh, 2012).

Consideration for Human Subjects

Maintaining the anonymity, privacy, and confidentiality of the participants in this study was a primary concern, and as such, every effort was made to ensure discretion throughout the entirety of the study. Prior to data collection, participants were informed of any potential risks and the voluntary nature of their participation was reinforced. All physical data files associated with the study were stored in locked file cabinets and electronic files were kept on password protected servers. The data collected was only be accessible to the researchers associated with the study and members of Institutional Review Board. When writing about the participants and their experiences, I protected participants by reporting on themes in the aggregate and disguising identifying information or contextual details that could reveal the participant's identity.

Chapter Summary

In this chapter, I explained the methodology utilized in this study by providing an overview of the research design, details of the site and participant selection, description of the data collection and data analysis procedures, and a discussion of the efforts that were taken protect the anonymity, confidentiality, and privacy of the participants of the study. The following chapters, four and five, include the findings and discussion of the study, respectively.

CHAPTER IV

FINDINGS

This study examined the experiences of 15 undergraduate students from Southern Research University (SRU) who have participated/continue to participate in a combination of curricular and co-curricular programming. I interviewed each participant for approximately 20-30 minutes using a series of open-ended questions intended to initiate active conversation about the topic of their personal experience taking part in both curricular and co-curricular university entrepreneurship programming sponsored by SRU.

As seen in Table 4.1, participants represented all undergraduate grade levels, although seniors represented the largest population. Gender was split roughly evenly across both the study overall and within the primary participation type which indicates the means through which a participant was initially recruited (either through a curricular or co-curricular activity). However, many students have participated in and/or intend to participate in both types of activities. All participants are identified by the pseudonym below.

Table 6			
<i>Participant Characteristics</i>			
Primary Type	Pseudonym	Gender	School Year
Co-Curricular	Victor	Male	Freshman
Co-Curricular	Jessie	Female	Junior
Co-Curricular	Helen	Female	Senior
Co-Curricular	Patricia	Female	Senior
Co-Curricular	Gabriella	Female	Senior

Primary Type	Pseudonym	Gender	School Year
Co-Curricular	Judith	Female	Senior
Co-Curricular	Barry	Male	Senior
Co-Curricular	Logan	Male	Sophomore
Curricular	Elizabeth	Female	Senior
Curricular	Carla	Female	Senior
Curricular	Jenna	Female	Senior
Curricular	Brian	Male	Senior
Curricular	Ian	Male	Senior
Curricular	Greg	Male	Sophomore
Curricular	Freddie	Male	Sophomore

In this chapter, I explore how students make meaning of their participation in university sponsored curricular and co-curricular entrepreneurship experiences and how these experiences relate to their feelings of entrepreneurial self-efficacy and future entrepreneurial intentions. Participants in both curricular and co-curricular activities expressed the importance and the worth of the experience in developing their feelings of confidence as an entrepreneur. This occurred particularly through the development of an entrepreneurial interpersonal network and through gaining skills and knowledge in areas including the creation of an entrepreneurial environment, product development, and opportunity recognition.

The contribution of this study is to create links between entrepreneurial self-efficacy (ESE), participation in university entrepreneurship program, and the value added for the students' participating in these programs. This was achieved through the students' description in their own words of their lived experience. Using the research framework outlined in chapter three that initially drove this line of inquiry, I show how for entrepreneurially interested

undergraduate students, participation in interdisciplinary university entrepreneurship education programming relates to the predictors of self-efficacy and thus contributes to their future entrepreneurial intentions.

Table 4.2 lays out the feelings and experiences portrayed by the undergraduate students at SRU across two dimensions and three sub-categories within each dimension. The broader categories reflect the two segments of the research questions proposed by this study – making meaning of entrepreneurial experiences and relating those experiences to an entrepreneurial future. The sub-categories express the values and perceptions as relayed by the student participants in relation to their lived experience through participation in curricular and co-curricular entrepreneurship programming. The concepts associated with the predictors of ESE and the sub-components of the ESE scale are woven throughout the experiences and intentions related to both the current meaning making and the anticipation of the future self. These experiences are described in detail in the following sections of this chapter.

Table 7	
<i>Dimensions of Entrepreneurial Self-Efficacy</i>	
Broad Categories	Specific Experiences and Intentions
Making Meaning of Entrepreneurial Experiences	<ul style="list-style-type: none"> Getting My Hands Dirty If They Can Do It, So Can I The Feedback Loop
Relating to An Entrepreneurial Future	<ul style="list-style-type: none"> My Entrepreneurial Future Paying it Forward The Hobbyist

Making Meaning of Entrepreneurial Experiences

The first component of the findings of this study related to the question of how undergraduates make meaning of the role of entrepreneurship programming in the development of self-efficacy. These findings expressed the lived experiences of these students using their own words to describe the feelings and self-discovery that emerged as they participated in curricular and co-curricular entrepreneurial programming. The experience was viewed through the lens of self-efficacy, and particularly ESE, with each student articulating aspects of mastery experiences (achieving something for themselves), vicarious experiences (watching or learning about others' experiences), and social persuasion (coaching and feedback) as important factors of their learning and growth. I have categorized these experiences as the themes "Getting My Hands Dirty"; "If They Can Do it, So Can I"; and "The Feedback Loop" to capture the essence of the students' lived experiences and the value they place upon them.

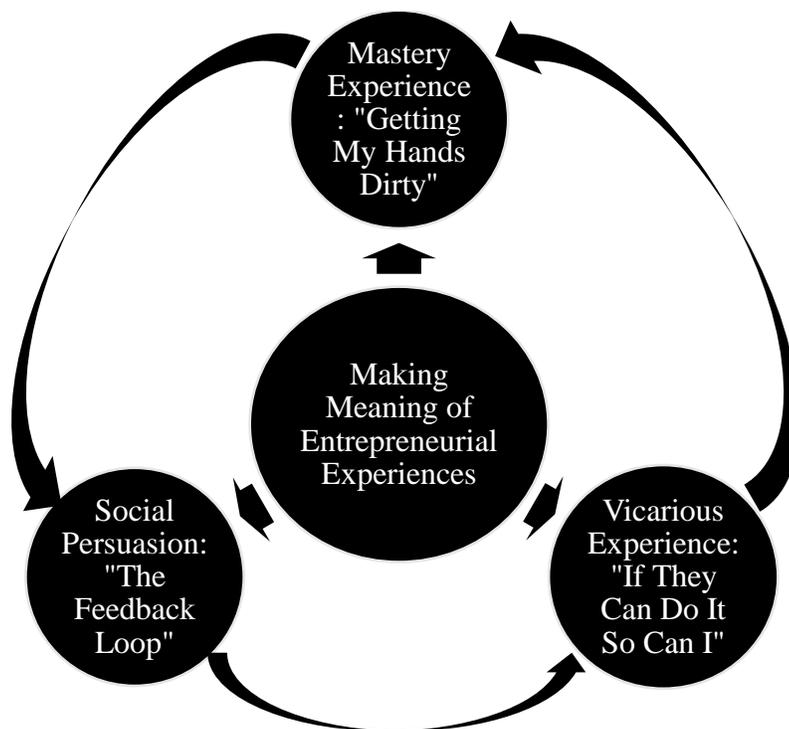


Figure 2 The Role of Self-Efficacy in Making Meaning of Entrepreneurial Experiences

Getting My Hands Dirty

Getting My Hands Dirty related to the importance of mastery experiences or being able to have direct involvement in accomplishing an entrepreneurial task. Mastery experiences were achieved by students in both curricular and co-curricular settings and provided the students with opportunities that they felt they would not otherwise have had outside of the university setting, or at least not without personal significant risk. Gabriella (Co-Curricular, Senior, Female) expressed the value of this real-life experience which she gained through her participation in a co-curricular program that she had not been able to achieve in other entrepreneurial endeavors outside of SRU.

Yeah I think it gave me hands on experience so listening to the show, watching my mentor, those are very like, oh maybe I can do those one day, but not actual experience. And I feel like that gave the experience so yeah.

Patricia (Co-Curricular, Senior, Female), also a co-curricular participant, echoed the importance of the doing, not just the learning, “what I did get from it was learning how to do research, learning how to do the face to face things, how not to be afraid to answer questions on a panel and meet people. That was amazing.” Elizabeth (Curricular, Senior, Female) encountered, and benefited from, similar real-life experiences in a curricular setting through her coursework.

People were all in, so we had to come up with an industry analysis, a marketing and operations plan, financials, as if the company was up and running, we had to project every single cost, how much we wanted to pay ourselves, as if we weren't college students. Everything was extremely hypothetical, but it had to be very accurate. The attention to detail was insane.

Aside from the general value of experiencing the life of an entrepreneur, the students singled out specific entrepreneurial skills that they gained from these hands-on experiences including building an interpersonal network, recognition of opportunity, and product development.

Building an interpersonal network. The importance of people and having the right network to support you as an entrepreneur was stressed throughout all the interviews. The sense of belonging was expressed by Judith (Co-Curricular, Senior, Female) in relation to her participation in a co-curricular event, “I feel like I definitely walked out having a little bit more feelings like, I could be part of that community.” Barry (Co-Curricular, Senior, Male) echoed similar sentiments highlighting the impact his participation had on his sense of self and where he might be without it.

I feel like I would be like a totally different person. I wouldn't have none of the people I know, made the friends I made, the connections I made, that kinda stuff. I feel like I wouldn't have grown at all or anything.

Participants also saw the value of these relationships beyond the classroom or the current activity. Helen (Co-Curricular, Senior, Female) described a connection with a fellow student, “actually one of the other participants is interested in kind of partnering with me on it so it's just something I need to kind of, like I said find some time and resources” while Victor (Co-Curricular, Freshman, Male) found mentors who he can leverage in the future “so it was like great for more personal connections, and a great way to make mentors too, because I still talk to some of them even now.” The action of participating in an event served as the catalyst for these students to build their personal networks at both the peer and mentor levels.

The importance of participating as a group was also an influential and somewhat surprising takeaway for many of the students. As Ian (Curricular, Senior, Male) expressed regarding his class participation, “just being able to work cohesively as a group was probably the most meaningful part of the class for me.” And while group projects are common in classrooms, Jenna (Curricular, Senior, Female) felt a difference in this particular group experience and

relayed the significance of making these connections, “I would say the contacts that I made...I've never had a group project where I was so involved with the people in the group.”

Recognition of opportunity. The ability to participate in an entrepreneurial experience also helped students gain confidence in their ability to recognize and develop an opportunity while procuring the resources to make it a reality. Elizabeth (Curricular, Senior, Female) and Jessie (Co-Curricular, Junior, Female) both appreciated the active opportunity to experience what it was like to explore their ideas to determine what, if any, opportunity actually exists. Elizabeth (Curricular, Senior, Female) described her experience and the experiences of some of her classmates in conducting an industry analysis, something many of the students had not done before participating in her class.

Definitely the industry analysis, because I had never, we got lucky with our idea because when we went to go do the industry analysis, we realized, okay, there's insane amounts of information online. That is available because we're SRU students, thank god. But we were fortunate that the education business right now is booming as far as tutoring and all of that, but there were a lot of other students who, when they went to do the industry analysis, they found out the trend is going down. We shouldn't enter this industry.

Jessie (Co-Curricular, Junior, Female) also learned a great deal first-hand from getting out of the classroom and speaking to her potential customers.

We actually went out to the hospital, we spoke to people to see what it is their needs were and what they were actually expecting. It opened my eyes up to what other people were going through that were on the other side, as far as the caregivers. And that kind of put me in a different direction and made me realize that I needed to do a little bit more than just T shirts, I need to do more.

While Jessie (Co-Curricular, Junior, Female) learned from understanding the input of her customers, Gabriella (Co-Curricular, Senior, Female) recognized the importance of matching an opportunity to the needs of her potential customers when they may not necessarily know what that product or service might be.

So the business I think we were kind of, we were trying to figure out what would it be and the biggest take away was that you have to ask, you have to get feedback from your clients. So like you can have the idea, but what's the actual need. And not that they're asking people like, what do you want? People don't know what they want, but people do have needs so we were asking about the needs that are need to be met.

The importance of taking a hypothetical idea and doing the work to determine if it was viable was paramount to the students as a first step in developing a business, even if that first step was not correct as Carla (Curricular, Senior, Female) expressed “because you know humans, we learn by making mistakes and then learning from them, so I think the whole process of that class is designed to just, make a mistake, learn from it, make a mistake, learn from it.” Jessie (Co-Curricular, Junior, Female) also learned a great deal about herself as an entrepreneur and where she was – and was not – in the developmental process and how to take the knowledge gained and move forward.

I would say it made me feel more accomplished, but it made me realize that I wasn't ready. As far as what I mean as wasn't ready, as in the actual paperwork business side of it, all the things that I needed on paper if want to approach investor, I was not ready because I needed to know all the numbers, all the information. I didn't have that data. I thought it just was get up, run a business, make the money and that's it. But that's not how it works, it's a big long process. So it prepared me as far as what questions I need to answer, and I'm still working on it. It prepared me for my business plan. And it also let me know that this is an ongoing thing, it's not just you make the money and that's it. The first-hand knowledge achieved through their participation in curricular and co-curricular entrepreneurship activities was invaluable to these students as they learned to recognize entrepreneurial opportunities, and what to do once the opportunity was identified.

Product Development. Having the opportunity to build a product or business in a low or no-stakes environment was significant to the students as they began to gain confidence in themselves as entrepreneurs. In her co-curricular program, Jessie (Co-Curricular, Junior, Female) was first exposed to the idea of creating a business plan to help guide her ideas.

And we were given an actual, what do you call it, a business canvas that we had to fill out from scratch. So we spent some time doing that, and that was difficult for me because I didn't realize how many questions that I had unanswered. And that really opened up my eyes to how much more that I need to spend on fixing the structure of my business.

Patricia (Co-Curricular, Senior, Female) was able to take this concept one step further in having the ability in the span of a three-day activity to create a prototype of her group's product idea and present it to a panel of potential investors.

So once you chose what group you wanted to be with, after the five products were chosen, you introduced yourself to your new company, per se, and then you started with what you wanted to do, how you think we can get it done, trying to put together a prototype, going out into the field to do research to see if people really needed or wanted something like you're trying to put together, revamping the process if it was something that you needed to do to change because maybe somebody didn't need your specific product but if you just tweaked it a little bit, you go ahead and do that. We made a prototype and at the end we actually did a pitch to a panel.

While both came in to the program with ideas, their participation provided them the unique opportunity to take the idea one step further and act as entrepreneurs instead of just envisioning themselves as potential entrepreneurs.

Helen (Co-Curricular, Senior, Female)'s group also created a test product, which turned out to be different from what the creator's initial idea was intended to be – something that evolved from customer feedback.

My group members, I think we were really focused on one particular issue and it ended up that we, after we did our customer assessment and went out to kind of test what our market demographic was, we came back with a totally different idea as far as what we felt that the public needed at that point. So it definitely was, it was good to say, don't go out just knowing that you're just going to produce this one particular item where in turn your customer base may realize that they need something different and you may have to change things. So it definitely brought about a change in perception because even the main contact, she originally her idea was one particular thing, and what we ended up pushing as far as our business plan and our test product, was totally different. It was an app instead of an actual product and so we did base that on our customer research.

Without the benefit of participating in the event at SRU, Helen (Co-Curricular, Senior, Female)

and her fellow students would not have had the safe, low-stakes environment to experiment and learn as opposed to potentially jumping into the wrong venture or product uninformed and failing unsupported.

If They Can Do It, So Can I

If They Can Do It, So Can I referred to the vicarious experience of the participants hearing about and seeing the successes and challenges of other entrepreneurs and imagining themselves in their shoes. While this phenomenon was present for both students in curricular and co-curricular environments, it was particularly salient for those in the classroom setting with professors and guest speakers. Greg (Curricular, Sophomore, Male) relayed the significance of having people with entrepreneurial experience speak in his class.

They can relate to me on a personal level because A, they are people and B, situations are going to happen. Whether it's natural weather. Like with natural weather could close your business for five days, or ruin your business. You have to take into account in that. Hearing these people speak was the most meaningful to me.

Greg (Curricular, Sophomore, Male) was also surprised to learn how similar some of the speakers were to himself, “but I was like, ‘you’re in the same boat as us.’ Anyone could become an entrepreneur, and just hearing them speak about it was very cool in a sense. I really enjoyed it.” Similarly, Barry (Co-Curricular, Senior, Male) felt grounded by hearing about the experiences of other entrepreneurs who he may not have encountered under other circumstances “...mainly from the people around me who also have businesses, ‘cause I feel like if I didn’t know anyone who had a business I wouldn’t know what to do myself.”

Outside of the classroom, co-curricular activities also provided students the opportunity to learn from project leaders and mentors as well as from the other students participating in the activity alongside them. Gabriella (Co-Curricular, Senior, Female) was surprised by the willingness to share ideas with others and, “...how open some people were. People had tons of

ideas and most of the time people keep them kind of to themselves, like I did you know like too scared to say anything or do anything.” The inclination of the SRU entrepreneurial community to share their experiences, successes, and failures opened the eyes of the participants to what is possible for them as entrepreneurs.

The innovative environment. One major learning opportunity that the students took away from hearing about other entrepreneurs’ experiences was the importance of having an innovative environment. Almost all the participants in co-curricular experiences discussed how they encountered this innovative environment at SRU’s entrepreneurship center which, as on many other campuses, serves as the hub for entrepreneurial activity on campus. Like many other participants, Jessie (Co-Curricular, Junior, Female) particularly appreciated the level of support and encouragement that she received there that she did not find elsewhere on campus.

They believe in my passion and my mission...I love the entrepreneur center. They're all encouraging, they're all uplifting. And that's what I need some days, some days I'm like I don't know if I can do this, this is a lot. But they remind me that it's a process, it takes time, you're on the right track. It's a constant reminder that you're getting there in your time.

Barry (Co-Curricular, Senior, Male) enjoyed having the opportunity to share an environment with people like himself, “...seeing someone who actually does it, people who work like that usually stay up late, working, and making candles and that kinda stuff, and it's nice to see other people up ... 'Cause I'm up late too.” As an engineering student, Barry (Co-Curricular, Senior, Male) regarded the entrepreneurship center as a community where he could find similar-minded people who wanted to help each other learn and grow.

It's just nice to also see other people who are here with me at the same time. Working on our respective stuff, but seeing how they ... I can go to them with questions and that kinda stuff, and they can help me understand what to do in certain situations.

Being in such an innovative environment with fellow entrepreneurs helped the students

understand the need for creating this type of environment in their own businesses. An innovative environment is integral to the entrepreneur both throughout the learning process and once a venture has begun. The participants clearly recognized the SRU entrepreneurship center as a place to provide encouragement for them and a model for the future environment they could create for themselves.

Risk and Uncertainty Management. Another area in which students placed a great deal of importance was learning about the inevitable management of risk and uncertainty that goes along with the pursuit of an entrepreneurial path. They achieved this in part by hearing about the experiences of other entrepreneurs. Greg (Curricular, Sophomore, Male) described the valuable lessons that he learned from his professor and the entrepreneurs that visited his class.

The professor shared a lot of her own stories. Like if you really want to be an entrepreneur, you have to have the time, you have to make sacrifices, and time sense. There's just kind of a relentless work ethic. It's a non-stop. I think they understand that they don't have that safety net, a steady paycheck coming every two weeks, so there's a grind mentality that I've observed in successful entrepreneurs.

Freddie (Curricular, Sophomore, Male) was particularly impressed by one of his classmates and what he learned from her and how she runs her business. "She was... prepared for any risks that could happen. And I guess she had her financials written down of what does she need to start off with and then what does she need to fall back on if anything came." He also gained valuable insight from his professor. "She made sure that we know entrepreneurs take risk, and they have a plan, even though sometimes their plan doesn't always, actually, the plan never matches up they always have to adjust," He learned similar lessons from one of the speakers who came to visit his class.

It was really interesting for me because he told me that in order for you to have a successful business, you have to open up 10 businesses because literally nine of them will fail. And he said that 10th one will work. And he said he's always been an entrepreneur in

business ever since he was a young kid. And he just said, you just have to have ... You have to be very proactive. And you have to really want it in order for you to succeed.

Helen (Co-Curricular, Senior, Female) and Logan (Co-Curricular, Sophomore, Male)

each recounted a very specific experience that they encountered with an individual dealing with risk and uncertainty through their involvement in co-curricular entrepreneurship programming.

Helen (Co-Curricular, Senior, Female) was surprised by what she saw from a fellow student.

It was interesting to see the change in her perspective in terms of once she reached out to some other people and see that the true need was not quite what she had planned and so. She actually accepted that pretty well and I think that might have been hard for some people to say well you know what this is what I wanna sell, but this is really not what they wanna buy. They want this item instead. So actually, that was an interesting curve ball that I think a lot of people might find hard to take because they're like well this is the product I'm bringing to market and they better buy it. And then she was able to change that, so it was really good.

Having seen that response, Helen (Co-Curricular, Senior, Female) was able to adjust her own future thinking about having to potentially pivot from her original idea. Meanwhile, Logan (Co-Curricular, Sophomore, Male) also acknowledged the valuable lessons he learned from students who dealt with adversity, not just from those who were finding success.

Then you have other student entrepreneurs who are doing very successful. And a lot of times, this is really cool perspective, but a lot of times somebody, let's say [student], say she goes through a bad deal or something goes wrong. We can all learn from that lesson so that we don't go through it similar. So there's a lot of peer coaching almost happening. And it's really cool. And it's really nice to have that fresh perspective of somebody who, we're on a similar playing field. We understand each other.

And Ian (Curricular, Senior, Male) recognizes now that from hearing the stories of other entrepreneurs, his way of thinking has been permanently changed.

Oh gosh. I think really now I'm just locked into that mindset where every business I interact with, I'm always thinking about the nuts and bolts of that specific business. How are they successful? I don't know why, but it's just one of those things. Like when I go to a restaurant I take a look around, and I'm like, "I wonder how many people come in here every night, how many times they turn the tables over. What's their inventory like? How

much do they pay these chefs and servers?" So it's like these little things are always, these wheels are spinning in my head. I don't know why. It's just like a habit now.

All the students, through classes or other co-curricular programming, were given the opportunity to learn directly about the lives of other entrepreneurs and get a taste of what this life might be like for themselves in the future as an entrepreneur.

The Feedback Loop

The Feedback Loop denotes the mentoring and coaching that took place throughout the process of the classes and co-curricular activities. Unlike the mastery and vicarious experiences, the social persuasion element of self-efficacy permeated every aspect of ESE instead of being related to individual skill development. Logan (Co-Curricular, Sophomore, Male) described the importance of being able to go to his mentor for feedback when he hit a wall in his goal setting process.

And so I went to her and I was like, "I know if I set goals they'll help me get somewhere, move somewhere, have something to work for. But I just don't know how to do that. What's a right goal. What is a goal? How do I set it? How do I backtrack to make it actually doable or achievable?" And she walked me through the whole process. By the end of it, I felt like all the clouds just went away. It was so clear to me now.

Having someone to rely on and provide consistent guidance was integral to building Logan (Co-Curricular, Sophomore, Male)'s confidence. Helen (Co-Curricular, Senior, Female) agreed saying, "I definitely think that having exposure to this program and kind of the guidance through what a startup should look like, I feel more confident in developing my own idea." Feedback and coaching took place continuously in both formal and informal settings in the classroom and outside.

Feedback in a curricular setting. In the classroom, feedback took a more prescribed form coming from three main sources – the professor, the panel to which one class presented their business ideas, and their fellow classmates.

Ian (Curricular, Senior, Male) was surprised by the level and value of the feedback he received from his professor in comparison to other classes he had taken.

The teacher, she gave extraordinary feedback every step of the way. It was unbelievable how much she wrote into our grades. She wouldn't just assign a grade and just be done with it. She would actually write notes in the margins of every single page, and some of these things that we turned in were 30 pages long, so. Just tremendous feedback every step of the way from giving little hints as to, "Hey, if you're going to pursue this, you might want to research this," or "You may want to talk to these people," or "This might be a way you could improve this idea." Stuff like that.

Meanwhile, Jenna (Curricular, Senior, Female) highlighted her professor's ability to keep students on track in saying, "she was good at guiding us in the right direction and telling us when we were going off base, you know, putting us on the right path," and Greg (Curricular, Sophomore, Male) appreciated how she pushed them to keep moving forward develop their ideas.

Our Professor just gave us a lot of her ideas. You have a marketing plan, well, what are your demographics? What is beyond that? Just that type of stuff. It was really helpful and useful, and if I ever do open a business, I will take that into account.

Presenting to a panel of investors in a "Shark Tank" like environment was also a source of a wealth of feedback for students participating in one of SRU's classes. In fact, this was one of the features of the class that Elizabeth (Curricular, Senior, Female) was most excited about.

So when she told us that we were going to be thrown into a virtual Shark Tank at the end of the semester, I was like, "Oh god. Well, this is going to be really good experience for me, because I'm going to get to talk to these people and hear their questions and they're very experienced in their field," so that's really what I wanted to get out of it, was that final.

It was also the area in which Elizabeth (Curricular, Senior, Female) felt she gained the most value out of the course and what could have the biggest impact on her future as an entrepreneur.

And then the sharks, they liked our presentation. But the questions that they raised were very good questions. Some of the people in the class had real business plans that they were working on for their own business, so had this been my own business, their

questions were extremely valid. Their coaching was 100% there. I would definitely contact a lot of them and see if I could get more information because they really did help us, even though that was our last breath of "We did it."

Carla (Curricular, Senior, Female) had a similar experience with the sharks and the value of the feedback they were able to provide to her and her group about their pitch and the confidence they gained from that experience.

I guess like, when we got to the end and it was actually like the shark tank, the feedback from like real investors, and there was a lot of them. She had so many that came out. It was like 40 people. And they're all like real entrepreneurs and investors and all that. I would say like getting feedback from them, and hearing you know, from them that we did a good job and that this could work and that this is a good idea, it kind of like just boosted. It made our group feel like, I don't know, like it's not impossible to open your own business, you know? Like you could actually do it, it just takes a lot of work.

Greg (Curricular, Sophomore, Male) was impressed by how direct, and at times critical, the entrepreneurs were with their feedback. He appreciated the fact that it allowed him to understand what pitching to an investor might be like in a real-world situation.

The feedback wasn't all positive. It wasn't to be hard on people, but having these successful entrepreneurs come in and you pitch your idea to them, you want that critical feedback, because that's what's going to help you, whether you're sensitive or not. That's how I see it. That's the best kind of feedback, during a business pitch, which was like, the last day of class.

The third source of feedback in the classroom came from a somewhat unexpected source to some of the students – their fellow classmates. Elizabeth (Curricular, Senior, Female) described how peer feedback was delivered in her class and how her team incorporated that feedback into their project.

I think that what was really helpful from the classmates was after each deliverable, so the industry analysis, the operations plan, we had to post them onto a discussion board and then all of our classmates had to grade at least three. So everybody was getting feedback and they raised a lot of questions that our team didn't get and sent to them... We all kind of lifted each other up in the sense that, "Hey, sharks might ask this question. Close this loophole."

In fact, Carla (Curricular, Senior, Female) was surprised by the value and depth of the feedback she received from her classmates in the discussion board posts.

And like, not just say like, "Good job." Or whatever, we had to say like, "This is what's wrong with it." It was very critical. Almost like negative feedback all the time, because you constantly just had to be improving your idea, or else there was no point in it. Because like, the whole purpose of the class is to take an idea that sucks and make it into an idea that can actually work.

Each of these sources of feedback and coaching, both on their own and in combination, added an incredible amount of value to the students and created a greater appreciation of what can be achieved in a classroom setting. A similar value was placed on the experiences of participants who received feedback outside of the classroom.

Feedback in a co-curricular setting. The three sources of classroom feedback – professor, potential investor, and classmate, combined to create a powerful source of confidence and comfort in the students who participated in curricular activities. Participants in co-curricular activities also had the opportunity to receive coaching and feedback from similar sources including session leaders, panel experts, and activity groupmates. For example, Judith (Co-Curricular, Senior, Female) received valuable coaching from the panel participants at an entrepreneurship center event.

There were three expert panelists who basically outlined the trajectory from starting or having an idea for a small business to all the way to needing something about IPO's or I don't know, going public with your shares. They tried to, sort of in a nutshell, explain the steps from which you grow your small business into something like Amazon or Google or something. All of the panelists made it clear at the same time that it is really trial and error and a lot comes down to not just having resources available to you for people helping out, but also really depending on the business idea. Even if you have all the best scaffolding in the world and supporters and investors, you still need to have that great idea, which is what carries you through each of the processes. I mean, at the end of the day, it still comes down to sort of what your business is about.

This level of coaching inspired her to return to the entrepreneurship center for future activities and come prepared the next time to get the maximum value from the services offered. She said, “I would be thrilled to go and maybe help myself develop a little bit more idea wise or even just how to brainstorm better or get inspiration from other people who participate during those talk backs.”

Victor (Co-Curricular, Freshman, Male) appreciated the coaching and feedback he received throughout his participation in a three-day event, from the beginning to the end. He explained, “and all the while this is going on they have mentors going around, talking to us, helping us along the way. And on the third day, that's when we actually finish everything, and we present it to the panel.” Helen (Co-Curricular, Senior, Female), who attended the same event, was impressed by the variety of mentors and the different points of view that they brought.

It was great to see mentors across a couple different platforms. Some in the IT sector, some in the actual retail sector, some in terms of consulting, so a couple different, some service, some product, some combination of so it was great to have mentorship that had different aspects and different facets because everybody has a different perspective and so what's important to one particular demographic is not always important to the next. So it was great to have feedback across a couple different platforms.

Jessie (Co-Curricular, Junior, Female) was also impressed by the dedication of her activity session leader and what that meant to her as she develops as an entrepreneur.

The instructor was very adamant about certain things, she was very honest, which is very good. I don't want someone telling me that this is okay to do when it's really not. She didn't sugarcoat anything, and it was kinda like tough love, but if you want to be successful, this is the way you have to do it. And that's the part that really stood out to me. Is the fact that they want to see us succeed, they were willing to help us and they were willing to criticize us in a positive way to help us.

And Logan (Co-Curricular, Sophomore, Male) felt like the support he received, and can count on to receive in the future, from the other frequent participants in co-curricular activities at the entrepreneurship center are vital to his own present and future success.

And it's a continuous thing. But it's almost reassuring to know that I have them for whatever I need. If you get in trouble you know you have your mom, your dad that are at the end of the day gonna be there for you. And that's how I feel with them when it comes to business things.

While perhaps not as formal or predictable as in the classroom setting, the coaching and feedback received by the co-curricular participants was equally as valuable as that received in class. Barry (Co-Curricular, Senior, Male) summed up these thoughts in saying, "it's just nice to also see other people who are here with me at the same time. I can go to them with questions and that kinda stuff, and they can help me understand what to do in certain situations."

Putting the Pieces Together

The process of making meaning of their entrepreneurial experiences involved learning, growing, and adapting by participants in curricular and co-curricular activities. The participants unanimously found value in their entrepreneurial experiences with each student relaying many positive experiences with a level of passion they may not have expected from themselves in relation to a class or co-curricular activity. Participants placed a great deal of importance on getting to experience life as an entrepreneur, seeing the life of an entrepreneur through their eyes and experiences, and the constant feedback and coaching that they received throughout their participation in curricular and co-curricular activities.

Though participants in curricular and co-curricular activities may have been in different environments and circumstances, they unanimously expressed their growth as entrepreneurs through their increased knowledge of areas including risk and uncertainty management, creating an innovative environment, recognizing opportunity, developing a product, and building an interpersonal network.

Relating to An Entrepreneurial Future

The second component of the findings of this study address the question of how undergraduates relate their sense of ESE to their future entrepreneurial intentions. The findings express the students' feelings about themselves as future entrepreneurs in relation to the self-efficacy they gained through participation in curricular and co-curricular entrepreneurial activities. Unsurprisingly, all the students who participated in the study expect entrepreneurship and the associated skills they gained in their entrepreneurship programming to play some part in their future. They articulated this in many ways and directly attributed it to several of the predictors of self-efficacy they experienced in their entrepreneurship programming. Two interesting perspectives that emerged among how participants perceive themselves as future entrepreneurs were the transition from hobby to career, or their self-identity as a hobbyist, and the desire to pay forward the success that they attributed to their experiences at SRU. As displayed in figure 4.2, while the central theme that emerged was the individual's entrepreneurial future, their identity as a hobbyist and the desire to pay it forward influenced their sense of current and future self.

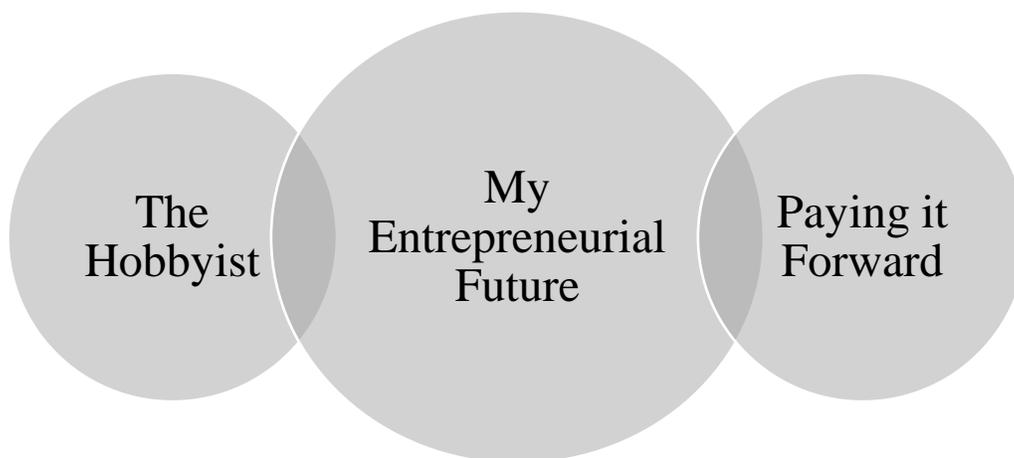


Figure 3 Dimensions of the Future Entrepreneur

My Entrepreneurial Future

For some participants in the study, the concept of the future was immediate, such as within months or a few years, while for others, their own entrepreneurial future was something that they foresee farther in the distance beyond what they can precisely measure. As such, the future meant different things to different people, and at times different things to the same person. Some participants, like Logan (Co-Curricular, Sophomore, Male), had an idea that they intend to pursue in the near term while still in school.

Then I see myself getting into this hair care industry. I also have a YouTube channel where I've been building a following on there, where I do curly haired videos, things like that. So the hair company sort of goes along right with it.

Others, like Patricia (Co-Curricular, Senior, Female), had an idea that they would like to pursue down the line, either after graduation or once they have had more traditional work experience. But the knowledge Patricia (Co-Curricular, Senior, Female) gained through her participation with SRU's entrepreneurial programming will stay with her as she pursues that dream, whenever it may happen.

I eventually, after I get out of school, I want to open a massage therapy spa and I also want to have my own clinical psychology business. So I have to finish school of course and then get into, I guess, doing whatever I need to do to make it happen. I gotta find the space and get the overhead, buy my equipment and advertise.

Meanwhile, Judith (Co-Curricular, Senior, Female) did not know exactly how entrepreneurship will play in her future, but one major takeaway from her experience was, "it seems like, not that everyone can be successful, but I think if you sort of do the legwork, you have a fighting chance." Patricia (Co-Curricular, Senior, Female) had a somewhat different perspective regarding her future as an entrepreneur and the motivation behind it. "So, I think I would like to have my own business because waking up and having to clock in for somebody else sometimes isn't really fun and they make more money than you." And Barry (Co-

Curricular, Senior, Male) saw entrepreneurship as a way to make his mark, “I guess the main goal of my life is to be remembered I guess. Not just go like, ‘He appeared, I was whatever.’”

Jenna (Curricular, Senior, Female) also learned that the entrepreneurial skills she gained could help in many aspects of her life. “Well, it can help you whether you work for someone, or it can help you in your own business ventures. It gives you a more, I don't know, a higher view of things and what it takes to succeed.” Many of the participants could not exactly articulate what their entrepreneurial future would entail, but many, like Jenna (Curricular, Senior, Female), attributed their participation in entrepreneurial activities to the fact that they would have or desire one at all.

Some participants who had only attended co-curricular programs expressed interested in taking entrepreneurship classes in the future at SRU to build upon the skills they learned. Jessie (Co-Curricular, Junior, Female) struggled with this decision.

I think I should do that but I'm considering switching my major 'cause I'm in Human Services. But if I'm going to pursue entrepreneurship, I might just have to switch my career path. And that's the part that I'm dealing with right now. I'm like, should I do it? I'm torn in between so I want to take classes.

Victor (Co-Curricular, Freshman, Male) also expressed interest in taking future classes, however his engineering major poses a scheduling concern so he may rely on additional co-curricular resources to meet his needs.

So I can't because I don't have time to it fit into my schedule 'cause I'm double majoring in engineering, so, yeah, it's gonna be kinda hard, but there are a lot of other resources outside of classes but I just wish there was a way I could kinda fit it in.

Greg (Curricular, Sophomore, Male) had similar qualms about balancing the desire to take future entrepreneurship classes with the requirements of his major.

I thought about possibly getting my certificate in entrepreneurship, I know you can do that. So I'm considering it. Right now it's not on my level just because I'm trying to get

my major done. If I can do that in the time frame that I plan to, then I'll move on and try to get my certificate as well.

Meanwhile, Patricia (Co-Curricular, Senior, Female) planned to take advantage of future programs at the entrepreneurship center to build on the foundation of what she learned at her first event and help her reach her future goals.

I want to do some of their Lunch and Learns. As a matter of fact, I'm going to go check and see what things they have available this year or if they've started their entrepreneurship thing for this year and I will definitely be over there because I want to get a business started.

The value of participation in entrepreneurial programming was evident to these participants and lead them to wish to continue participating in whatever way would be manageable with their course schedule and other responsibilities.

The Hobbyist

One common thread among many of the participants was that, although they saw themselves as a future entrepreneur, they imagined it taking the form of a hobby or a part-time endeavor as opposed to a career. Carla (Curricular, Senior, Female) expressed the desire to potentially elevate her hobby to a career by saying, "but yeah, it's kind of like if my hobby could be my dream job. You know? So that would be awesome." Brian (Curricular, Senior, Male) saw how the spark of an idea from a class activity could allow him to turn something he loves into a business in the future.

Oh yeah, definitely I hopefully, if possible, after I get some experience in accounting. I start an entrepreneur company in that or any other type of business. In the class one of the things was to come up with a business idea or a business pitch and then talk about it. And mine was, because I played soccer, it would have been a soccer campus or academy for young kids and make it affordable especially. Because, it should be a cheap sport but it's not, actually because tournaments and the leagues are really expensive in reality. So, make it affordable for parents to bring their kids and for some, okay, it will be free for them. Depending on their economy. But yeah, that's one of the ideas that I had.

Elizabeth (Curricular, Senior, Female) and Jenna (Curricular, Senior, Female) also saw their entrepreneurial activities as stepping stones that allow them to enjoy use their hobbies to make some extra money. Elizabeth (Curricular, Senior, Female) acknowledged that she is not ready to go all-in on an entrepreneurial career right away, but she will still take advantage of the skills and confidence she gained to get the ball rolling.

I really want to open my own business for my personal hobbies, which is dog training, agility. It's kind of what I did what I was younger. So that alone really helped. I'm in school for management and business analytics. Do I see an analytics firm? Probably not. I'll need to work in one for a while, which I also learned in the class. You know, you work in the industry before you try to conquer one of your own.

Whether their passion stays a hobby, progresses to a part-time business, or becomes a full-fledged career, each of these participants expressed a desire to put their entrepreneurial skills to work in the future.

Paying it Forward

Another theme that emerged as participants talked about their future as entrepreneurs was the desire to pay it forward and help other student entrepreneurs who may find themselves in a similar situation to where they are now. This desire was deeply tied to the feelings of gratitude and appreciation that they had for the mentors and coaches who had influenced them along the way. In addition to achieving her own entrepreneurial success, in the future Jessie (Co-Curricular, Junior, Female) wants to help other entrepreneurs pursue their passion.

I see myself teaching other entrepreneurs about the struggle and how they can succeed. As far as being a small business owner, I do see myself expanding maybe in the next 10 years, but I do see a future for me in entrepreneurship.

Judith (Co-Curricular, Senior, Female) expressed a similar desire to share her future success with the SRU community. “Hopefully lightning strikes and gives me my perfect app or idea that I can get off the ground and I can be one of the people talking at a panel some day at the

Entrepreneurial Center.” And while Logan (Co-Curricular, Sophomore, Male) saw himself as a future mentor to student entrepreneurs, he also understood the value of funding a student’s education and hopes to be able to provide this type of value to SRU students in the future.

One of the things that I really want to do, it's just been deep down in my heart to do, is offer one to how ever many I can, full ride scholarships for entrepreneurs, because it's challenging when, in addition to the challenge that I'm going through right now too. You have to pay for school. And you have to fund your business, or your ventures, startup, whatever. And it's a lot. And so, I think that it would be so cool if I could take the stress of you having to worry about paying for school to just focus on what you're doing. I think that'd be really cool.

Logan (Co-Curricular, Sophomore, Male) attributed this intention to help others to his own experiences at the entrepreneurship center, which is what initially drew him to attend SRU.

The Role of Participant Type

The 15 participants included in this study fell into three different categories – primary activity type (curricular or co-curricular), school standing (freshman, sophomore, junior, or senior), and gender (male or female). While none of the emerging themes related solely to any one participant context or demographic, there were certainly patterns (to a different extent in each case) between them and the framework of the study.

The Role of Primary Activity Type

As mentioned earlier, “The Feedback Loop” took the most obviously different shape among participants in curricular and co-curricular activities with the boundaries of the classroom vs. non-classroom setting playing an important role. That was not, however, the only area in which differences were evident. While participants in both types of activities expressed the importance of working in a group setting, the co-curricular participants emphasized the value of building the entrepreneurial network both through the specific activity and in a place like the entrepreneurial center. Many of the curricular participants did not seem to feel the need to look

outside of the classroom – and the longer-term commitment of a full-semester course – while the co-curricular participants craved a feeling of community. Victor (Co-Curricular, Freshman, Male) spoke about his desire to maintain the collaborative environment because of how the people in it helped him become more confident as an entrepreneur.

It just made me feel like they wanna help me because being in that collaborative environment there are a bunch of other students who they have the same passion as you, they want pool their ambition. So, you wanna do your best in the atmosphere to help them and they'll help you back in return.

Conversely, the curricular participants in general were more likely to see entrepreneurship as an extension of an existing hobby. While the co-curricular participants ranged from not really having an idea at all to having a business underway, curricular participants generally viewed their entrepreneurial future as one where a hobby could potentially become a business, but not immediately and likely not as a full source of income. Jenna (Curricular, Senior, Female) described this potential growth in what started out as a part-time endeavor. Participating in the co-curricular activity motivated her to put some of her ideas into action and potentially take them even further once she graduates.

Well, I have the business, and since then I have actually purchased more furniture and pursued it a little more...I do this part time, so you know it's not ever a real burden for me, and it's not something that's got to pay my bills. It pays for school. That's all I really wanted it to do. But I'm going to graduate this next semester, and you know, maybe I do want to make it more.

Overall, participants in both curricular and co-curricular activities were well represented throughout the framework of this study, however these minor differences can be important in the design of future curricular and co-curricular entrepreneurial experiences, and in finding the ideal mix of curricular and co-curricular activities for a given student.

The Role of School Standing

Participants in the study ranged from first semester freshmen to soon-to-be graduating seniors. It is important to note that because there is a large population of non-traditional students at SRU, school standing did not always have a direct correlation with age, so the perspective of school standing relates only to how far along the participant is in their college career. It was also helpful to look at standing as two groups instead of four – underclassmen (freshmen, sophomores, and juniors) in their early years where more exploration might take place, and upperclassmen (senior) whose future aspirations and plans are more solidly taking shape.

Freshmen and sophomores like Victor (Co-Curricular, Freshman, Male) and Greg (Curricular, Sophomore, Male) were particularly impressed by the mentors and guest speakers, especially those with entrepreneurial experience of their own, that they encountered in their activities. Logan (Co-Curricular, Sophomore, Male) also relayed the importance of fellow students as role models and the importance of being able to relate to them on a personal level. “There's this guy [student]. He owns a company where he does coding and design and builds apps and websites, things like that. And he's there all the time. We're chilling there all the time. And so, it's really cool.”

Meanwhile, upperclassmen Gabriella (Co-Curricular, Senior, Female), Patricia (Co-Curricular, Senior, Female), and Elizabeth (Curricular, Senior, Female) all stressed the importance of the real-life scenarios and the importance of having to take action on their own while Carla (Curricular, Senior, Female) and Brian (Curricular, Senior, Male) touched on the value of being able to see and experience failure. Brian (Curricular, Senior, Male) took this away from his classroom experience, “it definitely gave me a feeling, yeah I should do it I should not be scared of it... I learned that it's okay to fail, you don't have to be scared.” Generally, the

upperclassmen were more focused on the value of doing something for themselves while underclassmen were personally impacted by the experiences of others.

The Role of Gender

Of the three potentially influencing factors (activity type, school standing, and gender), gender was by far the least differentiating among the experiences of participants, particularly in that none of the participants specifically related any of their personal experiences or future plans to their own gender. In all areas of the framework, relating to both current feelings of entrepreneurial self-efficacy and future entrepreneurial intentions, there was no one theme that stood out as being dominantly a male or female sentiment as might have been expected based on the previous research regarding female entrepreneurs.

The Participant as an Entrepreneurial Individual

The experiences of all the 15 participants were woven throughout the previously discussed themes. However, there were two participants that stood out as embodying the entire framework of the study. These participants, who happen to have opposite characteristics, were Elizabeth (Curricular, Senior, Female) and Logan (Co-Curricular, Sophomore, Male). Elizabeth and Logan, each in their own ways personified all the facets of the lived experience of participating in university entrepreneurship programming while sharing an unmatched enthusiasm and appreciation for the opportunities they had been given at SRU.

The Case of Elizabeth

Elizabeth (Curricular, Senior, Female) chose to take her course as a follow-up to a previous introductory entrepreneurship course at SRU and as part of the requirements for a new certificate program at SRU. She portrayed this commitment to entrepreneurship education by describing registering for this course as being “all in”. Her first big surprise in the class was how much she

had to change her initial idea once she dug in to analyzing the market, establishing her customer base, and identifying her resources – all gained through the mastery experience of Getting My Hands Dirty. Her confidence grew as she experienced the phenomenon of If They Can Do It, So Can I through the speakers in her class. Her direct interaction was key, as she explained,

...because of that, it opened the door. She was like, ‘send me an email. I can give you a list of their information’ All of that, so it was very inspiring to see these people have been very successful but also took the time to make sure that they could be there to help us with little incentive to them, but they had information to give us and it was really helpful.

Elizabeth expressed that the so-called sharks who judged the final presentations were also an important part of The Feedback Loop and impacted how she felt about herself and her entrepreneurial skillset at the conclusion of the class.

And then the sharks, they liked our presentation. But the questions that they raised were very good questions. Some of the people in the class had real business plans that they were working on for their own business, so had this been my own business, their questions were extremely valid. Their coaching was 100% there. I would definitely contact a lot of them and see if I could get more information because they really did help us, even though that was our last breath of ‘We did it.’

As a senior, Elizabeth had a fairly strong sense of her entrepreneurial future and firmly fit into the category of The Hobbyist. As a management and business analytics major, Elizabeth saw herself spending some time immediately following college at an analytics firm but did not regard that as a way to pursue her future entrepreneurial goals.

Well, personally I have a lot of different goals. I really want to open my own business for my personal hobbies, which is dog training, agility. It's kind of what I did what I was younger. So that alone really helped. I'm in school for management and business analytics. Do I see an analytics firm? Probably not. I'll need to work in one for a while, which I also learned in the class. You know, you work in the industry before you try to conquer one of your own.

But I definitely see myself going into as far as my hobby side, on my weekends and stuff, opening some sort of training center like that and feeling more confident about how I need to approach it and how I need to build that plan, because you do business plans in some of

the management classes, but you don't do something this in depth and this picked apart I guess is the word.

In speaking about her future and how it was influenced by her participation in entrepreneurial activities at SRU, she expressed her overall takeaway as such. "I think it definitely helps me with my future goals or actually really see them better and see how they would actually play out."

The Case of Logan

Logan (Co-Curricular, Sophomore, Male) was one of the most involved co-curricular participants through his frequent participation in activities at the entrepreneurship center. Unlike Elizabeth, Logan specifically came to SRU for its entrepreneurship programming and with a solid sense of himself as a current and future entrepreneur. However, like Elizabeth, he also espoused the value of each of the themes woven through the framework of this study. Logan spoke highly of the entrepreneurship center and the role of the entrepreneurial community as a provider of knowledge and stability in his personal growth.

And the Entrepreneurial Center has really sort of been, how I like to phrase it is they've sort of been like guard rails. You know when you're bowling, you put the guard rails up so that it doesn't go in the gutter. That's sort of what the Entrepreneurial Center has been for me. Just, you're not gonna go too out of bounds. If you aren't sure about something, you always have somebody that knows the answer. You have somebody who can help you. And so that's what it's really been for me.

Unlike some of the other participants, Logan looked at his entrepreneurial experiences at SRU not as a single influential moment in time, but as a constant source of encouragement for his life and future. In describing his experience in a co-curricular activity, he described the profound influence it had on how he approaches his day to day.

It was like a reset almost. Like if I had a reset button. That's what it was. So I was able to really sit down and sort of design my life. Like, what does the perfect life look like? Okay, now if the next five years are perfect, what would that look like? Okay, now if this year everything went perfectly, what would that look like? And then setting goals to make those happen. And then backtracking them so I know what to do today, what to do tomorrow,

what to do next week, what to do next month. It was just a great breath of fresh air. And it's a continuous thing. But it's almost reassuring to know that I have them for whatever I need.

Like other participants, Logan emphasized the importance of the network of mentors and fellow students he has built and will continue to nurture in his time at SRU. He specifically brought attention to the importance of the coaching he received from them as well as the ability to watch them succeed (and fail) and learn from their experiences. Whereas Elizabeth embodied The Hobbyist, Logan fell definitively into the category of participants who were so moved by their experience that it drove their desire to Pay it Forward for future entrepreneurial students at SRU, particularly those involved in the entrepreneurship center like himself.

And how the Center ties in is I definitely plan on, one of the things that I really want to do, it's just been deep down in my heart to do, is offer one to how ever many I can, full ride scholarships for entrepreneurs, because it's challenging when, in addition to the challenge that I'm going through right now too. You have to pay for school. And you have to fund your business, or your ventures, startup, whatever. And it's a lot. And so, I think that it would be so cool if I could take the stress of you having to worry about paying for school to just focus on what you're doing. I think that'd be really cool.

This future desire to share his success spoke volumes about Logan's experience with entrepreneurship programming at SRU, the value he placed on it in relation to his personal growth, and how it will undoubtedly shape his entrepreneurial future.

Chapter Summary

In this chapter I explored the two segments of the research questions proposed by this study - making meaning of entrepreneurial experiences and relating those experiences to an entrepreneurial future - by the recounting of the lived experiences of the 15 study participants. In exploring the participants' values and their individual expressions of what was important to them, I was able to break down the two broader perspectives into three subcategories each. These subcategories of making meaning of entrepreneurial experiences – Getting My Hands Dirty, If They Can Do It So Can I, and The Feedback Loop – and relating experiences to the

future – My Entrepreneurial Future, The Hobbyist, and Paying It Forward – all incorporate the various tenets of entrepreneurial self-efficacy. The participants' stories, as told in their own words, provided rich detail to explain just how they saw themselves and their experiences relating to these six subcategories.

In Chapter 5, I discuss the results of this study as well as their contributions to theory related to entrepreneurial self-efficacy. I also outline recommendations for future research and discuss the implication for practice for those involved in developing and implementing university entrepreneurship programming.

CHAPTER V

DISCUSSION

In this chapter I discuss my findings related to the themes which emerged in exploring how undergraduate students make meaning of the role of entrepreneurship programming in their development of entrepreneurial self-efficacy (ESE) and how they relate their sense of ESE and future entrepreneurial intentions. The chapter continues with the contributions of the current study to theory and its implications for future research and practice. I also address limitations of the study and how they potentially impacted the subsequent findings.

Summary of Findings

The purpose of this qualitative, interview-based study was to explore the shared lived experiences of undergraduate students to understand how they make meaning of their participation in entrepreneurship programming, the role these programs play in their development of self-efficacy, and how their developing self-efficacy relates to their future entrepreneurial choices. The main source of data for this study was the analysis of new data through semi-structured, one-on-one interviews. The interview protocol was informed by the Farhangmehr et al. (2016) mixed methods study of predicting the entrepreneurial motivation of university students and was further modified to specifically incorporate the components of the De Noble et al. (1999) characteristics of ESE.

In analyzing the data, I employed two types of codes which align with the research questions: values coding (primary) and structural coding (secondary). From the themes that emerged from these two coding strategies, I identified two broader perspectives (making meaning of current experiences and relating them to future intentions) which were further divided into three subcategories each. These subcategories of making meaning of

entrepreneurial experiences - Getting My Hands Dirty, If They Can Do It So Can I, and The Feedback Loop – and relating experiences to the future – My Entrepreneurial Future, The Hobbyist, and Paying It Forward – all incorporated the various tenets of ESE as categorized by De Noble et al. (1999). These findings suggested that the previously identified components of ESE hold unique relevance and significance to undergraduate students as they progress through curricular and co-curricular entrepreneurship programming, and as such should be incorporated and highlighted in future programming.

Discussion of Findings

Previous research has determined that entrepreneurship education has a positive impact on students as it encourages them to nurture their more unconventional skills and instills confidence (Rodov & Truong, 2015). Newman et al. (2018) connected entrepreneurship education to the development of self-efficacy, specifically linking the use of live case studies and business plans to mastery experiences, observation and interaction with successful role models to vicarious learning and mentoring and feedback received on assignments to social persuasion. Chen et al. (1998) and De Noble et al. (1999) took the self-efficacy connection one step further in creating scales to measure the unique features of task-specific entrepreneurial self-efficacy.

In addressing the gap in the research surrounding the success of undergraduate students in entrepreneurship education programs and how these programs build self-efficacy identified by Wilson et al. (2009) and Bullough et al. (2015), the findings of the present study supported and built upon these previously established connections. The findings provided a greater understanding of the individual and common experiences of the undergraduate students participating in these programs and practices at their university and how they made meaning of their developing feelings of ESE. The current research exposed a new perspective of the

students as they were given the ability to not only identify areas of entrepreneurial growth (such as recognition of opportunity and product development), but how and why this growth occurred thus beginning to make the necessary connection between entrepreneurship education and entrepreneurial self-efficacy missing from previous research.

Growth in entrepreneurial self-efficacy, as well as its personal value and significance, was evident across all participants in the study regardless of gender, school year, or the type of activity or activities in which they participated. Some of students like Ian (Curricular, Senior, Male), Brian (Curricular, Senior, Male), Helen (Co-Curricular, Senior, Female), Judith (Co-Curricular, Senior, Female) and Gabriella (Co-Curricular, Senior, Female) were more casual or first-time participants while others like Logan (Co-Curricular, Sophomore, Male), Elizabeth (Curricular, Senior, Female), Jenna (Curricular, Senior, Female), and Victor (Co-Curricular, Freshman, Male) were more seasoned entrepreneurs who came into the programs with specific goals and intentions in mind.

However, regardless of in which group a participant fell – or somewhere in the middle – all the participants related in some way to the themes of Getting My Hands Dirty, If They Can Do It So Can I, and The Feedback Loop in ways that resonated with them and their feelings of personal growth. Some of the students placed greater worth on the mentors that provided coaching in their classes and activities while others prioritized the value of having a safe environment to practice the skills of creating a business plan, talking to potential customers, and building a product prototype. Others still recognized something in themselves that they had not seen by observing others who were relatable to them succeeding – and failing – in their entrepreneurial ventures.

The significance of the self-efficacy gained through participation in entrepreneurship program and how students related it to their future senses of self and entrepreneurial intentions

also permeated many of the interviews. Regardless of their future goals, defined or undefined, every participant recognized the value of the skills gained through participation in entrepreneurship programming and how these skills could be applied to any future path. Some students focused more immediately on taking additional classes, attending more events, and jump-starting a current business idea. Others could only theoretically imagine how entrepreneurship featured in their future. Others were inspired to give back to the SRU entrepreneurial community as a way of thanking them for the support that they felt that would not have received from any other university resources. While it remains unclear how the ESE gained will manifest in the future of most of the students, the value placed upon it by the students themselves is undeniable.

One theme that was noticeably absent from the findings was that of the impact of gender on feelings of entrepreneurial self-efficacy, particularly among female students. In three separate studies of gender beliefs and entrepreneurship (differing in geographical location and industry make-up), Thébaud (2015) determined that “participants held lower expectations for women entrepreneurs’ abilities and the viability of their business plans than for men entrepreneurs’ in general” (p. 79). However, in discussing their experiences in curricular and co-curricular programming at SRU, gender was never once mentioned as a hindrance or area of importance to any of the participants, male or female. Another area that did not present itself as a matter of discussion was any sort of disagreement with the value of the curricular and co-curricular activities and their contribution to feelings of self-efficacy. While the feelings manifested in different ways among the students, each participant, whether they considered themselves to be an entrepreneur or not, freely related their experiences in their respective programs to growth of self-efficacy in a way that was valuable to them.

The connection between ESE and entrepreneurial intentions has been consistently identified through quantitative lines of research (Hao et al., 2005; Wilson et al., 2009; Susetyo and Yuliari (2018). From the present research, developers of curricular and co-curricular entrepreneurship education can begin to understand the mindset of students who have recently participated in such programs and how and why these connections were made from each student's unique perspective. Through the findings of this research, courses and activities can be designed to ensure that students from different backgrounds and with different perspectives of themselves as entrepreneurs can gain self-efficacy in a way that is valuable and meaningful to their future intentions.

Contributions to Theory

Wilson et al. (2009) and Bullough et al. (2015) identified a gap in the research surrounding the success of undergraduate students in entrepreneurship education programs, particularly regarding how these programs can build their self-efficacy. Subsequently, as suggested by de Herminio et al. (2018) as a follow up to their quantitative study of the impact of self-efficacy on entrepreneurial intentions, further qualitative inquiry was necessary on the connection between entrepreneurship education and entrepreneurial self-efficacy. The present study contributed to the building of this connection through a qualitative analysis of how students make meaning of their experiences in entrepreneurship education and the impact on their ESE and entrepreneurial intentions. The findings provided rich data to explain the connection and how it was evoked through the unique lenses of 15 undergraduate students.

The body of research leading to the theory of entrepreneurial self-efficacy, its development, and its impact on future entrepreneurial intentions has predominantly been completed through quantitative research. In fact, in their 2018 review of the literature relating to entrepreneurial self-

efficacy published from 1998 to 2017, Newman et al. found 128 studies for inclusion and only four were qualitative studies. From this review, Newman et al. urged future researchers to look beyond the measures created by Chen et al. (1998) and De Noble et al. (1999) to develop new measure of entrepreneurial self-efficacy. The rich data provided by the current study can help to develop measures incorporating the lived experiences of the curricular and co-curricular entrepreneurship programming participants at SRU.

Implications for Practice

According to Wilson et al. (2009), access to entrepreneurship education has the proven benefit of increasing entrepreneurial self-efficacy; however, previous researchers have lacked a clear understanding of the experiences of entrepreneurship students (Susetyo & Yuliari, 2018). According to Zhang (2017), “the progress of academic studies on entrepreneurship education has remained stagnant partially due to the insufficient fine-grained qualitative research on the impact of entrepreneurship education at the individual level” (p. 5). This progress has been advanced by the current study and its examination of the lived experiences of individual students at SRU.

As De Noble et al. (1999) suggested, coursework and training can be used to nurture self-efficacy among students, and the findings of this research study can be used to improve or augment the current services provided by SRU or serve as a guide for other colleges that currently have or are looking to create similar programmatic offerings. Results of this study will be of value to practitioners in learning how undergraduate students at SRU make meaning of their participation in specific curricular and co-curricular entrepreneurship education programs and relate it to their future entrepreneurial intentions. As discussed in the literature review, many faculty members remain suspicious of the non-traditional or method-based style of teaching associated with entrepreneurship education. The findings of this study helped to explain from

the perspectives of the students how and why these teaching styles have been effective by showing expressing value they created. Fayolle et al. (2006) urged that the success of an entrepreneurship program should not only be measured by the number of businesses created, but also in the “evolution of students, attitudes, and mindset” (p. 715). The present study illuminated this precise evolution.

In analyzing specific predictors of self-efficacy, Zeldin and Pajares (2000) found, through a qualitative study of women in the field of mathematics, that self-efficacy beliefs were nurtured through encouragement and vicarious experiences provided by family, peer, work-related, and academic influences. The knowledge gained from the present study expanded upon these findings by looking at how self-efficacy is nurtured in an entrepreneurial setting, thus providing examples specifically relevant to the development of curricular and co-curricular entrepreneurship education. In addition to the encouragement and vicarious experiences that were relevant in the field of mathematics as identified by Zeldin and Pajares (2000) the present findings point to a strong need for the ability for potential entrepreneurs to gain mastery experiences in a supportive and low-risk environment. This is something that a university can provide either through curricular or co-curricular entrepreneurship programming that the student may not otherwise find on campus.

From a practical perspective, the findings of this study can be used by the entrepreneurship faculty at SRU for curriculum design and by the staff of the entrepreneurship center for program design. For example, the ‘shark tank’ aspect of both one of the classes and one of the activities was incredibly impactful to both curricular and co-curricular experiences. Both the feedback provided, and the networking aspect were of great value and should be included where possible in future classes/programs. Similarly, the level of feedback provided

both formally and informally, in and out of the classroom, was greatly appreciated and should continue to be a cornerstone of any entrepreneurship-related programming. Additionally, for programs geared towards underclassmen, the value of having speakers and mentors who were willing to tell their own stories and build a connection with the participants was invaluable in the students' growth and the beginning of the ability to see themselves in the more experienced entrepreneurs' shoes.

The findings can also be used to design an assessment tool to measure growth in ESE across the course of a semester or event. For example, the participant questionnaire that was used to determine eligibility for the present study could be adapted to serve as a pre and post-participation evaluation of personal feelings of self-efficacy. If completed by students participating in every class and event, the database of findings would grow exponentially and could be used to constantly evolve curriculum and program components. Finally, entrepreneurship faculty and entrepreneurship center leadership should continue to strategize on not only how to inspire students to participate in more activities, but how curricular and co-curricular activities can best complement each other, particularly from the standpoint of building and reinforcing feelings of ESE.

Additionally, the findings of this study have implications for higher education more broadly as entrepreneurship education moves away from just the business school and becomes incorporated throughout a campus. The instrument used in this study could be modified to determine various types of self-efficacy among undergraduate students, or it could be used as written to determine how students make meaning of entrepreneurial experiences in classes and activities that are not specifically labeled as entrepreneurship programming. As additional entrepreneurial student experiences are explored throughout a campus, common student personas

may begin to emerge allowing departments and centers to better address student needs with a wider, and more customized, variety of programming providing different types of experiences.

Implications for Future Research

Future research should continue to explore qualitatively the connection between entrepreneurship education, ESE, and entrepreneurial intentions in various contexts. As the present study was one of the first of its kind, improvements can undoubtedly be made based on my experiences as a researcher. In addition to one-on-one interviews, focus groups should be employed as an additional source of rich qualitative data. Through focus groups, future research can further explore the dynamic of group entrepreneurial self-efficacy or what Newman et al. referred to as entrepreneurial self-efficacy as a collective phenomenon. While the present research touches on the importance of group activity and collaboration, actual observations of the group in action or a focus group made up of team members who have worked together in a class project could provide additional insight into this phenomenon and its significance.

Because SRU is in the relative infancy of recognizing entrepreneurship as an institutional priority, the availability of participants who had completed multiple courses, multiple co-curricular activities, or a wide array of both were limited. Future research should focus on students who have participated in both curricular and co-curricular programming to determine if the type or combination of programming has an impact on the development of ESE and subsequent entrepreneurial intentions. While the present findings did identify preliminary differences among perspectives of participants who participated in one type of programming versus the other, additional research should explore how one individual makes meaning of participation in multiple forms of entrepreneurship education programming to determine if they assign different meaning or values to the different experiences.

The study described could be based at a more entrepreneurially experienced school than SRU and require participants to have participated in multiple entrepreneurial activities including both curricular and co-curricular programs. At a school with a deeper history of entrepreneurship education, it is more likely that students will have had numerous opportunities for participation and will be generally more aware of the opportunities than the students at SRU. Given the need to have participated in multiple programs, the suggested study could focus on upperclassmen only to ensure that they have had time to take part in, and process their feelings about, several entrepreneurship education activities. The interview protocol from the present study could be adapted to inquire about the difference in how participants felt in a curricular vs. a co-curricular activity - or if they felt any difference at all. A similar single-interview study would be appropriate given the reflective nature of the inquiry.

Another area of research which would contribute greatly to this field of study is longitudinal analysis. Newman et al. (2018) identified the need to further conceptualize ESE as a stable trait or a developmental state to determine which factors relate to short-term fluctuation and which relate to long-term changes in perception. A study like the present one but which follows students from freshman year to graduation could illuminate the changes that occur within the individual over time as they participate in new and different activities and gain more first-hand experience in entrepreneurial activities. In particular, the study could identify a group of participants with entrepreneurial intentions as they enter their freshman year of college. The researcher would conduct in-depth interviews with a protocol like the one employed in this study at freshman year orientation and at the end of each semester to determine changes in the participants feelings of self-efficacy and how they made meaning of the activities in which they participated in that semester.

The initial interview could be based on the questionnaire that was used to identify the students in the study while the first interview (after first semester of freshman year) and could be very similar to the one used in this study. Subsequent interviews could evolve from the present instrument to explore changes in feelings based on further participation and the building effect of participation in multiple activities across semester. Another line of questioning could delve into the different ways in which the same participant makes meaning of participation in both curricular and co-curricular activities throughout the course of their education. The framework of the current study would be applicable to this proposed future study, however the participation in entrepreneurship programming would be extended, and potentially evolving, over four years as opposed to the current snapshot of one moment in time.

Limitations

One limitation of the current study that could have impacted the suggested findings was that the participants were all sourced from one institution and participated in many of the same activities and courses together. The presence of an exceptional teacher or a commonly experienced mishap could have colored the recounting of the experiences of many participants in the same way. However, the participants in the research study represented a balanced mix of gender, school standing, and curricular/co-curricular participation. Their openness and desire to share candidly and truthfully about their experiences with entrepreneurship programming contributed to a rich data set that resulted in saturation once analyzed. Additional limitations included confounding variables and volunteer bias. Confounding variable could have included influences such as students gaining ESE from sources outside of the programming provided by SRU or making future choices for reasons other than entrepreneurial self-efficacy. Volunteer bias could have been a factor as the individuals who were identified as potential participants and who agreed to participate

in the study may have been more likely to contribute to and take full advantage of the programmatic offerings.

Conclusion

As seen in this study, the predictors of self-efficacy (Bandura, 1977) and the indicators of entrepreneurial self-efficacy (De Noble et al., 1999) are intertwined in the experiences of undergraduate students participating in curricular and co-curricular entrepreneurship programming at Southern Research University. Participants expressed the value of their current entrepreneurial participation across several dimensions with both overlapping themes and unique lived experiences defined through the eyes of the student. The self-efficacy gained through this participation was undoubtedly relevant as the participant's imagined their own entrepreneurial future, both in terms of what it meant for them and how they wished to contribute to the community that had been so influential for them. Curricular and co-curricular entrepreneurship programming is vital to the development of ESE and future entrepreneurial intentions, and its importance is paramount to the contribution of entrepreneurial economic growth.

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Appendix A

Qualified Participant Screening Questionnaire – Curricular

Introduction:

The brief questionnaire below is intended to recruit participants for an interview study related to participation in curricular and co-curricular university entrepreneurship programming. It should take no longer than 5 minutes to complete. Students who complete the questionnaire will receive 1 extra point on the final exam in the course in which they received the questionnaire. Interviews with interested and qualified participants will be conducted in the final weeks of the Fall 2018 semester. Students who are selected to complete an interview will receive a \$20 Amazon gift card.

Completion of the questionnaire(s) and participation in the interview study are voluntary and there will be no penalty in this course or otherwise for not participating. Should you decide to participate now, you can later withdraw from participation in the study at any time.

Questions:

Q1 Name (required for interview scheduling purposes only)

Q2 Email Address or Phone Number (required for interview scheduling purposes only)

Q3 Age

- Under 18 (1)
- 18 - 24 (2)
- 25+ (3)
-

Q4 School Year

- Freshman (1)
- Sophomore (2)
- Junior (3)
- Senior (4)
- Other (Please describe) (5) _____
-

Q5 Gender

- Male (1)
- Female (2)
- Other (3)
-

Q6 Do you now or have you ever operated a business?

Yes (1)

No (2)

Q7 If you answered yes to question 6, please describe the business and your role.

Q8 I intend to operate my own business some day.

Strongly disagree (1)

Somewhat disagree (2)

Neither agree nor disagree (3)

Somewhat agree (4)

Strongly agree (5)

Q9 Prior to taking this course, have you previously taken (at the high school level or higher) any courses related to entrepreneurship?

Yes (1)

No (2)

Q10 If you answered yes to question 9, WHAT COURSES related to entrepreneurship have you previously taken and WHERE did you take them? Please list all applicable courses. (Example: Intro to entrepreneurship in high school and ENTR 201 at ODU)

Q11 Why did you sign up for this course? (choose all that apply)

It is required for my major (1)

It is a prerequisite for another course (2)

I'm interested in entrepreneurship (3)

It was recommended to me by my adviser (4)

Other (please describe) (5)

Q12 I plan to take another course related to entrepreneurship.

- Strongly disagree (1)
 - Somewhat disagree (2)
 - Neither agree nor disagree (3)
 - Somewhat agree (4)
 - Strongly agree (5)
-

Q13 Have you participated in any co-curricular entrepreneurship experiences at ODU?
(Examples include but are not limited to club meetings, competitions, events, guest speakers, mentoring relationships, activities sponsored by the Strome Entrepreneurial Center?)

- Yes (1)
 - No (2)
-

Q14 If you answered yes to question 13, please describe the activity(ies) and your role.

Q15 I plan to participate in future co-curricular entrepreneurship experiences at ODU.

- Strongly disagree (1)
 - Somewhat disagree (2)
 - Neither agree nor disagree (3)
 - Somewhat agree (4)
 - Strongly agree (5)
-

Q16 How confident do you currently feel in your abilities in the following areas:

	Not at all confident (1)	Not very confident (2)	Neutral (3)	Somewhat confident (4)	Extremely confident (5)
Risk and Uncertainty Management (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Innovation and Product Development (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interpersonal and Networking Management (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunity Recognition (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Procurement and Allocation of Resources (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Development and Maintenance of an Innovative Environment (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q17 Are you interested in participating in a brief one-on-one interview (to be conducted online at your convenience towards the end of the fall semester) to discuss your experiences with

curricular and co-curricular entrepreneurship programming (interview participants will receive a \$20 Amazon gift card)?

Yes (1)

No (2)

Q18 Is there anything else you would like to share or do you have any questions?

Appendix B

Qualified Participant Screening Questionnaire – Co-Curricular

Introduction:

The brief questionnaire attached is intended to recruit participants for an interview study related to participation in curricular and co-curricular university entrepreneurship programming. It should take no longer than 5 minutes to complete. Interviews with interested and qualified participants will be conducted in the final weeks of the Fall 2018 semester. Students who are selected to complete an interview will receive a \$20 Amazon gift card.

Completion of the questionnaire(s) and participation in the interview study are voluntary and there will be no penalty for not participating. Should you decide to participate now, you can later withdraw from participation in the study at any time.

Questions:

Q1 Name (required for interview scheduling purposes only)

Q2 Email Address or Phone Number (required for interview scheduling purposes only)

Q3 Age

- Under 18 (1)
- 18 - 24 (2)
- 25+ (3)
-

Q4 School Year

- Freshman (1)
- Sophomore (2)
- Junior (3)
- Senior (4)
- Other (Please describe) (5) _____
-

Q5 Gender

- Male (1)
- Female (2)
- Other (3)
-

Q6 Do you now or have you ever operated a business?

Yes (1)

No (2)

Q7 If you answered yes to question 6, please describe the business and your role.

Q8 I intend to operate my own business some day.

Strongly disagree (1)

Somewhat disagree (2)

Neither agree nor disagree (3)

Somewhat agree (4)

Strongly agree (5)

Q9 Have you ever taken (at the high school level or higher) any courses related to entrepreneurship?

- Yes (1)
- No (2)
-

Q10 If you answered yes to question 9, WHAT COURSES related to entrepreneurship have you taken and WHERE did you take them? Please list all applicable courses. (Example: Intro to entrepreneurship in high school and ENTR 201 at ODU)

Q12 I plan to take future courses related to entrepreneurship.

- Strongly disagree (1)
- Somewhat disagree (2)
- Neither agree nor disagree (3)
- Somewhat agree (4)
- Strongly agree (5)
-

Q13 Have you participated in any co-curricular entrepreneurship experiences at ODU?
 (Examples include but are not limited to club meetings, competitions, events, guest speakers,
 mentoring relationships, activities sponsored by the Strome Entrepreneurial Center?)

Yes (1)

No (2)

Q14 If you answered yes to question 13, please describe the activity(ies) and your role.

Q15 I plan to participate in future co-curricular entrepreneurship experiences at ODU.

Strongly disagree (1)

Somewhat disagree (2)

Neither agree nor disagree (3)

Somewhat agree (4)

Strongly agree (5)

Q16 How confident do you currently feel in your abilities in the following areas:

	Not at all confident (1)	Not very confident (2)	Neutral (3)	Somewhat confident (4)	Extremely confident (5)
Risk and Uncertainty Management (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Innovation and Product Development (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interpersonal and Networking Management (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunity Recognition (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Procurement and Allocation of Resources (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Development and Maintenance of an Innovative Environment (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q17 Are you interested in participating in a brief one-on-one interview (to be conducted online at your convenience towards the end of the fall semester) to discuss your experiences with

curricular and co-curricular entrepreneurship programming (interview participants will receive a \$20 Amazon gift card)?

Yes (1)

No (2)

Q18 Is there anything else you would like to share or do you have any questions?

Appendix C

Research Participant Informed Consent Form

Study Title: Building Entrepreneurial Self-Efficacy: How Undergraduate Students Make Meaning of their Entrepreneurial Experiences

Principal Investigator: Chris R. Glass, Ph.D., Assistant Professor, College of Education, Department of Educational Foundations and Leadership, Old Dominion University

Investigator: Amy Kurfist, Doctoral Candidate, College of Education, Department of Educational Foundations and Leadership, Old Dominion University

Purpose of Research: The purpose of this research is to understand how participation in two or more instances of curricular and/or co-curricular entrepreneurship programming contributes to the development of entrepreneurial self-efficacy, or the level to which individuals believe themselves capable of successfully performing the tasks and roles of entrepreneurship, and shapes the future entrepreneurial choices of undergraduate students without a pre-existing business at Old Dominion University.

Procedures: As a participant in this study, you will participate in one, approximately 30-minute one-on-one interview. By participating in a one-on-one interview, you grant permission for the information collected to be used in the process of examining the development of entrepreneurial self-efficacy of female undergraduate students through the participation in entrepreneurship programming at Old Dominion University. The researchers will maintain confidentiality by removing any information from the results that might identify you. The information collected in this study may be used in future reports, presentations, and/or publications, however you will not be identified in the research.

Risks and Benefits: There are no foreseeable risks associated with this study. The benefits of this study include a greater understanding and the potential improvement of entrepreneurship programming for women at ODU.

Privacy and Confidentiality: Ensuring your anonymity is a primary concern of the study team, and your records will be kept private to the extent allowed by the law. Once disseminated, findings will be reported by aggregated theme or you will be assigned a pseudonym of your choosing. The data will be accessible only to the researchers associated with this study and the Institutional Review Board. The results of this study may be published or presented at professional meetings, but the identities of all research participants will remain confidential. Care will be taken to disguise markers of your identity such as your title, department, or any other biographical data. Although every attempt will be made to keep your identification private, some distinguishing responses that you share may reflect your identity.

Voluntary Participation and Withdrawal: Participation in this study is voluntary, and you have the right to choose not to participate in the study without consequence. Should you decide to participate now, you can later withdraw from participation in the study at any time.

Costs and Compensation: Upon completion of the one-on-one interview, participants will receive a \$20 Amazon gift card as compensation for their participation.

Contact information for questions and concerns: Please contact Chris Glass at (757) 683-4118 or via email at crglass@odu.edu or Amy Kurfist at (201) 314-9733 or via email at akurfist@odu.edu if you have any questions about this study. If you have questions or concerns about your rights as a participant in this research study, you should contact Dr. Laura Chezan, the current chair of the Darden College of Education Human Subjects Review Committee at 757-683-7055 or lchezan@odu.edu or the Office of Research at Old Dominion University at (757) 683-3460.

By signing below, you are indicating voluntary participation in this study and acknowledge that you may at any time: 1) choose not to participate in the study; 2) choose not to answer particular questions; and 3) discontinue your participation in the study at any time. You are attesting that you have read this form or it has been read to you and that you understand the form, the nature of the research study, and the potential risks and benefits. You will be given a copy of this form by the researcher for your records.

Your signature below indicates your voluntary agreement to participate in this study.

Research Participant Signature/ Date

Chris R. Glass, Ph.D., Principal Investigator/ Date
Old Dominion University

In addition, your signature below means that you voluntarily agree to allow your responses to be digitally recorded.

Research Participant Signature/ Date

Appendix D

Interview Protocol

Introduction Text

Thank you very much for participating in today's interview! The purpose of this interview is to learn about your experience with entrepreneurship programming and how it has impacted the level to which you believe yourself capable of successfully performing the tasks and roles of an entrepreneur, and your future entrepreneurial choices. After the conclusion of this interview, the information collected, along with data from additional interviews, will be categorized into themes and topics and subsequently included in a report on university entrepreneurship programming and entrepreneurial self-efficacy. Your personal information will not be connected to the results of this interview. By signing the informed consent form, you have agreed to participate in this confidential interview. Please take a moment to review the form you previously signed, and if you feel uncomfortable for any reason, you are free to conclude the interview at any time. If you have no further questions at this time, we'll begin.

Researcher Notes

Listen for and follow-up on any mentions of **risk and uncertainty management, innovation and product development, interpersonal and networking management, opportunity recognition, procurement and allocation of resources, or development and maintenance of innovative environment**. Follow-up with the student to draw out their description and meaning of the experience and the effect of the experience on the student, particularly as it may have related to a **mastery experience**, a **vicarious experience**, or **social persuasion** in the context of a curricular or co-curricular entrepreneurship activity.

- Prompts to draw out description and meaning: "Describe...", "Tell me more about", "what was meaningful about the experience for you?"
-
- Prompts to draw out the effect of the experience on the student: "How has [experience] shaped your goals?", "How has [experience] influenced how you see yourself?", "How has [experience] influenced how you approach entrepreneurship?"

Questions

1. **To start, I'd like to know about more about you and what got you involved in entrepreneurship.**
 - a. Tell me about your participation in [class/activity].
 - b. How did you decide to [take the class/participate in the activity]?
 - c. What did you expect to get out of the experience?
 - d. Has anything surprised you about your experience in the [class/activity]?
 - e. Have any experiences in [class/activity] been especially meaningful to you?

2. **Now I'd like to hear more about your feelings of accomplishment as an entrepreneur.**
 - a. How, if at all has your participation in [class/activity] helped you feel more accomplished as an entrepreneur?
 - b. **Follow-up questions as relevant**

3. **Now I'd like to hear more about how you've seen entrepreneurial success modeled by others.**
 - a. How, if at all, has your participation in [class/activity] provided you the opportunity to see entrepreneurial success modeled by others?
 - b. **Follow-up questions as relevant**

4. **Now I'd like to hear about your experience receiving feedback.**
 - a. How, if at all, has your participation in [class/activity] provided you the opportunity to receive coaching or evaluative feedback?
 - b. **Follow-up questions as relevant**

5. **Now I'd like to talk about your entrepreneurial goals for the future.**
 - a. **If freshman/sophomore/junior:** do you plan on participating in additional curricular or co-curricular entrepreneurship programming at ODU? What role do you see entrepreneurship playing in your future? **If senior:** What role do you see entrepreneurship playing in your career?
 - b. **For all:** How was your participation in entrepreneurship programming at ODU so far influenced these goals?

6. **Is there anything we've discussed today that you'd like to explore further?**

Conclusion Text

Thank you for participating in today's interview. As a reminder, the information collected will be used as part of a report on university entrepreneurship programming and entrepreneurial self-

efficacy. I will be providing you with a memo summarizing the main themes and take-aways from this interview. If you have any comments that you would like to share, please do not hesitate to contact me at the email or phone number provided in my email signature.

Post-Interview Memo (after web conference has been disconnected)

- Major themes of the interview
- Most interesting thing I learned in the interview
- Most surprising thing I learned in the interview
- Unclear statements for follow-up
- Suggestions for future interviews

Appendix E
 NVIVO Code Book Snapshot

Name	Files	References	
Entrepreneurial Future		8	13
Paying it Forward		2	3
The Hobbyist		4	5
Mastery Experience		7	12
Mastery - Environment		2	3
Mastery - Interpersonal Networking		8	8
Mastery - Opportunity		5	8
Mastery - Product Dev		6	6
Mastery - Resources		7	9
Mastery - Risk and Uncertainty		3	3
Personal Growth		3	3
Social Persuasion		10	15
Coaching - Environment		3	4
Coaching - Interpersonal Networking		2	3
Coaching - Opportunity		2	3
Coaching - Product Dev		3	3
Coaching - Risk and Uncertainty		2	3
Coaching - Resources		3	6
Vicarious Experience		7	11
Modeled - Environment		4	4
Modeled - Interpersonal Networking		2	2
Modeled - Opportunity		7	8
Modeled - Product Dev		1	1
Modeled - Resources		1	1
Modeled - Risk and Uncertainty		5	5

VITA**AMY KURFIST**

Old Dominion University

Darden College of Education Educational Foundations and Leadership

4301 Hampton Boulevard, Norfolk, VA 23529

EDUCATION**Old Dominion University**, Norfolk, VA

PhD Higher Education, May 2019

Dissertation: Student Global Mobility: *Building Entrepreneurial Self-Efficacy (ESE): How Undergraduate Students Make Meaning of Their Entrepreneurial Experiences*

Chair: Christopher R. Glass

Indiana University, Bloomington, IN

MBA, Marketing and Entrepreneurship, May 2009

Boston University, Boston, MA

BS, Mass Communication Studies, August 2002

PROFESSIONAL EXPERIENCE**Hanover Research**; Arlington, VA; Content Director; 8/18 – present**Needham & Company, LLC**; New York, NY; Vice President, Corporate Access; 2/15 – 5/16**Fountain House**; New York, NY Director of Special Events; 2/14 – 12/14**BMO Capital Markets**; New York, NY; Head of US Equity Marketing; 9/12 – 2/14**UBS**; New York, NY; Associate Director, ROADSHOWS • • 7/10 – 7/12**Bear, Stearns & Co**; New York, NY; Vice President, Roadshow Coordination; 2/05 – 7/07**Bear, Stearns & Co**; New York, NY; Control Group Paralegal; 2/05 – 7/07/03 – 2/05