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Looking at Innovation Dialogically: Teaching Communication and (Social) Change in the Innovation Engineering Program at the University of Maine

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**LOOKING AT INNOVATION DIALOGICALLY: TEACHING COMMUNICATION
AND (SOCIAL) CHANGE IN THE INNOVATION ENGINEERING PROGRAM AT
THE UNIVERSITY OF MAINE**

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A DISSERTATION

Submitted in Partial Fulfillment of the

Requirements for the Degree of

Doctor of Philosophy

(in Communication)

The Graduate School

The University of Maine

May 2018

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Dissertation Advisors: Dr. Nathan Stormer and Dr. Liliana Herakova

An Abstract of the Dissertation Presented
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Higher education institutions face two concurrent demands: preparing students for the job-market, while also developing informed and engaged citizens (Frey & Palmer, 2014; Gould, 2003). How universities reconcile these demands varies. The Innovation Engineering program (IE) at the University of Maine strives to both, “change the world by enabling innovation” (concern for social issues) and educate entrepreneurs (students) whose innovations reach markets quicker and at a decreased risk (capitalist orientation) (Hall, 2013; Kelly, 2014). The program uses a systems approach to innovation by teaching tools and methods for creating, communicating, and commercializing meaningfully unique ideas. Processes and contexts are important parts of a systems approach, yet within this program there is not a clear articulation of the various processes and cultural ideologies and contexts that enable or discourage particular orientations to communication, innovation and social change. This dissertation is a critical qualitative case study of one Social Entrepreneurship program (SE) – the IE program at the University of Maine. This critical case study aims to better understand such processes and

contexts through a focus on the meanings and practices of communication and social change as they are taught and experienced in IE. In this study, I first use articulation analysis (Hall, 1985; 1989) to expose the dominant cultural and ideological discourses embedded within IE's program documents. Additionally, I use relational dialectic theory (RDT) (Baxter, 2011; Baxter & Montgomery, 1996) to describe the discursive struggles and cultural ideologies embedded within the co-participants experiences. Finally, I employ critical communication pedagogy (CCP) to evaluate the descriptions of the discursive struggles and cultural ideologies and discourses that emerged. I find that two dominant discursive struggles emerged: dissemination-dialogue and integration-separation. I also find that although IE fosters an entrepreneurial spirit, the program privileges neoliberal values where the autonomous individual is prioritized. Based on the results of this dissertation, I propose a critical social entrepreneurship education model (CSE) for the IE program and other SE programs to consider embracing in order to reconcile the two demands of higher education of preparing students for the job-market and developing agents of social change.

DEDICATION

This work is dedicated to my mother, Bettyann Congdon, my father, Mark Congdon, Sr., and to all my former students during my time as a special education teacher in North Carolina. My parents taught me the importance of using my voice and talents to stand-up *for and with* others. My former students taught me the importance of grit and persistence. Despite all obstacles many of my former students faced, they continued to do their best and shine. You all are my inspiration, and why I will always be your advocate and an advocate for all students with disabilities. My mom, dad, and former students have inspired my line of work, and to them, I will be forever grateful for their continued confidence in me, even when I may have or continue to doubt myself. This is for you. Just as my parents and students inspired me, I hope my work motivates others to use their voice and strengths to stand-up and fight for justice.

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CHAPTER 1

INTRODUCTION

Setting the Stage

According to a recent study, 55% of undergraduate students reported that a concern for social issues was a major factor in determining where they wanted to work (Janus, 2015). This trend reflects two demands in and of higher education: preparing students for the job-market and developing informed and engaged citizens. A focus on career development responds to public demands for preparing students for the job market (Gould, 2003). At the same time, universities declare a commitment to develop tomorrow's agents of change to bring about positive social transformations in their communities (Fadeeva & Mochizuki, 2010; Harkavy, 2006). These two commitments, therefore, necessitate higher education pedagogies that are both practically-oriented and socially-engaged; pedagogies that navigate the tensions between, on one hand, capitalist/neoliberal demands of productivity and profitability and, on the other hand, social justice demands of transforming the very structures supporting inequality as a side effect of capitalism (Frey, Pearce, Pollock, Artz, & Murphy, 1996; Tufte, 2017).

Engaging such tensions, critical pedagogy and relational dialectics theory (RDT) (Baxter, 2011; Baxter & Montgomery, 1996; Giroux, 1988; Lather, 1998) offer unique lenses through which the current project explores an existing social entrepreneurship (SE) higher education program – Innovation Engineering (IE) at the University of Maine. I chose this program as a case study because its mission and curriculum strive to both “change the world by enabling innovation” (Babbitt, 2015) (concern for social issues) and educate entrepreneurs whose innovations reach markets quicker and at a decreased risk (concern for economic success). With this project, I seek to understand how an educational program that positions itself as a leader in

bridging social change and economic/career success teaches how to, “create, communicate, and commercialize” innovation (Hall, 2013; Innovation Engineering, n.d.; Wyke, 2013).

Informed by critical communication pedagogy (CCP), I aim to understand the opportunities and unintended consequences ushered in through SE programs such as Innovation Engineering (Fassett & Warren, 2007). The exploration of these programs is especially important at a time when innovation education spreads – seemingly uncritically celebrated – from business boardrooms into college classrooms and, recently, even into K-12 contexts (Gonzalez, 2017). Looking at Innovation Engineering as a case study, this project contends that dominant SE education models embrace neoliberal values and privilege entrepreneurship over social concern and social change. Neoliberalism is defined as, “the policies and processes whereby a relative handful of private interests are permitted to control as much as possible of social life in order to maximize their personal profit” (McChesney, 1999, p. 40). An education that embraces neoliberal values privileges market-based values and economic gain, without considering potential unjust consequences (Simpson, 2014). I intend to demonstrate how this privileging of neoliberalism is constructed through and accomplished in communication, as it occurs in IE’s documents, classrooms, and in participants’ reflections and recollections of experiences in the program.

First, however, it is important to understand how IE serves as a case study of SE education. Enos (2015) synthesized SE literature and explained that SE education programs share five basic tenets: 1) A SE education “seeks to combine academic lessons and real world applied experiences” (p. 11) by focusing on, “building skills and on teaching students the steps to organizing resources around solving” (p. 19) a problem; 2) There is an institutionalization of SE principles into the university curriculum by establishing majors, minors, and/or certificates; 3)

SE education emphasizes creating and sustaining social values, such as developing innovation incubators; 4) The SE curriculum development advocates a continuous process of adapting and learning; and 5) A SE education incorporates and teaches the importance of accountability and impact. Enos (2015) further discussed that 51% of universities in the United States and around the world use the terms *innovation*, *social innovation*, or *social entrepreneurship* to describe the work of their specific SE education programs. In the context of this study, innovation is used to describe the IE program at the University of Maine. Below, I review the history of IE at the University of Maine and explain how the program meets Enos' five-prong definition of SE education.

Historical Overview of the Innovation Engineering Program

The IE program at the University of Maine was started in the fall semester of 2005 through a partnership with Doug Hall, the founder of *Eureka! Ranch* – an organization that helps multinational corporations to invest in ideas for profit (Hall, 2013; Kelly, 2014). IE was created in response to the shared recognition that the state of Maine needed to retain their students since many left for employment opportunities out of state. Furthermore, Maine fell behind other states in terms of creating a culture of innovation and economic growth (Kelly, 2014). Thus, the University of Maine recognized the need to do something in response to the lack of both economic opportunities and an entrepreneurial culture within the state.

The University of Maine created the program to help students be prepared for the job market, specifically those who majored in liberal arts-related disciplines. IE's goals were for students to be able to develop a set of skills that enables them to articulate with confidence their talents, abilities, and goals, and to apply what they learn to both their future careers and their social and civic responsibilities (Hall, 2013; Innovation Engineering, n.d.; Kelly, 2014; Wyke,

2013). The University of Maine understood that many students, especially liberal arts majors, were not competitively prepared for the job market and did not understand how they could translate their educational experiences into meaningful employment opportunities (Kelly, 2014). The pressures to ensure that students were ready for their jobs also came from external influences, such as the University of Maine System and the state and the federal government. Thus, the program focused on teaching students how to use a systematic approach to, “create, communicate, and commercialize” meaningfully unique ideas by developing lessons that have a real-world, hands-on application (Innovation Engineering, n.d.). IE’s design met the first criterion of a SE education program, since it combined academic lessons with a real-world problem-solving approach.

After its inception, the program received aid from the University of Maine System and a curriculum diploma grant from Venture Well, a nonprofit organization dedicated to supporting programs that teach entrepreneurial skills to students from all fields, so that they can bring those skills to the market (see venturewell.org). As a result, the IE program developed a minor as well as undergraduate and graduate certificates at the University of Maine, meeting the second criterion of a SE education program (institutionalization). IE has since expanded and has become more institutionalized by: 1) developing and incorporating an undergraduate/graduate summer fellowship program, Innovate for Maine; 2) hosting a K-12 Invention Convention where students learn to create and develop their ideas; and 3) providing a dedicated business incubator for students and the community to develop their ideas, products, programs, etc. with the goal of stimulating economic growth and advancement in the state (Hall, 2013; Kelly, 2014). Thus, this meets the third criterion of a SE education model (sustained outreach for innovation). IE created

and sustained social values through its work in the community, which is beyond their required academic curriculum.

Additionally, the program has evolved over the years in its approach to teaching innovation skills and currently relies on a blended learning model. In preparation for class work, students view lecture videos online; in class, students complete projects with the instructor, who serves as a coach (Hall, 2013; Wyke, 2013). The program has also increased its course offerings since 2005 from one to six (see Appendix G for a timeline of important dates of the IE program). Such an increase highlights how the program adapted and evolved, which is the fourth criterion of a SE education program. Within the program/curriculum design and institutionalization of IE, there was an emphasis on measuring impact and accountability. Here, the skills taught in IE emphasized quantifying/measuring the impact of the idea created by students (Hall, 2013; Kelly, 2014; Wyke, 2013). Additionally, the IE program is licensed to over 10 campuses across the United States and Canada, and is expected to continue to grow and expand. Moreover, how the program evolved and adapted was based on the data of student evaluations, the work produced at the Eureka Ranch, and the academic performance of students, among other types of data sets (Hall, 2013; Kelly, 2014; Wyke, 2013). The focus of measuring impact and being held accountable highlights how the program met the fifth criterion of a SE education program (Enos, 2015).

Purpose of the Study

The purpose of this study is two-fold: 1) to critically examine the IE program at the University of Maine as a case study of SE education, and 2) to contribute to germane and timely research on how CCP can enhance and transform the practical dimensions of SE frameworks, attending to issues of fostering social change. This harks back to the broader question of how

universities can work to educate for and effect social change, while simultaneously preparing students for the job market. Focusing on the IE program, I explore a deeper understanding of processes and cultural contexts within education that enable or deter participants from advancing personal, professional, institutional, and social change. Utilizing a critical lens allowed the invisible and taken-for-granted ideologies and assumptions within the IE program to become evident, and thus, offers opportunities for stakeholders to reflect and possibly (re)imagine new possibilities for conceptualizing, teaching, and practicing IE.

In this study, I utilized several communication frameworks to guide this project and the overall analysis. I employed relational dialectics theory (RDT) to describe the meanings and tensions present in IE's classrooms and co-participants' experiences and the overall dominant discursive struggles that emerged (Baxter, 2011). I also utilized articulation theory to unpack the cultural discourses (distal already-spoken) embedded within IE program documents, which allowed for understanding what cultural discourses shaped co-participants' telling of their experiences (Baxter, 2011; Hall, 1985; 1989). Subsequently, I applied a critical lens using critical communication pedagogy (CCP) to explore the pedagogical approaches to teaching communication and (social) change within the IE program in order to identify the possible spaces and moments where CCP can be incorporated and actualized within the already existing IE program. With this approach, I explored the meanings and practices within SE education and considered their implications within and beyond the classroom.

First, I analyzed IE program curriculum and other program materials to understand what ideologies and worldviews are being articulated and the cultural discourses embedded within the articulations. At the same time, I conducted participant-observations during a student training about the tenets of the IE program. Second, I interviewed students, instructors, leaders of the

program, alumni of the program, and university administrators. Finally, I conducted two focus groups (one with current students and alumni, and one with instructors and program leaders).

Connecting SE, CCP, and Dialogue/Dialectics

Social entrepreneurship (SE) programs in higher education emerged as an inventive response to complex social needs by combining strategic business methods with efforts to address community problems (Johnson, 2003). Bridging career development with social transformation, SE education, “promises positive social impact by applying business techniques to organize and measure the work accomplished and creating innovative approaches which are sustainable, not just one-off interventions” (Enos, 2015, p. 9). A SE student learns to become “society’s change agent, as a pioneer of innovation that benefits humanity, characterized by ambition, driven by mission, are strategic, resourceful, and results oriented” (Brock & Steiner, 2009, p. 22). Students apply the skills they learn and develop in their classes to bring innovative perspectives, talents, and resources in order to challenge social problems. As such, SE directly connects to the idea of using innovation to facilitate meaningful change. Within SE, the concept of innovation is embedded and taught mostly from a skills-based perspective. Here, innovation attaches to the “social” aspect of SE and is known as social innovation (SI). SI is conceptualized as a, “collective creation of new legitimated social practices aiming at social change,” where social entrepreneurs, the students, are the actors driving social change through/with/in the innovation (Cajaiba-Santana, 2014). SIs encompass both material and non-material dimensions. The actual innovation, its mechanism, and product are the material dimensions of SIs, while changes of attitudes, behaviors, or perceptions that result in new social practices are non-material dimensions of the SIs (Cajaiba-Santana, 2014; Osburg & Schmidpeter, 2013). Through SE, SI takes form when a new idea establishes a different way of thinking and acting that makes it

possible to situate and promote changes in/with existing paradigms (social systems, structures, and mindsets).

Undergraduate students' strong interest in doing social good, paired with growing emphasis on developing job-ready skills, contributes to an increase in both SE and SI university programs worldwide (Enos, 2015; Janus, 2015; Osburg & Schmidpeter, 2013). As SE and SI programs within higher education continue to grow globally, scholars and educators alike have called for attention to specific considerations when developing SE and SI programs (see Brock & Steiner, 2009; Cajaiba-Santana, 2014; Enos; Janus; Jensen, 2014; Osburg & Schmidpeter, 2013; Zietsma & Tuck, 2012). These considerations can be summed up in three important questions: 1) How well are students able to apply the concepts of SE and SI to their respective fields once they graduate with a degree?; 2) How are SE and SI taught and practiced among various cultures and contexts?; and 3) How does SE education connect to other fields and majors outside of business? These questions are important to consider in light of data showing that a majority of bachelor's degrees in 2015 were awarded in vocational or occupational areas such as education, business, communication, and more recently, sports management and computer-game design (Selingo, 2015). These majors may have a more "practical" job-ready approach to teaching, which may naturally align to the goals, methods, and aims of SE. Specifically in relation to the third consideration above, it is important to consider how SE may partner with heavily enrolled majors other than business. Moreover, since the increased call for scholars to analyze SE in terms of its effectiveness with enacting positive social change, it is especially productive to explore the combination of SE and other service-learning courses typically related to humanities and social science majors, such as communication, education, history, and English (Enos, 2015).

One disciplinary connection worthy of exploring is between communication and SE education. A recent assessment conducted by the American Academy of Arts and Sciences Humanities Indicator revealed that the discipline of communication is posting strong growth in relation to undergraduate majors, undergraduate degrees awarded, student popularity, and the number of higher education institutions offering the degree (Undergraduate and Graduate Education, 2014). Courses in group communication, persuasion, strategic communication, interpersonal communication, intercultural communication, business communication, leadership communication, media theory, digital rhetoric, health communication, and organizational communication translate well into, and are beneficial in, our current digital and global economy (Schmidt, 2014), therefore opening possibilities for connections to SE education. Furthermore, communication education should be a defined part of SE education and, considering communication's influence in interconnected spheres of life and work, it is worth exploring how communication is taught in SE programs and how models of teaching communication can further SE goals.

Cameron (2000) acknowledged that communication in modern society is frequently seen as a technical and essential skill. Effective communication is considered the key to successful relationships and professional lives. Such a skills-based approach to communication aligns to the aims of SE that focuses on developing methods and skills that can be evaluated and improved to enact positive change. Here, communication is embedded in all facets of the social entrepreneurship process through a strategic circular (interactive) loop, where the goals and aims that are developed by the social entrepreneur (student) are continuously being evaluated against the social justice mission created for meaningful and lasting change (Kickul & Lyons, 2012). Therefore, the process for communication is conceptualized as interactive with a purpose to

further the progress of social change and relevant social entrepreneurship skills. The goal of having measurable outcomes that account for social change is accomplished through continuous feedback from a variety of sources (and/or stakeholders) throughout the interactive process. However, this strategic communication process embedded within a SE education fails to capture the complexity and dynamism of both communication and meaningful social change, since such processes are closely aligned with dominant neoliberal values. This potential pitfall is important to consider, particularly regarding the complex issues of power, privilege, difference, and collaboration within communication and how they are framed or understood within SE education.

From a critical pedagogy perspective, Fassett and Warren (2007) cautioned against conceptualizing and embodying communication as a strategic process in the classroom since it views “power” in the classroom as being measured and conceptualized as a static characteristic that teachers need to use to their (and their students’) advantage. In other words, power in the classroom is “given” to the instructor to use intelligently or poorly, while (“good”) students follow instructions with compliance in order to accomplish instructor-determined goals or tasks. With this view of power, disagreement with and resistance to the strategic approach to communication in the classroom is interpreted as “deviance, as decontextualized (mis)behaviors that, at first blush, may seem arbitrary or irrational” (Fassett & Warren, 2007, p. 42). In response to static conceptualizations of power and linear models of communication, Fassett and Warren (2007) called for a critical communication pedagogy (CCP) in the classroom, stating that students and teachers, as citizens, have a “responsibility of exploring power and privilege, even - and especially if - that process implicates [their] own work” (p. 42). CCP is especially relevant when understanding and (re-)envisioning educational programs in which students and

practitioners are seen as “agents of change” who interacted with multiple stakeholders. The commitment of CCP is to develop deep reflection as part of the communication process and social responsibility of education - for students and teachers, in and outside of the classroom.

Critical pedagogies, in general, are concerned with understanding and transforming culture and oppressive cultural/ideological processes; thus, CP draws from many disciplines in which Cultural Studies is key (Fassett & Warren, 2007; Frey & Palmer, 2014; Giroux, 2012; hooks, 1994; 2003). Additionally, articulation analysis is a type of cultural studies analysis that exposes cultural ideologies and taken-for-granted assumptions (Hall, 1985; 1989; Slack, 2006). Therefore, articulation connects to CCP and existing critical scholarship around social change, where all contribute to different levels of analysis by describing and exposing dominant cultural systems of meanings – discourses.

Specifically, RDT seeks to understand the cultural discourses (distal already -spoken utterances) that are embedded within ideologies (Baxter, 2011), while articulation works to expose the taken-for-granted and hidden assumptions in those oppressive ideologies with the goal of (re)articulating and (re)imagining new ways of knowing/doing (Hall, 1985; 1989; Slack, 2006). As such, in this study, I first used articulation analysis to examine dominant cultural ideologies and discourses in IE’s program documents/materials, which is discussed in further detail in Chapter Three. Knowing and exposing the dominant cultural discourses and ideologies that were articulated within the IE program’s documents promotes a better understand of what cultural discourses and ideologies are reproduced, asserted, and/or transformed in IE-ers' reports on experiences in the program. Incorporating different levels of analysis in this study provided new and exciting possibilities for better understanding how IE and SE education models may be used for positive social change.

SE and CCP may, on the surface, share a commitment to social change, yet when it comes to conceptualizing, practicing, and teaching communication, their visions may appear rather contradictory. The goal of the present project was not just to resolve such a contradiction, if it is even there, but to explore its creative tensions and the possibilities that exist for an educational program that aims to foster both business success and positive social change. I am interested in exploring which CCP commitments may be present and/or valued within SE education, as embodied in the Innovation Engineering program. I conducted this exploration by looking at the discursive struggles and dialectical tensions in relation to conceptualizing, practicing, and teaching communication and social change. I conducted this study in the context of IE's specific process, which emphasizes that innovation can be spearheaded by anyone through a systems approach of "creating, communicating, and commercializing" ideas (Hall, 2013; Innovation Engineering, n.d.; Kelly, 2014; Wyke, 2013).

It would be naïve to assume that the pursuit of this mission is absent of tensions, but this study took a communication perspective that acknowledges such tensions as inevitable and necessary forces, rather than oppositional and/or negative "problems" (Baxter, 2011; Baxter & Montgomery, 1996; Montgomery & Baxter, 1998; Mumby, 2005). This perspective and how it shaped the analysis in the present study is discussed in more detail in Chapter Two. In brief, a dialogic orientation toward communication research, which is also foundational for CCP, focuses on exploring discursive struggles, presuming that tensions are always present in productive dialogues with one another (Baxter, 2011; Baxter & Montgomery, 1996; Montgomery & Baxter, 1998). Dialogue here is not a practice among/between individuals, but a discursive process that is analyzed for meaning-production with cultural implications. This study is informed by a critical dialogic perspective, allowing me to examine the definitions, practices, and links between

communication and (social) change in the IE program. Here, CCP is used to interpret and critique what is happening in IE and how it is happening.

As such, this study is explicitly critically orientated and informed by a constitutive model of communication, where communication constructs, influences, and reshapes ways of thinking, knowing, and feeling about context-specific social and physical worlds (Craig, 1999). A constitutive approach is interested in how communication “produces and reproduces shared meanings” and perceives language as anything but neutral (Craig, 1999, p. 125). In this way, communication is dynamic, and meaning is subjective and embedded within a particular context (Tufte, 2017). A constitutive critical dialogic approach to studying communication and/in education recognizes that tensions produce meanings and social realities and ultimately lead to discursive struggles. Thus, such tensions do not necessarily need to be resolved, rather they can be explored for the both/and potentialities they create within such struggles (Martin & Nakayama, 1999; Tufte, 2017).

From a critical dialogic perspective, as performed in CCP, this study examined meanings, perceptions, and experiences of communication and social change education within the IE program at the University of Maine. I sought to understand the ideologies and practices foregrounded in IE’s teaching of how to “create, communicate, and commercialize” innovation (Hall, 2013; Innovation Engineering, n.d.; Kelly, 2014; Wyke, 2013) and how this educational approach may articulate (with) social change. Through such an examination of the discursive struggles, subsequent dialectical tensions and their meanings, and the possibilities provided within the IE program, I offer a conceptualization of a critical social entrepreneurship education (CSE) and the role of (teaching) communication in affecting social change within SE education.

Organization of Dissertation

To better explicate the focus, goals, and process of this dissertation, the following chapter includes a review of literature relevant to the purpose of this project. In Chapter Two, I discuss the critical dialogic perspective by focusing on germane research in critical theory, critical pedagogy (CP), and critical communication pedagogy (CCP). Additionally, I examined relational dialectics theory (RDT), specifically Baxter's conception of the utterance chain, discursive struggles, and dialectical tensions while exploring the application of RDT from an organizational level. Next, I reviewed research on innovation education, concentrating on SE and the principles of communication that are embedded within innovation education, while making connections to the IE program. I end Chapter Two by discussing the connections between RDT, CCP, and SE scholarship and situate how this research is important to this study and answering the three proposed research questions.

Chapter Three focuses on the methodology of the study and the specific methods of data collection and analysis. Here, I first discuss the methodology of the study by providing a rationale for using a critical qualitative methodological approach and the specific elements of this approach in the present study – articulation analysis and critical ethnography. From a perspective that combined CCP with RDT, this approach allowed me to explore cultural, organizational, and interpersonal discourses and processes of meaning production typically hidden within shared and embodied ideologies, taken-for-granted assumptions, and distal already-spoken utterances. I discuss the specific data collection and data analysis processes. The appendices include the specific research protocols and tools used in this study (Appendices A through F).

Chapter Four uses articulation to examine the U.S. cultural discourses (distal already-spoken) embedded in the ideologies present in IE program documents (internal and external), such as IE course materials, syllabus, the IE website, and other relevant IE documents. I found that the cultural discourses of individualism, community, and rationality (Baxter, 2011) emerged most often in the ideologies imbedded within the program documents. These cultural discourses articulated in IE's documents reinforce a neoliberal relationship between new forms of educating (training) and the (re)production of a hierarchical labor force for our new economy (Frey & Palmer, 2014).

Chapter Five provides a summary of the results by discussing dominant discursive struggles, dialectical tensions, and praxis patterns that emerged in each of the themes. I identified four main themes (in ascending order): 1) IE praxis; 2) communication as engineered dissemination focused on economic outcomes/returns; 3) (re)engineering possibilities for (social) change; and 4) communication as engineered programmatic identity work. The findings suggested the constant and underlying struggles of Integration-Separation and Dissemination-Dialogue as the most prevalent. However, I found that the discursive struggle of Dissemination-Dialogue was most often considered and studied as a dialectic tension (Papa, Singhal, & Papa, 2006). This finding of dissemination-dialogue as a struggle and not as a dialectic contributed new understandings of RDT, which was particularly important from a communication perspective, and not forgetting that dissemination-dialogue is not either/or but both/and (Baxter, 2011). I also found that the discursive struggle of expression-nonexpression did not emerge explicitly. Additionally, I found that although the discursive of struggle uncertainty-certainty emerged sporadically and connected to other dominant discursive struggles, it was not as

dominant as the struggles of integration-separation and dissemination-dialogue. As a result, I did not focus on the moments when the discursive struggle of uncertainty-certainty emerged.

Chapters Six, Seven, and Eight discuss, in detail, the findings of the study with regards to the three central research questions. Chapter Six focuses on how communication is conceptualized and taught within IE. Here, I found that the dominant discursive struggle in the theme of communication as engineered dissemination focused on economic outcomes/return is dissemination (centripetal) over dialogue (centrifugal), whereas in the theme of communication as engineered programmatic identity work, the dominant discursive struggle was integration-separation. Chapter Seven answers how (social) change is conceptualized and taught within IE. Here, the discursive struggle of integration-separation was dominant, where the theme of (re)engineering possibilities for (social) change arose. Chapter Eight discusses the connections between communication and (social) change within the educational philosophy and teaching in IE, where both discursive struggles of dissemination-dialogue and integration-separation emerged in the theme of IE Praxis. Together the findings in these chapters suggested that although IE fostered an entrepreneurial spirit, IE's engineering of communication and (social) change embraced neoliberal values and failed to capture the complexity and dynamism of both communication and meaningful social change that recognized various cultural processes/contexts.

The concluding Chapter Nine reviews this study's purpose, methods, and findings. Here, I review the limitations of this study, offer directions for future research, and conclude with a discussion of the implications of this research for creating education and communication programs dedicated to preparing students to both succeed professionally and to be agents of social change. Specifically, I propose a critical social entrepreneurship (CSE) model for IE and

SE guided by a community-based participatory action research (CPBAR) framework and offer a definition of (social) entrepreneurship from a critical communication framework. A CSE approach to innovation, communication, and social change would work to balance the discursive struggles of dissemination-dialogue and integration-separation by embracing social justice orientated help (Huber, 2013). I end every chapter with a critical reflection addressing my experiences, perceptions, and positionality related to my experiences of being an educator, an IE student, and a researcher throughout this dissertation process.

My first introduction to the IE program was during the first year of my Ph.D. program in 2014. My graduate advisor at the time informed me that I may want to consider looking into adding the IE graduate certificate to my plan of study, since the program aligned to my pedagogical and research interest with investigating how higher education, specifically in the communication field, educates students for their futures. I then met with two of the program leaders and instructors of the IE program to find out more information about the program's focus, goals, and pedagogy. Two things stood out to me during and after my initial meeting. First, I was fascinated by how excited and passionate the two program leaders were about the IE program and what the IE program was attempting to do (i.e., teach students a set of practical skills that will hopefully allow them to create future economic opportunities for themselves and others in Maine). The passion by the two program leaders was contagious, and I felt inspired to

take an IE course, so I signed up for INV 510¹ for the upcoming semester. Second, I was intrigued by how the IE program valued teaching students a set of practical skills that they can (hopefully) use for their future career aspirations. IE's practitioner-based approach to teaching students a set of skills also aligned to aspects of my own undergraduate education as a communication studies major concentrating in public relations (PR), organizational communication, and rhetoric.

As a first-generation college student and someone who grew up in poverty in rural Pennsylvania, I appreciated IE's practical focus with preparing students for the job-market. As someone who struggled financially to pay for my own college education because of growing up in poverty and not being able to rely financially on my parents, I had to take-out thousands of dollars in education loans. Since I acquired over \$100,000 in education loans, I needed my college education to teach me a set of practical skills that would allow me to be employable. My major in communication studies afforded many opportunities as an undergrad to apply course content, specifically in my PR courses, to the "real-world" by working in peer-teams for local nonprofits. By the time I graduated with my B.A. in communication studies, I had developed effective practical written and oral communication skills resulting in a professional portfolio of numerous published PR writing samples that "proved" I had the communication skills needed to work in the PR profession.

¹ INV 510 is the first of three graduate courses for the Innovation Engineering Graduate Certificate at the University of Maine. INV 510 focuses on teaching graduate students all the skills in both the Create undergraduate course and the beginning skills in the Communicate undergraduate course.

In addition to gaining practical communication skills in undergrad, my communication studies major also incorporated a liberal arts education into all courses by teaching students critical thinking skills and the importance of building meaningful relationships with others. Here, communication ethics was centered and emphasized in classes, where students also learned how (strategic) communication may oppress and/or also be a vehicle for positive social change. However, after meeting with the two program leaders and doing additional research on the IE program prior to enrolling in INV 510, it was not clear to me how, if at all, IE also incorporated a liberal arts component into their courses (i.e., critical thinking skills, ethics, etc.) like my undergraduate Communication program. Despite this, I still decided to enroll in INV 510. I felt that the IE program was doing something interesting with how and what they taught students and saw potential connections to my own interest with understanding how communication programs in higher education can both teach students a set of practical skills for their future careers and how to be civically engaged. I felt that IE was on to something with how we educate students in higher education. This was the beginning of my interest in specifically exploring IE as a case study of a SE education program.

CHAPTER 2

LITERATURE REVIEW

Overview

As outlined in the previous chapter, the Innovation Engineering (IE) program provides a kind of social entrepreneurship (SE) education. By examining IE at the University of Maine, the present study is a case study of SE education that aims to identify the ways in which the IE program represents and perpetuates larger cultural discourses representative of hidden and oppressive ideologies and the possibilities of rearticulating such discourses in more just ways. Expanding on the understanding of discursive binaries, such as good/bad, just/unjust, either/or, critical communication scholarship seeks to identify and interrogate the limits of such discursive categorizations and the possibilities of recognizing the both/and. As such, understanding communication as existing on a spectrum, a discursive struggle, is important for the purpose of this study.

IE implements various internal assessments, such as course evaluations, student and instructor reflections, and students' academic performance and progress, among others to understand and improve the overall IE program and students' educational experience. Additionally, existing studies of IE focused on: 1) whether or not the specific tools and methods IE uses to teach the concepts of creating, communicating, and commercializing are effective (Miller, 2013); 2) the historical overview of innovation and entrepreneurship in Maine's economy and the development of IE as an emerging innovation and entrepreneurship education model (Kelly, 2014); and 3) understanding IE's educational approach to teaching creativity and innovation (Wyke, 2013). These studies suggested that overall, IE is an effective education program that: 1) uses appropriate scientific tools and methods that help students create and

market ideas of innovation (Miller, 2013), 2) provides a framework that may help create economic growth in Maine's rural communities (Kelly, 2014); and 3) incorporates a practical approach of teaching creativity and innovation to students through the dissemination of knowledge and skills (Wyke, 2013).

Given this context, what can the present study contribute? This dissertation offers a unique approach that adds to existing assessment and research, and seeks to understand the program and its practices from a critical communication pedagogy perspective, identifying connections between innovation, social entrepreneurship, and higher education. To give a better sense of how this approach contributes valuable understanding of and directions for IE program development, in this chapter, I situate the study within the theoretical frameworks that inform it and review existing research on SE education, which include critical pedagogy (CP) perspectives. Chapter Two provides a review of the literature related to my dissertation study, pulling from Relational Dialectics Theory (RDT), Critical Communication Pedagogy (CCP), and Social Entrepreneurship (SE). I first provide an overview of a critical dialogic perspective to studying communication. Next, I review relevant research on CP and CCP. Then, I discuss scholarship related to innovation in education and SE. Finally, I end with a chapter summary proposing the three research questions before providing a critical self-reflection.

Critical Dialogic Perspective to Communication

Generally, critical approaches to theory and research seek to expose social and political inequalities and to honor the specific contexts of those who are being marginalized, in other words, tipping the scale towards an equitable balance. Critical approaches to communication are additionally committed to developing better conceptions of the interconnections and tensions among knowledge, identity, and power within system(s) of meanings (Martin & Nakayama,

1999). Communication is understood as, “both the principal constitutive element in the move toward understanding and truth and as a means for the exercise of power and domination in society” (Mumby, 1997, p. 11). A critical dialogic perspective recognizes that meanings are produced through/in the persistent interplay of multiple voices that both embody and produce discursive struggles that result in internal and external tensions (Baxter, 2011). Transformation of the social order may occur through recognizing, understanding, and working within the structures and struggles that may be present.

Martin and Nakayama (1999) explained that a, “dialectic approach accepts that human nature is probably both creative and deterministic; that research goals can be to predict, describe, *and* change; that the relationship between culture and communication is, most likely, both reciprocal and contested” (p. 13). Scholars who take a dialectic and dialogic approach to studying communication and its social role criticize researchers’ reliance on over-simplified binaries that tend to prioritize one side of the dichotomy while marginalizing the other. This prioritization leads to, “the inevitable hierarchization implicit in dualistic construction” (Baxter & Hughes, 2004, p. 363), especially since our language tends to embody a dualistic understanding based on a subject-object (e.g. innovative and unimaginative) (Collinson, 2005). Responding to simplified dichotomies, Baxter and Montgomery (1996) discussed that a “relational-dialectics” approach to communication, also known as relational dialectics theory (RDT), understands social life as a “dynamic knot of contradictions, a ceaseless interplay between contrary or opposing tendencies” (p. 3). RDT evolved from Bakhtin’s theory of dialogism, where the view of dialogue focuses on the relational dynamics surrounding issues of language, its use, and meaning production, where unity and difference are both at play with and against each other (Baxter, 2011; Holquist, 2002). Dialogue occurs within and across particular

utterances and utterance chains by emphasizing how the voices of others become woven into what we² think, say, write, and embody (Bakhtin, 1981a, 1981b, 1986, 1993). Through utterances and utterance chains, our systems of meanings take hold, evolve, and are/can be called into question.

From an RDT perspective, meaning-making is a process that develops from discursive struggles - the interplay of centripetal and centrifugal social forces in relating. Discursive struggles of RDT include, but are not limited to, integration-separation, certainty-uncertainty, and expression-nonexpression. These discursive struggles emerge in various dialectical tensions – the expressions of these struggles, which emerge from different, often competing, discourses, worldviews, and/or systems of meanings (Baxter, 2011). In Chapter Five, I discuss the dominant struggles that emerged from this study, which include the core struggle of integration-separation, which is already identified as one of the three main struggles of RDT. According to the data, I also found the struggle of dissemination-dialogue, which previous research (Papa, 2012) classified as a dialectic tension. Reclassifying dissemination-dialogue as a struggle, I provide a definition and explanation of the internal and external tensions that are situated within this struggle.

Additionally, Baxter (2011) suggested and demonstrated how contrapuntal analysis, a method focused on the interplay of opposing tendencies in narrative stories that capture the

² It is important to mention that I use the pronoun “we” throughout the dissertation as a call to action to other critical scholars and educators through various rhetorical and reflective questions and statements, with the hope of encouraging reflection among the readers’ own teaching and learning praxis. The use of the pronoun “we” also embodies and punctuates my own thoughts, reflections, and reactions to the literature. To highlight these reflective moments and calls to action, I italicize the text.

both/and aspect of Bakhtin's dialogism, can be applied to understand the relationship between centripetal and centrifugal forces working in/through cultural discourses. The centripetal force focused on the dominant, normative, discourses and the centrifugal force represents marginalized discourses (Baxter, 2011). Negotiating the centripetal-centrifugal struggle so that centrifugal forces are not (as) marginalized is where communication has its greatest potential to foster change. Centering the centrifugal forces may allow for the re-articulation of distal already-spoken utterances and reimagine distal not-yet-spoken utterances that result in a more equitable and just world.

Rudick and Golsan (2014) called for scholars to apply a critical lens to RDT research, especially in educational contexts, since RDT offers a conceptual language that is sensitive to power, and therefore aligns with critical scholarship. Therefore, applying a critical lens to RDT allows us to investigate our social world through centering power relations within the tensions so that *we* may reveal and critique the forms of domination within the various relational discourses. Critical communication research explores power as both "politics of everyday life" and "politics of epistemology" (Mumby, 2000). Thus, critical communication scholarship is concerned with both micro-performances of power on the interpersonal level and the connections among such performances and macro-level social, political, and economic processes and ideologies (Craig, 1999). According to Best and Kellner (1991), "dialectics for critical theory describe how phenomena are constituted and the interconnections between different phenomena and spheres of social reality" (p. 224). Baxter (2011) saw these interconnections as central to the meaning-producing processes within the dialogic utterance chain – cultural/macro-discourses are referred to as "distal already-spoken" and "distal not-yet-spoken," while the relational/interpersonal histories and futures are "proximal already-spoken" and "proximal not-yet-spoken,"

respectively, which I discussed in greater detail and in relation to the IE program in Chapter Four.

It is important to note that RDT does not necessarily align to the critical or interpretive traditions directly, though it can be used in those frameworks, but aligns with the dialogic tradition (Baxter, 2011; Montgomery & Baxter, 1998). Deetz (2001) explained that the dialogic tradition of communication has two main assumptions: 1) this approach centers the systems of meanings, or discourses, by which social realities are produced and shaped, and 2) identity is viewed as fragmented and always in flux, as the individual self is decentered. Deetz (2001) completed an organizational communication study using the dialogic tradition focusing on managerialism and organizational decision making and asserted that most interactions are simply reproductions of dominant discourses or actions. However, sometimes the other is embraced in dialogue and we can imagine other possibilities and produce something new (Deetz & Simpson, 2004). Instead of perceiving dialogue as a means to dissolve difference, we should engage in dialogue to discover and navigate difference. In the present study, a critical dialogic perspective guided the description of meanings present in IE discourses. Specifically, articulation and RDT was used to identify and make sense of the discursive tensions and cultural discourses present in IE texts, including programmatic documents and interviews about experiences in/with IE. With this application of RDT, I explored what it meant to “create, communicate, and commercialize” innovation, how are such meanings produced, how they are performed in IE practices, and what are the possible implications of such performances.

A dialogic approach to research, focusing on dialectics or the dynamic interplay of tensions and contradictions, has mostly been applied to interpersonal communication focusing on relationship development (Baxter, 2011; Baxter & Hughes, 2004; Baxter & Montgomery, 1996;

Montgomery & Baxter, 1998), and on connecting dialectical tensions to interpersonal and organizational contexts (Bridge & Baxter, 1992). However, scholars have increasingly focused on connecting dialectical tensions to organizational communication, specifically organizational change (Kellett, 1999), organizational conflict (Jameson, 2004), organizational contradictions (Tracy, 2004), organizational resistance (Mumby, 2005), organizing for positive social change (Papa, Singhal, & Papa, 2006), collaborative tensions within interorganizational relationships (Lewis, Isbell, & Koschmann, 2010), tensions within oppressive organizational structures (Hopson & Orbe, 2007), and leadership in organizations (Collinson, 2005). Much research has also looked at dialectics in group settings, specifically with group tensions (Adelman & Frey, 1997; Johnson & Long, 2002; Kramer, Benoit, Dixon, & Benoit-Bryan, 2007; Kramer, 2004). Researchers have also explored dialectical tensions within educational contexts, specifically looking at the tensions between students as learners and the subject taught (Palmer, 1998), teaching deeply versus teaching broadly (Arnett & Arneson, 1999), the teacher-student relationship (Rawlins, 2000), the dialectical tension of integration–separation of mature students going back to college (O’Boyle, 2014), and dialectical tensions in the classroom (Prentice & Kramer, 2006).

Through these studies, *we* learn that RDT helps *us* understand how *our* communication, regardless of the context, is influenced by our past, manifests presently, and is geared towards our future (Baxter, 2011). Cooks and Warren (2011) revealed how our communication creates and maintains our larger systems of meaning that already and always positions some as outsiders and thus undeserving of acknowledgement. What is missing from the existing research is how a critical approach to RDT in an educational context may work to destabilize the systems of meaning that solidify injustice. Because educational institutions are key sites for socialization

and cultural proliferation (Alexander, 2006; Freire, 1970, 2000), it is especially important to examine communication from a critical dialogic perspective in educational contexts.

Examining education with a critical communication lens, *we* can begin to understand influences of power and ideology in this context and the tensions present. As such, *we* can ask questions like: *What is being said in the classroom? What kind of teaching/learning is occurring and how? What is being taught? Who is saying and teaching it, and for whom? What are the dis/connections of the pedagogical approaches to social change that exist? How can students and teachers strive for a dialogical communication educational framework that challenges dominant cultural codes in communication, while simultaneously developing the communication skills students need in our global society?* This study takes on Rudick's and Golsan's (2014) call for communication scholars to examine how a relational communication framework in communication and instruction research may work to disrupt oppressive tensions in our systems of meaning.

As previously mentioned, this study explored one specific SE program, the IE at the University of Maine, using RDT to describe the discursive struggles, meanings, and tensions present with how it understood and conceptualized communication and teaching innovation, the implications of what was taught and practiced, and how CCP offers a framework for rearticulating and transforming the IE program into a critical SE education. In the next section, I discuss a branch of critical praxis³, known as critical pedagogy, that encourages scholars to investigate phenomena within and outside of the classroom and informs particular teaching

³ Freire (1970/2000) defines praxis as reflection and action. Fassett and Warren (2007) apply this to critical pedagogy by defining praxis as a reflexive process that explores how, we as educators and scholars, create the events that we observe (reflection) and on doing pedagogical practice (action).

practices. A critical approach is suitable for this case study since I am interested in examining the tensions within the IE program by uncovering the meanings and practices of communication.

Critical Pedagogy & Critical Communication Pedagogy

Although by no means homogeneous in their approach, influential thinkers and practitioners of critical pedagogy (CP) (e.g. Freire, 1970/2000; Giroux, 1988; hooks, 1994; hooks, 2003; Lather, 1998; McLaren, 2003; Shor, 1996) have viewed society as divided by unequal power relations, which are both perpetuated and legitimated by dominant cultural practices. Education is embedded within structures and practices of inequality. Educational limitations and achievements are then internalized as individual failures and accomplishments, furthering an ideology of meritocracy (Bartolome, 2004). Indeed, the structure and practices of contemporary education in the United States militate against CP's goals of emancipation, social justice, equality, transformation, and understanding that language matters (Fassett & Warren, 2007; Frey & Palmer, 2014). Much of the literature on critical pedagogies focused on what could or should be done within and beyond classrooms to support social justice and emancipatory goals. Much of this work was highly theoretical, focusing on the ultimate, transformative ends. Other work was eminently practical, proposing specific classroom strategies or instructional techniques that promote critical praxis (e.g. Nylund & Tilsen, 2006). Between the scholarship that described critical educators' instructional approaches (e.g. Breunig, 2009) and the texts offering guidelines (whether explicit or implicit) for teaching courses with social justice goals (e.g. DiAngelo & Sensoy, 2014), scholars have suggested the advantages of co-constructed learning goals, collaborative group work, journal writing, student dialogue, and the use of multiple forms of evaluation. Ultimately, such strategies can provide opportunities for critical reflection and link political issues with personal experiences (Lewison, Flint, & Van Sluys,

2002) while also potentially redefining the role of the teacher (Breunig, 2005; Suoranta & Moio, 2006).

The usefulness of such strategies in effecting CP learning goals and outcomes, however, remains uncertain. For instance, such approaches do not distinguish themselves as critical alternatives to generic student-centered pedagogies (Breunig, 2011). Breunig (2005) noted that strategies associated with critical pedagogies (e.g. reflection, experiential activities, presentations, group work) can be implemented devoid of social justice goals, reducing critical pedagogies to “tokenism” (p. 120). Critics suggested that critical pedagogies may not only fail to disrupt hegemonic educational practices, but may, in fact, reproduce the very “relations of domination” they intend to challenge (Ellsworth, 1989, p. 298). In Ellsworth’s seminal article on the dilemmas of practicing critical pedagogy in an undergraduate anti-racism course, she highlighted this essential dilemma, noting:

[W]hen participants in our class attempted to put into practice prescriptions offered in the literature concerning empowerment, student voice, and dialogue, we produced results that were not only unhelpful but exacerbated the very conditions we were trying to work against, including Eurocentrism, racism, sexism, classism, and ‘banking education.’ To the extent that our efforts to put discourses of critical pedagogy into practice led us to reproduce relations of domination in our classroom, the discourses were “working through us” in repressive ways and had themselves become vehicles of repression. (p. 298)

Other scholars have echoed this critique (e.g. Gore, 1993; Ruiz & Fernandez-Balboa, 2005) and have expanded Ellsworth’s discussion of the contradictions inherent in the practice of critical pedagogies (Evans, 2010; Gur-Ze’ev, 1998; Shor, 1996).

How to adequately research the effects of critical pedagogies on student-teacher dynamics in education is similarly contested. Braa and Callero's (2006) study offered a case in point. Applying innovative, critical practice to their sociology courses, Braa and Callero facilitated the development of a students' tenant union. They transformed class sessions into union meetings, with student-coordinated agendas and leadership with students leading each class sessions. The professors stepped back and served as facilitators and advisors to students. Through this structure of the classroom environment and set-up, students experienced the tension involved in disrupting power dynamics. Despite this performance-based indicator of success, Braa and Callero underscored the challenges involved in understanding students' experiences of the course. Relying solely on traditional course evaluations to gauge the effects of this critical and engaging learning environment for students, the scholars note the inadequacy of such assessments: "the goal of critical pedagog[ies] is to enable emancipation through personal and social transformation. Success in this regard is difficult to measure using standard course assessment tools" (Braa & Callero, p. 366). In this particular case, Braa and Callero were ultimately unable to represent the specific, subjective understandings students developed when they experienced a critical pedagogy in praxis, since participatory methods of "assessment" were not developed or used for the primary mode of "measuring" student and teacher learning.

An important question to reflect on is that since Braa and Callero (and other critical educators) were starting with the presumption that our education system does not work and reinforces injustices, why use its traditional tools to gauge critical pedagogies on student-teacher learning? More problematic is that Braa and Callero did not offer their own reflections during the process of co-participating with students; instructor reflection is an important commitment and practice of engaging in critical pedagogies (Fassett & Warren, 2007; Frey & Palmer, 2014;

Giroux, 1988; Lather, 1998). However, Braa and Callero focused solely on opportunities “for students to apply sociological knowledge to the transformation of society,” and de-voided themselves from engaging in their own critical praxis (p. 360). By focusing solely on increasing participation and developing critical social consciousness among students through critical reflection and action, and not on the instructors of the course, Braa and Callero may have instead reinforced hegemonic classroom and societal practices that they were attempting to change.

Evaluating the effects of (presumed) critical pedagogies is complicated by the fact that traditional assessment tools and curricular designs, like those valued and used in many communication education classes, composed part of the very system that critical communication educators seek to problematize. Hendrix, Jackson, and Warren (2003) discussed how “educators cannot effectively teach students if we fail to consciously reflect upon how, why, and for whom we design our overall departmental curriculum and the corresponding individual course content” (p.180). But even when critical communication educators adopted alternative teaching, assessment, or research strategies, they may still fall short of fully opening a dialogic space of considering students’ experiences (Orner, 1992). As a result, how students – and even more so, teachers – understood their learning and experiences of CP remains poorly articulated in the existing literature.

Despite these critiques, CP does provide opportunities for students and teachers to examine power and privilege that is not prioritized or valued in a traditional ‘non-critical’ pedagogical approach, and thus allows for the possibilities of a more socially just world (Fassett & Warren, 2007), especially when considering language. Fassett and Warren (2007) expanded on CP by developing critical communication pedagogy (CCP), which regards mundane communicative practices as constitutive and focuses on questions of identities and cultures as

produced and contested in communication. At its best, a commitment to a CCP praxis may work to create open and caring dialogic environments that serve as sites for critical and difficult conversations about privilege (Cummins, 2014).

Drawing on the critical tradition, critical communication pedagogy (CCP) conceptualizes communication from a social constructionist framework that seeks to understand the taken for granted systems, power structures, beliefs, language, and ideologies through which certain realities are privileged over others (Mumby, 1997). At the postsecondary level, communication instructors and students have both been well disciplined by years of schooling. From this perspective, instructors and students must be dedicated to a rigorous struggle to understand “what is” in relation to “what could be” (Kincheloe, 2008) while examining “who benefits” from undemocratic and oppressive institutions and unequal social relations. Critical communication pedagogy (CCP) is focused on raising critical consciousness of institutional power and the role language plays.

CCP is rooted in the recognition that “the unreflective acceptance of technological/instrumental models of teaching and learning is not only limiting but dangerous,” since the process of instruction begins with the view that instructors are charged with transmitting specific communication knowledge to students (Sprague, 1993, p. 350). Sprague (1992; 1993; 1994; 2002) has challenged communication scholars to develop a more critical inquiry of communication pedagogy by looking at the role of language and power in knowledge and the classrooms. CCP expands CP by recognizing that language matters in raising consciousness of the relationships among communication, power, and justice and by focusing on mundane practices of communication (Fassett & Warren, 2007). As a field of study and as a praxis, CCP works to restore justice through communicative practices that enable critical

reflection (consciousness-raising) to uncover and challenge ideological distortions. This, in turn, enables political action by liberating us from institutional oppressive ideologies and systems (Craig & Muller, 2007).

Fassett and Warren (2007) developed ten fundamental commitments of CCP: 1) In CCP, identity is constituted in communication (pp. 39-41); 2) Critical communication educators understand “power as fluid and complex” (pp. 41-42); 3) “Culture is central” to CCP, not additive (pp. 42-43); 4) Critical communication educators embrace an emphasis on practical, mundane “communication practices as constitutive of larger social structural systems” (pp. 43-45); 5) Critical communication educators embrace social, structural critique as it places specific, ordinary communication practices in a meaningful context (pp. 45-48); 6) Language and analysis of “language as constitutive of social phenomena” is central to CCP (pp. 48-49); 7) Reflexivity is an essential condition for CCP (p. 50); 8) Critical communication educators embrace pedagogy and research as praxis (pp. 50-52); 9) Critical communication educators welcome in their classrooms and in their writing, within their communities, and with their students, research participants, and co-investigators-a “nuanced understanding of human subjectivity and agency” (pp. 52-54); and 10) Critical communication educators engage “dialogue as both metaphor and method” for our relationships with others (pp. 54-56). Reflecting (on) these commitments, CCP constitutes communication education as a humanizing vocation where *we* are continuously locating and engaging *our* position in context to both teaching and research. What these 10 commitments mean is that CCP revolves around studying both the formal and mundane practices of the communicative *construction* of power and identity in the classroom (Cooks, 2010). As such, CCP aligns nicely to a critical dialogic approach, specifically the tenth commitment that Fassett and Warren (2007) outlined – understanding dialogue as both a metaphor and method of

CCP. A critical dialogic approach sees value in tensions and listens for them, as they may punctuate a moment of learning, and ultimately a moment of transformation.

From a CCP perspective, ideological difference and socioeconomic context are constitutive of what happens in schools and classrooms. Therefore, instructors “appraise education for pain, for inequity, and seek to act accordingly, which is to say **with** each other, not on, for, or to each other” (Fassett & Warren, 2007, p. 26-27). Put another way, CCP recognizes power as distributed, fluid, and multifaceted and highlights dialogue as both a method and a metaphor for education (Fassett & Warren; Sprague, 1994; Wood & Fassett, 2003). Therefore, classrooms are sites where *we*, students and teachers, must enact *our* joint “responsibility of exploring power and privilege, even and especially if that process implicates our work as teachers and researchers” (Fassett & Warren, p. 42). Additionally, commitment seven highlights reflexivity as an active process of situating knowledge, locating it in the temporal, personal, and sociopolitical contexts while continuously examining how *we* think and the consequences of *our* thoughts (Cooks, 2010; Lather, 1998). It enables *us* to explore how *we* create *our* realities vis-a-vis our assumptions, values, past experiences, and language choices (Fassett & Warren, 2007).

Students and teachers are seen as co-creators of knowledge where *our* identities, experiences, and personhood are valued and listened to through/in dialogue, which highlights Commitment 10 of CCP (Fassett & Warren, 2007; Freire & Macedo, 1995). Dialogue is a process of inquiry and mutual humanization (Freire, 1970/2000) that students and teachers, “undertake together to (de)construct ideologies, identities, and cultures” (Fassett & Warren, 2007, p. 55). CCP, then, is a praxis of engaging in and understanding interactions in educational contexts, whereby culture and power are always central concerns continuously performed and interrogated in (mundane) performances of teaching and learning. A main area of focus for CCP

scholarship that attempts to shine light into this has been the ways education and educating are embodied and performed, specifically as raced (Alexander, 1999; Simpson, 2007) and gendered (Cooks, 1997), and with regards to (normative) sexuality (Lovaas, 2010) and (dis)ability (Fassett & Morella, 2008).

Cummins (2014) found that by drawing attention to power structures and their mundane embodiments, critical communication educators who embrace and practice CCP may ultimately be creating more caring environments, which may also increase students' academic success. Cummins defined care as, "engaging in relationship with another in order to see from his/her worldview and to respond to him/her in dialogic, respectful ways in an attempt to help him/her become the best possible version of him/herself" (2014, p.43). Embodying the commitments of CCP may, thus, produce transformational (personal) change. Here, caring is a reciprocal process and requires the one caring to embody dialogue, empathy, and respect, while also requiring those being cared for to embody these same processes but also being responsive to the one doing the caring and to the experience of caring. Pedagogy of care is not universal, but instead relational and attentive to context where communication is constitutive.

In another CCP study, Moreman and Non Grata (2011) examined how instructors learn from and mentor students who are undocumented. Using Moraga and Anzaldúa's theory of the flesh and CCP, the authors provided an en fleshed voice of the daily struggles, frustrations, and fears many undocumented students experienced and showed how *our* academy worsened those fears and frustrations through *our* educational practices in and out of the classroom. Although care was not explicitly discussed, the embodiment of care between the teacher-students is present throughout, especially as they reflected on, investigated, and engaged in dialogue on how educational practices of non-White bodies was connected to the idea of cleanliness and filth,

where, “the educational transformation, it is implied, is what brings these individuals into their sanitary new lives” (p. 313). Here, they provided an example with how educational practices required, “Passports of Education.” Specifically, they reflected on and paid attention to those “serving” academics and “cleaning” our hotel rooms at conferences, which are usually brown bodies, where these brown bodies remove, “dirt with their considered-to-be contaminant bodies” (p. 313). The scholars highlighted the discrepancies in academic theories, especially those critically orientated, with how academics continue their daily (oppressive) practices of presenting their research in their elite bubble while not necessarily reflecting on, challenging, and calling out the daily (oppressive) tensions that are present within the conference structures/systems of meaning and other educational practices themselves.

Moreman and Non Grata (2011) offered a call to action for *us* to critically examine *our* relationships with others and *our* classroom and institutional practices so that *we* may begin to challenge (and change) *our* oppressive power structures. They ended by emphasizing that, “out of dirt and filth, out of the fecund comes new growth and new life. Ranges in somatics, languages, histories, and citizenships, we are a cultural group that alters our definitions as we go... Even if you wash us all away, we will just come back” (p. 317). So, I ask, as critical scholars and educators: *How can we take Moreman and Non Grata’s call to action literally? How can CCP scholars and practitioners work with others in the educational context to foster critical consciousness and engagement? How can we begin to work through the tensions that may be present in our educational and institutional practices in and out of our classrooms that may limit the opportunity for meaningful relationships to emerge with/between students-teachers?*

Harbrech (2013) offered one such approach with how academics provide training to Graduate Student Teachers (GTAs) so that *we* may challenge and change *our* oppressive academic and educational practices. Harbrech's (2013) study used CCP to examine a GTA program in communication that uses Boal's Forum Theatre to teach new teachers about issues of power and privilege, and how these new teachers may implement and teach from a CCP framework. The study also discussed the potential challenges and opportunities with implementing Forum Theater into GTA trainings that may not be focused on challenging oppression. Harbrech (2013) found that using Forum Theater to teach new teachers on issues of power in the classroom provides a, "space for a group to collectively take charge of the fears that oppress them internally and collaborate upon multiple strategies to approach these challenges that are present in their reality in a productive manner" (p. 93). Here, GTAs learn how to employ and go against a banking approach to teaching (Freire 1970, 2000), while collaboratively developing new teaching strategies and ideas that work to expose issues of power. Through these collaborative discussions and performative activities, Harbrech explained that GTAs began to realize how their own identities have not only influenced their teaching practices, but have afforded them privileges (2013, pp. 94-97). Through this study *we* learn how departments and instructors may redesign curricula to explore, challenge, and change teaching practices, while also exploring and investigating their own identities and experiences and how these intersect. Additionally, through such performative activities, instructors and students may begin to develop a sense of care as part of learning by exploring their own identities and educational experiences, as examined by Cummins (2014). A contextual pedagogy of care is emphasized in Harbrech's (2013) insight that,

[T]here is no one ‘right’ answer for a given situation; there are many ways to approach the challenges we face in life, and even the ones that we choose that do not go the way we expect can ultimately add to our knowledge and our personal and professional growth. (p. 97).

Simonis (2016) conducted a study on how international students studying in the United States experience and negotiate silence and voice. Simonis (2016) sought to understand how voice and silence are conceptualized, calling into question the binaristic nature that is usually associated with these. Using CCP and post-colonial theory, she argued that voice and silence in the United States educational system have multiple meanings and can be understood as different forms of communication and participation. Simonis’ (2016) study is important in taking a focused communication approach – exploring meanings and their constructions – to consider the possibilities of creating more equitable and inclusive learning environments. She drew attention to the limitations of “universal” systems that disregard students’ various entry points and ways of participating in the educational process. In response to these limitations, she called for culturally-responsive teaching. Culturally responsive teaching (CRT) uses the “cultural knowledge, prior experiences, frames of reference, and performance styles of ethnically diverse students to make learning encounters more relevant to and effective for [students]” (Gay, 2010, p. 31). Scholars have found CRT to be beneficial with fostering the academic achievement and engagement of culturally diverse students, specifically with mentoring students in higher education (Lucey & White, 2017), teaching students in online educational environments (Woodley, Hernandez, Parra, & Negash, 2017), and increasing academic success among African Americans students with disabilities (Wilson & Gatlin, 2016). Educators who embrace CRT create shared learning experiences through understanding students’ cultural experiences by connecting the curriculum

to students' backgrounds, establish connections with families/local communities, and view cultural differences as strengths (Aronson & Laughter, 2016; Bassey, 2016; Landorf & Nevin, 2007; Mustian, Lee, Nelson, Gamboa-Turner, & Roule, 2017). Here, learning how to actively listen and understanding others' experiences (empathy) is a needed first step in order to create a more dialogic (and caring) classroom and university environment. CRT, like CCP, points out that in order to understand the implications of an educational system and a teaching approach, we must first understand how culture is conceptualized and engaged – something I continue to consider in my exploration of IE.

However, Kahl Jr. (2017) discussed how CCP is criticized for not having an applied focus to pragmatically solve real problems in *our* world. He called on CCP scholars to develop pragmatic applications in and out of the classroom when engaging in CCP. This study took Kahl Jr.'s call to heart by developing and applying CCP in a more pragmatic manner, specifically looking at the discursive struggles that are articulated in/through the shared utterances, resulting internal and external dialectical tensions, and producing a clear separation between the commitments of CCP and SE. Ultimately, this project seeks to reimagine and balance the pragmatic applications of SE with CCP. I now turn to discussing this alternative pragmatic approach to educating students for future careers while also developing their sense of citizenship – social entrepreneurship education models.

Innovation Education and Social Entrepreneurship Models

As mentioned previously, SE and SI education is growing in the United States and around the world (Enos, 2015; Janus, 2015). Despite the various types of programs and meanings of social entrepreneurship and how these entrepreneurs use/apply SI, Kickul and Lyons (2012) offered the following as a shared vision connecting the various meanings of SE and SI:

[A] social innovator [i.e. student] adds value to people's lives by pursuing a social mission, using the processes, tools, and techniques of business entrepreneurship. She or he puts societal benefit ahead of personal gain by using the 'profits' generated by her or his enterprise to expand the reach of her or his mission. The social entrepreneur's vehicle for pursuing her or his mission could be for-profit, nonprofit, or public in its structure, or it could be hybrid, or any of these. (p. 19)

There is an assertion that SE is the "only true sustainable mode of humanitarianism in place today" to solve our world's most pressing problems through socially-minded innovation (SI) (Brock, Steinder, & Jordan, 2012, p. 90). Within a SE and SI education program, students learn the tools and processes of social entrepreneurship toward creating social innovations and becoming entrepreneurs. This aligns to IE's goal of helping students develop an innovative mindset and teaching them the skills needed to create meaningfully unique ideas, products, services, and/or programs for their future careers (Wyke, 2013).

Miller (2013) provided an investigation into the IE program's effectiveness of the specific practical tools and methods they use to teach the concepts of creating, communicating, and commercializing. To do so, Miller (2013) reviewed experimental treatments in academic scholarship. The IE program Miller analyzed for his study focused on a partnership between the Hollings Manufacturing Corporation and a local university (not the University of Maine's IE program) called the Hollings Manufacturing Extension Partnership (MEP) program. Students in the MEP program were required to enroll in the IE program in order to gain employment at the corporation post-graduation. The goal of Miller's thesis had two purposes: 1) "Determine whether or not the IE program techniques" (p. 38) [i.e. the tools, methods, and educational praxis of the program] work and are appropriate with accomplishing the goals and skills IE teaches; and

2) Provide an academic study to “validate it [IE] as a whole” (p. 38). Miller wanted to find out if IE’s approach to teaching innovation and marketing and the tools that were taught in the Create, Communicate, and Commercialize courses were supported by existing academic research.

Miller (2013) found that combining the specific tools IE uses to teach Create skills (i.e. Mind Maps, stimulus, TRIZ, groups, etc.) may result in compounding improvements in both quality and quantity of the ideas that are created. The approach to teaching the Communication skills (simplicity, honesty, repetition, providing quantifiable proof, etc.) in the IE program are found to help, “strengthen communication when crafting any message, not just advertisements ... [and that] ... educational effectiveness [of these tools] is almost entirely dependent on the students’ ability to understand and appreciate the material being taught” (p. 31). Miller also found that the tools used to teach the skills of Commercialization (i.e. do one thing great, Four-Woodlock Equation, etc.) can influence customer decisions as well as be able to predict the potential success or failure of a new product, which may save time and money. Through this study, Miller discovered that most of the academic literature found that the specific techniques that IE uses work at a fundamental level, but it is not clear how these tools or methods used by/of IE interrelate and/or may influence each other or how they are contextualized by students and instructors in the various realms of their lives.

What is interesting, yet concerning, is the literature that was reviewed focused on the specific individual methods and tools, and not on the systems or educational approach that the program takes holistically. Moreover, the literature that Miller (2013) reviewed is all post-positivistic in its theoretical and methodological approaches - experimental-scientifically tested for statistical significance. Miller acknowledged that, “observational studies are sometimes less well-accepted, as was noticed by the author both at the IE workshop and in conversations with

employees” (p. 6). This is problematic, especially since communication research is not examined and, at the same time, communication is a central skillset and a course within the IE program. Additionally, focusing only on post-positivistic quantitative research eliminated any discussion on the educational, relational, cultural, and/or human experiences and dimensions that may be found in the literature about IE’s approach to teaching these individual methods/skills of create, communicate, and commercialize. The research then lended itself to looking at each of these skills/tools as individual parts and not in relation to one another. Thus, a holistic-relational and cultural view of understanding the implications of the methods that IE uses is not clearly articulated or understood.

Finally, through the MEP partnership between the university and the local corporation of Miller’s (2013) study, the university became the means for offering corporate training. Here, the priority and focus are on the university to provide a service to a local corporation that meets the corporation’s needs, and not necessarily on learning beyond the context of the corporation’s needs. Although the MEP partnership may have been a good idea on the surface, since students were offered employment at the local corporation once the IE program was successfully finished, this partnership may be problematic, since the educational goal is to develop students’ vocational skills and to socialize them into corporate culture, rather than on developing critical thinking skills. This career-focused orientation reinforced a neoliberal approach to education, which may have limited students’ opportunities post-graduation, because students are taught to apply skills in a specific narrow context. Such narrow focus, though professing itself to be career-oriented, may actually limit other employment opportunities that call for skills that tend to be developed and gained in a liberal arts education (Frey & Palmer, 2014). Additionally, it did not appear that students in the MEP partnership are taught how to create meaningfully unique ideas for social

change and/or develop their sense of community and civic engagement, since the focus is only on developing their career skills in the context of the local corporation. *We* come to understand from this study that the IE program did use tools that are valued in a corporate-manufacturing setting and also are “validated” by scientific experiences from a variety of fields, but the tools/methods lacked a clear and coherent interrelation. *We* are left wondering if what students learn may be meaningful beyond the local corporation context and/or actually work towards developing an innovative mindset where students may be able to apply the skills learned to create a more socially just world.

Alternatively, using semi-structured interviews and surveys of students and instructors, Wyke’s (2013) dissertation examined the University of Maine’s IE program’s educational focus by describing the student experiences of the curriculum and the pedagogical approaches that IE uses. She found that the program’s pedagogical focus is constructivist, since IE taught the concepts of creativity and innovation by having students use a hands-on approach where they work in groups to develop their critical thinking and problem solving. Wyke defined a constructivist learning environment where, “students are required to employ cognitive processes and to participate actively in the construction of new knowledge by integrating new information with prior learning and experience” (p. 77). Wyke emphasized that creativity is a desired skill in the workforce and commended the IE program’s ability to cultivate creativity as a skill through action-orientated approaches to learning. She posited that developing students’ cognitive abilities through experiential learning and activities improved their creativity skills. Wyke conceptualized creativity as an internal psychological trait that can be materialized in the classroom and formatively assessed, “from multiple interactive and iterative cycles of learning, assessment, feedback, and reflection” (p. 6). Additionally, she claimed a flipped-classroom contributes to

students' feeling of confidence in their mastery of the skills taught. However, Breunig (2005, 2011) argued that a "hands-on" action-orientated approach to learning did not mean that meaningful experiential learning has occurred. In order for meaningful experiential learning to occur, it must be paired with CP, so that students and teachers engage in reciprocal dialogue that prepares students to apply the skills learned on their own terms (Breunig, 2005, 2011).

Helping students develop an innovative (Enos, 2015) and/or sustainable mindset (Woodman, 2012) are features generally taught in SE programs, such as IE. One could argue that innovation and sustainability are also needed for positive social change (Enos, 2015; Woodman, 2012). Therefore, using a CCP lens to examine the IE program as a case study of SE also helps clarify what, if any, components of this program already embrace a social justice framework, the process of how students create innovative ideas, and the communication embedded within it.

Echoing broader critiques of CP and CCP, the SE education perspective believes that the more critically orientated approaches to education, "have fallen short because of lack of attention to civic goals, commit insufficient time and resources to developing civic skills and fail to pay attention to assessing outcomes" (Enos, 2015, p. 46). SE education attempts to fill this gap by emphasizing the importance of goals and using strategic business and communication methods to achieve the goals set. As one application of SE education, the IE program also attempts to fill this gap of CP and CCP by both preparing students for the job-market while also teaching them a skill set that they can use for (social) change (Hall; 2013; Kelly, 2014; Wyke, 2013). What is not always clear in the SE and IE literature is how "failure" is measured. There is something to be said about the difficulty to measuring social change itself. The pressure to "prove" the ideas are moving toward social change in the duration of an IE or SE education program is another neoliberal push to quantify deliverables (Fassett & Warren, 2007; Frey & Palmer, 2014; Tufte,

2017). There have been multiple SE education initiatives that are considered successful in addressing important social issues, even though the problem may not have been completely solved (Hess, 2006; Sandler, 2010). It is important to remember that in CCP, social change is a verb ... ongoing ... uncertain, changing, ebbs and flows, etc. (Fassett & Warren, 2007). What is important to examine within the context of IE as a case study of SE education, more generally, is if the program allows students to enter into a social change process and relate to it on their own terms.

There have been other critiques of the SE education approach. Dees (2012) explained that SE educational methods may undermine their initiatives and goals by overemphasizing and focusing on either charity or problem solving. He argued for a more holistic approach to SE education that encompasses both a service (and what he called charity) and a problem-solving model that seeks a long-term solution and not on one or the other. By just focusing on charity, Dees (2012) argued that long-term social change is unlikely since the social entrepreneur [i.e. the student] came into a community to solve a problem for them and not with or guided by them, and thus never truly solved the social issue that initiated the SE intervention. A potential significant “pitfall” of not having this holistic approach to an SE education is that it may create conditions of “dependency” instead of “self-determination” within communities that are being “helped” or “serviced” (Enos, 2015).

Responding to the noted disconnect between intentions and results, there is a growing consensus among SE educators, professionals, and scholars that local conditions, including political, environmental, and cultural, need to be considered when engaging in social justice work since these problems cannot be solved with a straightforward and clean fix (Enos, 2015; Goldsmith & Burke, 2011; Hobbes, 2014; Jensen, 2014; Morozov, 2013; Zietsma & Tuck,

2012). Recognizing the complex and dynamic nature of solving pressing social issues was not previously identified within the SE education model as explicitly (Enos, 2015; Jensen, 2014; Zietsma & Tuck, 2012). Furthermore, how structural factors, such as culture, power dynamics, politics, language, money, etc., should be addressed within an SE education for creating innovative ideas continues to be debated (Enos, 2015; Zietsma & Tuck, 2012). In this context, it seems that CCP, with its focus on context, culture, and power can offer a helpful perspective on rethinking and reconceptualizing SE. This project looked at one specific case study of SE to explore the ways in which CCP commitments and practices may already be present and/or how they may help transforming SE education.

Jensen (2014) acknowledged the challenges of a SE education, when it comes to evaluating its impact in various contexts. Specifically, Jensen argued, when applied to the humanities, a SE education model should take the “holistic person perspective” (p. 250). Through conducting a case study using primary data gathered from quantitative course evaluations, interviews and observations of a SE graduate class in the humanities department at a university in Denmark, Jensen found that SE education programs focused too much on evaluating and assessing independent courses, programs, or modules, and thus did not take a broader perspective to evaluating the potential impact of a SE education. Here, SE education focused too much on an individual unit, person, or program, and not a collective approach to assessing the potential impact. This critique of a SE education is similar to the limitations of the studies from Miller (2013) and Wyke (2013), as they focused on the individual unit and not on the collective experience or approach within the IE program.

Jensen (2014) acknowledged that SE education programs, “affect student learning outcomes in different ways in different contexts and often disconnected from course time and

space” (p. 350). She contended that it is valuable to understand and investigate how students both practice the commitments and concepts in SE education courses and in their daily life, and thus need to be viewed more holistically. The holistic person perspective is derived from situated learning and is also similar to the culturally-responsive learning model discussed previously, which both assume that students learn through engaging in social practices, where both thoughts and actions take place in culturally and socially structured domains (Bassey, 2016; Gay, 2006; Lave & Wenger, 1991). Here, learning involves the whole person in connection and interaction with others in and with communities, which is extended in space and time. Situated learning connects to CCP by emphasizing community (learning as belonging), practice (learning as doing), identity (learning as becoming), and meaning (learning as experience) (Coker, 2016; Fassett & Warren, 2007; Lave & Wenger, 1991). Thus, learners are constituted as “persons-in-the-world” (Jensen, 2014, p. 357). Recognizing this, I assessed where IE falls on this “scale” of compartmentalized—to-person-in-the-world learning.

Also from a critical perspective attentive to context, Pache and Chowdhury (2012) emphasized that SE education needed to embed identity work beyond the course content and experiential learning. They acknowledged that some students may struggle with accepting the tenets of SE education and bridging these concepts into the various sectors/fields of interest due to their previous educational and social experiences, reactions of other students and their families, and doubts about potential “low-class” professional opportunities with lower salaries due to doing more social justice/public service type of work (Pache & Chowdhury, 2012, p. 505). Similarly to Petriglieri and Petriglieri’s (2010) call to attend to developing students’ SE identity, Pache and Chowdhury (2012) emphasized that programs and professors should not force students to adopt an identity of a social entrepreneur, but should provide them a safe space

to reflect, self-clarify, and affectively process what a social entrepreneur identity may feel like. Pache and Chowdhury's approach views identity as dynamic, where a SE identity can be chosen since the SE educator does not force the ideological viewpoints of a SE education on students, but guides students' exploration process. This is similar to CCP's view of identity as evolving and changing, informed and shaped in/with/by communicative behaviors (Fassett & Warren, 2007).

The pedagogical approach, as advocated by Petriglieri and Petriglieri (2010) and Pache and Chowdhury (2012) with a focus on teaching/developing a student's SE identity, embodies aspects of a pedagogy of care, since the professor is not forcing students to adapt or change to an SE identity but encourages a self-reflective process where the professor supports the students' development and decisions (Cummins, 2014). This pedagogical approach is another inherent tension within the literature. *How then, if even possible, could a SE education adopt a more critical approach to identity and its ideologies without colonizing? How can these various tensions be brought to light, examined, challenged, and changed? After all, if creating a more socially just world is the goal, how may these differences be acknowledged, reconciled, and engage in dialogue with each other?*

Summary of Literature Review and Research Questions

Tufte (2017) discussed the various tensions within the literature on communicating for (social) change. He offered an approach that centered dialogue from a critical pragmatist perspective. Tufte (2017) outlined four key components that are needed for bridging communication and social change, not only by individual agents of change but also within/by the larger organizational structures themselves. First, he suggested the necessity to understand communication in a "holistic and ecological manner" that emphasizes a "practice approach" (p.

21). Second, Tufte (2017) explained that it is important to acknowledge the embeddedness and contributions of media to social and political spaces. Third, Tufte (2017) emphasized the need to, “clarify how to understand social change,” which he described as a, “complex and often contested process” (p. 21). Finally, the fourth component addressed issues of agency and governance, which are, “based on the citizen-driven social change processes that emerge from the development of localized knowledge bases, information systems and communication practices” (Tufte, 2017, p. 21). These four components aligned to the various commitments of CCP, especially the importance of centering dialogue as a method for understanding the dynamic nature of meaning-making, while continuing to value local knowledge (Fassett & Warren, 2007). Specifically, from a CCP perspective, the present study addressed two of the needs outlined by Tufte (2017) with regards to SE education: it clarified the understanding of social change within a particular SE educational program, and it assessed and imagined a holistic conceptualization of communication that may work to further social change.

Tufte (2017) argued that participatory communication is both a means and an end, and he approached communication and social change from a perspective that provided, “the links between long-term social change agendas, with their long-term strategies, and short-term insurgencies, with their here-and-now tactics” (p. 130). Like Fassett and Warren (2007), Tufte (2017) highlighted the need to question the taken-for-granted assumptions that suggest the process of organizational development inherently means that there is a commitment to social justice, especially considering that most organizations are narrowly focused on their “singular impact” instead of the larger issues of social change (p. 144). By examining the role of narratives (individual, organizational, and cultural), Tufte (2017) looked at the connection between the discursive and dialogic process of social change to the doing of such change in a real-world

context. This is where CCP has the possibility to intersect with and inform/transform a SE education approach with ideas of innovation by better recognizing, understanding, and examining various power dynamics that may be involved in the local, historical, cultural, social, political, and environmental contexts when addressing social issues.

Despite the various theoretical differences and assumptions of both CCP and SE education, both share a stated purpose of creating a change in the world, emphasizing how students and instructors should best engage with their communities as professionals and citizens. Tufte (2017) called for a, “new paradigm and praxis in communication for social change” that must, “be rooted in a more inclusive, people-centered and radically participatory development paradigm” (p. 166). Similarly, Enos (2015) provided an overview of the literature on how a critical community-orientated approach to education (i.e. service-learning) and SE education, “have much to offer to each other and that expanding definitions and ways to consider this work should characterize the next generation of community engagement” (p. 3).

Moreover, Woodman (2012) developed a pragmatic educational model that combines both a social justice and job-skills approach for how educators may help foster and develop a “sustainability mindset” for students. In this model, sustainability has potentiality and education is viewed as a process that facilitated addressing the various social, relational, and environmental conditions that are connected with unsustainable social thoughts and behaviors. Teaching a course with the tenets of a sustainability mindset, “encourages self-awareness as a way to appreciate the power of creativity, vitality, and collaboration as alternatives to oppressive or conforming forms of power” (Woodman, 2012, p. 242). A sustainability mindset nurtured reflexivity and praxis; it did not provide students with closed categories and critiques of their ideologies/beliefs and associated behaviors, but instead coached them into questioning the very

social conditions and structures that may close off potentiality, which closed off our continuous process of becoming. Sustainability allows for a process of potentiality built on understanding and challenging our systems of meanings through education. These pedagogical approaches are changing higher education, since both CCP and SE focus on developing students applied knowledge while also expanding the manner in which research is traditionally done, both theoretically and methodologically (Enos, 2015).

Within the criticisms summarized in this chapter, of both CCP and SE, there is an inherent struggle between critically examining and striving to transform unequal capitalist/neoliberal structures, while at the same time possibly serving these same structures through (often limited and skills-focused) involvement with communities and organizations. A critical dialogic perspective, focusing on discursive struggles and dialectical tensions, may provide insight into SE meanings of communication, (social) change, and innovation, allowing us to examine and potentially “harness” the transformative potential of such tensions (Martin & Nakayama, 1999; Mumby, 2005).

By combining a critical RDT approach with CCP to investigate the meaning-producing dialectical tensions within the IE program at the University of Maine, I hope this study contributes to a pedagogical model of critical SE education that develops students’ citizenship while also preparing them for the global job-market. In envisioning such a pedagogy, the present study contributes to an understanding of IE and SE identities as, “ongoingly constructed in the interactional dance of similarity and difference in systems of meaning” (Baxter, 2011, p. 103). Through this study, I hope to begin to understand this complex dance and the tensions involved within these two educational approaches (CCP and SE) and their interaction. To this end, this study explored the following three research questions:

RQ1: How is communication conceptualized and taught within the Innovation Engineering program at the University of Maine?

RQ2: How is social change conceptualized and taught within the Innovation Engineering program at the University of Maine?

RQ3: What is the place of and connections between innovation, communication, and (social) change within the educational philosophy and practice of Innovation Engineering at the University of Maine?

The next chapter focuses on the methodology and data analysis process of this dissertation study.

Based on my experience in IE and in my Ph.D. program, I believe that CCP can enhance SE education, and more specifically the IE program. Taking INV 510 was unlike any other experience I had in my graduate education (masters and Ph.D.). First and foremost, INV 510 met once a month and used a blended-learning model where students completed coursework online. This structural format was different than other graduate classes I took at the University of Maine. Honestly, I liked the blended learning format and meeting once a month. I also felt like I had more time to dive into aspects of the content since students had a month to complete and synthesize the content. This structure was also very convenient to the busy and stressful life of being a Teaching Assistant, Graduate Assistant, and taking other graduate classes that met weekly. Second, I absolutely loved the teamwork in INV 510 where we completed both team projects and individual projects. I felt like I learned more by working in teams than the work I did individually. This pedagogical aspect of the INV course also aligned to my own undergraduate educational experience, and my own pedagogy of team-based project-based learning that I used in the classes I taught at the University of Maine. For me, this was the

biggest benefit of the INV program, as there were limited to no encouragement of group projects and/or teamwork in other graduate course I took in the communication or education departments. In my master's program I did take a class called "Communicating for Social Change" where students had the option to complete a team research paper, and this assignment was the greatest learning opportunity that I experienced during my MA program. Our team research paper was better developed and more insightful than one created individually. Writing collaboratively allowed my peers and I to learn from and with each other and to understand various standpoints that we could not have known if we completed an individual research paper. We then submitted our paper to a conference, which was accepted, and presented our research paper together. This peer learning from completing projects in teams was very similar in the IE program, and I had wished other graduate courses at the University of Maine allowed for and encouraged more collaborative work and assignments. However, despite these two positive experiences in my first INV class, there were some shortcomings.

Although, the blended learning and structural format of INV courses and the emphasis of teamwork were positive experiences for me overall, this was not always the case. For instance, I remember during my first team project in INV 510, we had two students in our group that were consistently absent and did not pull their weight. Despite creating a team contract and talking with the professor when the absent students would not consistently pull their weight, the other team members had to come together to complete the work that the others did not do. This experience is similar to other experiences when working in groups and is a potential pitfall of collaborative team-based learning. However, what was confusing at times, is that the online feedback provided by the instructor was not always helpful or clear, and since we met once a month, there was not much time to always meet with our group outside of class and/or meet with

our instructor for clarity. Also, and more importantly, I came to realize in INV 510 that critical thinking and ethics/thinking about potential consequences of the innovative ideas we were creating was not discussed or incorporated into the skills being taught.

During this time, my advisor informed me of SE, and recommended that I read some of the literature. As I read various SE scholarship (i.e., Enos, 2015; Kickul & Lyons, 2012), I saw many connections to what IE was attempting to do and the tenants of SE. As previously mentioned, I came to realize that the IE program is a form of SE education. I then began wondering, how, if at all, could a critical pedagogical approach, specifically CCP, be incorporated into the IE program. I wondered what could SE programs in general, and more specifically, the IE program learn from CCP. What could CCP learn from SE by way of IE? What would CCP have to say about IE's educational and communication approach to "creating, communicating, and commercializing" (Hall, 2013; Kelly, 2014) innovative ideas? These reflective questions paired with my own experiences in the IE program is where this dissertation study took shape. I realized that there is something to study here; there is something to understand better that may be of value to the IE program and to the field of communication, specifically programs guided by CCP.

CHAPTER 3

METHODOLOGY AND METHODS: A CRITICAL ETHNOGRAPHIC CASE STUDY OF INNOVATION ENGINEERING

Overview

Now that I have reviewed how this study is guided by a culmination of previous critical and dialogic literature in communication and education, this chapter focuses on detailing the particular methodology and methods that I used throughout this project to guide my exploration and analysis of the emerging cultural/ideological discourses, discursive struggles, and dialectical tensions in/of the IE program. I used a critical qualitative methodology to understand the discursive construction of meanings and practices of communication, innovation, and (social) change within the IE program at the University of Maine. Specifically, I conducted a critical ethnographic case study, drawing on data from over 500 pages of program documents (publicity documents, internal documents, and instructional materials for the IE program) and “interactive” data from four participant observations of an IE student training program, 18 interviews (six undergraduate and graduate students, three alumni, seven instructors and program leaders, and two university officials), and two focus groups (one with students and alumni and one with instructors and program leaders). I collected all qualitative data between May 2016 and May 2017. Through the exploration of IE as a particular SE case study, I also utilized articulation analysis, which is explored expansively in Chapter Four as a method for understanding the interplay between cultural ideology and identity in order to expose, and ultimately uncover, how communication serves as a catalyst towards repositioning the scales of justice in more balanced and just ways.

This study is informed by Lincoln and Cannella's (2009) call for a "radical reconceptualization of research" (p. 54) that insists on questioning the foundation, purposes, methods, and forms of interpretation of research projects. This call is consistent with critical commitments that question the construction of knowledge, as described in the previous chapter. In this chapter, I first outline the context of the present study, while also reviewing the design and structure of the Innovation Engineering program. Second, I discuss the methodology of this dissertation study. Third, I discuss the specific data collection and analysis methods used for this study. I end this chapter by providing a chapter summary and critical self-reflection.

The Context of the Present Study

The study focused on a particular SE higher education program – Innovation Engineering (IE) at the University of Maine. The IE program offers an excellent site for this study, since the program confers undergraduate and graduate degrees that focus on creating innovative change. Furthermore, this program is distributed to other higher education institutions across the United States and Canada, making it important to understand what ideologies and practices are exported along with the curriculum.

The IE program's design, focused on innovation, was developed from the works of Deming (1956; 1986; 1988; 2000) and Ackoff (Ackoff & Greenberg, 2008; Detrick, 2002). IE uses a systems approach, teaching students how to "create, communicate, and commercialize meaningfully unique ideas" that attempt to solve a problem or harness an opportunity (Hall, 2013). Innovation was conceived as the meaningfully unique idea component, while engineering was the systematic approach to create, communicate, and commercialize the innovative idea.

Wyke (2013) explained that Innovation Engineering provides students with a systematic approach to innovating, generating, and communicating ideas, as well as managing the risk

associated with experimentation and with bringing an idea to fruition. Students learn to identify solutions within their fields that both solved the problem and did so in a novel fashion. Further, IE teaches students how to demonstrate a keen understanding of the problem, communicate the benefit promised by the innovation, and prove that the solution works (Wyke, 2013). Wyke (2013) explained that this communication model in IE is known as *Problem, Promise, Proof* (P-P-P). The desired curricular outcome of the program is for students to gain the confidence to create their own opportunities and to lead change in their respective fields of expertise (Wyke, 2013).

In this model, students are supposed to actively participate in the construction of new knowledge, rather than simply receive knowledge through formal instruction (Wyke, 2013). The overall goal of the IE program is to help students understand that the answer to creating meaningfully unique ideas is not to individually fix a part of the problem but to take a whole system look at the problem. This led to the idea that a different way of thinking is required because focusing on a part instead of the system will not create new solutions (Hall, 2013; Wyke, 2013). Students in the IE program then work to develop a different mindset that uses a systems approach to creating innovative solutions to pressing problems and/or opportunities.

The present study focused on practices and meanings of communication and change within this context by examining program documents and co-participants⁴ experiences through data collected in observations, interviews, and focus group conversations. Co-participants include instructors and students (current and former) within the selected program. Because social

⁴ Co-participant(s) is the term that will be used in place of ‘participants’ for this study, since we all will be participating together in systems and processes of meaning creation (Madison, 2012).

innovation requires the development and maintenance of relationships with various stakeholders, as well as the critical evaluation and production of messages, communication is essential in this context. Understanding how communication and change are constituted within an innovation-focused higher education program may offer a, “unique ability to educate, advocate, and challenge structures of oppression” (Gilbert, 2014, p. 254), since it encouraged reflections on and critiques of the systemic ideological assumptions of/about communication and change in relation to power.

Critical Qualitative Methodology

Tracy (2013) explained that qualitative research allows for explorations into cultural phenomena or activities that might be missed by quantitative approaches to answering research questions, such as experiments or structured surveys. Using a critical qualitative methodological approach allows for the examination of taken-for-granted understandings of culture by analyzing what people *actually* did rather than just *asking about* what people said. Qualitative research produces knowledge that allows us to understand cultural ideologies and their work through examining co-participants’ values-in-use (Schein & Schein, 2004). Specifically, I conducted a case study of the IE program at the University of Maine using both articulation analysis and critical ethnography to investigate the discursive struggles within the IE program, how the struggles and corresponding dialectics emerged in utterances, and what meanings and cultural discourses are produced in navigating the various discursive struggles.

I used a critical constructivist model, acknowledging that facts and realities are socially constructed in particular contexts and from within particular social and structural positions (Guba & Lincoln, 1994). Constructivist orientations to research, “provoke questions about how social realities are produced, assembled, and maintained” (Holstein and Gubrium, as cited in

Silverman, 2014, p. 24). Despite looking at the social constructions of reality, constructivists do not seek overtly to alter such constructions toward more equitable societies (Guba & Lincoln, 1994). On the other hand, a critical perspective combines an understanding of locally-produced meanings and realities with axiological commitment to advocacy and provoking social change (Creswell, 2007; Guba & Lincoln, 1994). Thus, the critical constructivist orientation to research that I adopt in this study is emancipatory in that it helps, “unshackle people from the constraints of irrational and unjust structures” (Creswell, 2007, p. 22). This framework is practical and collaborative because it is inquiry completed “with” others rather than “on” or “to” others (Creswell, 2007); participants and researchers are viewed as active co-participants in the inquiry process.

The critical constructivist approach aligns to the constitutive model of communication that serves as a paradigmatic lens for this study (Guba & Lincoln, 1994). Within the constitutive view, communication, “produces and reproduces shared meanings” (Craig, 1999, p. 126). This translates into an iterative approach to research design, where the analysis is developed in the repeated alternation of theories, research questions, and emerging qualitative data (Miles, Huberman, & Saldana, 2014).

An iterative research process is congruent with a critical activist orientation to research in communication. For example, through participant observations and interviews, Tracy (2000) examined how an organization’s emotional rules are oppressive to employees, as they are connected to historically produced power relations. This study allowed readers to understand how an organization’s normalized practices might be altered, disrupted, improved or changed for a more equitable workplace. Another study using communication activism pedagogy and participatory action research methods discovered that strong university-community partnerships

that invite spontaneous moments in and out of class can alter the direction of an entire course resulting in positive community change (Jovanovic, Congdon, Miller, & Richardson, 2015). These two critical qualitative studies model how the choice of research methodologies is closely tied to the aims of research as a social enterprise with constitutive implications. Like the study of IE that I undertook, these two studies sought to understand, expose, and challenge/change competing implicit and/or explicit ideologies within systems of meanings. With critical ethnographic methodology, the research itself, not only its findings, is intended as part of a process of social transformation.

To produce a richer understanding of the various meanings and practices of communication, entrepreneurship, and change within the IE program at the University of Maine, the research design embraces a, “triangulation of research perspectives that allows for integrating theoretical perspectives of several methodological approaches” (Flick, 2012, p. 164). In this qualitative case study of IE, I first utilized articulation theory (Hall, 1985; Hall, 1989) to conduct an articulation analysis of IE documents to examine dominant U.S. cultural discourses. Next, I employed a critical ethnographic methodology of interactive data (i.e., participant observations, interviews, and focus groups) to uncover themes by conducting a contrapuntal analysis (Baxter, 2011) to explore the discursive struggles and tensions present within the IE program and how the cultural discourses articulated in the IE program documents emerge in co-participants experiences. To allow for flexibility within the study’s design, an iterative process is used to inform the collection and analysis of the data and themes generated.

The specific qualitative methods that are used for this framework are an analysis of program materials and documents, participant observations, interviews, focus groups, memos, and personal reflections. As such, from initial conception to completion, the methodological

framework evolved and took shape as data were collected. Participant observations and an analysis of documents were conducted first and used to inform the questions and procedures for the interviews and focus groups. In the subsections that follow, I first review the methodological approaches with using a case study, followed by discussing articulation analysis, and critical ethnography.

Case Study. Creswell (2007) explained that in conducting case studies,

[T]he investigator explores a bounded system (a case) ...over time, through detailed, in depth data collection involving multiple sources of information (e.g., observations, interviews, audiovisual material, and documents and reports), and reports a case description and case based themes. (p. 73)

The clearly identifiable boundaries of a case allow the research to capture rich detailed data (Stringer, 2014). A benefit of a case study approach is that it allows us to better understand the issue or problem within its specific local context. A case study approach also aligns nicely to the tenets and goals of critical research, which views participants as valuable contributors to the research process, since they are embedded within their community (Stoecker, 2012). This embeddedness can also be a limitation, since it may be difficult for the researcher to step back when analyzing data (Miles, Huberman, & Saldana, 2014). However, Miles, Huberman, and Saldana (2014) discussed that reflexivity and recognizing one's positionality may actually foster a more rigorous and trustworthy analytical process for the embedded researcher.

A possible limitation of a case study approach is not having enough information to present an in-depth picture of the case, which can limit the value of the case study (Creswell, 2007). Thus, in planning a case study, it is important that within the research design process (a data collection matrix, for example) is developed and/or multiple methods are used for data

collection, highlighting the specific amount of information that is likely to be collected about the case (Creswell, 2007). Therefore, this study employed multiple qualitative methods (articulation analysis of program materials and documents, interviews, participant observations, focus groups, and reflective notes) to capture and produce rich descriptive data.

Prior research has turned to case studies as a methodology overtly aimed at changing institutional practices. For example, Fries-Britt and Turner (2001) explored Black students' educational experiences at a predominantly White institution (PWI) by analyzing data collected in focus groups and semi-structured interviews. Offering a case study of the institution, the authors are able to provide insight into the organizational dimensions at the PWI that marginalize and silence Black students.

In short, critical case studies aim to offer in-depth complex explorations of social structures with the purpose of altering such structures in socially just and equitable ways. As with a dialogic understanding of the "utterance chain," promoted by RDT (Baxter, 2011), such complex explorations require the understanding of both cultural/ideological and relational discourses, as well as the connections among discourses. To this end, the present study used articulation analysis (Hall, 1985, 1989) and critical ethnography (Madison, 2012). Articulation analysis, a type of cultural studies analysis, allows for the exploration of hidden dominant cultural ideologies and taken-for-granted assumptions. As previously mentioned in Chapter Two, articulation provides an analysis of the cultural discourses (distal already-spoken). Here, culture refers to both organizational culture and larger ideologies, such as neoliberalism, as they are performed by the program. In the next subsection, I discuss how this dissertation incorporated articulation analysis.

Articulation Analysis. Articulation “is a means to understanding the struggle to fix meaning and define reality temporarily” (DeLuca, 1999, p. 334). Articulation allows us to understand and cross-examine the contradictions and ambiguities of cultural narratives in context – in a given time, space, place, histories, etc. This incorporates two critical components: 1) understanding the manner in which different values, practices, discourses, etc. relate or connect to each other in a given historical moment, and 2) encouraging ways of believing, being, and performing in the world as possible or not (Slack, 2006). Slack (1996) further explained that,

Epistemologically, articulation is a way of thinking the structures of what we know as a play of correspondences, non-correspondences and contradictions, as fragments in the constitution of what we take to be unities. Politically, articulation is a way of foregrounding the structure and play of power that entail in relations of dominance and subordination. Strategically, articulation provides a mechanism for shaping intervention within a particular social formation, conjuncture or context. (p. 113)

Generally, the idea here is that when we talk about articulation, we are interested in getting at how ideological forces come to produce somewhat coherent subjects (i.e. unified subjects or unities). *Unities* is a term used to explain how a particular collection of connections and disconnections is experienced as coherent (Slack, 1996). One can participate in a program, institution, cultural practice, and so on that is filled with contradictions yet is felt to be coherent and logical.

For example, I identify as a gay White American cis-man, but there is nothing natural or singular about how that identity has come about — the identity makes sense within a series of discursive formations that suggest (strongly) that there is something unifying about our sexuality, race, and gender. This story of identity could be told differently (and has been at different points

historically). But at particular points in time and space, we tend to culturally agree with what it means to be gay or straight, woman or man, Black or White in the United States (generally speaking, to simplify this). This example highlights how unities are those provisional articulations where new (or sustained) subjects come into being. Understanding what is articulated in the IE program by examining the contradictions and ambiguities of the various cultural discourses was needed if we are to grasp how IE may be used for both preparing students for their future careers and for creating critical agents for change.

A critical ethnographic approach adds to this, that an ethical and engaged analysis requires that inquiries into structures and practices are always done collaboratively with co-participants to ensure that multiple voices are included and valued (Creswell, 2007). This helps ensure that issues of power are taken into consideration when trying to understand various systems of meanings and their social construction. I now review how this study incorporated critical ethnography as part of its methodology.

Critical Ethnography. Thomas (1993) explained that a critical ethnographic methodological approach to research focuses on critical ethnographers developing analytic reflection(s) that investigates culture, knowledge, and action grounded in ethical commitments of exposing oppressive systems, structures, and/or meanings (Thomas, 1993). As a methodology, critical ethnography is a value-laden exploration of meanings and the processes of their construction and social acceptance or rejection. The goal of critical ethnography is to choose between conceptual alternatives that may challenge existing meanings, research, policies, programs, and other types of human activity, so that a more socially just world may come to be (Carspecken, 1996).

There are various procedures for conducting critical ethnography within a critical qualitative framework to ensure that research is completed in a rigorous and culturally sensitive

manner. Creswell (2007) discussed a five-step procedure for conducting an ethnography once it is determined that ethnography is an appropriate research design for the study. This five-step process focused on: 1) identifying, locating, and connecting with important stakeholders and/or participants; 2) determine cultural themes/issues to study and analyze 3) examine and then expose issues of power and oppression, with the goal of advocating for certain oppressed groups; 4) when in the field, embody respect and reciprocity; and 5) develop evolving norms or systems for final analysis, which could include traditional research reports or more performance-based formats, like plays or poems (Creswell, 2007). Ethnographic procedures like these help ensure that rich descriptive data are collected through a participatory approach valuing local and situated voices (Denzin & Giardina, 2009). These procedures go hand-in-hand with the epistemology of a flexible research design, since the researcher is incorporating and valuing the voice of co-participants when investigating the social phenomena. The purpose is to develop deep and transformative understanding, not to predict or prescribe (Silverman, 2014).

Huber (2013) completed a dissertation that used critical ethnography and CCP to examine how future teachers articulated and practiced help in and through communication. She found that there were various meanings of “help.” The help that was articulated and practiced with focus on social justice was very different from the help that was talked about in everyday, mundane experiences. Huber (2013) proposed a definition of a “social justice-oriented help,” which involved: 1) “compromise and negotiated decision-making” (p. 57), 2) “a deep commitment to getting to know students in context, both at a local level and as existing within multiple different systems at once” (p. 60), 3) “a willingness to live in discomfort, negotiate and reciprocate with students” (p. 60), and 4) “trusting students to know something about themselves and what they want in their lives” (p. 60). Stemming from this definition, Huber (2013) developed strategies to

foster this conceptualization, so future and current educators may be better able to offer the help and care that students may need. This study performed that critical ethnography can become an emancipatory methodology, as research itself became the “doing” of critical theory from a constitutive model of communication, the process that directed and completed the task to interpret or illuminate a social action (Madison, 2012). In the next section I discuss the specific data collection and analysis methods used for this study.

Data Collection and Analysis Methods

In this section, I describe the process of how data were collected and analyzed, and how the specific methods align to the overall research design of a critical ethnographic case study that uses RDT, CCP, and SE as the theoretical frameworks. I first discuss the data collection process of document review and analysis. Next, I discuss the “interactive” data collection process and analysis (i.e. co-participant observations, semi-structured interviews, and focus groups).

IE Document Review and Analysis. Bowen (2009) explained that analyzing documents as a qualitative method is a “systematic procedure for reviewing or evaluating documents—both printed and electronic (computer-based and Internet-transmitted) material ... [and]... entails finding, selecting, appraising (making sense of), and synthesizing” (pp. 27-28) the documents. Multiple studies have used document analysis to triangulate their findings with other methods to enhance their rigor. For example, Hoepfl (1997) discussed how a document analysis of newspaper reports, department self-evaluation, and university policy documents are used to triangulate data from interviews to examine the closures of technology teacher education programs. In another study, Connell, Lynch and Waring (2001) conducted a document analysis to supplement observations and semi-structured interviews in three case studies investigating the complex social phenomena that manifests both internally and externally within organizations.

This study used document analysis similarly to triangulate with participant observations, semi-structured interviews, and focus groups. Such triangulation is beneficial in keeping the researcher biases/subjectivity in check and producing more complex analysis (Bowen, 2009).

Aligning with the critical theoretical framework, I explored IE documents with attention to how they construct meanings. A critical constructivist analysis of organizational documents investigates the organization of “social action in a setting” (Goffman, 1982, p. 238). For this study, I turned to Hall’s (1985, 1989) theory of articulation, and I examined documents of the IE program to analyze how these documents illustrate and connect certain features of IE, constructing an ideological structure that frames the program. Through an exploration of the IE program’s documents, I explored the connections/tensions and implicit goals of social change embedded within the program and its documentation (Tufte, 2017, p. 133). Specifically, I examined the cultural discourses (distal already-spoken) embedded within the dominant ideologies.

Silverman (2014) explained that a critical constructivist approach to document analysis examines documents as topics and not as resources. To do this, Silverman explained that researchers should examine the construction of reality that is communicated and the behaviors/activities that guide the interpretation of the claims made. This means that I investigated the documents in terms of what ideologies and worldviews are privileged and how the documents construct a certain ideological reality within/of the IE program.

In conjunction with other methods (interviews, focus groups, and survey), Robley, Whittle, and Murdoch-Eaton (2005) developed a model to review and evaluate higher education curricula that focuses on preparing students for future careers. Their model proposed a process for higher education departments and institutions to evaluate and revamp their curricula in order

to develop students' generic skills of oral and written communication, critical analysis of information, time management, and teamwork so students are better prepared for the job-market. The researchers found that conducting a document analysis of the curriculum is very helpful with understanding students' and faculty members' experiences and perceptions of the curriculum and its practical implementation. The scholars also discovered that document analysis can help with understanding whether or not students accomplished the intended learning outcomes, while simultaneously developing students' generic skills for their future. This study highlighted that examining a program's documents and materials makes an important contribution to case study explorations of higher education programs.

For this dissertation study, three types of program materials were collected for analysis. Documents analyzed included: publicity documents, internal documents, and instructional materials for the IE program. Publicity documents included the IE's website, brochures, flyers, news articles, and social media pages (Facebook and Twitter). This resulted in the following being analyzed: the eight main pages of the IE's website (<https://umaine.edu/innovation>); 270 Facebook posts that were posted between August 2016 to May 2017 on IE's Facebook page (<https://www.facebook.com/umaine.i.center>); 237 Twitter posts that were posted between August 2016 to May 2017 on IE's Twitter account (<https://twitter.com/umaineinnovates>); six flyers and three brochures of IE from the 2016-2017 academic school; and 38 newspaper and other news articles written between August 2005 and June 2017 that were found in an online library database using the key phrases "Innovation Engineering" and "University of Maine".

Internal documents included archival materials accessed through the University of Maine's library and annual reports of the IE program. This resulted in the following 16 reports being analyzed: Descriptive statistics from 2016 of student demographics enrolled in the IE

program at the University of Maine, Two University of Maine's Provost's Academic Affairs Annual Reports from 2014 and 2015; Two University of Maine's Presidential Student Life Reports for the years 2013-2014 and 2014-2015; Three Measures of Growth reports for the state of Maine for years 2015, 2016, and 2017; the 2017 University of Maine's System Research Reinvestment Fund Annual Report of Activities; the 2011 Making Maine Work: Critical Investments for the Maine Economy report; the 2016 Entrepreneurship Grows Maine Resource Guide; the 2014 Annual Report of the University of Maine's Blue Sky Highlights; the 2015 Innovate for Maine's Boot camp Intern Survey Summary Results; the 2015 Innovate for Maine's End of Fellowship Program Intern Survey Summary Results; the 2015 follow-up Survey results from Past Interns in the Innovate for Maine Fellowship program; and the 2015 Innovate for Maine Fellows Program Terms and Conditions for companies.

Instructional materials consisted of course syllabi, the curriculum map for the Foundation of Innovation Course, which was started in the spring of 2017, and graphic organizers and tools for the entire IE curriculum. This resulted in the following instructional materials being analyzed: Three IE course syllabi (INV 121: Fundamentals: Innovation Engineering; INV 510: Innovation Engineering Accelerated I – AKA: Create and Communicate; and INV 511: Innovation Engineering Accelerated II – AKA: Commercialize and Systems); The 228 page curriculum map of INV 121: Fundamentals: Innovation Engineering for instructors; and 186 pages of graphic organizers and other curriculum tools taken for the Innovation Engineering Labs website (<https://innovationengineeringlabs.com/cafe>) for the entire IE curriculum (15 pages of materials for skills related to Stimulus, 45 pages of materials for skills related to Create, 16 pages of materials for skills related to Communicate, 32 pages of materials for skills related to Commercialize, and 78 pages of materials for skills related to Systems).

Using Hall's (1985, 1989), Haworth's (2005), and Slack's (1996) process of articulation, I analyzed the three different sets of IE program materials. I analyzed the documents by using the following five guiding questions for each type of document set (publicity documents, internal documents, and instructional materials): 1) Who is doing the articulation?; 2) Who is being articulated?; 3) What is being articulated?; 4) What is being erased/silenced?; 5) What are possible alternatives/re-articulations? These elements of analysis relied on a kind of stitching together of various cultural discourses (distal already-spoken) and understanding that by stitching them together, IE creates a sense of opposition to other forms of education.

These document materials were primarily used to help triangulate the perceptions and experiences of instructors/leaders and students gathered from the interactive data (i.e. participant observations, semi-structured interviews, and focus groups). Additionally, understanding the dominant cultural ideologies and discourses that emerged in the program documents allows us to better understand what was expressed in the participant observations, interviews, and focus groups. After completing the articulation analysis, I wrote a critical reflection memo on this analysis process examining my positionality and subjective thoughts. This memo both guided and continued to develop through the next data collection and analysis phase, as described below.

Co-Participant Observation. Co-participants(s) is the term that is used in place of “participants” for this study, in recognition that the “researcher” and the “researched” participated together in systems and processes of meaning creation. I also saw myself as a co-participant (rather than a researcher per se), because I analyzed these systems and processes of meaning creation from within the context of my own positionality and experiences with the program. I further address my own positionality below. Approaching this research from a

dialogic perspective, using the term co-participants(s) further aligned with the critical tradition by attempting to equalize relations of knowledge production (Madison, 2012).

Lindlof and Taylor (2011) explained that researchers who engage in participant observations, “draw on their experiences to imagine what the [co-participants’] motives might be for performing these actions. What researchers end up with are descriptions of these interactions” (p. 35). Here, the descriptions focused on how co-participants not only account for each other’s presence but evaluate each other through their talk and action. Validity then, “derives from the “researchers’ having been there [where] observing and participating” work together (Lindlof & Taylor, 2011, p. 135). Participant observations have been a primary tool when studying organizations and/or organized social groups, as it provides insight into linking daily practices to larger structures and systems (Boden, 1994; Buscatto, 2008; Buscatto, 2011; Czarniawska, 1998; Smith, 1996; Tufte, 2017). Since I analyzed the IE program, which was embedded within a university setting, by investigating the tensions embedded in the experiences and program itself, participant observations allows for the possibility to connect what happens to/with individuals to macro level frameworks of institutional and organizational practices (Smith, 1996; Tufte, 2017).

A study completed by Maynard (1989) used participant observation to examine “how a sense of mutuality is accomplished” (p. 134). Maynard argued that since the method itself allows us to draw conclusions based on what is observable *to us*, the method is fundamentally based in a social construction understanding of reality and research. From this model, the phenomenon under investigation was locally constituted in the activities of the co-participants, focusing on the social interaction of what people are doing. Using a constructivist model, then, allows for the examination of, “questions about how social realities are produced, assembled, and maintained” (Holstein & Gubrium, 2008, p. 375). However, since identity is symbolically constructed, the

researchers' and co-participants' cultural identities influence how they account for and evaluate each other. As such, it is important that the researcher takes this into account, especially when seeking to understand and expose tensions and the power dynamics that may be at play.

Therefore, researchers need to “view fieldwork as a process in which researchers and (co)participants put the various components of their identities into play as tokens of status and bids for attention and inclusion” (Lindlof & Taylor, 2011, p. 141). This is especially important for a critically-oriented study, since “knowledge is socially located and arises in social positions that are structured by power” (Hallstein, 1999, p. 35).

Understanding the recurring narratives within an organization, by and between individual members, and shared within the culture of an organization is foundational to exploring and interpreting the connection/tension between the suggested goals of the organization and the expected goals of the individual (Tufte, 2017). As mentioned in the previous chapter, Tufte (2017) argued that narratives help us, “connect the small story of a particular event with the larger narrative of development and social change” (p. 144). Thus, the co-participant observations provide a rich context of how narratives and/as ideologies are shared, disseminated, and experienced within the IE program, which in turn unveiled the tensions between/within the IE program.

To hold myself accountable for how my own identities and privileges influenced how I experienced and co-created meanings in the participant observations, I completed reflexive memos after each participant observation by assessing the, “ambiguous gifts of [my] physical characteristics, social attributes, and cultural capital ... [since] ... they establish axes of difference and similar wit corresponding configurations in the group members being studied” (Lindlof & Taylor, 2011, p. 142). Writing self-reflexive memos also provide accountability to

the research process so the findings are not called into question on the basis of attachment and emotional involvement with co-participants, since this is frequently critiqued as a limitation of this method (Buscatto, 2008; Fassett & Warren, 2007; Silverman, 2014).

Within this particular study, co-participant observation provided access to activity and interaction in the educational process and pedagogy that was not necessarily conscious, remembered, or thought important by the co-participants during interviews or other qualitative methods. As such, co-participant observations offered insight into what is talked about and practiced and the ways in which words and actions dis/connect, so that overarching themes may be found. Participant observations informed the analysis by sensitizing me to context-specific meanings and practices.

I took part in a week-long co-participant observation of the program's summer training for students in May of 2016. I was previously directly involved with the IE training program for students of the *Innovate for Maine* internship as a former graduate assistant. Prior to the observations, the processes received approval from IE administrator and the University's IRB. Prior to the observations, all co-participants were fully informed of the research process and their voluntary involvement. Co-participants could ask to be excluded from recorded notes at any time.

Following an observation protocol, the observations were captured in hand-written field notes, then expanded into Word documents, and coded. This resulted in 20 hours of participant observations, 26 pages of single-spaced typed field notes, and four single-spaced typed reflective memos that were one page each. There were 29 people involved in the participant observations (including myself) with 24 undergraduate students and four program leaders and instructors. Of the co-participants, 9 were female with 6 of them being students and the rest program leaders,

and 20 were male, with 19 being students (including myself) and one being a program leader.

Next, I review the process of data collection for the semi-structured interviews.

Semi-Structured Interviews. Silverman (2014) explained the importance of interviews having rapport, flexibility, and engagement in active listening – all of which are allowed for in the format of semi-structured interviews. Semi-structured interviews require mutual responsiveness and continuous re-orientation to the conversation. Responsive follow-up questions create both engagement and rapport. Tracy (2000) used semi-structured interviews as well as documents and participant observations for her case study of the organization of a cruise ship, analyzing power dynamics in relation to emotion labor and subordination of employees. Interview data allowed Tracy to identify several long-standing assumptions about emotion labor and burnout of employees.

Conversing with a constitutive model of communication, I saw the, “interviewer and interviewee actively constructing some version of the world appropriate to what we take to be self-evident about the person to whom we are speaking and the context of the question” (Silverman, 2014, p. 172). I analyzed both language in context and the creation of meanings within the communicative situation of the interview, as described in the next section. This approach required me to continuously take stock of my own role in the production of meanings that occurred during the interviews. This was accounted for in the reflective memos that became part of the data analysis. I also needed to consider that the questions I asked could make the co-participants think about topics that they have not considered and could encourage them to continue reflecting on the roles they perform in the future (Baxter, 2011). Seeing the interviews as reflective conversations framed my hope and intention that they provided opportunities for all

co-participants to reflect on their knowledge of identity within, and relationship to the changing IE program.

Since this study's focus was on understanding the meanings and practices of communication and social change education within the IE program, and the program is re-evaluated by program leaders every year, it was important to conduct interviews with a variety of students and instructors who were at different stages of the IE program. A novice student or instructor may experience and have a different perspective of the program than those with longer tenure. Similarly, I conducted interviews with alumni since their perspectives may be different from those of novice instructors, students, or program leaders. University of Maine administrators were also interviewed to provide the historical context and situate the IE program within the larger University vision and mission.

Semi-structured interviews were conducted with instructors, program leaders and university students, of the Innovation Engineering program at the University of Maine. For the interviews, recruitment occurred by emailing the instructors and leaders of the IE program to ask if they and students in their classes of their curricular program would be interested in participating in the study. Email information was obtained from the Innovation Engineering's website and University of Maine's email system. Once the instructors and leaders indicated their interest in participation, I requested that they send a recruitment email to students, asking them to contact me if they would like to participate in the study. From there, a snowball approach was used to reach out to other potential co-participants.

I interviewed 13 people involved in the program, of whom 8 were male and 5 were female (see Table 3.1 and Table 3.2 for demographic information of co-participants who participated in an interview). Instructors/program leaders' work experience in IE varied from 2 to

12 years, and most instructors had at one point or another taught INV 121 and INV 180 with more experienced instructors and program leaders teaching higher level courses, such as INV 401 and INV 490. Interviewees were also asked if they wanted to participate in a focus group exploring their experiences further. Four students/alumni agreed to participate in a student-centered focus group and four instructors/program leaders agreed to participate in an administrator/staff-centered focus group. The focus group procedures are discussed further below.

Table 3.1⁵ Demographic Information of IE Student Co-Participants (*indicates that they participated in a focus group).

| Pseudonym | Gender | Student Status | No. of IE classes taken | Major/Minor |
|-----------|--------|---------------------------------|-------------------------|---|
| Eric | Male | Alumni (Graduate) | 3 | Secondary Education w/ Innovation Engineering (IE Graduate Certificate) |
| Mason * | Male | Alumni (Undergraduate) | 6 | Biology w/ Innovation Engineering (Minor) |
| Tim | Male | Alumni (Undergraduate) | 6 | Mechanical Engineering Technology w/ Innovation Engineering (Minor) |
| Jessica * | Female | Graduate (2 nd year) | 2 | Business Administration & Fine Arts w/ Innovation Engineering (IE Graduate Certificate) |
| Sheila * | Female | Undergraduate (Junior) | 1 | Communication w/ Psychology (Minor) |
| Holly | Female | Undergraduate (Junior) | 1 | Business Management w/ Entrepreneurship (Concentration) |
| John * | Male | Undergraduate (Senior) | 1 | Mass Communication w/ Media and Graphic Design (Minors) |
| Michelle | Male | Undergraduate (junior) | 5 | Communication w/ Innovation Engineering (Minor) |
| Zion | Male | Undergraduate (senior) | 1 | Business Administration |

⁵ Given the homogeneous racial make-up of the co-participants being mostly white, I did not specify the racial identification out of concerns for protecting the anonymity of a person of color who participated.

Table 3.2⁶ Demographic Information of Co-Participating IE Instructors and Program Administrators (*indicates that they participated in a focus group).

| Pseudonym | Gender | Official Status |
|-----------|--------|--------------------------------|
| Raquel | Female | IE Instructor |
| Jay | Male | IE Program Leader |
| Kristen | Female | IE Program Leader |
| Mary * | Female | IE Program Leader & Instructor |
| Frank * | Male | IE Program Leader & Instructor |
| Evan * | Male | IE Program Leader & Instructor |
| Britney * | Female | IE Program Leader & Instructor |
| Seth | Male | Senior University Official |
| Will | Male | Senior University Official |

For the interviews, a question guide was used and is included in Appendix C. The informed consent form is included in Appendix D. Interviews lasted from 15 to 97 minutes with the average interview lasting around 48 minutes. Per ethical principles of qualitative research (Maxwell, 2005), interviews occurred at a time and location of co-participants' choosing, including but not limited to school buildings, community centers, and/or other public spaces. Interviews were digitally recorded and transcribed. This resulted in 281 pages of single spaced typed transcripts. The names of individual co-researchers were removed from interview data and pseudonyms were used instead. Interview data were preliminarily coded in the process of data

⁶ Since all co-participating IE instructors and program leaders are white I did not identify the race in Table 3.2. I also did not specify the number of years of involvement in the IE program out of concern for protecting the anonymity of co-participants.

collection, using the responsive interviewing model (Rubin & Rubin, 2005) to analyze the data for both the initial and follow-up interviews and to narrow in on the themes relevant to how meanings of communication and social change are constituted within the program.

As I collected and transcribed all the data (interviews and participant observations) verbatim, I continued to interview co-participants until I reached theoretical saturation (Guest, Bunce, & Johnson, 2006; Kuzel, 1992). Researchers explained that all themes are thoroughly developed and elaborated on at the point of theoretical saturation, which can range between five to seventeen interviews to achieve maximum variation (Bertaux, 1981; Corbin & Strauss, 2008; Creswell, 2007; Guest, Bunce, & Johnson, 2006; Kuzel, 1992). After initially collecting 12 interviews, I continued to collect data by doing six more interviews (18 total) and two focus groups to enrich the data set and provide more depth of analysis. All interviews and focus groups were transcribed before beginning the data analysis process (described in more detail below).

Additionally, in the interviews, I asked co-participants if they wanted to be a part of the process as I coded and interpreted the data. Even during the interviews and focus groups, I made an effort to consistently paraphrase and restate what I was hearing in order to provide internal validation (Lindlof & Taylor, 2011; Silverman, 2014; Tracy, 2013). However, there are critics of doing this since co-participants may deny such interpretations and want them removed, and that there is an assumption that there is a fixed truth on reality that can be accounted for by a researcher and validated by a respondent (Silverman, 2014). For this purpose, interested co-participants were invited to be a part of a member-check process and had access to the transcripts of their interviews. This resulted in three co-participants making minor grammatical and/or language usage changes in their interview transcripts that better reflected their experience.

Focus Groups. Focus groups enriched this case study since they, “produce insightful self-disclosure that may remain hidden in one-on-one interviews” (Tracy, 2013, p. 167). This method offered a different climate and context for data collection that is more interactive and collaborative since focus groups are more socially oriented, with a flexible structure that allows unanticipated issues to emerge and be explored during the discussion (Getzel & Thoma, 2008; Krueger, 1998). Focus groups offered me an opportunity to analyze the active co-production and negotiation of meanings among co-participants, contributing to a more complex perspective on co-participants’ values, attitudes, and beliefs (Hoffman, Richmond, Morrow, & Salomone, 2002; Lindlof & Taylor, 2011; Silverman, 2014; Tracy, 2013).

Hoffman et al. (2002) found focus groups to be useful with examining how first-year students’ perceptions of the university’s environment shaped their sense of belonging. Focus groups have also been used from a critical theoretical framework to examine African American student experiences with the racial climates on their college campuses (Solorzano, Ceja, & Yosso, 2000), as well as how they select and enact communication strategies when interacting with members of the dominant group (Glenn & Johnson, 2012). Such studies highlighted how focus group data can shine a light on how groups within an institution talk about the construction of oppression in higher education and the strategies that they perform when navigating educational experiences. From a critical framework, focus groups allow us to better understand the various tensions that power dynamics produce in higher education institutions, as well as how such dynamics are produced in navigating tensions.

Two focus groups provided data for this study. One focus group (N = 4) included alumni and current students of the IE program and lasted 46 minutes. The second focus group (N = 4) included instructors and program leaders of the IE program and lasted 58 minutes. Co-

participants for both groups were recruited during the interviews. Interested co-participants received a follow up email (see Appendix F). Focus group conversations were digitally recorded and transcribed. This resulted in 35 single-spaced typed pages. The names of participants were removed from focus group data and pseudonyms were used instead.

Data Analysis: Procedures. Montgomery and Baxter (1998) explained the importance for studies to address in their methodology the multivocal text that emerges while listening for variances in meaning that highlight disjointed articulations of contradictory experiences. Consequently, the focus on critical dialogism is understanding how opposing tensions create meaning (Baxter, 2011) and the dominant ideologies/systems/structures that influence and/or silence the meaning-making in praxis (Fassett & Warren, 2007). Such dominant ideologies are recognized in critical dialogic research and particularly in Relational Dialectics Theory (RDT) as the “distal-already-spoken” (Baxter, 2011) or the cultural discourses that shape meaning-making. In the present study, cultural discourses were examined first through the articulation analysis of program materials.

Articulation analysis allowed us to expose the way various elements in IE are linked in a social formation through cultural discourses. I used Hall’s (1985; 1989) five step approach to articulation analysis to describe and examine the cultural ideologies embedded in IE’s documents. I also used the five common U.S. cultural discourses of individualism, community, privacy, rationality, and romanticism as described by Baxter (2011) as a framework to identify and evaluate the cultural discourses embedded within the articulated ideologies. I first focused on each set of documents separately by reading through all the document materials within a set to understand what was stated holistically. I then re-read each document set while typing notes with my interpretations in a Word document. Here, I first examined the hierarchy with who was doing

the speaking (i.e. who is that IE person/organization and what interests do/does she/he/they seem to hold?) Second, I analyzed who was articulated by listing what the documents are trying to bring together (i.e. which people, what objects, what acts, rituals, performances, and what cultural discourses?). Third, I investigated what was articulated by looking at the overall effect (i.e. what are the documents suggesting these elements have in common with each other and cultural discourses). I then turned to exposing what was silenced/erased due to the commonalities that were articulated. Lastly, I explored what alternative articulations were possible by examining subjective histories and imagining new social arrangements and/or systems of meaning. After this, I created interpretative descriptive summaries from my notes of each document set/type with regards to each of the above questions.

I used these descriptive summaries to generate the analysis of what cultural ideologies and discourses were articulated in IE's program documents/materials. Three dominant cultural narratives/ideologies were articulated: 1) IE as a universal application; 2) IE using experiential learning to promote the teaching of a market-orientated skillset, and 3) IE fostering an entrepreneurial culture and potential for economic growth. Within these three articulated cultural narratives/ideologies, I found three dominant U.S. cultural discourses in the program documents that were described by Baxter (2011): 1) the discourse of individualism (IE privileges and centers the self-interest of the program itself and of the autonomous individual over community/others); 2) the discourse of community (IE constructs itself as the "saving grace" – an educational Messiah for economically disadvantaged areas) ; and 3) the discourse of rationality (IE promotes knowledge as objective and privileges measurable outcomes). This approach not only aided the analysis of what is being articulated in the IE program documents/materials, but also allowed me to conceptualize how the articulations in each of these

types of documents are similar or different from each other and in relation to historical and cultural contexts, as well as the U.S. cultural discourses that emerged.

I used RDT as a framework to guide the coding and analysis process with: 1) identifying tensions and praxis patterns by examining how centripetal and centrifugal forces emerge in the utterance chain; and 2) linking cultural discourses (from program documents) with interpersonal and relational discourses (from observations, interviews, and focus group data). The purpose of this analytical approach was to better understand and examine how cultural discourses (the distal-already-spoken and distal-not-yet-spoken) both shape and are shaped by the individual and relationship meanings and negotiations (Baxter, 2011).

Data were analyzed using standard procedures for working with qualitative data and textual analysis. More specifically, I used articulation analysis to examine the cultural ideologies and discourses in the program documents and thematically analyzed the participant observations, semi-structured interviews, and focus groups. Silverman (2014) explained that a thematic analysis develops themes by focusing on possible variations in meanings within the data and understanding the patterns that may arise. As such, themes may arise from the meanings that are described by the co-participants and can also be constructed from patterns of action that may emerge. This dissertation study utilized a thematic analysis for analyzing co-participants experiences in/of the IE program in the interactive data with how communication and (social) change are taught and practiced.

For the interactively-collected data (observations, interviews, and focus groups), I employed two cycles of coding and used the inductive approach to the thematic analysis focusing on the work of opposing forces, discussed by Baxter (2011) as contrapuntal analysis. Baxter explained that contrapuntal analysis is a method that is concentrated on the interplay of opposing

forces in stories that highlights the both/and aspect of Bakhtin's dialogism. The first step in contrapuntal analysis is the transcription of the spoken text, which, as described above, resulted in 341 typed single-spaced pages of transcripts coming from participant observations (26 total pages), semi-structured interviews (281 total pages), and focus groups (35 total pages). I read the transcripts once while listening to the recorded interviews in order to check for content accuracy and become familiar with the data set. This was accomplished within one week of each interview being completed. Co-participants also had access to the transcripts to make any edits that they felt were needed (member-check), which results in one program leader/instructor, one program leader, and one university official making minor changes to their transcript for grammar/clarity of language.

Using the qualitative data program NVivo, I first coded the interactively-collected data using holistic coding. Holistic coding focuses on an extensive section of data to capture a sense of the overall substance and possible themes that may emerge (Miles, Huberman, & Saldana, 2014). This type of coding is most appropriate when the researcher has a general sense of what to investigate. This approach was suitable for the current study since, based on existing literature, I assumed that the IE program and a SE education approach to the teaching of communication and change as strategic processes is not necessarily critical. During this round of coding, I made notes on the transcripts and wrote four additional reflective memos to highlight information that I found interesting. The reflective memos were then compared to other completed interview transcripts and any subsequent interview transcripts. Because of this process of familiarization with the co-participants experiences, patterns were documented, which aided in the generation of the initial coding categories. This resulted in 23 initial findings with 1,097 total coded references.

The second level of coding was line-by-line and included generating NVivo and Values codes. NVivo coding prioritizes and honors co-participants' voices, using their own language as codes/labels (Miles, Huberman, & Saldana, 2014). This was appropriate for the current case study, since it focuses on understanding and examining the cultural values and meanings of communication within an SE education program. During this level of coding, the data were coded based on the systems of meaning with regards to what was being told and what was being performed (Baxter, 2011; Langellier & Peterson, 2004). Then, the data segments were coded into categories until no new coding categories emerged. Here, I created a code-book to guide the analysis and second level of coding to help organize the data using co-participants' own language. After this, I re-read all the interactively-collected data, analyzing and comparing transcripts and memos from one data set to the next. Re-reading transcripts, analyzing and comparing transcripts and notes from one interview to another, accomplished this. This resulted in 15 codes emerging from the 23 initial findings.

In the third step of analyzing the data, I generated themes from the 15 codes I found in step two. Here, the purpose of creating themes was to identify larger patterns by grouping the codes that emerged (Silverman, 2014). It is at this point in the data analysis process where contrapuntal analysis differs from traditional thematic analysis (Baxter, 2011). Here, the focus of the contrapuntal analysis was to identify the contradictions in the systems of meanings that were identified in the codes. This consisted of discovering themes within the data that capture the centripetal-centrifugal struggle and the praxis patterns of managing the centripetal-centrifugal struggle. I focused on examining the interplay of meaning-making that emerged in the utterances that were centered as "natural" or "normative" (centripetal) and the meanings that were marginalized from the center and positioned as "unnatural" or "nonnormative (centrifugal)

(Baxter, 2011). Codes were categorized by similarity and themes were identified by asking the question of what is the larger meaning of each category of codes (Fassett & Warren, 2007). I then engaged in an iterative process of continuously checking the theme against the context and cultural discourses, and I re-read all the transcripts one final time while simultaneously checking the themes against the context of meaning provided by the co-participants. This process resulted in the 15 themes being grouped under four thematic categories: (1) IE praxis (36.46% of overall coded data with 400 references); (2) communication as engineered dissemination focused on economic outcomes/returns (26.89% of overall coded data with 295 references); (3) (re)engineering possibilities for (social) change (25.98% of overall coded data with 285 references); and (4) communication as engineered programmatic identity work (10.67% of overall coded data with 117 references).

In the last step, I identified verbatim examples of systems of meanings from co-participants that were exemplars of the four themes. These exemplars focused on markers identified by Baxter (2011) to be useful in the contrapuntal analysis, which show competing contradictions through opposing, negating, and/or entertaining. Contrapuntal analysis focuses on the “interplay of contrasting discourses” (Baxter, 2011, p. 152), such as identifying the contrasting systems of meaning, world views, and/or points of view that are spoken or written. These illustrations were used to highlight the contradictions (discursive struggles) and praxis patterns in the analysis of the data.

Chapter Summary and Researcher’s Reflexivity

As this chapter outlined, this study utilized a critical qualitative methodological approach in order to understand and expose dominant cultural discourses, meanings, and struggles. Specifically, as a case study, this project used articulation analysis and critical ethnography to

examine the three research questions, focusing on the discursive struggles and cultural ideologies and discourses that shape and express how communication and (social) change are conceptualized and taught within the IE program at the University of Maine. The data collection and analysis processes were iterative. Data were gathered via analysis of documents, participant observations, semi-structured interviews, focus groups, and intentional reflexivity.

Given my positionality as a White, cis-male gay American graduate student who is completing the IE Graduate Certificate program at the University of Maine, it was important that I was aware of my subjectivity and how my subjectivity may influence my experiences and interpretations of the data (Madison, 2012; Maxwell, 2005). There was potential that I may project my beliefs and assumptions as I framed the conclusions of this project based on my previous experiences with the program, and critical scholars encourage researchers to reflect and address our subjective experiences (Fassett & Warren, 2007; Madison, 2012). Maxwell (2005) claimed that:

Qualitative research is not primarily concerned with removing variance between researchers in the values and expectations they bring to the study, but with understanding how researchers' values and expectations influence the conduct and conclusions of the study (which may either be positive or negative) and avoiding the negative consequences (p. 108)

Thus, as I collected and analyzed data, I needed to be aware of my own values and how they were impacting the research process and conclusions I co-constructed with co-participants. To get at this, I wrote reflexive memos addressing my positionality after observations and interviews, as well as during the coding process, and include critical self-reflections at the end of every chapter in this dissertation (Thomas, 1993). In these critical reflections, I discuss in greater

detail my previous roles and experiences with IE and with my identity, since these intersect in framing how I view the world and interpret data in the present study.

Reflecting on my experiences of taking courses in IE, I found that there was limited space and/or discussion on how to use these skills of innovation for social change from a social justice perspective where issues of power, difference, and culture were centered. As briefly mentioned in my reflection in chapter two, the lack of incorporating ethics and critically thinking about the potential consequences of the ideas being created was very concerning to me. Given my background and interest in critical pedagogy, where exploring issues of power and thinking about potential implications is centered, I consistently wrestled with how to call into question some of the assumptions that the skills being taught were making. When I would ask critical questions, or try to incorporate my previous knowledge of/on critical scholarship into class discussions and/or individual assignments, I was encouraged to just “trust” the IE system and process. However, this was unsettling to me, and at times, I felt alienated from the IE community and program. Despite this feeling of isolation, I was invested in taking more classes and understanding how I could collaboratively and individually “create, communicate, and commercialize” (Hall, 2013; Kelly, 2014) ideas for social change.

What I experienced was a skill-set that focused on teaching students how to create products in the market. Although, it was acknowledged that the skills taught could be used for social justice initiatives, it was hard to decipher and apply these market-driven approaches to other, more culturally sensitive areas for innovative change. I found myself challenging my professors, bringing in my critically oriented training from communication into our class

discussions and into the projects I did. I found myself pushing back, which did cause tensions in the class.

However, when an opportunity presented itself to be a summer graduate assistant for the Innovate for Maine Fellow program, I took it. Here, I was able to not only mentor, train, and supervise undergraduate and graduate students from across Maine, but I was able to provide context and understanding relationally from a critical perspective. I was not able to change the curriculum or training that students received, but I was able to pose questions and guide discussions that got into issues of power, privilege, ideology, and culture, and what this may look like in their internships. As this position ended and as I took more IE courses, I found myself wondering how the IE could program embrace and/or be expanded to include a more critical approach to social justice when teaching students, the skills of innovation. Understanding my position with how my identity and experiences have influenced my worldview is important to consider as I move forward with this study.

CHAPTER 4

ARTICULATION OF CULTURAL IDEOLOGIES AND CULTURAL DISCOURSES IN IE PROGRAM DOCUMENTS

Overview

As previously highlighted, IE is informed by and embedded within a certain cultural worldviews/systems of meanings – discourses. As such, the cultural discourses embodied by the IE program are uttered and enacted within IE’s documents and materials. This chapter examined the Innovation Engineering program materials/documents by using articulation analysis, which is a type of cultural studies analysis (Angus, 1992; Grossberg, 1986; Hall, 1985; 1989; Howarth, 2005; Laclau, 2005; Slack, 1996; Szkudlarek, 2013). Through this examination, I outlined what the documents suggested about the dominant United States (U.S.) cultural ideologies and cultural discourses present in IE’s conceptualization and teaching of communication, innovation, and (social) change. Specifically, I used Hall’s (1985; 1989) five-step process of articulation analysis. I also used the five common U.S. cultural discourses (distal already-spoken) of individualism, community, privacy, rationality, and romanticism as explained by Baxter (2011) as the framework for identifying and analyzing what cultural discourses are embedded within the articulated ideologies of the IE program documents. As discussed in Chapter Three, the three areas of program materials/documents that were analyzed using the articulation were: publicity documents (IE’s website, social media posts, news articles, etc.), internal documents (annual reports, etc.), and instructional materials (syllabi, curriculum maps, etc.).

I found that there are three central articulations by the Innovation Engineering program: 1) the articulation of the IE content/system as universally applicable to solve any problem/opportunity for any field, area, or interest; 2) the unity formed by using experiential

learning practices when teaching students, a market-orientated skillset to prepare them for their future careers; and 3) the articulation of the IE program fostering an entrepreneurial culture that will create economic growth and development. These three articulations are embedded in three distinct U.S. cultural discourses, as described by Baxter (2011): 1) The discourse of individualism; 2) The discourse of community; and 3) The discourse of rationality.

Understanding how these discourses work to perpetuate and privilege centripetal forces, within IE and the larger U.S. ideology, provided an opportunity to (re)articulate and (re)position centrifugal, marginalized forces closer to the center and move the scales of justice towards an equitable and just balance.

These dominant cultural articulations discursively serve to garner support for the IE program from various stakeholders (students, parents, K-12 and higher education instructors, university officials, political leaders, and businesses) by promising some form of (economic) return. Here, the IE program did this by silencing/discounting (potential) critics through setting the parameters around what is being taught, how IE is taught, who teaches it, and how the IE program evolves/expands. The cultural discourses made by/in the IE program out of such elements as economic growth, technology, progress, and universality functioned to perpetuate and justify a larger education framework of neoliberalism. Recognizing that these cultural discourses are embedded within the ideologies being articulated in IE program documents/materials may allow *us* to better understand, negotiate, and build strategies for creating a more democratic learning environment where students are applying the skills learned in the IE program to both develop their job-readiness *and* foster their abilities to create/develop positive social change.

I began this chapter by first briefly reviewing articulation (Hall, 1985; 1989) and the U.S. cultural discourses that emerged. Second, I briefly reviewed the mode of analysis that I used to investigate what is being articulated and the cultural discourses in the program materials/documents. Third, I discussed in detail the results of what is being articulated and the cultural discourses that emerged in IE's program materials/documents. I then concluded the chapter by focusing on what the results mean for this study and offer a critical reflection.

Articulation and Cultural Discourses

An articulation analysis connects to both RDT and critical scholarship around social change. Specifically, articulation allows for the hidden ideologies/worldviews and taken-for-granted assumptions present in current IE program documents/materials to be exposed (critically orientated), while simultaneously examining dominant cultural discourses - the distal-already spoken of RDT (Baxter, 2011) - embedded within the cultural ideologies; all contribute to different levels of analysis that allow for the IE program to be (re)imagined and (re)articulated. In order to examine the discursive struggles and dialectical tensions that exist within the IE program, it is important to first understand the cultural ideologies/worldviews that are being articulated and the cultural discourses present in the program's materials/documents – the cultural narratives.

I used narrative, specifically U.S. cultural narratives about education, entrepreneurship, and social responsibility to talk about IE as a kind of unity. Unity/unities are particular collections of connections and disconnections that are experienced as coherent, where one can participate in a program, institution, and cultural practice, among other things, that is filled with contradictions, yet is felt to be coherent and logical (Hall, 1985). Articulation theory allows one to inspect the way that such a unity operates so that it can be opened to critical evaluation rather

than taken as simply “natural” or “true.” Within the context of this study, combining RDT’s understanding of cultural discourses in the United States with articulation allowed us to understand the cultural ideologies of the unity/unities in which educational practices are situated. In turn, this approach made the historical contingency of taken-for-granted ways of thinking more visible. Therefore, I focused my analysis on where and which different practices, values, outcomes, etc. were dis/connected to better understand what U.S. cultural discourses emerge in IE’s programmatic identity, and how that identity was performed in the program’s documented institutional memory. As a macro-level frame to this study, articulation helped me to better understand how these dominant cultural ideologies and discourses were reproduced, asserted, and/or transformed in IE-ers’ experiences of the program. Specifically, I found three cultural discourses being articulated in the IE program documents: discourse of individualism, discourse of community, and discourse of rationality.

The discourse of individualism was the dominant discourse and foundational for other U.S. cultural discourses. Here, self-interest and autonomous individual were non-problematically valued and privileged, especially in communication production (Baxter, 2011). The discourse of community focused on the idealized obligation individuals have to their community, where a religious puritan/morally just undertone centered systems of meaning. Although this discourse privileged placing the needs of the broader society above individuals, it connected to the discourse of individualism in that the service or action of what is morally just focuses on individual actions. An important note is that the dialectic of individualism-community was an expression of the discursive struggle of integration-separation, which as discussed in Chapter Five, was a dominant discursive struggle that emerged in the data. The discourse of rationality privileged the individual by viewing human action as a means-end logic, where having goals and

then working toward accomplishing those goals were valued (Baxter, 2011). Understanding what cultural discourses emerged in the IE program documents allowed me to have a more nuanced understanding of how cultural ideologies were produced within unities. Since the program documents/materials were foundational to what was believed, performed, and applied in and out of the IE classroom, we can better understand what was being expressed in the participant observations, interviews, and focus groups. In other words, how co-participants understood what was being expressed and taught in IE, which stemmed from the cultural discourses embedded in IE program/documents, influenced how they understand their world – their IE educational experience. This understanding among co-participants then gave shape to their systems of meaning about communication, innovation, (social) change, and the role of education in the U.S. This linkage of social formations within IE encouraged a certain identity(ies) that those involved in the program developed through this process, where these U.S. cultural discourses connected to the various discursive struggles in the utterance chain with how co-participants talked and negotiated various dialectics.

The Mode of Analysis

To determine what is being articulated in the program materials of IE, I analyzed publicity documents, internal documents, and instructional materials for the program (defined below). Specifically, I used Hall's (1985; 1989), Haworth's (2005), and Slack's (1996) processes of articulation to analyze the different sets of program documents and materials of IE separately. To start this process, I first focused on each set of documents separately by reading through all the document materials within a set to better understand what was stated holistically. I then re-read each document set while typing notes with the interpretations in a Word document by focusing on: 1) the hierarchy with who was doing the speaking, 2) who was being articulated by

listing what the documents were trying to bring together, 3) what was being articulated overall, 4) who and/or what were being silenced or erased, and 5) what were possible alternative articulations. Then, I generated interpretative descriptive summaries from the notes of each document set/type and used these for the document analysis.

Next, I analyzed publicity documents included the IE's website, brochures, flyers, news articles, and social media pages (Facebook and Twitter). This resulted in the following being analyzed: The eight main pages of the IE's website (<https://umaine.edu/innovation>); 270 Facebook posts that were posted between August 2016 to May 2017 on IE's Facebook page (<https://www.facebook.com/umaine.i.center>); 237 Twitter posts that were posted between August 2016 to May 2017 on IE's Twitter account (<https://twitter.com/umaineinnovates>); six flyers and three brochures of IE from the 2016-2017 academic calendar year; and 38 newspaper and other news articles written between August 2005 and June 2017 that were found in an online library database using the key phrases "Innovation Engineering" and "University of Maine."

Internal documents included archival materials accessed through the University of Maine's library and annual reports of the IE program. This resulted in 16 reports being analyzed⁷ (see footnote for a list of the reports). Instructional materials consisted of course syllabi, the curriculum map for the Fundamentals of Innovation Course, which was started in the spring of

⁷ Descriptive statistics from 2016 of student demographics enrolled in the IE program at the University of Maine, Two University of Maine's Provost's Academic Affairs Annual Report from 2014 and 2015; Two University of Maine's Presidential Student Life Report for the years 2013-2014 and 2014-2015; Three Measures of Growth report for the state of Maine for years 2015, 2016, and 2017; the 2017 University of Maine's System Research Reinvestment Fund Annual Report of Activities; the 2011 Making Maine Work: Critical Investments for the Maine Economy report; the 2016 Entrepreneurship Grows Maine Resource Guide; the 2014 Annual Report of the University of Maine's Blue Sky Highlights; the 2015 Innovate for Maine's Bootcamp Intern Survey Summary Results; the 2015 Innovate for Maine's End of Fellowship Program Intern Survey Summary Results; the 2015 follow-up Survey results from Past Interns in the Innovate for Maine Fellowship program; and the 2015 Innovate for Maine Fellows Program Terms and Conditions for companies.

2017, and graphic organizers and tools for the entire IE curriculum. This resulted in the following instructional materials being analyzed: Three IE course syllabi (INV 121: Fundamentals: Innovation Engineering; INV 510: Innovation Engineering Accelerated I – AKA: Create and Communicate; and INV 511: Innovation Engineering Accelerated II – AKA: Commercialize and Systems); The 228 page curriculum map of INV 121: Fundamentals: Innovation Engineering for instructors; and 186 pages of graphic organizers and other curriculum tools taken for the Innovation Engineering Labs website (<https://innovationengineeringlabs.com/cafe>) for the entire IE curriculum (15 pages of materials for skills related to *Stimulus*, 45 pages of materials for skills related to *Create*, 16 pages of materials for skills related to *Communicate*, 32 pages of materials for skills related to *Commercialize*, and 78 pages of materials for skills related to *Systems*).

Cultural Discourses Articulated in the IE program

In examining IE's publicity documents, internal documents, and instructional materials, I found three dominant articulations, which are discussed below: 1) IE as a system with universal applications; 2) IE as taught through experiential learning and market-oriented skill sets; 3) IE as a promise for the development and growth of an entrepreneurial culture. I also found three dominant U.S. cultural discourses that emerged within the articulation of the cultural ideologies in the IE program documents/materials: the discourse of individualism, the discourse of community, and the discourse of rationality.

Articulation 1: IE as a System with Universal Applications. The Innovation Engineering's first discursive articulation focused on the program's vision of a *universal application*, where the discourse of rationality and discourse of individualism emerged. This compelling phrase was inextricably connected to the essence and appeal of a standardized approach to education focused

on outcomes assessment (Fassett & Warren, 2007). Additionally, the *universal application* phrase was powerful because of its role in fostering a Westernized, context- and value-free, positivist model of social scientific approach to truth, to knowing, to educating (Hall, 1989; Laclau, 2005; Szkudlarek, 2013). The Innovation Engineering website, when discussing what the program is, made this articulation and discourse clear:

[Innovation Engineering] complements any major or field of study including the sciences, arts, humanities, business, engineering, and education. In the program, students learn how to employ the tools and methods of innovation in their field of interest... The process can be used on major innovation projects that have a dramatic impact on sales and profits or minor projects that help transform the culture. It's a four-stage process of Define, Discover, Develop and Deliver and integrates painlessly with classic project management systems. (Innovation Engineering, n.d.)

Furthermore, the IE fundamentals course served as two general education requirement courses at the University of Maine. This in turn worked to further legitimize the IE program and to show all stakeholders involved with/in the university, that the content material of IE was as important for students to know as that of other core-courses (public speaking, English composition, etc.). The across-curricula application also provides legitimacy of IE as “universal” learning that can be applied to any major just like writing (English composition) and public speaking courses.

Additionally, IE's documents suggested a certain pride in the “objective” universality of the program when it came to its ability to create and test how meaningfully unique ideas are through a formulaic, predictive measure. In the INV 121 Fundamentals Course Instructor's guide (2016), it is stated that:

[T]here is a mathematical calculation we can perform to gauge how Meaningfully Unique customers think our idea is. It is based on original research by Doug Hall and AcuPoll Market Research. Customers were asked a series of questions about products before they were commercialized. Questions included how likely they were to purchase the product, and how new and different they perceived the product to be on a scale from 0-10. When compared to how the same products actually performed in the marketplace, Doug and his team determined the best predictor of success was to take a blend of customers' Purchase Intent scores and their New and Different scores at a 60:40 weighted value. (p. 22)

The discourse of rationality emerged through the privileging of a means-end logic. However, this was problematic since there was an assumption that a survey created to measure the “meaningful uniqueness” of products before they were commercialized can also be applied when creating ideas for innovation related to the human experience. This problematic approach disregarded context and positionality – in culture, social movements, programs, and any other circumstances where human experience and difference is centered.

Critical approaches to interventions for positive social change (which could be considered social innovations) acknowledge context and centering of difference by recognizing unjust power relations (Angus, 1992; Hall, 1989; Osburg & Schmidpeter, 2013). Critics acknowledge that positivist model of social scientific approaches to knowledge seek to predict behaviors in order to advance capitalistic practices that may (un)intentionally oppress and further marginalize (Frey & Palmer, 2014; Grossberg, 1986; Stark, 2006; Tufte, 2014). Thus, no “meaningful” change or social innovation may result from the interventions (innovations) as it may continue the existing practices and cycles of oppression, especially if assumptions and issues of power and difference are not explicitly articulated, acknowledged, or reflected on. As

Tufte (2017) suggested, critical communication scholars need to adopt, “a new grammar of change,” which should include, “new logics of action new actors, new narratives and new strategies to articulate them and make them heard” (p. 140).

Rather than explain and be explicit about the theoretical and methodological assumptions and limitations that the IE system uses (which all research does, including positivist model of social science), the IE approach dismisses critics of their positivist model of “scientific” systematic approach to innovation, by articulating that if one disagrees with their approach, they are *not* willing to learn how to be effective innovators, and thus this program is not for them. Here, the discourse of individualism shone through as IE’s self-interest is privileged – this dismissal is part of the IE mindset, which is discussed further in Chapter Eight. Those who are learning the IE process/approach need to just, “trust in the cycles of learning” (IE Fundamentals Course Instructor Manual, 2016, p. 143). Critiques are then dismissed as the critic’s “lack of trust” rather than considered in relation the IE system and its potential of promoting certain values – the discourse of rationality and the discourse of individualism. This was highlighted in an interview with Doug Hall, published in the *Maine Policy Review*. He stated that

[I]t’s possible to teach people who are *willing* to learn a *reliable* and *reproducible* system for creating meaningfully unique ideas. I know it’s reliable, as it is multiplying across the world at an exponential pace. In the three years since we went public with the systems approach, it has been adopted by thousands of companies, from small startups all the way to Fortune 100 companies. (Lukens, 2014, p. 76)

By putting the attention (and blame) back on the individual (discourse of individualism), IE is able to deflect its critics and claim universality (discourse of rationality). As such, IE represents its positivistic “social scientific” system with a universal application, the success or failure of

which is contingent on the individual or the business, not the underlying values reproduced in the system itself. One performance of this articulation was evident in the IE Fundamentals Course Manual, which stated that IE can be universally applied to “ignite innovation within people, projects, and culture ... [because] ... It is the first innovation system that is based on quantitative data ... [which was] ... gathered by the Eureka! Ranch team, founders of Innovation Engineering, over the past 30 years. This includes assessment data on 25,000+ innovations and 100,000+ individuals” (IE Fundamentals Course Instructor Manual, 2016, p. 9). Here, quantitative positivist scientificity is clearly articulated with a universal application, disregarding of context – the numbers “prove” the system *truly* works. The discourse of rationality and discourse of individualism work together in the social formation of the articulation of IE as a universal system.

IE’s silencing of dissent and critiques limits opportunities to engage in meaningful dialogue and transformative change within the program and in its external applications when attempting to ignite innovation within people, projects, and cultures for positive social change across various academic disciplines, communities, and other contexts (Freire & Macedo, 1995; Papa, Singhal, & Papa, 2006; Stark, 1996; Tufte, 2017). As such, it cannot be emphasized enough that the dominant cultural discourses of individualism and rationality highlighted in this articulation of universal knowledge/application align to neoliberal values of accountability, truth, predictable results, and profit (Angus, 1992; Frey & Palmer, 2014; Hall, 1985; Laclau, 2005). According to critical theorists and pedagogues, such an articulation of knowledge to capital, especially when assumed as “natural,” is detrimental to attempts to (re)imagine a more socially just world, especially for historically marginalized groups, since this articulation reinforces the

oppressive structures and systems already in place, and thus may limit new possibilities and articulations (Fassett & Warren, 2007; Frey & Palmer, 2014; Szkudlarek, 2013; Tufte, 2017).

Articulation 2: IE as Experiential Learning and Market-Oriented Skillsets. This second articulation of experiential learning strategies, such as hands-on applications, blended learning, reflection, collaborative group work, and project-based learning, as being effective for teaching and having students apply market-orientated skills is emphasized in all IE curriculum materials/tools, publicity documents, and internal documents. Here, the discourse of rationality emerged as central to this articulation. The course syllabus for the IE Fundamentals course highlighted this well:

You'll learn how to innovate and drive innovation in everything you do --- and that means less planning and more doing, less talking and more action. In each of our 12 skills you'll learn something new that will build on your learnings from the previous skills and you'll walk away with tools and techniques that you can use to generate ideas and make them a reality. Whether you are interested in product development, social innovation, or simply making the work you already do more meaningful, this class has been designed to prepare you for success. You'll engage in rapid research to gather thoughts, ideas, and unique perspectives as you gather information that will spark fresh thinking. Building prototypes, surveying potential customers, and talking to experts are just a few of the activities you may choose as you further build and strengthen your ideas. An idea without numbers is just an idea. You'll use new tools and estimating to build math models that support your concept. By the end of the day, the business case you've built will speak to the feasibility of your idea in the real world. (Fundamentals, 2017, pp. 1-2).

The IE Fundamentals syllabus showcased the discourse of rationality through the language use of “less talking and more action” and “engage in rapid research,” which values certainty and making “wise choices.” The promises and articulations made in this syllabus were also echoed in a Twitter post from April 2017 that promoted an upcoming event hosted by the IE program. The event was called “Whiteboard Pitch” and focused on awarding funding to a student group that wins a “pitch” competition for a fundraising plan. A panel of innovation judges evaluated the pitches and the winner was provided “consulting with our business professionals.” This event and its Twitter promotion showcased that experiential learning extended beyond the classroom and was embedded in all the programs, events, and functions of the IE program. There was an assumption that market-oriented, hands-on activities enhanced student learning, which also helped prepare them for their future careers by making appropriate plans to accomplish goals—the discourse of rationality (i.e. creating a fundraising plan for their business). The event and its promotion further articulated the mastery of applied skills with business-oriented winning and, by extension, articulate learning with competition. This tweet highlighted the assumption that hands-on experiential learning through competition will help spur innovative ideas.

Breunig (2005) explained how experiential approaches to education, which include generic student-centered pedagogies, have triumphed as a dominant method of learning and teaching in our Western culture. However, a critique of this approach to education is that an experiential approach does not always ask of students and instructors to critically examine and, “consider the aim, intent, and purpose of their practice(s)” (Breunig, 2005, p. 107). Lipman (2017) elaborated on this further by explaining how these educational strategies reinforce technical rationality and efficiency as educational processes are, “standardized, centrally prescribed and scripted, and subject to accounting measures” (p. 580). This emphasis on

efficiency of/in learning and its articulation with experiential pedagogies was evident in a promotional flyer for the IE graduate classes for the Fall 2017 semester, which stated:

Learn how to work smarter and take action on your ideas. The courses are taught in a convenient blended learning format that mixes in-person and online work to minimize the amount of time required in the classroom without losing the benefit of working directly with your peers and the instructor.

The flyer highlighted the tension with experiential learning and general student-centered pedagogies with how a standardized approach to learning that was efficient (i.e. blended learning to minimize the amount of time required in the classroom) was privileged over encouraging students to critically examine/apply what they learn to, “work smarter and take action on your ideas.” Again, the discourse of rationality is embedded within the language of, “work smarter and take action.”

The experiential learning practices of IE through having a standardized blended learning curriculum also encourages students to embody/develop a market-oriented mindset when creating ideas. This was reinforced on IE’s website, which explained that the goal of the program was for students to, “develop a mindset and skill set for creating, testing, and achieving ideas” (Innovation Engineering, n.d.). In a news story where two alumni of IE were interviewed about their experiences, one student discussed how embracing the IE mindset has helped her personally and professionally. She explained that,

I find that I am applying IE principles not only to my field, but also to my daily life. I think differently now. IE is not taught like other classes; it is a method that is learned and practiced over and over again. The exhilaration of discovery carries forward long after

the lesson and helps students to realize that they are capable of making opportunities for themselves (Hughes & Smith, 2014, p. 80).

What was articulated here was how the experiential approach to teaching the IE curriculum also reinforced the previous articulation that IE had universal application – experiential learning assured universality of the skills taught. Additionally, at the same time, it assured student-driven uniqueness. This was also seen in an interview with the academic director of the IE program when she discussed the hopes and goals for IE students who came from humanities/social science majors:

I felt inspired and confident that we could build curriculum to offer these tools and methods to students in any major field of study at the University of Maine. Teaching students to address problems and opportunities by diversifying their thinking, to use writing as a thinking and prototyping tool, as well as to articulate and persuade, and to use Fermi estimation and simple mathematical formulas to evaluate and refine ideas, gives them the skills and confidence to create their own future in the field about which they care the most. It also supplies them with a common language (and, again, the confidence) to engage in collaborative, interdisciplinary projects—terms that describe most inventive processes and even most businesses nowadays (Lukens, 2014, p. 75).

What was emphasized here was that the IE program provided an approach for students to apply this system to anything, and that it can be used to solve any problem or capitalize on any opportunity – it was an end-all, be-all that was the solution to everything. The universal application narrative was embedded within this discourse. Within this articulation, a tension emerged between a liberal arts education and a more technical skills-based education. There was an assumption that a liberal arts education was not universal and did not provide the needed

foundation to be successful in the job market. The articulation of liberal arts with skills in IE both embodied this tension as a cultural discourse and attempted to resolve it using reframing.

This tension was discursively performed in one of the news stories with the academic director of IE and Doug Hall. The academic director further proclaimed that, “in the liberal arts, we often confront questions about the utility and relevance of our subject matter to students’ lives and future work in the world” (Lukens, 2014, p. 75). A liberal arts education had to answer to questions about how useful it was in the “real world,” and that it was perceived as “philosophizing.” The discourse of rationality was embedded within the utterances of “utility and relevance.” Contrary to such challenges to the practical utility of liberal arts education, studies continuously showed how a liberal arts education was essential to developing critical thinking, writing skills, civic engagement, and increasing cognitive development across the disciplines (Astin, 1999; Dylan, 2013; Pascarella, et. al., 2013; Rowe, 2013). Further, studies and polls found that students who had a liberal arts education tended to have more opportunities that resulted in longer term financial and career successes (Anders, 2016; Hart Research Associates, 2013).

What is articulated here is that IE provided an educational service that is “bridging” students’ academic majors, interests, passions, goals and the real world together. IE documents suggested that the program sought to articulate that a liberal arts education needed enhancing through “marketing” and “practicality.” There was an assumption within the IE program documents that a liberal arts education failed to teach students how to apply what they learn to the “real world” once they graduated. Additionally, program documents highlighted the narrative that the manner in which a liberal arts education taught students is incomplete/wrong since this type of education failed to connect students’ passions/interests/liberal arts majors to the job

market. Again, the discourse of rationality was embedded, since there was an assumption that a liberal arts education did not teach students how to make plans to accomplish their goals. As a result, IE was viewed as the solution to teaching students how they can apply their major/education to the “real world” for employment/career opportunities in the marketplace, and as a result led to personal fulfillment/confidence and economic and career success. What was missing were questions concerning problems with this educational approach and with the content. Further unquestioned was the assumption that measurable professional “success” equals personal fulfillment. Unexamined were also possible tensions that a market-oriented approach may produce once “innovative” ideas enter communities of people. For instance, questions about ethics, cultural considerations (rural, Native Americans, refugee population, etc.), and/or various educational philosophies about creating civically engaged citizens were all avoided/silenced.

As such, this approach to using experiential learning to teach students technical/practical skills was read as problematic from a critical perspective since these “business metaphors of quality control, accountability, and standards replace any notion of democratic participation in education as a public good in a democratic society” (Lipman, 2017, p. 580). As a result, the purpose of higher education was defined as supporting the labor-market needs of capitalism – IE is embracing neoliberalism. The discourse of rationality was dominant in this articulation through the focus on developing the skills and temperaments necessary for the job market of globalized capitalism, where experiential learning strategies provided the process and tools to accomplish this (defined) purpose.

Articulation 3: Entrepreneurial Culture and Economic Growth. This final articulation, of IE fostering an entrepreneurial culture that will eventually lead to economic growth and development, served to ideologically and politically solidify the purpose of education in

America, “as serving the global economy, especially, as we hear, the economy of knowledge” (Szkudlarek, 2013, p. 1). This articulation was embedded within the discourse of rationality, the discourse of community, and the discourse of individualism. There was a suggestion that, “if [students], clients and citizens can be turned into consumers with choices, then the problem of education and other social [and economic] challenges may be solved” (Enos, 2015, p. 17). This was clearly articulated in an entrepreneurship guide created by Leadership Maine (2016), which provided a resource for (social) entrepreneurs of opportunities in Maine that could help them develop their ventures. IE was described as an, “incubator for knowledge-based business ventures that will lead to the creation of new Maine-based industries through University research and development” (Leadership Maine, 2016, p. 27).

Additionally, the IE website emphasized this articulation when discussing how the skills being taught, “are essential to participation in the global economy and will prepare graduates to lead the commercialization of new products, services and technologies” (Innovation Engineering, n.d.). Through the analysis, it became clear that the entire institutionalized structures of the IE program, the partnerships/relationships with state agencies, local/state businesses, K-12 public schools, the University system, and community in general were all focused and tailored to spurring economic growth in Maine. This in itself was not necessarily negative, but may become problematic if it ignores all other considerations of social and community well-being and further ignores how certain market approaches only increase economic divisions rather than offer growth to everyone. The strategic institutionalization of IE across various industries and sectors in Maine has been reported to be the only approach in the United States where the focus of education becomes job training, since IE “integrate[s] innovation and entrepreneurship in a way that hasn't been done anywhere in the country” (Hemmerdinger, 2011, para. 3). Through these

highlighted examples of how IE is institutionalized, the discourses of rationality and community worked together through how IE frames itself as the “saving grace” to Maine’s economy by how it “prepares” students to, “lead to the creation of new Maine-based industries” (Leadership Maine, 2016, p. 27).

For instance, the University of Maine’s 2014 Annual Report (2014) provided numerous examples of how this is accomplished and structured: 1) The IE program sponsored a summer internship program for undergraduate and graduate students studying in Maine, called *Innovate for Maine Fellowship* in partnership with *Blackstone Accelerates Growth (BxG)* by creating statewide programs with coordinated, focused activities with Maine companies. The goal was to create jobs and economic development in Maine through entrepreneurship and growth; 2) The IE program provided extra revenue for the University of Maine through selling the academic license of the IE program to other universities around the U.S. and the world, where they split the profits with the Eureka Ranch. This revenue assists the university in having the funds needed to provide academic and economic resources and materials for students; 3) IE program leaders led multiple innovation workshops for businesses and nonprofits at the University of Maine and around the state (Portland, Augusta, Freeport) to, “help them commercialize innovations and implement innovation systems in their businesses” (p. 7); 4) Using the Innovation Engineering curriculum, the Foster Center provided lesson plans to K-12 teachers to easily incorporate the IE content and activities with state core curriculum standards; 4) IE sponsored an *Invention Convention* for K-12 students where students presented inventions that they created using the IE content, where they were then judged and provided awards based on its “meaningful uniqueness” (p. 9). This ethos of strategically institutionalizing market-orientated approaches to education across multiple systems/sectors/processes, as applied with the IE program, is problematic in that this is organized

in such a way that it reinforces capitalism's, "power-laden conditions that privilege some positions over others" (Mease, 2011, p. 165) where students continue to practice the art of the "enterprising subject" (du Gay, 1996). The discourse of community was embedded within this articulation in that capitalism is morally just and serves the broader society. Here, students were trained to enter a knowledge economy where their, "intellectual and social capital will mark them as unique and valuable" (Mease, 2011, p.152). Through IE embracing neoliberal approaches to education through a means-end logic, capitalism by way of IE became the "saving grace" to Maine's economy, to the purpose of education, and to how students were educated.

In another example, the 2017 Measures of Growth Report (2017) released in collaboration by the Maine Development Foundation, the Maine Economic Growth Council, and the University of Maine System has also drawn on this articulation of IE having universal application for economic growth and development for the state of Maine. The 2017 report stated that:

Business creation is a vital activity in today's economy. Entrepreneurship provides new and expanded opportunities for Mainers and creates jobs and economic activity.

Understanding the needs of diverse businesses at a variety of stages of development and providing access to resources and a supportive environment, can foster business creation and help businesses with growth potential take the next step. [IE is] ... key to [helping] diversifying the economy and strengthening our innovation-based economy (Measures of Growth, 2017, p.13).

As previously mentioned, what was communicated was the assumption that IE was more than just an educational program, but was the "saving grace" (religious utopianism) to help jumpstart Maine's lackluster economy. This function of an educational program being a "saving grace"

serves to reinforce a U.S. dominant cultural narrative of neo-liberal capitalist educational practices as being the answer to solving all problems (Frey & Palmer, 2014).

On another level, this articulation perpetuated the cultural discourse of individualism so dominant in Western cultures (Mease, 2011). Here, blame was placed on the individual business as the reason why Maine's overall state economy was lacking (discourse of individualism), and IE was the "saving grace" that can help the individual businesses reach their "growth potential" (discourse of community). This assumption that small businesses in Maine were not always supportive of new entrepreneurial approaches and/or innovative business practices, which slows and hurts the state's economic recovery, silenced critics of the state or other programs/policies. Opposition to policies and programs was recast as opposition to overall economic growth. At the same time, placing the focus on individual responsibility (individual businesses and their choices) to spur economic growth took attention away from the macro level systems, structures, institutions, and organizations that perpetuated inequitable economic activities, resulting from globalized capitalism. As Lipman (2017) reiterated, how this type of integrated system highlighted the strategic relationship between new forms of educating (training) and the (re)production of a hierarchical labor force for our new economy, which may only reinforce and extend inequalities – all of which undermines the fabric of our democracy.

Re-articulation: Imagining New Possibilities

First, it should be acknowledged that the above three dominant articulations that were embedded in the three discussed cultural discourses served to establish and reproduce a certain framework of the purpose of higher education as the foundation for economic growth/opportunities – a neoliberal framework of education (Frey & Palmer, 2014). This was, in part, accomplished by displacing and masking difference, so that alternative points of view and

critiques of the dominant perspective are discredited (Hall, 1985; 1989). What this meant is that dominant articulations depended on their abilities to disband outlying, dissenting, or conflicting elements. According to Hall's theory of articulation and re-articulation, to imagine new possibilities it is important to understand how articulations are discursively and ideologically made in the first place. By exploring the cultural discourses (distal already-spoken) embedded in the IE program documents/materials, *we* have a better understanding of how the market-oriented approaches to skills training in IE work to undermine and discredit alternative educational approaches, such as a liberal arts education or a social justice orientation to innovation.

According to Lewis and Roth (1993), this educational approach of teaching students market-oriented job skills over a liberal arts education, which was developed by business practitioners, was concerning. This was because these business professionals may have excellent specialized business-related skills, but they lack the “knowledge and habits of thought” (Lewis & Roth, 1993, p. 6) that would enable them and the students to use these skills effectively in our diverse world. Considering the IE program was designed with the assumption it will “fix” a liberal arts education gap in important job-training skills, and thus will “save” Maine's economy, how could the dominant narratives and cultural discourses in/of the IE program be re-articulated to reflexive and critical “habits of the thought” (Lewis & Roth, 1993)?

One such re-articulation was offered by Martinez, Padmanabhan, and Toyne (2007), where they (re)developed their business-related courses/curriculum to incorporate more social justice frameworks offered by liberal arts schools. The goal was to focus on developing students' citizenship needed for active community life as well as for rewarding careers – embrace the discourse of collectivism, which privileges the needs, values, and goals of others, instead of

individualism with the discourse of community. They did this through a variety of experiential activities and methods, including developing community partnerships, acknowledging limitations of the business methods/practices, incorporating cultural context and ethics from a globalized (post-colonized) framework, and including an apprenticeship type approach where students had the opportunity to study abroad. This approach also aligned nicely to how Breunig (2005) imagined and practiced experiential learning for positive community change. He argued that students and instructors needed to consider, “their understanding and their location” (p. 107). This was important since traditionally, an experiential education “lack[s] intention, purpose, and direction most often simply represent play. Play is fun; but play is not always enough, especially if there is some educational end toward which the practice (experience) is directed” (Breunig, 2005, p. 107). He explained that incorporating critical pedagogies with experiential learning strategies may allow for a more meaningful and thoughtful experience for students and instructors, as both share a vision of creating a more socially just world.

Additionally, it would be helpful if it was (re)stated how the program differs from the corporate training program at the Eureka Ranch, and if there was not much difference, why this was beneficial at an institution of higher education? Also, it would be useful to see how the University of Maine could (re)imagine how their IE program functioned and taught different processes from the Eureka Ranch, since IE was a higher educational program and the Eureka Ranch was a corporate training program. This was important to consider, especially if the IE program did not increase economic development, jobs, and/or keep students taking the program in Maine, as the program promised. What could the university do, then, and how could this partnership move forward and/or adapt? These questions asked us to (re)articulate the IE program beyond the discourse of rationality by imagining new possibilities of uncertainty.

IE could also better define how the IE system can create ideas by clearly defining what it means by products, services, programs, the personal, and processes. IE could also dive deeper into its theoretical underpinnings of Deming (1956; 1986; 1988; 2000) and Ackoff (Ackoff & Greenberg, 2008), where it hopes to go, and account for possible variations of where the program may fall short (i.e. be explicit that the surveys created and used in IE for the formulas were for products, and how this is a limitation and why – explain how/if this could still be used for non-products more clearly). Although IE expressed the importance of having students explain and provide their logic of reasoning for making decisions (i.e. when estimating), the program did not explain or provide the assumptions that it was making with its content, the theoretical and methodological assumptions or its pedagogical assumptions. This should be clearly articulated, which acknowledges the discourse of rationality. Enos (2015) discussed the importance of having educational programs acknowledge its limitations and approaches, especially if the educational approach is working towards some sort of (positive) change in/with the community. This was something to explore further with understanding students, alumni, instructors, and program leaders lived experiences. By examining the IE program and possibilities for re-articulations, how experiential learning was used to both prepare students for the labor market and develop their critical thinking skills needed for engaged citizens may be (re)imagined in our cultural discourses (distal not-yet-spoken).

Chapter Summary and Critical Self-Reflection

In sum, the IE program documents suggested IE's central articulations with universal application, experiential learning to develop practical skills, and economic growth/opportunity where the U.S. cultural discourses of individualism, community, and rationality emerged. These three articulations and cultural discourses functioned to perpetuate and rationalize a larger

American educational definition/purpose of neoliberal market-based training and hegemony (Frey & Palmer, 2014; Giroux, 2012). The dominant cultural ideologies that were articulated in/through the IE program silenced any critics by embracing a positivist worldview of knowledge and universal application (discourse of rationality) and placed blame on the critics that they just need to “trust the system” (discourse of individualism), as IE was the “saving grace” to Maine’s economy and education (discourse of community). Now that these dominant articulations and cultural discourses were made visible, what are *we* going to do about this knowledge, so that new possibilities may be (re)imagined in/of IE (distal not-yet-spoken)?

The IE program does serve an important purpose within the University of Maine and the overall state, and through this analysis I found stories where the IE program has made a difference in individual lives (discourse of individualism) – specifically with the K-12 Invention Convention, the Innovate for Maine Fellowship program, and workshops teaching small businesses how to apply the IE system for their businesses (discourse of community). Maine is a rural state with a dwindling population, and I do appreciate what the IE program is trying to do with spurring economic growth and placing value on experiential learning. As someone who grew up in poverty in rural Pennsylvania where good-paying jobs continue to be lost and a lack of opportunity persists in my hometown and surrounding communities, I truly appreciate the priority the IE program places on spurring economic growth to help the economic livelihood of students and communities in the state. This is a very noble and important cause – a social justice cause. However, I am concerned about the dominant cultural discourses embedded in IE’s program documents. I wonder how, if at all, could the IE program be (re)imagined beyond valuing a neoliberal framework to these discourses? After all, the program is so institutionalized

in its current form not only within the University of Maine but in the State structures and in other Institutions of Higher Education.

How do we move beyond the articulated distal already-spoken towards a more equitable distal not-yet-spoken? The role that the Eureka Ranch plays in helping to shape these articulations, particularly the market-orientated skillset, concerns me, especially since the Eureka Ranch is focused on corporate training and embodies the cultural discourse of individualism and rationality. How could the IE program be (re)imagined so that the experiential learning embedded within the program does not continue to perpetuate or privilege a corporate training approach to educating students, but privileges a more thoughtful-critical thinking framework? What opportunities do students, program leaders, and/or instructors have with helping the IE program evolve and expand? Are program leaders truly open and interested in engaging in dialogue about the strengths, limitations, and potential shortcomings of what ideologies and cultural discourses are being articulated through the program documents? Do co-participants experiences reinforce, challenge, and/or problematize these three central articulations and cultural discourses that were found in the program documents? Or, is there a sense of hope, pride, and commitment among co-participants? Is there a delicate balance and/or negotiation of both? To understand how these dominant ideologies and cultural discourses are embodied and practiced in and of the IE program, it is important to examine the lived experiences of the stakeholders in IE. The following chapter investigates this further by providing a summary of the discursive struggles that emerged in the interactive data.

CHAPTER 5

SKETCHING IE THROUGH DISCURSIVE STRUGGLES: AN OVERVIEW OF CO-PARTICIPANTS' PERSPECTIVES

Overview

In Chapter Four, I used Hall's (1985, 1989) five-step process of articulation analysis to uncover and expose the dominant and cultural ideologies/discourses (Baxter, 2011) (the discourses of individualism, community, and rationality) that emerged in the IE program documents. Chapter Five, then, develops from the identification of these articulations and provides an overview of the results of this study by briefly describing and analyzing how the IE program currently defines and teaches communication, innovation, and (social) change and the cultural discourses embedded within IE's system of meaning (see Table 5.1 for overview of discursive struggles with the internal and external dialectics that emerged in each theme). Understanding the bigger picture of how co-participants defined their experience in IE and the program itself highlighted how they negotiated and made meaning within these struggles and navigate in/between the emerging tensions. In these moments where co-participants worked to find a kind of balance between the centripetal and centrifugal forces, we were able to pinpoint the discursive spaces that offered the greatest possibilities for change and a tipping of the scale of justice. The next three chapters, then, answer each of the three research questions and dive deeper into the themes and discursive struggles.

The IE program was at a crucial turning point in its history with regards to how the program teaches innovation, communication, and (social) change. This turning point has been marked by recent and upcoming curriculum changes that included: development and teaching of the Fundamentals of Innovation Engineering course in the Spring of 2017, arranging that this

Fundamentals course fulfills two General Education requirements (the Artistic & Creative Expressions requirement and the Social Context & Institutions requirement) at the University of Maine, and the redesigns of the INV 180 Create, INV 282 Communicate, and INV 392 Commercialize courses that has or will take place during the 2017-2018 academic school year. There was much excitement surrounding the IE program due to these changes and to an increase in student enrollment in IE courses, especially since the IE Graduate Certificate is now being offered 100% online (UMaineOnline, n.d.). As explained further below, this made the present moment particularly well-suited for a study such as this that explore possibilities for pedagogical and curriculum development within the program.

Table 5.1⁸ Overview of Discursive Struggles and Dialectical-Tensions in Each Theme.

| Discursive Struggle | Internal dialectic (within IE relationship) | External dialectic (between IE and community) |
|----------------------------|--|--|
| Integration-Separation | Unity-Fragmentation ² Connection-Autonomy ⁴ | Control-Emancipation ^{3, 4} Inclusion-Seclusion ^{2, 3, 4} |
| Dissemination-Dialogue | Univocality-Multivocality ^{1, 4} | Diffusion-Collaboration ⁴ |

Notes: The superscripts above correspond to the following themes and their locations in the text.

Theme 1 - IE praxis (Ch. 8)

Theme 2 - Communication as an engineered dissemination focused on economic outcomes/return (Ch. 6)

Theme 3 – (Re)engineering possibilities for (social) change (Ch. 7)

Theme 4 - Communication as engineered programmatic identity work (Ch. 6)

⁸ Dialectics can be either internal manifestations (tensions experienced between relational partners/organizations/entities, including how they communicate with each another) or external manifestations (tensions between a couple and other dyads/entities or society, including how the couple/organization presents themselves to others) of discursive struggles (Baxter, 2011; Baxter & Montgomery, 1998). See Appendix H for other definitions of Key Terms.

To determine the overall themes and discursive struggles embedded within the cultural discourses described by Baxter (2011), I coded and analyzed 341 typed single-spaced pages of transcripts coming from participant observations (26 total pages), semi-structured interviews (281 total pages), and focus groups (35 total pages). I coded the data using NVivo, a qualitative data analysis software program. Data were grouped in 23 initial findings with 1,097 total coded references. Through subsequent coding, I grouped the 23 initial findings into 15 themes. These 15 themes were grouped under four thematic categories: (1) IE praxis (36.46% of overall coded data with 400 references); (2) communication as engineered dissemination focused on economic outcomes/returns (26.89% of overall coded data with 295 references); (3) (re)engineering possibilities for (social) change (25.98% of overall coded data with 285 references); and (4) communication as engineered programmatic identity work (10.67% of overall coded data with 117 references). Additionally, I found two dominant discursive struggles: 1) Integration-Separation (i.e., connection-autonomy, inclusion-seclusion, unity-Unity-Fragmentation, and control-emancipation); and 2) Dissemination-Dialogue (i.e., univocality-multivocality and diffusion-collaboration), where both integration and dissemination are centered (centripetal) and separation and dialogue are marginalized (centrifugal). The struggle of Dissemination-Dialogue, however, has only previously been identified and analyzed as a dialectic (Papa, Singhal, & Papa, 2006), which positions dissemination and dialogue as existing on the either/or spectrum. By redefining this tension as a discursive struggle, this study sought to remove the binary limitations and explore dissemination and dialogue as they exist on a continuum of the both/and.

Additionally, I found that the co-participants negotiated the discursive struggles within these contexts in accordance with five praxis patterns: balance, denial, integration, recalibration, and segmentation (Baxter & Montgomery, 1996). Balance essentially refers to a compromise

where, “the polarities of a contradiction are cast in a zero-sum relation by the parties” (Baxter & Montgomery, 1996, p. 64). Denial focuses on the effort to, “subvert, obscure, and deny the presence of a contradiction by legitimating only one dialectical pole to the virtual exclusion of the other poles” (Baxter & Montgomery, 1996, p. 61). Integration, “refers to a response in which the parties are able to respond fully to all opposing forces at once without any compromise or dilution” (Baxter & Montgomery, 1996, p. 65). Recalibration occurs when, “the opposing forces are no longer regarded as oppositional to one another... [and]... the polarities are encompassed in one another” (Baxter & Montgomery, 1996, p. 65). Baxter and Montgomery (1996) explained that segmentation involves an ebb-and-flow pattern, where the basis of inversion surrounds a topic or activity that is off limits in a certain polarity while other topics or activities are for that polarity. These findings have important implications for the communication field, RDT, CCP, and IE/SE.

The overall findings, as discussed above, highlighted that integration-separation emerged most often throughout the four themes. Additionally, I found that dissemination-dialogue arose as a dominant discursive struggle and not as a dialectic, as was previously claimed by Papa, Singhal, and Papa (2006). The dissemination-dialogue arose most prevalently in relation to how IE conceptualizes and teaches communication, which will be discussed below and in greater detail in Chapter Six. Understanding dissemination-dialogue as a discursive struggle and not as a dialectical tension has important implications for understanding, describing, and evaluating the role/function of communication using RDT and CCP, especially when navigating and negotiating the various cultural discourses and neoliberal ideologies embedded in/between preparing students for the job-market and developing agents of social change.

In describing, analyzing, and reflecting on their experiences, IE co-participants suggested that the program had lasting implications for sprouting an entrepreneurial spirit and orientation to the world where neoliberalism is valued. Specifically, I found that IE co-participants embodied an entrepreneurial approach to innovation and communication to enact some sort of market-orientated change, which can be personal change, product or service-orientated change, and/or social change. Here, IE centered itself as the “saving grace” – the Messiah to solving educational and economic problems in Maine, where the cultural discourse of community was articulated. Within IE, communication was taught to be strategically used through verbal, written, and relational approaches to create and implement an innovative idea for change through disseminating information, while maintaining control over the idea creation, communication, and commercialization process. There was an implication that this market-oriented entrepreneurial spirit can be used for social change if the individual wants to use IE for such purposes, where the cultural discourse of individualism is privileged. To fit the IE model of innovation, the impact of the personal, product, service, and/or social change must be quantifiable, privileging the cultural discourse of rationality. If IE is to conceptualize and teach students how to be agents of social change, I claim that there must be a balance between how IE privileges dissemination over dialogue and integration over separation when conceptualizing and teaching innovation, communication, and (social) change.

To better understand the interplay of the discursive struggles and how they emerged in the four themes, I structured this chapter by organizing the discursive struggles by tensions in meaning (“IE-ing”) and tensions in (self)definitions (“IE-er”). Specifically, I first discussed the tensions in meaning that emerged from the discursive struggles, focusing on co-participants’ overall experiences of “ferment” in the IE program. In this section, I analyzed the discursive

struggle of dissemination-dialogue in practice and the performances of what “IE-ing” means.

Third, I examined what it meant to become an “IE-er” and the discursive struggle of integration-separation in (self-)definitions. Here, I focused on co-participants’ metacognition of processes of identity formation. In exploring the various tensions of meaning, the discursive struggle of dissemination is privileged (the centripetal) over dialogue (the centrifugal). I end Chapter Five with a chapter summary and a critical self-reflection, examining my positionality in producing this analysis, considering my own role and assumptions related to the connections and negotiations between/of communication, innovation, and (social) change.

IE-ing: Tensions in Meaning – Dissemination-Dialogue Struggle

This section analyzed co-participants’ accounts and performances of what it meant to embody “IE-ing.” Here, the discursive struggle of dissemination-dialogue emerged as constructive of practices and identities. The dissemination-dialogue struggle focused on (modes of) information sharing internally and externally, where individuals and groups: (1) shared their ideas, stories, experiences, etc. to empower, and/or (2) “rely on outside, expert-disseminated information to guide their empowerment” (Papa, Singhal, & Papa, 2006, p. 57). Here, dialogue valued local knowledge and experiences by giving voice to those who may not be in a position of power. On the other hand, dissemination privileged transmission of expert knowledge and may create a dependent relationship and limit certain opportunities for participation and change, since there is little, if any, room for feedback. Dissemination focuses on the transmission of information by experts by directing, showing, and telling (Papa, Singhal, & Papa, 2006).

The dissemination-dialogue discursive struggle consisted of the univocality-multivocality dialectical tension internally and the diffusion-collaboration dialectical tension externally. Univocality-multivocality dialectical tension connects to Bakhtin’s (1981b) *heteroglossia* (p.

272), as this tension is concerned with the process of information sharing internally. The univocality end of the dialectical tension privileges one mode/meaning of internal information sharing, whereas the multivocality end centers multiple processes and modes of information sharing, where all processes/modes are equally considered/valued. The diffusion-collaboration dialectical tension recognizes that the external processes of (modes of) information sharing are rarely linear or unidirectional. Diffusion focuses on the external process of privileging the transfer of information from one unit/entity/person to another (Rogers, 2003). The collaboration dialectic focuses on the external manifestation of information sharing as an engaged, dynamic, interactional process, where multiple modes of information sharing are recognized and valued.

Peters (1999) explained that our society tends to value expert-centered transmission of knowledge and experience and discusses dominant discourses of communication in which, “dialogue can be tyrannical, and dissemination can be just,” (p. 34). Recent research has found that, when organizing for social change within a community, both disseminating information and engaging in dialogic circles through ground-based listening can lead to positive social change for those who may be otherwise marginalized (Papa, Singhal, & Papa, 2006). As such, this struggle acknowledges that dissemination and dialogue are dialectically intertwined when organizing and teaching for social change and examines whose vantage point is being considered and in what context.

Within educational context, dissemination privileges knowledge that is transferred to students from teachers and aligned to established or expected standards, whereas dialogue focuses on synthesizing multi-faceted complex concepts through reflection (cognitive and/or cognitive + affective) and enlashed knowledge (through the body) by engaging both critical and creative skills (Alexander, 2006; Freire, 1970, 2000). Historically, the United States education

system has privileged dissemination and has ignored the epistemological knowledge of the body and of performance, which, according to critical scholars, causes inequality to be perpetuated through creating knowledge hierarchies (Alexander, 2006; Fassett & Warren, 2007; Freire, 1970, 2000; Frey & Palmer, 2014). In a somewhat contradictory direction, however, Cameron (2000) asserts that in today's global society, "what people know when they leave school, college, or university is seen as less important than what they can do" (p. 127). Thus, the dissemination-dialogue struggle connects back to the purpose and methods of higher education and learning, more broadly. In co-participants' accounts, this struggle emerged in a variety of contexts, specifically with: 1) applying the IE system of creating and communicating innovative ideas persuasively to real-world contexts – Chapter Six; and 2) privileging a praxis of disseminating information quickly in order to take action – Chapter Eight.

I first examined co-participants' performances of the dissemination-dialogue struggle within the context of the role and function of communication internally in applying the IE system persuasively to real-world context. Here, the dialectic of *univocality-multivocality* emerged. Next, I analyzed how dissemination-dialogue struggle emerged within the context of the role and function of communication in the praxis of teaching and learning internally and externally. Here, the dialectics of *univocality-multivocality* and *diffusion-collaboration* emerged. I found that the IE program privileged dissemination over dialogue when negotiating tensions in what "IE-ing" means.

Tension in Applying IE to the Real World: Univocality-Multivocality. Within the theme of communication as engineered dissemination focused on economic outcomes/returns (discussed further in Chapter Six), the internal manifestation of univocality-multivocality emerged when applying the IE system persuasively to "real world contexts." For instance, Tim, an alumnus of

IE, privileged univocality over multivocality when he was discussing the persuasive utility of the problem, promise, proof model taught by the IE program:

I think right from the beginning learning how to communicate in a way that's meaningful to other people. One of the things that you learn in innovation engineering is a communication tool that they call Problem, Promise, Proof ... Just the idea of addressing somebody's problem directly. Giving them the promise of how you're going to be able to solve that problem and then giving them the proof of how you will solve that problem like that's so huge. You can use that in almost any interaction that you have. Anytime you need to ask somebody for something whether you're going to your boss and explain to him why you deserve a raise or you're trying to cast a new project at work and you try to show people, "You know, this is how it addresses a very critical problem that we have. Here's the promise of what we're going to do with this project and here's the proof that we can carry it out. We have all the resources. We have the best people. We have special knowledge in this area." Whatever. That tool alone, I think, is very, very valuable and it very much is a critical communication device.

This example highlighted how the flow is clearly one-directional – dissemination (from someone who is control "to" someone who does not know) instead of dialogic (which is usually marked by the use of "with") (Baxter, 2011). Here, Tim conceptualized communication as a tool that can be used to disseminate knowledge in any situation (i.e. professional, personal, etc.) when attempting to address a problem. He also performed how to apply this communication tool (i.e. problem, promise, proof – P-P-P) when talking with others through reflecting on scenarios where P-P-P can be applied to disseminate information. As such, Tim used the praxis pattern of denial when disseminating the P-P-P model, as dialogue was not even acknowledged. For instance, co-

participants in the IE program could transmit information to others using the “critical communication device” of problem, promise, proof but did not provide others the opportunity to meaningfully engage in dialogue about the problem at hand or about the device itself.

The communication tool of P-P-P is really a persuasive tool that assumes another person would accept the plan regardless of their own local knowledge. This may limit possibilities of developing ideas and solutions collaboratively based on the local and contextual knowledge of participants. At the relational-level of meaning in the context of addressing an economic problem (i.e. asking for a raise and working on a work project), being in “control” to disseminate knowledge using P-P-P is privileged over collaboration, creating a power differential. If the goal of P-P-P is to address a problem and work towards a solution, then its application as dissemination-focused may be problematic since, “interpersonal communication, discussion, and dialogue [are] the key vehicles of influence” (Papa, Singhal & Papa, 2006, p. 161).

The dissemination-dialogue struggle emphasized the importance of content dissemination as both information transmission and as common ground for the co-creation of meanings and community within the IE program. Such duality may foster new realities and possibilities, but possibilities of/for the IE program may be limited if information is disseminated in an un-unified manner and/or if there are not opportunities to mutually co-create meanings. The praxis pattern of denial, which was suggested in co-participants’ interviews, worked to silence dialogue as a productive collaboration that is a part of IE. For example, data suggested that the dissemination of content did not necessarily embody exclusively a transmission model of communication that it does hold dialogic potential, but that IE pedagogy does not realize this potential, essentially relying on and reinforcing a linear from-to model of spreading “knowledge,” as will be further discussed in Chapter Six.

Tensions in Praxis: Univocality-Multivocality (internal) and Diffusion-Collaboration

(external). The dissemination-dialogue struggle with the tensions of univocality-multivocality and diffusion-collaboration emerged in the theme of IE Praxis (discussed further in Chapter Eight). Specifically, this struggle emerged in the theme of IE Praxis when co-participants discussed the role and function of communication in teaching and learning when: 1) struggling to understand course content; and 2) appreciating the “hands-on” learning.

For example, in the participant observations, I observed students working in teams on a yellow card to come up an idea that was not product-orientated for a local client after the instructor disseminated information about the P-P-P model with how to fill out a yellow card. However, it appeared that students did not fully comprehend how to grasp or use the “tools” and concept of P-P-P to apply it beyond a product, which was how the teams had previously applied these concepts during the seminar discussion. During this observation, students struggled to translate the disseminated knowledge and apply it to a different context of creating an idea for a program or service. When students asked questions, the instructor just reiterated what was repeated during the lecture with stating the problem using data, explaining the promise directly, and then quantifying the proof. This lack of clarity caused confusion with some student teams and they struggled to translate the P-P-P model towards an idea for a program or service. In this instance, there was a lack of dialogue as the instructor did not ask students to clarify their misunderstandings. Additionally, when the instructor just repeated what was stated earlier in the lecture and then moved on to another student team, the instructor “disseminated” the information without providing opportunity for students to respond meaningfully or ask follow-up questions. Here, the instructor appeared to prefer the banking model of education by “depositing” information into the teams of students, and then moving on to another team to make another

“deposit” (Freire, 1970, 2002). Through the instructor’s process of depositing course content information, the instructor negotiated the univocality-multivocality tension through the praxis pattern of denial by denying the students’ struggle with comprehending how to apply the content while simultaneously denying that the opportunity to engage in dialogue concerning the students’ miscomprehension.

The tension of univocality-multivocality also emerged during the interviews with students. For instance, Sheila, an undergraduate student, like other co-participants, described how she struggled to comprehend how to apply the IE skills and what tools to use for various contexts because the “innovation labs website was confusing” and her instructor “did not give feedback in a timely manner,” and “when I would ask for clarity on my feedback or on how to use the tools, my concerns were dismissed and not answered.” Sheila elaborated:

A workbook would just be helpful that corresponds with skills and like the tools, as a reference even, especially for the tools. I never knew which ones I was supposed to use and how I was supposed to use them. I felt like there's something I was supposed to know but didn't the whole time. You know what I mean? It's like everybody else knows except for you.

Sheila highlighted that IE had different channels for knowledge dissemination (e.g., website, instructor feedback), but those channels were not appropriately utilized to guide clear and applied understanding of content and of connections among the tools and skills. But Sheila’s critique was dialogic - it sought to enter the conversation on IE praxis from within Sheila’s experiential knowledge of trying to learn. Her continuous use of the first person singular “I” showed that she owned her experience and tried to understand it in dialogue with the goals and content of the IE program. Sheila’s question - “You know what I mean?” - directed at me in the

midst of her critique, was an attempt to connect student-to-student, and it sought inclusion and affirmation that Sheila's "I" was not alone in this experience of feeling lost.

By following the question with the statement of, "it's like everybody else knows except for you," Sheila distanced herself from the IE program. This suggested Sheila's experience of, "failure in dissemination," her difficulty understanding content and making connections, and the lack of support in learning translate into a feeling of not belonging with/in the IE community. Sheila offered a solution to this problem, which, remarkably, privileged dissemination - having a workbook that connected the skills and tools that students can refer to if they struggle with understanding various components of the IE content. Here, Sheila used the problem, promise, proof model by stating the problem of not knowing how the skills and content work together creates confusion, suggesting a promise that IE creating a workbook would help clarify the connections between the skills and tools, and providing proof by explaining that the promise of a workbook would solve this problem. Although Sheila may have performed that she could effectively apply the problem, promise, proof approach to addressing a problem, her example highlighted how effective dissemination of information can unify others and create a sense of belonging "around common decisions and actions... [widening] ...the influence [of the IE program] and broadening the scope of its action" (Papa, Singhal & Papa, 2006, p. 162).

As in Tim's comment above and in the participant observation, Sheila's critique suggested dominance of the univocality internal dialectic, and the praxis pattern of denial is performed when it comes to the dissemination-dialogue struggle. However, implied in Sheila's critique was that a different model of/for dissemination may also open opportunities for dialogue, which were now missing in her experience. Because Sheila felt she did not understand her instructor's feedback and because the instructor did not provide clarity in a timely manner (from

Sheila's perspective), she felt neglected as an IE participant. The lack of understanding of IE content and of appropriate univocality-multivocality mechanisms posed a problem for both applying the skills and tools of IE and for relating/identifying with the IE community.

Additionally, the lack of clarity may be problematic when attempting to apply P-P-P to solve some problems, as suggested by Tim, since misunderstandings may limit opportunities for the co-creation of meaning. If one misunderstands how to use/apply the tools and skills, how then could the P-P-P model be applied meaningfully and collaboratively to solve a problem for some sort of (social) change? Moreover, Sheila's solution of a workbook sought to bridge her experience with the understood philosophy of the program, which reinforced the dissemination of knowledge, which she is challenging. Sheila's solution highlighted how the current P-P-P model used in IE may limit opportunities to co-create meaning and knowledge dialogically, since solutions tend to be created by those in "control" and/or using the P-P-P model (i.e. IE participants). Therefore, the current P-P-P model may not realize the dialogic potential that exists with dissemination – engaging from multiple perspectives around a common ground. As a result, IE's approach to creating and implementing an idea for (social) change, may reinforce already existing oppressive structures, systems, and/or knowledge claims by silencing others (Deetz, 2001).

In addition to the overall finding of content being disseminated quickly in the IE program, having students regurgitate the transferred knowledge through external practice (action) was also emphasized repeatedly. This highlighted how co-participants negotiated the diffusion-collaboration tension through recalibration by "transcend[ing] the form of contradiction without altering its ongoing presence" (Baxter & Montgomery, 1996, p. 66). For instance, Mason described how IE could evolve to include more "hands-on" experience by

teaching students how to apply IE to start a business (external application). Mason articulated how the IE courses could foster a greater entrepreneurial spirit within students:

I think it would be neat if you were given funds to start a business because they do that at some other colleges like Babson College where as a class you are assigned a group of three, five people or something and you actually start business and proceeds are donated to charity, but it would be neat if you could just start or have that mindset and be like, fail fast, fail cheap. Let's get this business off the ground to understand all the facets of business through Innovation Engineering. Rather than coming up with an idea for an app or something like that that you could make a prototype of, but really get it moving.

Mason's statement highlighted his desire to apply the IE concepts, particularly "fail fast, fail cheap," to start a business with his fellow peers through recalibrating how the IE program could evolve. Mason also offered an example of how this was done at other institutions. Through this example, Mason performed the problem, promise, proof model to explain how the IE program could change, focusing more on the doing, specifically with starting a business to help a charity in the community. Mason's words also highlighted the external dimension of the tension conventionality-uniqueness since he framed Babson College's program as unique when compared to the conventional education program of IE.

Additionally, Mason's suggestion of having the program provide start-up funds to students to start a business and give the profits to local charities so they have a more meaningfully education experience connected to Jensen's (2014) call for SE education programs to engage students from the "holistic-person-perspective" (p. 250). Here, an SE education provides opportunities for students to learn through engaging in social practices, where both

thoughts and actions take place in culturally and socially structured domains, which also connects to CCP's value of situated learning.

In this study, I found that although the IE program provided learning opportunities for students to apply the content through blended-learning, team-based learning, and project-based learning to develop an idea for (social) change, opportunities for meaningful reflection and dialogue with how students apply the concepts needed to be more developed into the curriculum for the program to embody CCP. Here, dialogue would be valued with dissemination of information that allows students, faculty, program leaders, etc. to engage in meaningful reflection and ask clarifying questions, where silencing and denial that places blame on the individual (student) does not routinely occur. Equally important, the concept of "fail fast, fail cheap" focused on developing an idea quickly/cheaply, which had little loss to the IE program, but this concept did not account for consequences in the "test" site (communities, people, etc.). This was problematic as there was no formal discussion or teaching of ethics, ethical behavior, or thinking about potential implications/consequences of applying ideas externally.

In the entire program material/documents, and in all the interactive data collected, the only mention of thinking about potential consequences of creating/applying an idea was framed as a "death threat." During a participant observation, the instructor leading a workshop session defined death threats as, "risks that can kill an idea, but we want to use the IE tools and resources to turn the idea into manageable risks." This conceptualization was very problematic, as the concept of a death threat was framed in neoliberal terms that can be "managed" using the IE tools/resources when creating an idea that may lead to some sort of profit/gain. There was no meaningful consideration or time spent during this process of how ideas being generated may negatively impact others and/or communities. This issue of not being held accountable to the

potential consequences of ideas created was highlighted during a participant observation when the instructor was discussing the concept of death threats.

For example, when the instructor asked students in the training session, “what’s the most important death threats,” students responded with various claims such as losing money, wasting time, someone getting hurt, and death. The instructor then indicated that death is the most severe death threat. During this discussion, a student then sarcastically responded, “it doesn’t matter if someone dies from the product if they signed a consent form,” and the instructor responded, “We don’t want anyone to die.” However, nothing further was mentioned or discussed with ethics or being responsible (social) innovators. Here, the instructor did not attempt to engage in dialogue with this student and the entire class and focused on disseminating the information of what a death threat is and how to turn a death threat into a “manageable risk.” The instructor also privileged univocality during this discussion of death threats by denying and dismissing what the student said in order to smoothly move on and eliminate any hope or potential of discussing the potential ethical implications/consequences of death threats. This example showcased the need and importance of incorporating and centering ethics into the IE system, which could potentially allow for possibilities of incorporating a CCP approach into the curriculum during the discussion/teaching of death threats. This finding of the need to develop opportunities in the curriculum that encourage and center meaningful reflection, dialogue, and ethical implications with how students apply the concepts was also highlighted in the integration-separation discursive struggle, which is discussed in the next section on becoming an IE-er.

In sum, through this entire section, a clearer picture emerged of how IE limited opportunities to engage in meaningful dialogue and transformative change within the program and also between the program and the community. This reiterated the silencing of dissent and

dismissal of potential critiques, observed in Chapter Four in the review of IE program documents that articulated a *universal application of its system*, thereby obfuscating other “voices” and possibilities and performing a cultural discourse of rationality. This is suggested, for example, in the way co-participants talk of themselves as not having the “mindset” or not “trusting” the system at first, but then talk with pride about having developed and internalized the mindset, being assimilated within the system and seeing things differently. IE also articulated (connected) critique/dissent/distrust with failure, which also meant “drinking the Kool-Aid” equals success, as suggested by both IE program documents and co-participants’ stories of coming to embrace failure as part of achieving success. Here, blame of/for failure was placed on the individuals versus the IE program (discourse of individualism), since impact was measured by only money and business success – discourse of rationality – and failure was never due to problems in the program, but individual’s inability to apply it well and/or communities/businesses inability to “accept” IE’s approach. This was how the IE program gave an identity that is based on social comparison and competition, which decontextualized and disconnected the “innovation” and its failure from the community that might experience it.

Through this section’s analysis, *we* learned what “IE-ing” meant in terms of developing an entrepreneurial spirit and the tensions that co-participants used to negotiate the practices of “IE-ing” – what makes one an “IE-er.” *We* learned that “IE-ing” privileged a dissemination approach to knowledge creation that conceptualized communication as both a strategic persuasive tool and skillset when creating and implementing innovative ideas (i.e. dissemination-dialogue). *We* learned that an entrepreneurial essence emerged through how the IE curriculum privileges action through failing fast, failing cheap (i.e., univocality-multivocality) where the focus was on the innovation itself and not on how it may change/affect a community or a context

externally – IE is free of any responsibility (i.e. discourse of individualism). Now that there is a better understanding of the practices and meanings of “IE-ing,” and the tensions within the dissemination-dialogue struggle, how did a co-participant become an “IE-er?” In the next section, I examined the process of socialization and identity development with what it means to have/belong to an IE identity/community, where the integration-separation struggle emerged.

Becoming an IE-er: Tensions in (Self-)Definitions: Integration-Separation Struggle

How did co-participants of IE evaluate actions and what tensions emerged in this meaning-making process of becoming an “IE-er”? Understanding how co-participants evaluated their worlds through an IE lens was important to consider, so that *we* may have a better sense of what actions co-participants consider to be “right or wrong” and how one performs an IE-identity/belonging. Overall, I found that co-participants viewed the IE system as the “best” and “most effective” way of “understanding people” and “enacting change” when creating innovative ideas. Here, there was a sense of pride among co-participants that the work they were doing and/or the skills and tools that were taught and applied were “game changers” and “life-changing” for all involved - students, instructors, program leaders, universities that host the program, etc. How co-participants evaluated the world through an IE lens and became an IE-er was a process that took time and required “buy-in” to what the program is teaching and how the program is teaching the skills. The co-participants’ accounts and performances in the previous section highlighted processes of the meanings and practices of IE-ing. This section of the analysis was concerned with co-participants’ metacognition of the processes of identity formation – becoming an IE-er.

I found that the process of becoming an IE-er was negotiated through the integration-separation discursive struggle, or the struggle between interdependence and individuation

(Baxter, 2011). The integration-separation struggle emerged in four primary dialectical tensions: 1) the internal display of the unity-fragmentation dialectical tension (i.e. embracing and/or challenging IE's way of knowing/doing – organizational identity); 2) the internal display of connection-autonomy dialectical tension (i.e. feeling/being part of the IE community or not - relational); 3) the external display of control-emancipation (i.e. negotiating the need to adhere to the established external guidelines/norms and the desire to teach/apply content on one's own terms – organizational identity); and 4) the external display of inclusion-seclusion dialectical tension (i.e. how IE as a program - a collective whole - integrates and/or separates itself from other relevant communities - the University, Eureka Ranch, Orono-Bangor, etc. – relational).

The dialectical tension of unity-fragmentation recognizes how individuals may share or lack common goals, purposes and/or identification with others, an organization, and/or with their community. Papa, Singhal, and Papa (2006) explained that unity occurs when individuals consider that they are not only working in cooperation with others to reach common goals, but that the others also must overcome common struggles to reach those goals; fragmentation occurs when there are competing and multiple interpretations and voices within a social setting. The connection-autonomy tension explores and expresses the simultaneous desire to be an individual and to be a connected with others, a part of a community (Baxter & Montgomery, 1996). The control-emancipation tension focuses on how our actions in any given context are embedded within some control system that can both emancipate and oppress, where there are “rules and expectations that are reinforced by organizational members and the organizational structure in place” (Papa, Singhal, & Papa, 2006, p. 56). Emancipation can occur when organizational members use existing control systems to emancipate themselves and/or develop other control systems for emancipation. Baxter and Montgomery (1996) explained that the inclusion-seclusion

tension focuses on the external desire for involvement with the outside world and the desire to live one's own lives, free from interferences.

I first examined co-participants' performances of the integration-separation struggle within the context of how co-participants negotiated IE's organizational identity and constraints with their own interests. Here, the internal dialectic of unity-fragmentation emerged in the theme of communication as engineered programmatic identity (Chapter Six), and the external dialectic of control-emancipation emerged in the theme of (re)engineering for social change (Chapter Seven). Next, I examined how the integration-separation struggle arose within the context of how co-participants evaluate the world through an IE lens – an IE mindset. Here, the dialectic of connection-autonomy (internal) and inclusion-seclusion (external) emerged in the theme of IE Praxis (chapter eight).

Negotiating IE's organizational identity: Unity-Fragmentation (internal) and Control-Emancipation (external).

I found that the integration-separation discursive struggle emerged when co-participants negotiated IE's organizational identity. Specifically, the dialectic of fragmentation emerged when co-participants discussed how IE's programmatic identity may challenge one's previous experiences and/or knowledge claims (as discussed in chapter six).

Mary, a program leader and instructor, described how some students and CEOs who learn about IE reject the system because it challenges their ways of knowing and various identity aspects.

Mary explained:

You will sometimes get a student who will say, well my dad or my mom says that we don't do it like this. You, you see this resistance to change a lot in corporate culture. We go in and we won't consult with a company if we don't have buy-in from the top person there, because if the CEO is sitting there being like well, that's not the way we've always

done it, so we're just going to not do it that way. Well there's no reason for us to do that, so when students go home, and they tell their parents, sometimes their parents will be like well that's not the way it's done, or that's not the way I've been doing it. Sometimes you do get a student who pushes and depending on whether it's me or Frank, Frank will be like well your dad's wrong. I'll try to do it a little bit more politically correct and protect their feelings a little bit... We're all different like that.

Here, we begin to understand how IE defines itself as different – and proud of it – as well as how students in the program rejected the IE system because it challenged their family's experiences and/or knowledge claims. Fragmentation appeared through the lack of connection and sense of community that students may feel in the IE classes, which contrasted with the sense of community and belonging in their families/previous knowledge/experiences.

Mary's example echoed Sheila's comment above and highlighted how a lack of understanding of the IE material may cause students to dis-identify, to reject, and to challenge what IE attempted to teach, which connected to the dissemination-dialogue struggle.

Additionally, both Mary's and Sheila's statements highlighted a potential problem with how some IE instructors and program leaders may be abrasive and attempt to “force” the IE system and identity onto students. This “force” counters Pache and Chowdhury's (2012) advice to SE educators and programs, as these researchers advocated that instructors and programs should provide a safe space for students, where they can meaningfully reflect, clarify, and be able to emotionally process what an IE/SE identity and IE/SE application may feel like. Pache and Chowdhury (2012) argued that there are detrimental consequences for both students and SE instructors/programs if they do not provide the supportive space students need to process what they are learning, since the content and application of the content may be unlike anything

students have ever experienced and/or been exposed to. Forcing students to adapt the ways and means of SE/IE will shut off their hearts and minds and limit any opportunities of them doing meaningful work using SE/IE (Pache & Chowdhury, 2012). Mary's comment did not imply a possible unification among different ways of knowing, but rather reinforced fragmentation of right/wrong, in which IE embodied the correct path, as also suggested in the analysis of the documents and articulating IE with religious themes. Despite Mary's attempt to be "politically correct" when others rejected the IE system, she used the praxis pattern of denial, as other ways of knowing/doing were rejected and dismissed as wrong.

Additionally, not all co-participants felt welcomed in the IE program. For instance, Raquel discussed how she felt like an outsider before she was an instructor in the IE program and did not understand how the IE system worked, but then felt a part of a community once she was able to connect to the concepts of IE:

I just didn't understand. He [the IE program instructor] would, I call it, "IE'ing me." I make it a verb. I'd be like, "Stop IE'ing me." Then when I learned about it, then I knew he was doing it, and then I would get even more mad because I could see through it then, and I was like, "Okay, now I know what you're doing," but then I started to be able to talk back and do the same things. Now, I think it's a benefit because we have that common experience, and we can use those skills in our personal lives. We'll be having conversations for a dinner with [another IE program leader] or something, and we'll just be chatting. Then someone will be like, "PO." Everybody stops, and she throws it out. Yeah, it kind of becomes a part of you in how you approach just everyday situations without necessarily even knowing it.

Here, we see how Raquel embodied and negotiated the tension of unity-fragmentation through how her identity developed to include IE, where it, “becomes a part of you,” and she was accepted by those already a part of the IE community. Raquel highlighted how successful and responsive dissemination can actually create unity and community, where understanding is linked to a sense of belonging. As a result, Raquel and others in IE developed a “common experience,” where they can “use those skills in our personal lives.” Papa, Singhal, and Papa (2006) argued that an important dimension that develops when others connect is interpersonal identification, because they are working to achieve something together. Initially, Raquel rejected the IE identity because she did not like being “IE’ed” by others in the program, and told them to stop and initially rejected the interpersonal identification. The phrase “stop IE-ing me” was an interesting articulation of a sensed lack of agency expected in IE, while also performing agency: Raquel felt acted upon, but was resisting by acknowledging the influence attempt and asking the other person to stop. Once Raquel accepted the IE identity, she was able to share a common experience with others in the program. The praxis pattern of recalibration was used to negotiate Raquel’s identity of feeling fragmented to being unified once she understood and accepted the IE system, and then incorporated the IE identity as her own.

In Raquel’s example we saw how she eventually embraced the IE identity through understanding what IE taught and in discussions that occurred with others. But, in Mary’s description of CEOs and students who rejected the IE system (quoted earlier), we see how various IE instructors flat-out told students that they’re “wrong,” and thus silenced their voice and experiences, which in turn, may limit opportunities for discussion and dialogue. Attempting to silence or reject others’ experiences and perspectives counters a critical communication approach to pedagogy where an ethic of care and dialogue is valued (Cummins, 2014; Fassett &

Warren, 2007). Again, connecting to the dissemination-dialogue struggle, these examples suggested that dialogue was necessary for unity to be possible. Because learning requires one to negotiate their sense of self in relation to the program, the absence of dialogue may result in rejection of the IE system and identity.

The external dialectic of control-emancipation also emerged with how co-participants negotiate applying IE's programmatic identity. Here, the control-emancipation tension within the IE program focused on negotiating the desire to teach/apply content on one's own terms and the need to adhere to the guidelines that have been established by program leaders at the University of Maine, the Eureka Ranch, State and Federal mandated education norms, and norms within our Western capitalistic system. Here, the IE organizational structure and members controlled how students/instructors/program leaders may apply, connect, and negotiate communication and innovation for (social) change using already established norms/processes of IE and/or of existing cultural and/or institutional control systems. Specifically, I found that how reflexivity as fostered in the program may allow for possibilities in navigating various control systems.

For instance, Jessica, a graduate student, discussed in a focus group how she engaged in a reflective process to apply the IE system beyond creating a product to prepare a grant for professional development workshop. Jessica described:

I didn't create a product. I went through a process of applying for a grant, applying to a grant. So, I created a professional development series of workshops and they would've been free. Because they would've been funded by the grant. So, what the innovation engineering process really showed me was how valuable are these workshops to the public. Would they attend? It became instead of purchase-intent, how likely are you to attend? So that fed into the sales forecast information. It became more about, "Okay,

instead of dollars, we're talking bodies." That was really valuable, whether to go forward or not.

Here, Jessica (re)engineered IE's controlling system through a reflective process to create something "new" by applying it externally to a grant application. Jessica's creativity navigated and articulated a web of productive tensions, which showcased how reflexivity allows for control of one's strengths, and hence for emancipation through control. Deetz (1995) explained that if the control systems are to be more emancipatory and democratic, they should focus their goals on "participation in the social production of the world, people, and meanings" (p. 108). Through Jessica's quotation, we better understand the emancipatory potential of the IE system by encouraging a reflective process for other ways of knowing/being when applying IE to external systems, and thus encourages the type of participation advocated by Deetz. Here, Jessica seemed to be celebrating being able to adapt IE to what she deemed important – she was celebrating her agency and the program's potential. This tension also connected to the univocality-multivocality tension as Jessica's reflective process allowed her to successfully use her strengths to adapt and apply IE to an external system.

The reflective process in the IE system can also be seen in Eric's, a graduate alumnus, performance of how he reflected on how IE can help prepare students for an unknown future.

Eric proclaimed:

I've done a lot of reading around the future of work. The word innovation, in all the reading that I've done, continuously pops up. Innovation. Innovation. The ability to adapt. The ability to change. The ability to adjust. And if you don't have that, your company, whatever, your product or whatever it is, you will fail. I think students need to be aware of that. You need to be able to ... There are jobs that have not been invented yet. Ten

years from now, they are going to be there. You must be able to, one, understand where your skill set lies, where your strengths are, understand that those jobs are going to change in 10 years. Those jobs that you're attracted to, three years from now, four years from now, five years from now, may not be there. Again, in that sense, I think I've drunk the Kool-Aid. You need to continuously be able to step back and reflect, I think, and be able to say, "I've got to adjust here because, if I continue with the same exact thing, I'm going to be non-existent. I'm not going to be relevant. You can't expect to do the same exact things, if you find a problem, implement those same strategies that got you into that problem, and expect to get out. It's not going to happen...That's where you see generational poverty. You have parents, well-meaning, very, very well-meaning, that will give their children the advice that got them into the situation, thinking it's the right advice, but it's exactly what put them in the situation they're in. That's innovation I think. I think it's the ability to just go in.

Eric assessed the future state of the economy and how the IE system allowed students to strategically reflect, and thus have the “ability to adapt” to external control systems. This ability to adapt, which was taught through the IE system, was emancipatory through using one’s strengths to navigate control systems. Eric’s statement also highlighted and positioned him as part of the IE community and the IE system. Through him explaining that, “I’ve drunk the Kool-Aid,” we begin to understand that for Eric, the “ability to adapt” and/or “adjust” within external control systems was guided through reflecting on his actions so that he did not “implement those same strategies that got you into that problem.” Eric’s continuous exchange between the use of “you” and “I” positioned himself in relation to this reflective process when applying the IE system to external control systems. The interchanging of “you” and “I” also highlighted Eric

engaging in dialogue with me, as the interviewer, knowing that we share a history of taking graduate course in IE together. Eric is a K-12 educator, and also knew that I am a former special education teacher and knew that I have a passion for teaching and working with students growing up in poverty. His example of generational poverty highlighted our shared history and his knowledge of my interests, and thus is seeking to engage in dialogue with me.

Interestingly, through the example of generational poverty, Eric implied that students' poverty was their parents' fault, because they did not know how to adapt or adjust their actions to navigate the control systems. He explained that parents were unable to rise out of poverty because they had been given, "advice that got them into the situation." "Advice" itself is dialogic and dialectic. On one hand, it recognized the influence of external forces into one's life, and perhaps even hinted at educational and economic systems that reinforce generational poverty under the guise of "advice" (Frey & Palmer, 2014). On the other hand, getting advice also implied the (im)possibility of (not) taking the advice, placing some reflective agency on the person(s) towards whom the advice is directed.

Eric also implied that the IE system was a potential solution to solving generational poverty because it taught a certain skillset that encouraged people to "step back and reflect" and, hence, to find their own response to "advice." Here is where IE had the potential to re-engineer possibilities for positive change and also reinforced the religious "saving grace" undertones that were articulated within the IE program documents – the discourse of community. By teaching students the set of skills in the IE system and the importance of reflecting on your "ability to adjust/adapt," Eric claimed that this had the potential to end generational poverty. This, in turn, had positive social change. Eric used the praxis pattern of recalibration to negotiate this tension

through how he uses a reflective process to apply the IE system externally and suggested that teaching students how to navigate control systems by using IE can emancipate them.

However, Jessica's and Eric's reflective processes of applying the IE system externally also highlighted how the application of IE externally privileged dissemination over dialogue. This was highlighted with how Jessica discussed and determined the "value" of her grant proposal for a professional development workshop to sales potential. The privileging of dissemination dismissed and devalued the potential relational and dialogic aspects that her workshop could provide to community members through the workshop experience. By comparing bodies to dollars and by applying the purchase-intent to the attendance of public bodies and to forecasting sales, the IE system reduced the level of meaning to an economic bottom-line and removed any relational or dialogical element of local context or knowledge from the decision on "whether to go forward or not." Additionally, when Eric emphasized the importance of teaching students how to adjust or adapt within the system in order to be employed and find a job because, "there are jobs that have not been invented yet," he implied that the purpose of education was to disseminate knowledge by training students for the job-market in our capitalistic system. However, this career-focused approach to education limits a more humanizing and relationship-based education that values critical thinking (Frey & Palmer, 2014; Giroux, 2012), while also limiting possibilities to (re)imagine an economic system not based on an, "imperialist white supremacist capitalist patriarchy" (hooks, 1997).

As such, advocating and teaching a reflective process of innovation through dissemination of knowledge that privileges and equates the purpose of an education through a capitalistic system's lens may be problematic. This approach to teaching a reflective process may have detrimental consequences, because the control systems could continue to favor and

reproduce “what dominant groups have produced...which hides the systemic effect...[where] all interaction [is] reduced to strategic interaction, and all nonstrategic moves could be seen as simply naïve or poor strategy” (Deetz, 1995, pp. 101-102). What this means is that although the IE system allowed participants to navigate the system through a reflective process and use their strengths to apply it to what they deemed important, the control system of how IE was applied externally through dissemination could aid in the reinforcement of oppressive dominant relations. As a result, this may silence potential discussions and/or (re)engineering of how systems may function and operate – how the IE system may be applied externally to emancipate.

Despite potential limitations to how the IE system may emancipate or control when applied externally, Jessica’s and Eric’s experiences exemplified how the IE system embodied and taught an entrepreneurial approach to navigating external control systems through a reflective process. This had important implications with developing students’ ability to navigate and/or challenge oppressive systems, since (social) entrepreneurship tends to critique the status quo of control systems to (re)imagine something new (Enos, 2015). *What I am left wondering is how then, could IE’s reflective process within their system evolve and/or adapt to account for and consider the role of oppressive control systems when navigating various external systems? How do co-participants of IE evaluate their world – their external control systems – using IE?*

Evaluating the World Through IE Glasses: Connection-Autonomy (Internal) and

Inclusion-Seclusion (External). The tensions of connection-autonomy (internal) and inclusion-seclusion (external) emerged when co-participants discussed how developing the IE mindset allows one to become part of a community, and as a result “can never take off your glasses,” which fits within the theme of IE praxis (discussed further in Chapter Eight). Mary explained:

It is a mindset shift, and that's why you can never take off your glasses because it's a mindset shift. For you, if I was to leave this job and go work somewhere else, and come up with an idea and be like okay, let's test this. Well, I don't really want to test. We've got to study it more, let's do more research that would drive me crazy. I couldn't do it because I'm just not of that mindset anymore. I was when I started here. I was like your 4.0, I'm ready to go to grad school, I am perfect, and I've never failed anything. Once the mindset shifted, it was liberating because now let's just go do it. If you fail it's not the end of the world, it's good because you just learned a ton. Talk about valuable research, you're getting it. On every cycle you're learning something. That's the mindset, it's just that Innovation Engineering mindset of fail fast, fail cheap and understanding people.

Mary's account of developing a certain mindset that IE teaches highlighted how this mindset allowed one to see the world in a new perspective, which is "liberating." This new perspective, or mindset, was embraced by the IE community, where one was then included and considered to be a part of outside communities that embrace IE (i.e. Eureka Ranch, corporations who embrace/implement IE within their business, etc.). Here, we begin to understand the important role of fostering an IE mindset, and how this mindset shapes our identity, and once this mindset is developed, we become part of a larger community – the "Innovation Engineering mindset of fail, fast, fail cheap," where the community views itself as confident and in control, where students have an opportunity to now become "Black Belt" certified and "spread the good word" of IE. Interestingly, Mary's statement connected the IE concept of failing fast, failing cheap to understanding people, which she did not bring up in any other context. This connection of understanding people to the IE mindset could, on the surface, seem out of touch, especially since

there was an inherent bias towards action in a quick and efficient manner, but developing meaningful relationships by understanding people takes time, and may not happen quickly.

What was problematic about the assumption of, “if you fail it’s not the end of the world, it’s good because you just learned a ton,” was that the idea of embracing failure is seemingly “emancipatory” (for the individual) but completely disregards the ideology it furthers that may be reinforcing divisions and inequities rather than transforming them. There were no consequences for individual failure or failure of this IE mindset, even if the community was negatively impacted/reinforces oppression. Here, there was an implicit understanding/assumption that IE would be accepted and included in outside communities that “want their help,” but IE and autonomous IE individuals held no responsibility/accountability for any failures that might result in outside communities based on implementing their system. Here, IE viewed itself as separate from those community/business failures. As discussed previously, here was why incorporating a discussion on ethics and potential ethical implications/consequences of the IE system and/or of the process with creating ideas is needed within the IE curriculum – within the IE system.

Additionally, Mary explained how the IE mindset, embraced by the IE community, liberated her from the mindset of working at a slower pace to try to be “perfect,” because if you “just go do it,” you “learned a ton,” even if “you fail.” This may also be problematic because the idea of working quickly, then failing, and then fixing what went wrong may be just as slow/fast as anything else. Here, there was an assumption that meaningful learning occurs through action, and time will be saved where personal success (the individual) was centered and privileged through this process. Mary’s comments of “working slowly” focused on how this impacted the innovation (process), but this also left no time or showed no concern for engaging the community the innovation might affect. Privileging “failing fast, failing cheap” through working

quickly left no time for critical reflection to the consequences of the actions of the (social) innovator.

By embracing the IE mindset of “failing fast, failing cheap,” one also rejected and/or sought to transform the traditional academic community’s way of knowing/doing of taking time to “study” and became part of the IE community’s way of knowing/doing. This is why IE saw itself as an innovative approach to education uniqueness, but in conventional settings. Here, co-participants developed a connection to IE. This highlighted how the IE mindset did have a bias towards action and did not value the traditional (“slow”) research process in a sense, because there was a belief that you learn (more) through doing. Here, learning through doing connected to the idea of adaptability – because being adaptable is so central to IE. For instance, if a community fails to adapt quickly when a failing innovation is placed on them, it’s their fault (not the innovation, the innovator, or other macro-level systems/processes that were forced on the community), the community is framed as lacking the skills necessary (and therefore IE is secluded from any responsibility), which, as mentioned previously, is problematic because this reinforces oppressive systems, structures, and processes (Deetz, 1995; 2001). This process privileges dissemination over dialogue while also privileging controlling the community instead of engaging in/with the community.

Furthermore, Mary felt empowered to apply IE’s system on her own terms – the autonomy to act and apply IE individually, but know that you are part of a larger internal “system” of knowing/doing, where one is emancipated to apply this system externally. This connected to Cameron’s (2001) claim on the importance of developing our communication skills through “doing.” Here within the IE context, communication through doing may create a connection to a larger community, a community that embraces a certain mindset, and defines

itself as powerful, in control, in charge. Within this negotiation of individual autonomy and internal unity of embracing the IE mindset/system, if how one applies the IE system on their own terms in outside communities/businesses is/was rejected, the failure is placed on the outsiders and not the individual or IE program itself. The dynamic interplay of these multiple tensions showcases how Mary used the praxis pattern of recalibration to negotiate her new community identity – one of the IE mindset of failing fast, failing cheap.

This recalibration of her mindset was renegotiated to embrace “doing” over “studying,” yet the ongoing negotiation of connection-autonomy and Unity-Fragmentation did not extinguish ongoing/potential dilemmas between/with individual autonomy/connection and internal unity/fragmentation. Here, the praxis pattern of denial was used to negotiate the inclusion-seclusion tension of how the individual applies the IE system externally – in outside communities/businesses, since the IE system and individuals of IE were united with not accepting and/or denies any responsibility or accountability for any potential failure that may occur externally, since “If you fail it's not the end of the world, it's good because you just learned a ton.” The privileging of the individual and the lack of care and responsibility that IE had in the communities counters CCP’s pedagogical approach to teaching, learning, and research. CCP values/privileges dialogue and acknowledges the role knowledge and power plays with individuals/communities emancipating from and/or reinforcing oppressive systems and structures (Fassett & Warren, 2007), which contradicts IE’s approach to evaluating the world.

The tension of control-autonomy also emerged in how the IE teaching methods challenged co-participants’ previous educational experiences and/or helped them become ‘better’ team players and leaders. For example, Michelle, an undergraduate student, discussed how she

personally grew as a leader through the group work that is part of IE's curricular structure.

Michelle elaborated:

I was never somebody who was necessarily like a leader but now I feel like I go in and I tend to always, this semester especially, just leads the group whether I am put in that role or not because I like it done a certain way. But I think that this class has helped me maybe learn how to be a leader in a different sort of way and communicate my ideas and not be afraid of that. And encourage other people that are giving feedback like, "Guys, what do you think we should do for this?" I don't know ... just in different ways that I hadn't before.

Here, Michelle reflected on her experiences as a student and showed how the sense of community that was offered within the IE classes allowed her to develop her leadership skills. While the IE courses provided opportunities to collaborate to develop small group communication skills, through this process, students may also develop their individual autonomy. This highlighted how the teaching and learning approaches of IE can develop both a sense of community and autonomy, and through this fluid process students developed their leadership and teamwork skills. For example, Michelle's use of the inclusive pronoun "we" represented a collective entity among a leader and team and in turn builds greater rapport (Ngai & Singh, 2018).

More importantly, the IE system and the co-participants may be encouraging and practicing in a new vision for leadership - leadership where one views herself/himself as always in relation with others, prioritizing relational dialogue that is more democratic within IE itself (internally) (Cohen & Jackson, 2016; Cunliffe & Eriksen, 2011; Fairhurst & Uhl-Bien, 2012). A relational leadership approach views leadership as being "co-created in relational interactions

between people, and that...leadership is dynamic, developing and changing over time” (Uhl-Bien & Ospina, 2012, p. 541). Central to this relational approach to leadership is communication. Fairhurst and Connaughton (2014) viewed, “communication to be central, defining and constitutive of [relational] leadership” (p. 8) and offering possibilities for social change. However, I found this problematic in the external dimension as repeated throughout this chapter (i.e. inclusion-seclusion), and for this new vision of leadership to take form, relationality has to work/be extended to both internal and external contexts of the IE program. This relational approach to leadership and teamwork connects to CCP’s commitments of embracing dialogue, understanding power being shared, fluid, and dynamic, and embracing human subjectivity and agency (Fassett & Warren, 2007).

Michelle embodied these commitments of CCP, which was highlighted when she attempts to engage in dialogue through explaining how she “encourages” feedback. Through a dialogic process of seeking feedback from her peers, Michelle attempted to incorporate all perspectives through the decisions that are made – to build a collective entity, which may have implications for how the IE system is applied and taught. This is a moment where co-participants in IE embraced and valued dialogue to make decisions collaboratively, in relation to/with each other about how to apply the IE process, which connected to the dissemination-dialogue tension. Here, dialogue was valued in the experiential learning moments provided in the IE system with how students applied the IE skills and tools in teams.

Through collaborating, students were provided the space to develop their individual agency and voice, and thus embody a relational approach to leadership. Michelle highlighted the role that communication played in developing relationships and becoming a leader in group work by being collaborative and encouraging and not forcing one’s view upon them. Michelle used the

praxis pattern of recalibration to negotiate this tension through showing how autonomy was reframed and as a result, enhanced connection among her team. The use of recalibration with how co-participants negotiate the connection-autonomy dialectical tension has important implications and positive consequences for how IE may be transformed by CCP and SE, especially since IE is encouraging a new vision of leadership for students. This speaks to the potential of how IE may be applied for meaningful (social) change and the role/place of communication in this process.

In this section, *we* examined the process of identity formation experienced by co-participants and learned that becoming an IE-er entailed knowing the language of IE and then performing it. If we understand that the performance of narratives constructs both organizational and individual identity, we start to see how such narratives, which Tufte (2017) described as participatory communication, serve as both an ends and a means in and of itself. Within this identity formation process, multiple tensions emerged. For example, *we* learned that becoming an IE-er means embracing what the program is teaching and not questioning the IE system, which was highlighted in Chapter Four. Through this process of accepting the IE program, IE becomes a part of you “naturally” and “organically,” and as a result you develop a common experience with others in the IE program (i.e. Unity-Fragmentation). *We* learned that there was much pride in becoming an IE-er and developing an IE identity that encouraged failing fast, failing cheap (embracing failure). *We* learned that through the identity formation process, co-participants learned to develop their voice through collaborative activities, where IE encouraged a relational (communication) leadership approach to teamwork to create a community (i.e. connection-autonomy) within the IE program. *We* also learned that co-participants become IE-ers through reflecting on their “failed” actions of applying the IE system in and out of the classroom

context (i.e. teacher-student). *Now that there is a better sense of the practices and meanings of “IE-ing” and how co-participants become “IE-ers,” what does this mean for how communication and (social) change are conceptualized and taught? What are the moments of connection between/among communication, (social) change, and innovation? How can IE evolve and/or adapt based on our understanding of the practices of IE-ing and becoming an IE-er? What can CCP and SE learn from this?*

Chapter Summary and Critical Self-Reflection

Through this analysis, *we* learned that the IE program encompasses the two dominant discursive struggles of dissemination-dialogue and integration-separation. Based on the interpretation of the data, I claimed that IE inspired an entrepreneurial spirit for co-participants that had lasting implications where neoliberal values were privileged and centered in the cultural discourses of individualism, community, and rationality. More importantly, the emergence of denial and recalibration as dominant praxis patterns with how co-participants negotiated the various tensions speaks to the potential to bring SE and CCP together and that any transformation should include commitment to dialogue. *How can SE and CCP be recalibrated and/or balanced to transform and inform one another?* In the places where there was “denial,” this may be more difficult, but the moments where recalibration and balance occur may be important places/starting points for integrating CCP based on what co-participants experiences already are. What role could a relational (communication) leadership approach play in this recalibration, and how could the IE program further encourage the vision of relational (communication) leadership? In the remaining chapters I explored these questions further.

Given the potential problems with the lack of opportunities for meaningful reflection and dialogue within the current curriculum design and teaching of IE, and the lack of responsibility

the IE system currently takes for “failures” when applied externally, how could the IE program be (re)imagined and/or (re)engineered towards a more socially just and ethically orientated curriculum? How could the IE program (and SE education programs in general) involve the community dialogically where success and failure may be redefined – collaboratively? One possible avenue for connecting CCP and SE within the IE program is embracing a Community-Based Participatory Action Research (CBPAR) methodological framework for redesigning a more social justice-oriented curriculum (Hacker, 2013; Janes, 2016).

CBPAR, “focuses on seeking solutions to practical issues, generating evidence-based knowledge for improving practice, and empowering participants for change action” (Ivankova, 2017, p. 284). CBPAR embraces a dialogic democratic process with developing practical knowledge by bringing “together action and reflection, theory and practice, in participation with others, in the pursuit of practical solutions to issues of pressing concern to people, and more generally the flourishing of individual persons and their communities (Reason, & Bradbury, 2001, p. 2). What this means is that CBPAR is an inquiry that is done *by* or *with* insiders of our community, but never *to* or *on*, which aligns nicely to the ten commitments of CCP (Fassett & Warren, 2007). Incorporating a CBPAR framework within IE may allow for the program to be (re)imagined so that dialogue and reflection are centered, where a “holistic person perspective” (Jensen, 2014, p. 25) that values situated learning and culturally relevant pedagogy are embraced (Bassey, 2016; Gay, 2006; Lave & Wenger, 1991). As such, a CBPAR approach is one possibility that may reconcile the various demands/tensions of/between CCP and SE within IE and offer a framework to what a critical SE education model may look like, which is further discussed in the conclusion chapter of this dissertation.

I appreciated the opportunity to engage in dialogue with co-participants through the participant observations, semi-structured interviews, and focus groups, as the stories we shared, performed, and created together and our willingness to be vulnerable, showed me the importance of listening with each other - to (re)imagine new possibilities connecting our past to our present with (re)making our futures (Baxter, 2011). Although I did not identify with everyone's experiences, I felt a sincerity and genuine desire in all our shared efforts to do good, to use our talents and skills to make a positive influence, whether personal, educational, professional, cultural, or social. While similarities in insights, feelings, and applications of co-participants and my own experiences emerged, grouping our individual voices together in one broad category would just essentialize our experiences (Cook-Sather, 2007), and not highlight the subjective experience of knowledge and learning. What follows in the next three chapters are the answers to the three research questions: Chapter Six examine how communication is conceptualized and taught within IE, Chapter Seven discusses how (social) change is conceptualized and taught within IE, and Chapter Eight examines the connections between communication and (social) change within the educational philosophy and teaching in IE.

Having gone through the graduate certificate program in the Innovation Engineering program, I have a new-found respect for the work that those affiliated with the program are attempting to do. Now that I am a "certified black belt," I also feel empowered to meaningfully examine the IE program to see how the program might be expanded...transformed...and made more culturally relevant to marginalized communities, which is what I am attempting to do with this dissertation. I realize that my positionality as a critical scholar influences how I view the program, and that, from this critical perspective, I initially was judgmental towards some of the

pedagogical methods of the IE program. However, being reflexive and engaging in dialogue with my two co-advisors and with professors in the IE program helped me to re-center my focus...helped me to truly understand what it means to be a critical scholar...helped me to truly appreciate the importance and value of reflection and reflexive memos...helped me to more meaningfully appreciate how higher education can both ethically and strategically prepare students for future career aspirations while also developing civic engagement.

Through my reflective memos...I found myself asking, how elitist is it for some scholars and educators to assume that the purpose of education is for students to acquire new knowledge and critique existing systems, and not focus on preparing them for a job? How elitist is it for me to judge others? I think to myself that it must be a privilege for some to assume no responsibility with preparing or teaching students for their future careers, and a privilege to think that just acquiring new knowledge will prepare students for the job-market. Unfortunately, this is not the reality for millions of students, especially when you look at the data on how many students majoring in humanities like philosophy, English, and history, among others, struggle with finding a job that aligns to their field of study and/or pays enough to pay back student loans (Undergraduate and Graduate Education, 2014). I also find myself asking why should I, as a critical educator, focus on teaching students' skills that reinforce neo-liberal values where universities become the training grounds for corporate interests, especially if students decide to major in a field where there may be no or limited job prospects? Yes, I fully understand the strengths of neo-liberal capitalistic approaches within United States education (Giroux, 2003; 2012) and how these same neo-liberal principles contribute to the rise of student loan debt and income inequality (Frey & Palmer, 2014). However, I also understand that our capitalistic system is designed in this manner...designed to frame community engagement and career

readiness as a tension. Through this project, I no longer see these two tensions as an either or but a both-with-and-something-in-between. I see these two tensions as always in relation with, where new possibilities may be revealed to (re)imagine and (re)engineer a more socially just world.

CHAPTER 6

COMMUNICATION – ENGINEERED AND ENGINEERING

Overview

In the first five chapters of this project, I highlighted why the IE program offered at the University of Maine served as a worthy case study to explore and expose the potential pitfalls of current SE education models. Specifically, both Chapters Three and Four highlighted how employing the methodology of critical ethnography and articulation (Hall, 1985; 1989) with this case study allowed us to expose and understand the impact of larger, cultural ideologies, which were perpetuated within the IE documents and aligned with the oppressive and centripetal forces of neoliberal values. This dissertation sought to (de)center such cultural discourses, which were privileged and normalized within higher education programs such as IE. Throughout this project, I demonstrated the possibilities of interweaving CCP and SE and called for a shift in the imbalanced conceptualization of communication towards embracing both dissemination and dialogue. As described in Chapter Five, exploring the both/and spaces between the discursive struggles, specifically of Dissemination-Dialogue and Integration-Separation and their respective dialectical tensions (Baxter, 2011; Baxter & Montgomery, 1996), allowed us to identify and understand the embedded ideological assumptions and practices and rearticulate distal already-spoken and not-yet-spoken discourses. I claimed that this process can result in the social change as called for by the critical scholarship in which this study is grounded. In the following chapters, I provided the findings of this study and sought to provide solutions to the three proposed research questions.

First, in Chapter Six, I focused on answering the research question: *How is communication conceptualized and taught in the IE program?* In answering this question, two

distinct but interconnected themes emerged: 1) communication as engineered dissemination focused on economic outcome/return and 2) communication as engineered programmatic identity work. These frames for/of communication were constructed through discursive struggles of dissemination-dialogue and integration-separation. Specifically, dissemination was privileged over dialogue in the theme of communication as engineered dissemination focused on economic outcome/return. In the theme of communication as engineered programmatic identity work, the discursive struggle of integration-separation was dominant. Further, in constructing these meanings of communication and pedagogical orientations to teaching communication in IE, co-participants highlighted distinct, but interrelated, understandings of communication as an internal tool and an external skillset. Communication became the means to an end, thus articulating the cultural discourse of rationality.

Taken holistically, I claimed that communication within the IE program is conceptualized as “techne,” or “an art that produces something in the world and requires a practical sense” (Sterne, 2006, p. 94). On one hand, IE’s conceptualization of communication as techne represented the program’s expressed commitment to the students’ success post-graduation. With this frame, communication was focused on engineering-specific skills that promoted the development and spread of innovative ideas with the explicit aim of a universal application and individual economic success. Here, the cultural discourses of individualism and rationality were dominant. The promises of a universal application of an IE education, which resulted in economic profitability, are consistent with neoliberal values and grounded in westernized ideologies of capitalism. Under this frame and emphasis of communication as a skillset that can be mastered, ideas’ failures were disconnected from systemic, cultural, or institutional obstacles and barriers, placing all onus on a person’s inability to adapt and succeed (articulating the

discourse of individualism). Giroux (2003) explained that, “within this emerging neoliberal ethic, success is attributed to thriftiness and entrepreneurial genius, while those who do not succeed are viewed as failures or utterly expendable” (p. 195). From this perspective, claims of a universal application of the program seemed logical since the inability to succeed falls solely on each individual and cannot be attributed to issues in programmatic design. In the educational context, claims of universal application often translate in seemingly “neutral” instructional practices (articulating the discourse of rationality).

Additionally, I argued that the dialectical struggle of dissemination-dialogue ran concurrently throughout the IE program (univocality-multivocality internal tension) and was emphasized by the co-participants, regardless of their individual role and/or responsibility within the organization. Building on Freire’s banking model of education (2000), the privileging of dissemination within higher education situates students as empty receptacles in which teachers deposit information and knowledge and disregards the interchange of learning and teaching as occurring simultaneously. (Re)conceptualizing communication within IE begins with positioning dialogue with dissemination, and understanding, “the teacher is no longer merely the-one-who-teaches, but one who is himself taught in dialogue with the students, who in turn while being taught also teach” (Freire, 2000, p. 80). Dialogue offers a space that invites and fosters reflexivity, where communication *with* others is central to internal and external collaboration and (social) change.

Similarly, Phipps and Guilherme (2004) described dialogue:

[A]s a move towards the everyday, towards the active making of reality *through* the interactive meaning-making process of communication. Communication, in this text, shifts from a tool used to help students see ‘real’ material inequalities (McLaren) or the

large-scale social hegemony instituted in education (Giroux), to communication as an interactive, day-to-day, knowledge-producing medium (p.45).

On the other hand, communication as a skillset centers on the effective and strategic use of the varieties of “tools,” as well as the verbal and written messages, more broadly, "to influence or persuade [others] with the goal of either changing or reinforcing their attitudes, beliefs, or behaviors" (Farris, Houser, & Hosek, 2018, p.7). The teaching of communication within IE as a tool and applying the tool externally as a skillset that produces a product and an outcome (discourse of rationality), represents the program’s basic goals of creating, organizing, analyzing, and evaluating meaningful and unique ideas. There is an acknowledgement and an assumption that students need to understand communication as both a tool and as a skillset that work together, in alignment, within and outside the IE system. However, what is absent is the failure to see the constitutive power of communication that cannot be separated from the creative process of innovation, entrepreneurship, and (social) change. Co-participants’ metacommunicative talk during the participant-observations, interviews, and focus groups (re)articulated the discursive struggle of dissemination-dialogue in relation to conceptualizing communication in this way.

An important component embedded within IE’s teaching and performance of communication as a tool and skillset was the act of “reflecting” to improve outcomes (discourse of rationality), where students in IE reflected on failures and potential “death threats,⁹” among other things. However, this “reflection” was similar to predictive evaluations – it focused on

⁹ Death threats within the IE program’s terminology refer to risks to an idea that may “kill” the idea, not actually “death threat” to a person.

using and adapting the communication tools and skillset toward influencing a more profitable (future) action/outcome. For example, in the Create course, when the IE program taught students how to generate innovative ideas through the use of “Stimulus,” students were asked to answer questions such as, “How can we ‘dissolve’ our greatest weakness?” and, “What is our greatest ‘death threat’ to long term success?” The types of reflection taught and practiced in IE did not promote critically examining the thinking behind the action/doing or interrogating how economic and social frameworks work within the IE program, higher education, and the larger culture.

I argued that, through this gap in critical reflection and a lack of dialogue for sharing such reflections, the current IE system’s conceptualization and performative practice of communication silences divergent voices who may want to challenge the engineered processes of communication. As a result, IE’s engineering of communication may fail to capture the complexity and dynamism of both communication and meaningful social change that recognizes various cultural processes/contexts (internal dialectic of multivocality and external dialectic of collaboration). This may limit future developments of the program that could help improve and adapt IE to various contexts and cultures. Ultimately, this may restrict the possibilities of teaching how to: (1) innovate for meaningful social change, (2) utilize IE for future career aspirations, and (3) apply the engineered system to help improve economic outcomes/development across various contexts/time/space. Through the analysis, I showed how communication is conceptualized and taught as described above and explored the potential implications, limitations, and possibilities of the program’s approach to communication. First, I examined how co-participants constructed and embodied communication as an engineered dissemination, which is focused on economic outcomes/returns. Here, the dissemination-dialogue struggle emerged, where dissemination was privileged. Second, I identified the ways in

which communication acted in/through the shared narratives and norms as described by the co-participants, which in turn demonstrated the conceptualization of communication as engineered programmatic identity work within the IE program. Here, the discursive struggle of integration-separation emerged. Within each of these sections, the discursive struggle of certainty–uncertainty (internal dialectic of predictability–novelty and external dialect of conventionality – uniqueness) emerged sparsely. When this occurred, I highlighted the moments of how this discursive struggle interplayed with struggles of dissemination-dialogue and/or integration-separation. Chapter Six ends with a discussion of the implications of IE’s conceptualization and pedagogical approach of teaching communication in this manner and offers a critical self-reflection.

Communication as Engineered Dissemination Focused on Economic Outcomes/Returns: Dissemination-Dialogue Struggle

A reoccurring pattern that emerged within this theme of communication as dissemination was highlighted by how co-participants talked about communication as a tool and communication as a skillset and the interplay between the two. If we understand communication as (familiarity with) the specific IE materials (e.g., yellow card, blue card), it becomes a tool with a limited, specific purpose. Communication as a skillset, then, referred to the use of those tools to externally influence others. Here, IE visualized communication as an external skillset/process, the effective use of which can be evaluated based on outcomes, such as change or reinforcement of attitudes, beliefs, or behaviors, reinforcing a discourse of rationality (Farris, Houser, & Hosek, 2018). The interconnections of communication as both a set of tools and a set of skills reinforce the idea that this approach to conceptualizing and teaching communication may have an economic outcome/return by using a predictable and “testable” system. In other

words, using the system, one can look at creating, communicating, and commercializing innovative ideas and assess were the tools appropriate, were the instructions provided followed, and was everything put together correctly. According to the principles in the IE program, “failure” would be explained by mistakes made by individuals in either the choice of tools or their applications, which also emerged in Chapter Four.

Many co-participants commented on the communication “tools” they have gained from IE in the form of particular materials, such as the yellow and blue card. For instance, mind-maps were viewed as a tool and resource for connection/participation to help externalize and schematize a creative process. The use of mind-maps as a communication tool highlighted a view that innovation cannot be an internal process, so translating ideas into text/writing or maps helped innovators connect to one another and materialize ideas. For example, Mason noted that the tools taught in the Communicate course were, “key to being able to tell other people about your idea and if you can't do that, then you're not going to get very far because you need to utilize all the resources as possible.” Here, Mason privileged and viewed the tools as a way to transmit messages to others clearly (i.e. “tell other people”), while also helping the student who was using the tools to strategically process how to communicate that idea for the desired outcome (i.e. “you’re not going to get very far”) – dissemination was privileged. Embedded within Mason’s statement was the notion of being able to use the tools “effectively” to transmit messages in a predictable and “reliable” manner. If the outcome of this communication as dissemination process was unsuccessful, the assumption was user error, not a faulty process or contextual complexities (privileged discourse of individualism).

Using communication as a transmission tool increased the familiarity with the process of engineering innovation, the identification of the self in terms of being an IE-er, and the

framework that was needed to generate innovative ideas and use them within the structure of the IE program. Eric demonstrated how he and the IE program in general reinforced the conceptualization of communication as transmission. He explained,

Mind mapping is just the way my brain operates, making those connections, so the whole Innovation Engineering Program, for me, is kind of how my brain functions... I see it more as a tool to use when working in groups. Before, I would use it just in isolation to get my thoughts down on paper. Using it more as a group brainstorming session.

Here, Eric describes the use of mind-mapping as a tool to transcribe the meanings in his mind onto paper in order to map out how to communicate those meanings to others, and in a sense bring those meanings to life. From a certain angle, we can read Eric's comment as a hint at the possibility of mind-maps as constitutive of meanings (ideas) in a group setting, yet the explicit emphasis in Eric's words was on mind-maps (communication) as a tool used to discursively represent meanings. In this example, we can see a surface-level, practical use of communication as a tool that transmits thoughts into words and diagrams, yet an unawareness of the potential of language and the power of communication as the very creative essence of meanings – communication is dissemination.

Eric's example of communication as a tool allowed us to participate in social contexts and see our place in them by developing a skillset. Communication as a tool of both translation and involvement/connection moved Eric to affirm his entrepreneurial possibilities, develop confidence, and understand his worth within the framework of the IE program. However, the ideological implication of this conceptualization of communication as a tool only served to further position and restrict communication as being primarily representational, denying its creative faculty. As Tufte (2007) argued, "values, ideologies and specific policy agendas inform

the practice of communication,” and cannot be separated from the communicative act, agent, or context (p. 144). The conceptualization of communication as a tool for disseminating knowledge and information was accompanied by the conceptualization of communication as the necessary external skillset in order to use those tools to produce the desired outcome (cultural discourse of rationality).

I now shift my focus to identifying and analyzing how the co-participants understood communication as a skillset, which manifested across the IE program as the dominant understanding of communication as representation, which appeared repeatedly as the struggle of dissemination-dialogue. As stated earlier, the dissemination-dialogue struggle addressed how co-participants used expert knowledge to make informed decisions and/or share their ideas, stories, experiences, etc. to empower others when applying the IE system to real world contexts (Papa, Singhal, & Papa, 2006). Communication as a skillset focused on the use of messages in order, “to influence or persuade [others] with the goal of either changing or reinforcing their attitudes, beliefs, or behaviors” (Farris, Houser, & Hosek, 2018, p.7). Within the IE program, communication as a skillset tended to center more on the external process rather than the product. However, as co-participants attempted to navigate the dissemination-dialogue struggle, a recurring pattern emerged that demonstrated how co-participants minimalized and conflated the univocality-multivocality and diffusion-collaboration tensions.

According to Tufte (2007),

The sharing and circulation of narratives, however, is one thing. Even more important is the construction of meaning among those who listen, use or in any other way engage around these narratives. Thus, understanding the storytelling process and the stories conveyed is fundamental (p. 102).

Embedded within the co-participants' narratives was the struggle to differentiate between dissemination and dialogue, which privileged communication as representational and perhaps was an indication of the both/and aspect of the dissemination-dialogue struggle. In an attempt at recalibrating dissemination and dialogue, the underlying praxis pattern of denial was exposed. This is highlighted in Sheila's experience as she discusses how she applies the IE concepts outside of the class:

IE really helped me with my clarity of thinking and being able to communicate your ideas with other people. A lot of the times, you say something to someone and they're annoyed at what you're saying. But taking the class made me take a step back and be like "How can I describe this to someone so they know exactly what I'm talking about?" I think that has actually made an impact on classes and everything and working in groups, too.

Sheila focused on the power of framing the idea and transmitting it with clarity, easing the recipient of potential "annoyance" from not understanding. By focusing on communication as an external skillset, Sheila demonstrated how having the right tool and using it correctly was essential for a successful outcome. Sheila's comments positioned detail and clarity as key to communication as a skillset. She began the process of self-reflexivity by trying to understand how her message(s) can influence those around her and views communication as a skillset because of the impacts that framing and delivering an idea/message may have. However, Sheila contributed to the shared narrative within the IE program that positioned communication as representational by stressing the importance of selecting the right words to translate the real meaning. She did not account for her interlocutor's possible contributions to meaning-making.

By conceptualizing communication as a skillset, the IE program positioned language as a vehicle and using language (communicating) as driving that vehicle toward a pre-determined destination. Incorporating a CCP framework would provide the opportunity to introduce and (re)calibrate the use of dialogue alongside dissemination and (re)imagine communication as a collaborative process of meaning creation. This articulated also with critiques of social entrepreneurship education as focusing excessively on the producer of the innovation. Enos (2015) argued, “A narrow focus on social innovation can be a barrier to significant social change by valuing social innovation over other practices and focusing on the individual as the generator and leader of change” (p. 81).

As John, an undergraduate co-participant, demonstrated during the student/alumni focus group, the IE program offered opportunities and spaces to potentially (re)calibrate the conceptualization of communication from representational to constitutive and/or as both representational and constitutive.

John: I really like the idea of failure and celebrating that when creating an idea with a real-world application ... whether it's the idea of just embracing failure as a positive and not a negative ... It made learning more fun and it made the class come up with some really cool things that we didn't necessarily think because we worked together to think of something new and different, so that's something that I know that I appreciated.

In this example, John focused on the idea of failure and embraced how failure can enact, embody, and/or produce something positive *and new*. Here, unpredictability, or novelty, was cast as an opportunity enabled by the predictable embrace of failure. Instead of communication as dissemination, the co-participant emphasized communication as relational, where the collaboration and the shared experience of failure can actually still “produce” something

valuable – a sense of community. A constitutive view of communication almost fully rejects the very idea of “failure” – as something is always made in communication; that does not mean not assessing or reflecting on the consequences – quite the opposite, communicating is always taking a moral stance in relation to others. As relational, communication creates spaces for (social) change to be collectively realized and actualized, producing a successful outcome regardless of the possible failure of a product.

Furthermore, communication as a skillset that was performed in the above comment showed how reframing “failure” can work to clarify and even change its meaning. The student described the failure and goofing off aspect of class as something new and different, which helped change the attitudes, beliefs, and/or behaviors of the students – the communication processes that were (in) the class itself produced a different understanding. Here, we can see the ways in which (re)calibrating the focus of communication as the act of dissemination towards communication as a dialogic and collaborative process of meaning-making can be (re)applied in real world contexts and the possibility for innovation to include social change as a goal and outcome of the IE program.

With the (re)conceptualization of communication and a critical exploration into the struggle of dissemination-dialogue, we begin to see the innovative and creative importance of divergent voices and the necessity to develop more inclusive pedagogical approaches within higher education and the IE program. As Tufte (2007) posited, “within the world of organizations communicating for change, we might describe this lack of ability to represent the marginalized to be inclusive and to listen as a crisis of imagination” (p. 177). Understanding the direct correlation between innovation, inclusivity, and social change is essential to employing a CCP framework to the IE program if the desired outcome contains social justice components.

Kristen, an undergraduate student, offered insight into how IE offers the potential to (re)conceptualize communication as an ongoing relational process that is integral to innovation, entrepreneurship, and personal/cultural growth. Kristen stated,

The mindset is one that embraces feedback in a way, so embraces feedback and iteration, a mindset where you have a bias towards action in any situation. I need help when I fail a lot, which sort of then lends itself to I need feedback. I need to learn more. I need to be curious about the world around me and gathering stimulus. I need help. I need the leverage of other people's opinions. I embrace diversity around me because I know that different perspectives are just going to make this pursuit better.

Kristen illustrated how she fused the IE mindset with her own reflexivity, which helped her appreciate other perspectives and embrace diversity as a means to develop her own identity within the IE system. In this example, Kristen's desire for feedback from others demonstrated how engaging in a dialogic exchange allowed for the collaborative nuance of communication to invite divergent voices in ways that were not typically privileged in the one-directional, dominant practice of communication as dissemination. I found that there is something very important in this process of embracing failure and/or reframing failure – but it is not the “fast, cheap” part, it is the relational part.

In IE, learning and practicing communication as an external skillset (diffusion) emphasized the strategic use and innovative framing of messages in order to disseminate ideas, though these ideas might change once others are involved. For example, Tim, an IE alumnus, defined communication in this way:

One of the big things that I found that is very difficult, especially in a volunteer organization like a church or any other nonprofit that has a lot of volunteer help is that

the communication piece is so huge. Because if you can't get people on board, you can't help them understand and catch the vision, then you have so many people dragging their feet that you just won't make any progress. There are critical people in organizations that if you don't get them on board, you can get everybody else on board, but if you don't get those critical people on board, you might as well just quit. Because they'll sabotage the whole thing. They'll try and take people in another direction. They'll say, "Oh, yeah. No, I think this is a good idea," and then kind of later on they'll say, "We should go do this, too." Or instead. Which kind of takes all the wind out of what you're trying to do. I think it kind of comes back to that communication piece, that getting people on board, helping them find buy-in and just really educating them well is extremely important.

Tim described a linear, trickle-down flow of communication, which positioned dissemination as a means to transmit information and accomplish education. Following the neoliberal logic of personal responsibility, which embraced the “market as the arbiter of social identity” (Giroux, 2007, p. 103), Tim demonstrated how the ideological commitment to understanding communication as transmission was a deeply engrained, systemic issue, reinforcing a cultural discourse of rationality. Similarly, Tufte (2007) called out how this, “obsession with the present and with observable change has permeated communication for development” (p. 109), which ultimately strips communication of its innovative power and repels the opportunity for successful social change. In this mindset, the failure of making “them understand” as not only the result of ineffective communication but was detrimental to need for personal success so much that the only other option is to “just quit.” Tim talked about the importance of communication to get critical people on board yet is unable to identify how this may be accomplished by/through dialogue, insofar as any opposition or attempt at alternative options is a form of “sabotage.”

Communication was a skillset in this example because of the process of advocating good ideas and persuading people to buy into what is being presented. Tim further described communication as a process requiring skills that include “reading” audiences, creating comfort, and tailoring messages.

Tim: It's like you kind of got to loosen people up a little bit. I think that communication when it comes to teaching innovation engineering is absolutely critical. When it comes to presenting it to businesses is very, very critical and then just practicing it with other people. All that really takes ...You have to speak to each person's kind of temperament or their thinking style because some people are very logical. Some people are very intuitive. Some people are fairly critical right from the beginning. It's like they discount things very quickly. If you don't know how to communicate to those different groups, you're going to lose somebody or you're going to lose everybody.

Communication is a skillset here because it embodied the strategic ways of breaching topics with audiences, as well as the consequences (“lose everybody”) of not successfully doing so. The message that needed to be relayed was critical because of the person’s attitude or beliefs towards a certain subject. In this particular instance, Tim illustrated how communication was conceptualized in the IE program as both the means and the ends (discourse of rationality), in which communication was a strategic process with specific, measurable outcomes. He connected logic, intuition, and the need to employ the appropriate communication tactics in order to successfully transmit the necessary information. The reciprocity needed for dialogue was inaccessible and the praxis pattern of denial (re)emerged, which was (re)demonstrated within the IE program’s need to separate and distinguish between what it means to “communicate” and “create.”

Eric: One of the things that I lacked prior to taking the class was how to communicate. My brain's always turning. But it's taking those ideas and making sure other people ... One, being able to articulate what the idea is, but also to make sure it's an actual idea that other people will go along with, purchase, buy, whatever it is. My customers really are my kids, the students, so I've got to make sure, before I do something, that I get some feedback from them, and that I'm communicating those thoughts and ideas to them prior to and also to the people who are above me.

In this example of communication as a skillset facilitating the external one-directional flow of information dissemination, Eric acknowledged the need to develop persuasive devices to overcome the challenges he faced as a teacher, in which he framed “teacher” in terms of a “salesperson,” where his students were his customers, who were also his “kids.” Eric made an overt and unquestioned articulation of education as business. Here, communication was representational and measured by his ability to learn and apply these skills as a means to an end. However, by referring to his customers as his kids, Eric assumed the role of expert, and in turn, closed the door to engaging in collaborative dialogue with his clients, restricting the opportunity to develop and learn skills not taught in the classroom.

As the examples and discussion so far show, conceptualizing communication as a tool was not necessarily separate from conceptualizing it as a needed external skillset - to use/apply the tools. In fact, although there was distinction between communication (as) tools (mind maps, yellow and blue card, etc.) and communication (as) skillset (mapping, translating, connecting), co-participants recognized that to ensure a “profitable” outcome, the tools and skillset needed to work in unison. This was highlighted in how Michelle, an undergraduate student, discussed how she communicated and created ideas. Michelle explained,

It's about the methodology of creating good ideas. How do we come up with unique ideas? We've got to have stimulus to generate new thoughts, new ways of thinking. We have to have that diversity so we get different viewpoints from a bunch of different people. Whether it's from different cultures or whether it's from different backgrounds, career-wise. You got to eliminate the fear that there are bad ideas. I think that ... I really think it's pretty universal that you can use those tools on anything.

Michelle highlighted the importance of diversity and accessing a variety of viewpoints when generating new ideas and communicating with one another. Dialogue is presupposed in the assertion of diversity, but it is justified through the promise of return in the shape of the (eventual) good idea. The internal tension of predictability-novelty (discursive struggle of certainty –uncertainty) was suggested in bringing together the creative potential of diverse ideas with the universality of looking for diversity as a good approach. Because there was diversity, even when the interactions it produced were unpredictable, there was a predictable promise of innovation through creating, organizing, analyzing, and evaluating the unique idea – discourse of rationality. In this sense, communication and dialogue (as the meeting of diverse ideas) were implied as needed for idea generation but were not explicitly named.

On the other hand, communication (as originating in and controlled by the innovator) was centered in getting ideas to others and in ascertaining “buy-in.” Tim discussed how, at times, there was difficulty with getting everyone to understand and/or agree with your idea. He explained:

One of the things that I may not have done very well is I may not have presented the problem, promise, proof in a way that necessarily spoke to each individual like it needed to. Or I may just not have known my audience very well. Some people were thinking,

"Well, our problem is this," and other people were thinking, "Our problem is this," and then I present something that's different than that. They say, "Well, that's not really addressing our problem." No, it's ... you're working with a group of people like that, it's challenging to address everybody's problem.

Tim described the familiar case of miscommunication and how differing ideas can clash because people do not begin on the same page. Here, he implied this is a problem, something to be avoided, rather than a productive, generative co-experience of communication. The struggle between dissemination and dialogue was represented in Tim's conceptualization of communication as transmission instead of opening pathways for dialogue, which allowed more opportunities to (re)clarify, (re)construct, and (re)establish definitions and solutions for needs and problems. However, in this example, Tim was able to be reflexive in his mistake of assuming each individual understood the routine of things; however, his proposed solution reinforced the ideological commitment to communication as representation insofar that changing the communication/language was assumed to understanding, which is the innovator's responsibility.

In this section, we can see how communication was used as both an internal tool and an external skillset, and to relay what is being taught and used to produce a successful outcome. The struggle of dissemination-dialogue came into play through the privileging of dissemination of knowledge, information, and how to effectively create innovative ideas using IE's conceptualization of communication as a tool and a skillset. Next, I explored how communication is conceptualized as engineered identity work within the IE program, where the discursive struggle of integration-separation emerged as dominant.

Communication as Engineered Programmatic Identity Work: Integration-Separation Struggle

The first commitment of the CCP perspective is the understanding that identity, which is dynamic and fragmented, is constituted in communication (Fassett & Warren, 2007). Critical communication scholarship has long understood and moved away from understanding communication as being only the transmission, dissemination, and/or exchange of knowledge and ideas to a more complex understanding that communication creates knowledge, constituting the very world in which we live, the reality(ies) that we experience, and the identities that we know. I analyzed the ways in which the IE program conceptualized communication as engineered identity work, which was used to (re)engineer individual members' identity in reflection of the organizational image of an IE'er. Here, communication was used as the means to shape individual identity into the shared identity of the IE program, which was demonstrated by the ways in which co-participants negotiated their identity as members of IE and the emergence of integration-separation as the dominant discursive-struggle.

When communication was seen as a skillset for identity work, the co-participants clearly suggested they had an understanding that what they were taught and the ability to relate that to different audiences/students was linked to performing and constructing organizational competence. This was highlighted by Mary, a program leader and instructor, as she explained,

A challenge that I see, and I know we need to address is this translation across applications, systems, customer opportunities, and social change projects, all these different things. At one point we had given ourselves sort of a goal to do a third of the examples business related, a third of the examples non-business related, and then a third very personal in the class... Someone who is in school, particularly a younger person

who is in school has their basic experience coming into that class is going to be very different than a CEO at a fortune 500 company, just very different. What do we need to give this person that this person already has? Sometimes it's fresh perspective that this person has is what the CEO needs because they become so locked into a way of doing things ... We've been negotiating or trying to figure out how we tailor, how we present the information to different audiences we work with. Yet what is an acceptable amount of variation? Because we don't want to be too different at the same time because then we're not covering the same ... We're not teaching the same skillset. That's a tension that we're constantly negotiating.

Given the current changes with the curriculum of IE, which also changed how the IE program is engineered, Mary discussed how there was a tension between tradition and flexibility when it came to teaching the IE skills to various audiences in order to successfully engineer and fuse the identity of IE with the identities of the audience. She asserted that a balance was needed between consistency and flexibility, connecting this balance to learning and to equitable outcomes for IE students (“teaching the same skillset”). Thus, she performed the organizational identity of IE as a program that attended both to its founding principles and to students’ needs. Two things were notable in the implicit equation of “covering the same” with “teaching the same.” First, the attention to content “covered” as assuring equitable outcome articulated the banking model of education (Fassett & Warren, 2007; Freire, 1970, 2002) and a transmission view of communication, where message delivered equals knowledge received. Second, remarkable is the omission of “learning,” particularly when the emphasis is on “*teaching* the same,” but there was no attention to how (differences and similarities in) learning would be assessed – learning was viewed as dissemination and not dialogic. This reinforced an articulation of a banking model of

education and a transmission model of communication – although the need for flexibility was “justified” with students’ needs, the focus remained on consistency of delivery (and therefore, the focus was on the teacher) rather than an exploration of interpretation/learning.

Additionally, Mary focused on the performances the individuals gave in relation to the IE program. Each person had a negotiation period of wanting to be accepted but also being their unique self. She focused on the example of the younger person with basic experience in relation to the CEO of a Fortune 500 company. There was a negotiation of a new perspective along with someone who was experienced in certain contexts and, perhaps, set in their ways. The integration-separation struggle arose in how to present the information to different individuals in order to get a consistent message *across*. In this example, communication can be viewed as a skillset because of the way in which the message needs to be communicated to a diverse audience. The effective and strategic use of the message was important because of how the message can be or was going to be received by the different audiences.

Another interesting component of the programmatic identity work of IE that emerged was with the long-term vision of the IE program. During the program leader/instructor focus group, a discussion emerged about the long-term plans, vision, and goals of IE, especially since the program was actively growing across the country (Hall, 2013; Kelly, 2014). However, there was no consensus as to what the vision/future of IE looks like. This was highlighted by Britney, a program leader and instructor, during the focus group. She discussed how,

Our longer term vision, and Jay has a specific vision, I think all of us are a little more ... not quite on the same page yet, because we don't know where this is going. But at some point, we'll have some kind of PhD or something so that ... our long term vision has

always been that this becomes a discipline. That is broad and recognized and not just at UMaine.

Britney added that a long-term educational goal of IE was to continue to grow to other universities where IE became a recognized discipline. However, what this looked like varied among the program leaders, as shown in the example above. Here, the tension of unity-fragmentation emerged, which focused on the negotiation of shared and/or lack of shared goals as Britney discovered that not everyone was on the same page. Within the unity-fragmentation tension, the praxis pattern of denial was used to focus on how the co-participants denied or excluded one tension in order to favor another. In this instance, unity was excluded, and fragmentation was highlighted because of the disconnection of the vision that each individual had for the IE program. Here, the conceptualization of communication as engineered identity work was shown through the need to define and agree on what it the IE identity means.

Within this discussion of the focus group, Evan posed the question, “if we're not evolving, then what are we teaching?” Mary discussed that adding the Fundamentals course to the IE curriculum created new opportunities in how to teach students to apply IE and develop their skills. She asked, “How can we really teach them to do real experiments and analyze the results of their experiments?” Mary explained how the courses and content of the IE system needed to be more rigorous by going, “deeper on a lot of them (the IE skills).” She explained that students have, “already seen a basic level of this. So, we've been thinking about either bringing back content that we used to have that's kind of fallen to the wayside, bring that back in, or how can we go deeper on some of these topics.” Britney elaborated and discussed how there are opportunities to create new courses:

I will say in just a very general big picture way, I think we've created opportunities where we can have special topics, I mean if we are creating experts? Students who go beyond the Fundamentals course? Then when have opportunities for special topics courses or that sort of thing. Where they can go even deeper in certain parts of the system. I think there are lots of opportunities to blend it with other programs, they're not just standalone Innovation Engineering program.

Looking to how the IE program could evolve in the future, many program leaders and instructors discussed opportunities that currently existed given the new Fundamentals course. In this example, we saw the emergence of the unity-fragmentation tension and, as seen in the discussions of the co-participants, they relied on the praxis patterns of recalibration and denial. Mary focused on the redesign of some of the IE courses in order to help specialize some topics courses and create more opportunities with other programs. The fragmentation aspect of the tension was abandoned in order to focus on the unity of the IE program and the potential portals that these specialization courses can open for people who go beyond the fundamentals.

Describing the impact of the Fundamentals course, Evan talked about how the IE program is in a unique position to offer opportunities to incorporate more socially orientated case studies and assignments into the curriculum. Here, Evan negotiated the new idea of incorporating more socially focused ideas to the program in an attempt to (re)engineer the identity of the program and the outcome of an IE education. However, not all co-participants were able to understand the IE process or identity by looking at the program's system as a whole. John explained that, "I feel like we're so into the checklist part of it that I feel like I'm missing the big picture sometimes." Extending on the idea of feeling like the IE process is a checklist,

Jessica discussed how she also struggles to fully comprehend the system's process of IE and wants it to come "naturally" to her (discourse of rationality). Jessica described:

I hope that I get through this class. No, I really do want it to come naturally. I want to be able to be like, okay, I have this project coming up, so step one, create. I feel like I don't have ... If I'm going to have a checklist, I want a checklist. I want to see which ones to do first. You know what I mean? It's given to us as a checklist, but I feel like we're missing the checklist.

In these examples, John and Jessica expressed the desire to naturally identify with the IE system's identity. John and Jessica were negotiating the tension by being their own individuals, but also wanting to feel as though they were a part of the IE community with regard to the shared, organizational mindset.

From another perspective, however, the organizational identity was often understood in relation to other disciplines and resulted in external tensions of the integration-separation struggle, such as inclusion-seclusion, which was highlighted by Raquel. Raquel described how,

I think sometimes students who are very ingrained in other certain systems have to maybe, be able to put that aside for the moment while they're learning IE because we are teaching you a certain set of skills and if you're caught up in, "Well, my program taught me it should be this, this, and this," then you're going to have a hard time making the shift to IE and being able to see things from that perspective. I think if you're willing to do that, they can definitely co-exist very, very well.

Raquel discussed how she responded to students who struggled with understanding the IE system. In her example, the tension can be seen as the students as individuals who have a hard time adopting the identity of IE, especially when comparing the program to others. We see here

the expectation for the students to negotiate their individual identity in order to conform to the identity of the IE program. Frank, however, was more direct with students who followed another system and not IE's. He stated, "you have to ask them, 'Well, why are you here? We're trying to teach you something different and you can use both, but if you don't want to learn this other thing and you're not willing to give it a chance then maybe it's not for you.'" Frank navigated the inclusion-seclusion tension by co-opting, supporting, and justifying the identity within the IE program, which was nonnegotiable, and which placed the blame back onto the individual students. This may silence voices and perspectives, and in turn, may turn students away from the IE approach to innovation. This counters Pache and Chowdhury's (2012) advice to developing students' SE identity by offering a caring and supportive approach, and not denying students experiences or forcing students to accept the SE approach. Here, the praxis pattern of denial (Baxter & Montgomery, 1998) was used to validate the organizational identity while denying the identity and experiences of students. The denial of students' experiences, thoughts, and identity was reiterated by John, an undergraduate student.

As John discussed his thoughts and experiences about being silenced, there was an emotional tone in his voice that was forceful, where it appeared that John rejected IE's approach and claims because of being denied. John explained that,

The [IE] model fundamentally is supposed to accommodate for critique and feedback, which I think is the most important part of this whole process. I mean, feedback helps our ideas and actions become better, right? Then, hopefully, they would be accommodating for critiques of themselves and be open to potentially changing some of their approaches or methods, but I found that IE doesn't accept critiques of their system. It's their way or the highway. You would think they would welcome feedback and welcome creativity and

flexibility, but they don't. I realized IE's rigid system wasn't for me, so I only took one course and told my friends to avoid taking their classes.

Not all co-participants appreciated the responses they received when they challenged or provided feedback to IE's system. John discussed how he struggled at times to connect his own background in communication, graphic design, and marketing and his personal interest with environmental communication to the program. Communication was a tool and skillset in this instance because of the use of IE in the class as a product, but also as a process in forming his own ideas and opinions about the system. He expressed how he would critique IE's system when talking with his professor, but would get shut down, which in turn made him feel disconnected from the community. Here, it appeared that John perceived that a critical communication pedagogy of care was not enacted (Cummins, 2014) due to being silenced, and resulted in John, "not taking any more IE classes." This also spoke to the firmness of IE's definitional boundaries, which may result in (unintentional) exclusion of potential students through the denial of dialogue. Using the phrase, "It's their way or the highway," demonstrated IE's organizational decision-making process as one that was built on models of "centralized authority" (Deetz, 1995, p. 5). The silencing and denial of students' previous experiences, thoughts, and identities had real negative consequences for the growth and potential of IE program.

By identifying, analyzing, and interrogating the discursive struggles of dissemination-dialogue and integration-separation and their corresponding dialectical tensions that the co-participants experienced in the IE program allows us, as critical communication pedagogues, to begin to unwind the complicated and complex process and impact of communication within higher education. Unraveling the ways in which the co-participants experienced and navigated within/through these struggles and tensions provided a window into how the program (and

others) can implement a cultural change within the organization on how they understand, use, and teach communication. Through this development in understanding the constitutive role of communication, the program may be more adept at incorporating and bridging aspects of social change and innovation. Additionally, by adopting a more constitutive understanding of communication as both a means and ends will foster the type of reflexivity the program needs in order to better and more clearly articulate if the goals and intentions of the program for students post-graduation are intertwined and foregrounded with social change in mind.

Chapter Summary and Critical Self-Reflection

According to Fassett and Warren (2007), the CCP perspective, “seeks to sensitize students and instructors to the ways that traditional ‘neutral’ instruction curtails their creative capacity to learn about and transform their everyday communicative practices” (p. 6). Listed as one of the essential commitments within the CCP framework, understanding how mundane, every day, “communication practices are constitutive of larger social structural systems” demonstrates how identities (both individual and organizational) are narratively (re)produced, (re)constructed, and (re)imagined (Fassett & Warren, 2007, p. 43). Ultimately, the IE program has the potentiality to incorporate and articulate an approach to education through teaching social entrepreneurship and innovation that is just as focused on the outcome that results in (social) change as much as it is on measurable economic growth and sustainability. However, in order for the program to integrate an educational focus that includes a social justice component with a social change outcome, there needs to be a shift (both individual and organizational) in the ways in which communication is understood, taught, and used within the IE culture and externally applied; one that moves away from separating communication *from* creation to realizing that communication *is* creation.

Nainby, Warren, and Bollinger (2003) explained that, “from a constitutive perspective, communication is the only way to assess the impact of transformative efforts” (p. 202). Hence, in order to adopt and measure the outcome of a CCP approach to teaching communication within the program that includes a defined social change focus, communication must be (re)conceptualized and understood beyond the confines of dissemination. Communication as a univocality centers on the utility of IE materials, such as the blue card and the yellow card; understanding the relationship between these materials and innovative ideas; and placing these materials within the overall organization of IE. In this way, IE used communication as a means to disseminate the program’s materials, a tool for exchanging information, and a metaphor that represents the chosen knowledge the students need to acquire in order to successfully complete the program and ultimately become an IE-er.

Innovation in itself suggests, encourages, and invites change as a way to advance and develop innovative solutions for a system, organization, or structure, which can be applied more universally. With that said, the IE program would benefit by reinventing its approach to how communication is conceptualized from an innovative lens, while simultaneously demonstrating how the IE program understands the fluidity of innovation, can identify their own need for organizational change, which produces a very clear, visible, and measurable outcome that goes beyond dollars and cents (discourse of rationality).

More importantly, the IE program’s refusal to identify its own limitations, assumptions, and areas for growth, only worked to highlight how a lack of reflexivity produced a stagnation, and exposed the program’s neoliberal ethics where, “success is attributed to thriftiness and entrepreneurial genius, while those who do not succeed are viewed as either failures or utterly expendable” (Giroux, 2003, p. 195). Additionally, this approach to separating communication

from all other aspects of innovation, SE, and economic growth contradicted the explicit goals of the program and the very essence of its mission, which has real implications for how students conceptualize and apply the program for meaningful (social) change. In the next chapter, I explore how (social) change is conceptualized and taught within the IE program and the potential implications of how (social) change is framed.

What stood out to me the most in this analysis is the silencing – the outright denial of students’ experiences, thoughts, and identities in order to ‘validate’ and ‘privilege’ the communication tools and skillset embraced by IE – essentially silence others in order to validate IE’s organizational identity. I remember John’s interview, and the negative emotions that John expressed about the program ... This left me feeling disappointed and defeated about the potential to use the IE program as a possible model for social change. Not long after John’s interview, I interviewed Jay, one of the IE program’s leaders, and during this interview, I too remember feeling silenced. Specifically, in our interview I was discussing the context of my independent study for one of the INV courses, and the importance of qualitative methods when interested in studying social change, which was what my innovation topic focused on. I remember specifically feeling annoyed when Jay dismissed much of what I was discussing by emphasizing, “you need hard data” to “prove” that what I was trying to do was worthwhile. In this moment I felt hopeless that the IE program could be (re)imagined with how it teaches communication to incorporate more of a critical and relational approach to communicating for (social) change (i.e. through the lens of Fassett & Warren, 2006; Frey & Palmer, 2014; Tufte, 2017).

After the interview with Jay, I met with Britney to discuss my INV project and told her how disheartened I felt after my interview, and she said something to the effect of “Jay can be a little too direct for some” and may not have understood what I was trying to do. Here, Britney encouraged a pedagogy of care where I felt valued, listened to, and hopeful again about the potential of IE. Not long after this, I completed the focus groups. Participating in that process and the positive energy and excitement of the new changes with the program and the co-participants’ excitement for my own dissertation study, I felt inspired and motivated – felt like I was listened to and not silenced.

Through the analysis of how communication is conceptualized and taught, I realized that although the program views and teaches communication through a certain lens of dissemination, my own experiences in the program vary based on my professor and interactions with the program leaders and instructors. Here, depending on the instructor/program leader, I felt cared for, listened, and was encouraged to apply the IE communication tools and skillset in my own manner. For instance, to become “black belt certified,” in my final INV class I completed an independent project that utilized critical qualitative research to state the “problem” I was working to address, which informed how I translated the promise, and “measured” the proof. My instructor supported my independent project and did not “force” me into using the quantitative approaches or tools emphasized in many of the IE methods – I was supported. My own positive experience with completing this project also showed me that IE has the potential to be applied for (social) change by balancing dialogue with dissemination. The translation of the tools was difficult for me but was made “easier” with the support of my professor. To me, this is where the IE program has potential to be (re)engineered and (re)imagined, where innovation invites dialogue, collaboration, care, and meaningful critical reflection/thinking.

CHAPTER 7

(SOCIAL) CHANGE WITHIN IE

Overview

In the previous chapter, I analyzed how communication is understood, conceptualized, and taught with the IE program and the problematic implications of reducing communication to “techne” (Sterne, 2006), or a practical art that can be learned from an IE education as a tool and a skillset and applied universally to external systems and contexts. Additionally, I described two dominant discursive struggles that emerged within the program and were emphasized by the co-participants: the first, Integration-Separation, which is one of the core struggles identified in RDT (Baxter, 2011; Baxter & Montgomery, 1996), and the second, Dissemination-Dialogue, previously defined as a dialectical tension by Papa et al. (2006). Ultimately, I argued that the current conceptualization of communication within IE was the over-simplification of communication as the opposing binaries of an either/or spectrum, and privileged communication as dissemination as the normalized and centripetal force. However, I also argued that what resided in the resulting tensions that emerged from these discursive struggles was the opportunity to rearticulate cultural/ideological meanings.

Consequently, Chapter Seven focused on answering the second research question: *How is (social) change conceptualized and taught within the Innovation Engineering program?* With the analysis offered in this chapter, I found that the theme of (re)engineering possibilities for (social) change emerged with how IE conceptualizes and teaches (social) change. Specifically, I claimed that change within the IE program is conceptualized and taught as the creation and implementation of innovative ideas that have a quantifiable impact, where co-participants use the engineered system of IE to imagine and produce new possibilities. This change, whether

personal, organizational, or systemic, is accomplished through the use of innovation and was expected to result in meaningful, unique, and measurable change. Although an IE education may lead to creating innovative ideas and/or solutions that resulted in changes that impact larger social/cultural/systemic structures, such goals were not explicitly foregrounded as the focus or motivation for the IE program. Moreover, what is considered, defined, and constituted as (social) change varied from individual to individual, as IE does not offer one unified framework for change, and such ambiguity is a cause for concern. Currently, an operationalized framework or pedagogical approach aimed at creating innovative ideas for social change is not shared or established within the identity of the IE program. The lack of a clearly defined and articulated social justice/change focus was indicative of the program's ideological alignment with neoliberal practices, which were invested in the privatization of knowledge and discourse and distant from the commitment to public concerns or the common good. As Giroux (2007) described,

As insecurity and fear grip public consciousness, society is no longer identified through its allegiance to democratic values but is identified through a troubling freedom rooted in a disturbing emphasis on individualism and competitiveness as the only normative measures to distinguish between what is a right or wrong, just or unjust, proper or improper action (p. 195).

By using a, “normative framing of development, which assumes commitment to the common concerns of social justice, equity and human rights” (Tufte, 2017, p. 144), I analyzed how the IE program attempted to conceptualize and teach (social) change and explored the ways in which the co-participants worked through/between discursive struggles as they discussed (social) change within the IE program.

In doing so, I first explored some facets of social change, specifically from the lens of CCP, while examining how co-participants understand and constitute what (social) change means, both discursively and performatively. Here, I focused on understanding how co-participants (re)articulated the meaning of (social) change within IE, where integration-separation struggle emerged. Second, I analyzed the pedagogical approaches used to teach (social) change and the potential impact of incorporating a CCP framework within an IE and SE education. In this section, I focused on understanding how co-participants (re)imagined the pedagogical approach of teaching (social) change in IE, where integration-separation struggle also emerged. Finally, I ended with a chapter summary and critical self-reflection. Through the analysis of the data, I found that the discursive struggle of integration-separation emerged as dominant with three corresponding dialectical tensions relevant to how (social) change was conceptualized and taught within IE: external display of control-emancipation and external display of inclusion-seclusion. I also highlighted the sparsely-sporadic moments where the discursive struggle of certainty-uncertainty emerged (internal dialectic of predictability-novelty and external dialectic of conventionality-uniqueness).

(Re)Articulating the Meaning of (Social) Change within the IE Program: Integration-Separation Struggle

Although a shared understanding of what social change means within the IE program was ill-defined at best, there was an agreement that at the center of change were skilled autonomous entrepreneurs who understood how to navigate and integrate external structures and systems to utilize innovative approaches in order to produce various positive transformations with measurable results. Here, the integration-separation discursive struggle was dominant, embedded in the cultural discourses of individualism and rationality. As Thorpe and Goldstein (2010)

defined, “An entrepreneur begins the process of defining success from the opposite direction, gravitating toward innovation, not emulation, as a way to achieve institutional excellence and sustainable competitive advantage” (p. 135). Assuming that innovation and innovating are fundamental to entrepreneurial success, how then might we be able to understand and develop the potential impact of an IE education that is built on commitments to both innovation and (social) change?

According to Enos (2015), social entrepreneurs are agents of change who are driven by a social mission, are strategic, and results-orientated. However, within entrepreneurship education, this vision contends with growing commitments to profits, the privatization of knowledge and resources, and the focus on economic and market-driven outcomes that mark contemporary higher education, “less as a public good than as a private right” (Giroux, 2012, p. 1). Not surprisingly, in this study, co-participants’ comments articulated the dichotomies between good and bad, public and private, and just and unjust at both the individual and organizational level. For example, Tim asserted that the, “heart and soul of [IE] is to go out and make your mark on the world,” articulating an unwavering commitment to making an impact, fundamental to IE’s organizational identity. Through Tim’s quote we see how the IE program continues to promote that empowerment, change, and agency are achieved at an individual level where leaving a “mark on the world” is a personal choice and/or responsibility, independent of contexts or structures (discourse of individualism). Tim elaborated on this phenomenon and explained that IE encourages individuals to,

[D]o something that you love and take these principles and apply it to whatever that is but starting your own business, that's great. If it's helping somebody else succeed in business, that's excellent. If it's changing the world through some kind of nonprofit organization,

then that's it. I would say it definitely inspires both entrepreneurship but also just people to be able to pursue their passions.

Here, Tim articulated and endorsed the notion of IE's *universal application with an economic focus*, which is re-iterated in the IE program documents (discussed in Chapter Four as the discourse of rationality). Using the examples of, "starting your own business," and "helping somebody else succeed in business," Tim returned to the dominant narrative that privileged individual economic benefit or economic change as the prominent outcome of an IE education. Thus, the process to apply the tools and skillsets taught in the IE program and the ability to go out and, "leave your mark on the world" was immersed within the confines of an individual's grasp of the entrepreneurial spirit. The integration-separation discursive struggle emerged, specifically the external tension of control-emancipation tension, in Tim's discussion about how individuals navigated existing systems to create something new, such that IE participants developed the ability and agency to "pursue their passions" in an effort to "leave their mark."

This idea of developing entrepreneurial agency was echoed by Holly when she connected the IE mindset of entrepreneurship and drinking "the [IE] Kool-Aid." Holly explained,

The things that you learn in innovation engineering you can apply to entrepreneurship, but you can apply them anywhere. I guess on whether it's entrepreneurship embracing innovation engineering or vice versa, I think there's a relationship there. But there is a relationship there in what I'm doing. There's a relationship. Anybody that uses it or takes the course can apply it across the board. I truly believe that.

In this example, Holly also validated and exemplified the *universal application* of the IE program "across the board" by demonstrating how IE fostered an approach that taught students how to use the tools and skills they have learned to create and innovate ideas for change

(discourse of rationality). Through Holly's emphasis on the "relationship" between innovation and entrepreneurship, we see the emerging tensions of control-emancipation in the integration-separation struggle and predictability-novelty in the certainty-uncertainty struggle. Holly described her feelings of empowerment with IE's universal application to create some sort of change by navigating between/through external control systems and embracing the creative process through the novelty of the IE program. With the assertion of empowerment also came an affirmation that Holly possessed and exuberated the entrepreneurial spirit. Through Holly's statement, we also begin to understand her experience of personal change through embracing and implementing an IE education by drinking the "Kool-Aid." A similar sentiment was reiterated previously by Eric and was echoed by many co-participants. Holly exemplified and demonstrated how individuals accomplished personal growth and change by adopting an IE mindset and identity.

Looking at these examples, we can attempt to (re)imagine how social change is conceptualized in the IE program as the co-participants unveiled the impact IE had on their development. According to Frey and Carragee (2007), "Communication activism, however, is not done simply to achieve the end products, for many cases, the particular changes being advocated may take a long time to occur or they may never occur at all" (p. 39). Thus, considering that *we* are able to see how co-participants experienced such significant changes at the individual level, we can start to (re)envision the possible ways to (re)construct the individual pieces and (re)build the foundation of an organization's identity. CCP recognizes the importance of raising individual critical consciousness, where individuals are then empowered to act and intervene into oppressive systems of meaning/structures (Fassett & Warren, 2007; Frey & Palmer, 2014). Through the above examples, we begin to understand how co-participants are

experiencing change and empowerment within themselves. If such confidence in one's self and in the program is successfully developed, perhaps this is an element that needs to be retained and directed more critically through applications of "working with" others.

In the following exchange, the co-participants attempted to expand the meaning of "value" beyond economic impact. This effort, however, and its performance in the exchange below, ended up highlighting the dominant narrative of financial gain as foundational to both the U.S. capitalistic culture and the paradigm within which IE is grounded. During the program leader and instructor focus group, co-participants discussed how the IE program itself was the epitome of innovation, through its evolution and changes regarding the IE tools, systems, and processes.

Britney: We now talk about it (IE) in terms of concept value and that value doesn't just mean economic value...the assignments that we've had the focus has been on economic value but it's really about measuring impact. And that might be an economic impact if it's a product, but if it's a social change idea that impact is something completely different.

Mary: The reason we had the assignments the way that they are, they are associated with some kind of economic value, is because products are just easiest for students to work on. So, if they understand products because it's a tangible thing, then they really start to understand the mindset and they can much more easily adapt it to the more complex ideas that they're going to be coming up with.

Frank: ...So one of the things that we've tried to do, and it seemed to have worked very effectively because I get the question, do you mind if I count trees. We started out creating an assignment where, for Fermi estimating, instead of estimating pennies and

cents, they're actually estimating the amount of carbon dioxide they're removing from the air by an event that they're going to end up generating and hosting...So looking at a value as what is your measurable impact. So we give the funny example, if you're a National Wildlife Federation it's how many seagulls you've saved. If you're the Arbor Foundation, it's how many pounds of CO₂ you've removed and how many trees you've planted. If you're Walmart, it's how many dollars you've made this past year. And, that translation has seemed to work very well...this semester it was how to use it in my life. And we're having more students use it around events that they're generating within Greek life, within their student clubs, and just looking at improving or that, what is the impact and how do I assign a value to my concept in order to compare ideas to each other.

Evan: So, while it's always easy to say we can all talk dollars and cents, we've moved away from doing that solely to broaden out what is measurable impact.

Britney: Try to get them to see that it's really not just about products. They learned about products in Fundamentals but here's how you can apply it to a different kind of situation.

In this example, the co-participants engaged in a dialogic exchange of how the IE program is/can be used for (social) change. The dialogue showed an agreement that “change” needed to be operationalized and measurable in order to be teach-able; on the other hand, the exchange suggested that once change had been articulated with (measurable) value, the teaching approaches themselves were adapted to meet students’ interests. Frank offered the most extended example of connecting his real-world story to the educational context of the IE program. The co-participants’ discussion also showed the certainty-uncertainty discursive struggle by framing the unique approach of teaching and learning innovation in the IE program, while still teaching and

applying the tools in the same disseminated manner when working towards creating change. Here, the external tension of the integration-separation struggle, inclusion-seclusion, was dominant, as Frank described how the IE system can be applied externally, so the IE system was integrated into the work of “outside” organizations/entities (i.e., “if you're a National Wildlife Federation it's how many seagulls you've saved...”).

Interestingly, the program maintained its control by presuming to know what was “easiest” to learn with regards to change, because as Mary suggested, “products are just easiest for students to work on.” It does not allow students to come at it from their own experience and in this way, also possibly change the program. Instead, the exchange demonstrated that teachers were in charge of “innovating” and adapting the examples but did not show reciprocal learning or how they (may) have learned from students about conceptualizing change. Additionally, the dialogue in this focus group also highlighted the privileging of measurable impact through quantifiable methods, where change is calculable. However, not all co-participants agreed with the economic/quantifiable focus of/for change within the IE program.

Similarly, in the student and alumni focus group, co-participants discussed potential to apply the IE system for economic impact and/or for social change. The emphasis on this theme within the focus groups was indicative of the lack of a shared, clearly defined programmatic understanding of what social change means. Specifically, there was a discussion on whether or not IE could actually be used for social change, considering its privileging of economic impact.

Jessica: Why not apply it to social change, because we keep saying that it can be applied to anything, right? That we want to help everyone everywhere innovate every day. If we say that and that's our goal, which we put at the front of everything with. That's our creed, so-to-speak, then why not social change?

Mason: I think from a student's standpoint and a person who teaches, I think that keeping it in terms of the economic impact value of the idea is important for teaching students because it's simpler than trying to work its way to make it very, very complicated. Or how did it become very complicated in trying to factor in many different little pieces about the social impact versus just economic impact. Because numbers are easier to understand than feelings, I think, in that sense.

Sheila: It depends on what kind of social change you're going for. If you're going for moral social change, I don't think it helps in that situation. Because it is focused on The economic focus doesn't make it about morals, it makes it about money. But if it's about what could make people reach out more for this certain ... Like what can make people reach out for a certain subject or maybe you're trying to educate people on something you need to know, what makes them interested in it before they can hear all the information on it ... but it it's more like "How can we get people to spend money on this?", then it's not. It's not about social change at all.

John: I think to be good at solving certain problems, whether social, cultural, or economic, they have to have a level of meaning and importance to you or else all you do is come up with fast, cheap solutions that are not sustainably and really have no meaningful impact. Change is complicated and there isn't always an easy fix or solution like IE's system makes you think but being passionate and feeling compelled to make a change can help drive you forward.

The discussion in student/alumni focus group highlighted various contentious stances in how the co-participants defined social change and how the IE program taught students how to create ideas for social change. Jessica started off by asking why the IE program did not focus or teach in a fashion that allowed students to more easily create ideas for social change. Mason then challenged Jessica's statement by claiming that, as a student and teacher¹⁰, focusing on "economic impact" is not only easier, but it is also the unifying approach shared by everyone in the program. Here, Mason navigated the tension of teacher-student and privileged teaching students how to measure impact and change through an economic/quantifiable approach. Speaking as a (co-)teacher, he privileged the predictable spectrum of the certainty-uncertainty struggle.

Challenging Mason's focus on economic outcomes, Shelia highlighted the complexity and dynamics of social change that was focused on morality rather than economic measurability and alluded to a critical paradigm – that the IE's current system cannot be used for social change if the focus is on the bottom line. Sheila highlighted the inclusion-seclusion tension of the integration-separation struggle with how the IE system "isolates" itself from certain external collaborations and applications because it focuses heavily on the economic output. John then brought it back to the individual level by privileging autonomy and emancipation where, "being passionate and feeling compelled to make a change can help drive you forward." Here, John tried to bridge one way in which "level of meaning" can be measured through money. However, placing social change as a "personal choice" for the autonomous individual (private morality)

¹⁰ At the time of the student/alumni focus group, Mason is a graduate assistant student in the IE program where he co-teaches IE undergraduate courses.

and not organizational responsibility, reinforced the cultural discourse of individualism while simultaneously assuming that IE had no responsibility with how IE-ers apply their system – it's the individual's choice. This framework and lack of organizational responsibility reinforced neoliberalism. The movement within the conversation reflects Deetz' (1995) critique of organizational communication, according to which,

The instrumental, amoral orientation of modern corporations assumes that moral decision making is a private responsibility of organizational members and leaders. With a *strong* private morality, pressures for productivity and profits without regard for the public good were counterbalanced into a reasonably productive tension (pp. 156-157).

The exchange in this student/alumni focus group contrasted that of the program leader/instructor focus group and represented the attempt to define social change within the program. Students offered a dialogic navigation-in-process. Here, students challenged IE's claim of universal application, as the current system/program may not account for moral or social change beyond economics (quantifiable outcomes). Additionally, students also described how the IE program did not currently teach students how to apply the IE program for social change, despite the claims made by program leaders and instructors in interviews and the focus group.

Student/alumni and instructors/leaders seemed to have very different perceptions about how the IE system can be used for social change. In the effort to create a shared organizational identity and bridge the student and instructor mindset, Mason began his statement by identifying himself as someone who is both a teacher and student of IE, as a means to establish authority, a dual-knowledge position. Tufte (2017) argued, "The most important driver of innovation and culture is dialog communication," and it is interesting that the exchange that follows, challenging

and complicating Mason's thoughts and experiences, does not necessarily undermine that authority, but it does perform a more equitable, dialogic engagement around ideas (p. 123).

Here, Mason prioritized being "the teacher;" he signaled a dialogic stance – student and teacher – but only performed one. The other students, however, invited the multivocality student/intellectual – they opened the dialogic space. This was an important moment, as it countered Wyke's (2013) overly positive emphasis on creativity in IE by showcasing the relational-dialogic potential. However, the dismissiveness of Mason's comments highlighted how IE may limit positive creative moments that Wyke described, since students' voices were silenced. Here is an important moment where CCP could be incorporated into IE: IE could listen to the students, thus affecting organizational/systematic change. Since students were having these conversations, and the thoughts of applying IE for social change were being contemplated by students, I would encourage for IE to open the spaces for students to have these conversations within IE. For example, Nastasia and Rakow (2010) explained that "making maps" to explore theorizing was helpful to examine the taken-for-granted assumptions and ideologies in theories and systems of meanings. Since IE used the tool of mind maps to help students generate ideas, this was a moment where using mind maps may be dialogically combined with CCP to explore IE's ideologies of (social) change.

Although not one person expressed a clear definition alone, pulling on the different strands of conversation, a definition of (social) change as entrepreneurial emerged that was: 1) unique and creative; 2) stemming from personal passions and encompassing personal change and 3) having predictable and measurable impact. In order to widen this sort of narrow focus, Enos (2015) proposed that higher education institutions develop programs that are built on and, "value civic engagement as something that is neither extra-, co-curricular nor resume building" (pp. 81-

82). Developing the IE program into one that is committed to innovation and the impact of (social) change, whose shared values are grounded in creating entrepreneurs that are drivers for social change, begins with a shared, organizational identity and understanding of what social change means.

Ultimately, *we* learn that through the entrepreneurial framework that is currently embraced by IE and the personal growth that stems from it, individual emancipation was privileged in the program's understanding of (social) change. Within this framework, students learned how to successfully navigate external control systems when creating and implementing innovative ideas. Although dialogue in the program may be valued as a way to foster creativity and enable individual emancipation through control of external systems, there was no reflexive centering of culture and context. Students were asking for a space to ask the critical questions, to think through the implications and possible unintended consequences of what they are learning – in this they were also performing their desire to be included in a process of (organizational) change, and what did the organization do? It reaffirmed its values and emphasized that the program leaders change the curriculum to include more varied examples. Again, ideas of “controlled emancipation” were so stark on the organizational level, and the administrators were even self-congratulatory – “look, we are willing to change, let's measure CO2 instead of money, we are hearing our students” – but what they were not hearing was that they were successful in empowering students, so much so that students (including myself) wanted to work on strengthening and changing IE. We/they (students and alumni of IE) wanted to be part of imagining and driving the development of social justice entrepreneurship ... But (how) can that happen? Perhaps, IE could embrace Huber's (2013) “social justice-oriented help,” since this type of help values students' voice in decision-making processes? Now that we had a (somewhat)

better understanding of what (social) change means within the IE program, I explored what (re)engineering possibilities for teaching (social) change looks like.

(Re)Engineering the Pedagogical Approach of Teaching (Social) Change within the IE Program: Integration-Separation Struggle

I found that the context to which co-participants (re)engineered possibilities for (social) change focused on (re)imagining future possibilities with regards to career opportunities and applying IE to their field. Here, the discursive struggle of integration-separation also arose. Co-participants also suggested IE as the model for others to use when creating and implementing ideas for (social) change. Consistent with prior research (Wyke, 2013), co-participants overwhelmingly discussed their IE experience as positive and helpful with developing an innovation mindset that allows one to create ideas for change. However, due to a great variation in experiences, it was not easy to identify and explain the process(es) through which students learned and developed this mindset, if at all. Commonalities in experiences did center around how IE helped students find their voice, speak their passions, and (re-)imagine their futures. Mason proclaimed gratitude to the IE program by reflecting on his personal discovery and growth:

I think I gained a future. I think without the program, I would have been so set in a mindset as a student. I originally wanted to go to veterinary school, but then I wasn't very interested in that. Innovation Engineering allows you to see how what you can do and what you learn can be applicable in many different ways ... You're not just set in a major. Innovation Engineering opens it up, so that way you can do many, many different things. An example, this summer I interned for a food company, but I did marketing and a little bit of food stuff. All right, so with a science major you can analyze things. You can write

reports. You can do this. You have a thinking mind or you have that scientific mindset, but you can apply it to marketing or business and use that to best leverage your abilities... You're not set on one career path. You don't have to be an electrical engineer or a veterinarian or something like that. You can take your ideas and run with them. If you see an opportunity, you should be able to take it and do something with it. Innovation Engineering can show you how to do that.

Through Mason's testimony, we see how his experience in the IE program offered him the freedom to figure out his passions and his strengths, so he could effectively navigate external systems and implement creativity and innovation across multiple contexts.

Once again, the personal change that IE privileges was apparent and was articulated with an expression of (individual and organizational) uniqueness. Through the explanation of having the ability to "leverage your abilities," Mason emphasized how IE encouraged students to think through what made them unique. Furthermore, this self-reflective process was what made IE education unique among other educational systems. In Mason's comments, it seemed that although, on the surface, IE is about creating, communicating, and commercializing ideas, it was really about the individual at the center of this process – innovation engineering engineers the innovator, centering individual responsibility and individual change (cultural discourse of individualism).

"Liberated" by being able to see the self-as-a-project and a process and embracing the predictability of on-going change, one does not need to be "set on one career path." Mason negotiated the external tension of control-emancipation and, through recalibration, the meaning of an entrepreneurial spirit emerged. Entrepreneurship coalesces around the agency to apply the IE framework towards various fields of interests in a systematic and creative process. According

to Sandler (2010), “The most successful entrepreneurs are creative and innovative. They have a compelling vision and possess a driving passion,” so much that “they most often question current practices, procedures, and methods in ways that trigger innovation” (p. 127). Furthermore, the ability to apply innovation in response to market needs in a variety of contexts is the vision of an IE education and the goal of a successful entrepreneur (Enos, 2015; Sandler, 2010). Mason used the praxis pattern of recalibration and sees the “thinking mind” and the “scientific mind” as one of the same.

Tim expressed similar sentiments with how the IE program “helped me understand myself better,” and resulted in both personal change and the realization of how he can help other businesses. Tim elaborated that,

I realized that one of the things innovation engineering did for me is it kind of ruined me in a sense because now when I go into a company, I see all the flaws, what you're doing wrong, and I want to be an agent for change. Reality is most companies aren't ready for change. And don't really appreciate those kinds of skill sets. What ends up happening is that if you're really one of those people that wants to create change in a company like that, you want to benefit the best way that you can see that they could be benefited and then they say, "Sorry. We don't really want that. We just want you to do your job over here."

This focus on “person” versus “roles” has an emancipatory potential that can be connected to critical communication pedagogy (Giroux, 1988; hooks, 1994; 2003; Lather, 1998). To expand this potential, the focus on the person should be developed into a focus on the person-in-relation and the person-in-context, following CCP commitments to centering culture and identity (Cummins, 2014; Fassett & Warren, 2007; Frey & Palmer, 2014).

Additionally, Tim continued to say that companies' insistence on ignoring the person and focusing on the job,

[K]ind of squashes out your drive and your motivation a little bit. I realized pretty quickly that I either need to have my own business, where I can make those ... call those shots or I need to be part of a business that's ready for some change that I can actually influence and add value to, so what I decided to do is I decided to make a career change completely. Now I'm running my own real estate business, buying and fixing up and reselling mobile homes, actually, and investing in mobile home parks.

Through Tim's statement, we see a personal change that emerged, but it is framed in a playfully-negative light, as the IE program "ruined" him to the point of quitting working for other companies and started his own business. Tim performs himself as a trickster (Giroux, 1988) who had, in a sense, liberated himself from the control (of being) possessed by other companies, which inspired him to start his own business. Here, he resisted a corporate (economic) system – "oppressor" – that "squashes" the personal, the human, and substituted it with a "cog in the machine" (Giroux, 2012). This realization, the proud sharing of which clearly delighted Tim, "ruined" Tim's ability to fit into the larger social system and serves as another example of the liberatory potential of the IE program.

This reinforced the previous claim that co-participants in IE developed an entrepreneurial approach to thinking and doing, but it was the responsibility of the individual to successfully employ this approach in innovative ways. However, what is interesting (and potentially problematic) is that because Tim did not know how to effectively navigate the control system in the other company, and ultimately apply the IE system in a more flexible manner, he ended up quitting his job and starting from scratch. But what if alumni of IE are at a company and unable

to apply the IE concepts, but do not have the means or resources to quit and start their own company? Tim's testimony challenged IE's claim of universality and flexibility and provided a concrete illustration of how translating the IE system to solve problems and adapt the IE system to various contexts was not always so easily achievable, and in turn, Tim used what he learned in the IE system as an exit strategy. However, under IE's logic, his inability to adapt to the structure in which he was originally in was Tim's fault, not IE's. Here, the external inclusion-seclusion tension of integration-separation struggle was highlighted with how IE excluded outsiders if they were not able to adapt/translate IE's system to all contexts and dimensions.

Eric touched on one possibility with how he was able to create change in his work environment as an educator. Similarly to Tim's illustration above, Eric discussed how the IE process taught him to, "really think about the system, to think what it is that I'm doing and how to tweak a thing a bit." He added that in his current position of teaching K-12 students, he applied the IE system to think about how to better develop students' career readiness. Eric described:

We're starting these career portfolios, career and college, career and education portfolios. It's something that has been ... a teacher has done them in the past, but it was just for seniors, basically. So, we're looking at how to do it 9 through 12. There's a formal presentation at the end. One of the things that I've brought to the table is we need to make sure that we have employers, get feedback on what these things should look like. We need to have colleges give us feedback on what these things should look like, the military give us feedback on what these things should look like because that's who we're preparing them for. We're not preparing them just to graduate. That's the system. The system is we're handing them off to somebody else. We need to treat this portfolio as

such. We can't treat it as just a check in the box so they can get their diploma. This is meant to be something they can use after they leave here...

In this example, Eric privileged employers' expertise and actually kind of brings "the system" of corporate governance in – so, now students can be "trained" and "shaped" much earlier to fit the mold, so that they can be employable. He was critiquing one part of the system, maybe the educational system, but he was not really reflective about how bringing the audiences listed above defined what and who mattered, and more importantly, questioning how this process was accountable for the system reflecting on itself rather than reasserting itself. Eric elaborated,

You're brainstorming different ways of doing curriculum or you're brainstorming different approaches to intervene with a kid, what better way than breaking out a mind map? What better way than let's do little research, let's do a little mining? Are we asking the right questions? Are we asking the right people? What better way to start some of that? You've sat in on teachers' meetings before. Some go well and a lot don't. And committee work, how awesome would it be to be able to do that as a teacher, to have this skill set. This is what I've started to use a little bit with this portfolio thing and the groups that we're working on, working with. This is why it's important. But it goes back ... You can use it in anything. If you're flipping burgers at McDonald's, you could use it. It definitely is applicable in anything. I can't say enough about it. I just think it makes sense.

Eric's example highlighted how through thinking in a system's approach, he was able to emancipate himself from the control system of his school to come up with an idea to better help students prepare for their careers beyond high school. Eric used segmentation to negotiate how he navigated the various applications of IE with creating a career portfolio through thinking about which IE communication tools and methods would work and align within the existing

system for the specific idea. For instance, Eric highlighted how he used “mining” and “mind map” to help generate ideas and then teach his co-workers how to use these “stimulus” tools with creating the process as to how students will develop a career portfolio. Eric’s example showcased how he applied IE’s approach for change, to create a school-wide graduation requirement of a career portfolio, so students will be more prepared after graduation.

This idea was an example of a potential social change idea, since it directly connected to shaping the community through influencing education and students’ potential for meaningful employment and personal sustainability. It was even more important, in this context, to reflect on the possible unintended consequences and the deep ideological work of the intervention (Giroux, 1988; 2003), which may amplify neoliberal values under the self-congratulatory guise of adapting the IE system to K-12 context. The portfolio still privileged creating ideas based on economic or market gains/growth/change. While it may enable students’ creativity and participation and it may empower confidence in one’s abilities to create, the project ultimately privileged employers’ assessment of ideas and students’ employ-ability as the motivating factors for creativity. It was not necessarily clear how the IE program can be used for some types of social change, such as moral or cultural social change, as suggested previously by Sheila in the student focus group. In connection to Tim’s earlier discussion, it seemed a risk of this approach was the replicate creation of future “Tims,” who are going to try to fit into the system, be assessed and try to be liked by the system, just to end up being “squashed.” At the end of his statement, Eric connected IE’s approach to change to universality, by offering how, “if you’re flipping burgers at McDonalds, you can use it.” But the question remained, how can you use it, to what ends, and how do we teach it?

Despite this potential limitation of IE's approach to conceptualizing and teaching (social) change, many co-participants emphasized how IE was a model for making the world a better place. For example, Eric highlighted that although IE, "was created and focused based on product making for a company ... it has a broader, more positive application." In Eric's interview, he reiterated a claim that was made in the Create course videos that IE was focused on, "the bigger picture of making the world a better place, doing cool shit that matters."

When asked about specific examples of how the IE system has been used for personal, economic, and/or social change, Jay described how at the Eureka Ranch,

[IE] can very much be for personal change or social change that you want to create ideas for. One thing we did over the summer at our Innovation Conference was we worked with a group in Cincinnati who was working with baby greens, essentially ... micro greens. They wanted to use that program to help inner city people make money in healthy ways. We spent a day, just a whole bunch of us, working on that and we created dozens of new ideas of how they could use the greens, how they could package them differently, how could they make them more appealing. Just dozens of ideas and if they were to follow through with those, that could make a really big difference in that city and then be a model for other cities. I think you could do that in a varying degree.

Through Jay's example we get a clearer picture how IE has been taught and used for community change at the Eureka Ranch. In terms of how (social) change was taught within the education program of IE at the University of Maine, Eric's comments suggested that the continuous evocation of "tools" (mind maps) and skills (mining) is how (social) change was taught. Interestingly, the social change that Jay discussed with how the IE program is applied still privileged and focused on creating products (i.e. packages for the micro greens) for an economic

impact (i.e. make more money). The external tension of inclusion-seclusion emerged through Jay's testimony, specifically regarding the creation of a novel idea that relies on the predictable system of IE to create an external product for micro greens.

Social and community change is not a quick process, yet Jay's example approached social and community change in the city as an "easy fix" through the creation of this product where individuals temporarily (i.e. those at the Innovation Conference) went into the city to help generate ideas to implement, and then once this was done, the IE individuals left the conference to go back home. In her study of alternative food practice, Guthman (2008) examined the issues surrounding the food justice movement and argued, "these projects lack resonance in the communities in which they are located" and ultimately, "that current activism reflects white desires more than those of the communities they putatively serve" (p. 430). This simplification of social change where outsiders come in to "fix" a community is problematic, and devalues local knowledge and agency (Dees, 2012; Papa, Singhal, & Papa, 2006). This is an example of the local-global dialectic and how social change created at the local level occurs in ways that mirror colonialization (Simonis, 2016). As Giroux (2012) suggested,

The elements of such a reactionary educational policy are well-known: unrestrained individualism in all realms, unbridled competition, the commodification of knowledge, the use of high-stakes testing as the ultimate measure of learning, and corporate values as the master metaphors for educational change, all of which signify a gross perversion of democracy in anything approaching an empowering education. (pp. 50-51)

In this study, co-participants' discussions regarding what social change is and how it could be taught within the IE program suggested the need for a clearly articulated definition and/or commitment towards/for social justice/change. What worked in the current IE framework was

the emphasis on agency, the recognition that, to some degree, agency is bound by and can reshape structures. What did not work was that there was a lack of complex, intersectional views and critiques of structures and culture; a lack of dialogue that excluded certain knowledge from appreciating the complexities of structure and culture (Dutta, 2008). Making an organizational and individual shift in the mindset of how IE identifies itself as a program may open up opportunities for organizational growth and change but must begin with organizational responsibility and critical self-reflection (Deetz, 1995; 2001).

In this section, *we* learned that the practice of (social) change continues to privilege change within the individual, where the individual embodies an entrepreneurial approach to go out into the world to disseminate knowledge and generate ideas for change, specifically change that has a measurable economic benefit or impact. We learned that social, community, or business/product change needs to be quantified in order to measure the impact and success of the implementation of an idea (discourse of rationality is privileged). However, what is unclear is how the IE system can be applied externally for moral and cultural (social) change. How then, if at all possible, could IE's system be (re)imagined so it can be applied for moral and cultural (social) change? Instead of focusing on quantifiable/measurable outcomes, is the IE program open to modifying/expanding their current system to account for outcomes that are not quantifiable? After all, meaningful social change is hard to measure/evaluate as this type of change does not align to quantifiable outcomes (Fassett & Warren, 2007; Frey & Palmer, 2014).

Chapter Summary and Critical Self-Reflection

Through the analysis in this chapter, *we* learned that (social) change within IE is conceptualized and taught through an entrepreneurial lens where individuals, first, need to have change within themselves – a mindset change of accepting the IE system in order to apply the IE

system in any and every context (universal application of/to change). Co-participants negotiated the discursive struggle of integration-separation, specifically by negotiating the external dialectical tensions of control-emancipation and inclusion-seclusion when thinking about/applying IE for (social) change. Potentially problematic with how (social) change is conceptualized and taught within IE is the continued privileging of individual autonomy to go out and “spread IE’s good word” in order to create economic growth/opportunities, yet when economic growth and/or or the successful application of IE’s system externally fails, there is no responsibility of/on IE for this failure in/with the community. Failure for (social) change continues to be placed on either the individual applying the IE system or is placed on the communities/external entities for not fully embracing/adapting IE’s system. Through this process, IE only takes credit for “successful” internal and external applications of its system, which reinforces the narrative that IE has a universal application. However, the student/alumni focus group highlighted how IE’s current system may not be able to be applied for moral or cultural social change, despite IE’s claim that their system can be. How then, could IE’s system be (re)imagined or (re)engineered with how it conceptualizes and teaches innovation, communication, and (social) change, so that creating ideas for moral and social change may better materialize? In the next chapter, I explored the connections between/among communication, innovation, and (social) change as conceptualized within IE’s philosophy and teaching practices.

Reflecting on my own experiences within the IE program, I realized that, in general, the IE system tends to push students in a “do for” direction where an idea gets generated in an “incubator” (scientific lab) and then gets disseminated into a context FOR others benefit. I was

struck with how hard it was to apply IE's communication tools and methods to create an idea that focused on a cultural (social) change. For example, in the INV 510 and INV 511 classes, I tried to create an idea that centered on creating more equitable educational opportunities for Native Americans in Maine, specifically focusing on the Penobscot nation since they lived in the local community near the University of Maine. Part of IE's system when creating and communicating ideas is for (social) change gathering "stimulus" to inform your idea creation and "eliminate" potential "death threats." During this part of the IE system, qualitative data is valued where you gather data through interviewing/talking with "experts" who are knowledgeable about your topic area, participating in observations, and gathering documents for analysis through looking at previous research and/or searching the internet to see what's been done, among other things. Through this process, I recognized my own positionality and privilege of being an outsider of Maine and a white male. Talking with a professor at the University of Maine who specializes in researching issues surrounding the marginalization of the Penobscot tribe, I knew that I could not just create an idea for or to the Penobscot tribe, but needed to first be invited and accepted into the Penobscot tribe as an Ally ("Ally building," n.d.). There is a historical distrust of the white race among the Penobscot tribe and rightfully so, given the atrocities that occurred and continue to occur ("How History Impacts Us Today," n.d.; Loring, 2016; "Maine's Indigenous Truth Commission Marks First Year," 2014).

Recognizing this, I attended the Ally training through the University of Maine's Diversity Institute (see <https://umaine.edu/umdli>) offered by Maine-Wabanaki REACH (see <http://www.mainewabanakireach.org>). Maine-Wabanaki REACH is a cross-cultural collaborative that offers Ally training for non-native people with the goal of building a,

[B]roader and stronger community of non-Native people who understand the long-term impact of historical harms done to indigenous people since first contact, centuries of governmental policies intended to eliminate “the Indian problem,” and present day systems that provide advantages to the dominant culture.” (“Ally Building,” n.d., para 1)

During this training, it was emphasized how building trust took time and the importance of listening to native people’s stories/histories, where an Ally would not go in to “fix” their native community. I realized during this training that the approach to being an Ally with developing community change in order to undo historical oppression did not align to IE’s approach of “fail fast, fail cheap” or quantifiable/measurable outcomes. Here, I noticed that there is a rift between CCP’s approach to power and IE’s approach. CCP “understands power as fluid and complex...[where] ...educators bear the responsibility of exploring power and privilege” (Fassett & Warren, 2007, pp.41-42), whereas IE’s approach to power reduces “power to a tool or skill set” (Fassett & Warren, 2007, p. 42) that IE-ers can use at their disposal without concern for cultural context. The values and process to challenging/changing the systematic oppressions within the Alley training and in CCP prioritize relationships, dialogue, listening, and collaboration, which is the approach valued by CBPAR (Hacker, 2013; Janes, 2016).

The entire process of gathering “stimulus” through qualitative methods and then participating in an Ally training took a significant amount of time. Through the learning that occurred through gathering all of the stimulus, I informed my IE professor that the IE’s system did not translate easily to creating an idea for social change in a fail fast, fail cheap manner within the context of working WITH the Penobscot tribe, and using IE’s approach was a death threat. IE’s entire system of creating an idea was a death threat to the values and cultural

context of the Penobscot tribe community. Essentially, I realized that we, as IE-ers implementing the IE system, and our ideas can be the “death threats” if we disregard cultural and historical context. The successful creation and implementation of the idea I was working to develop would not work, since IE’s system privileges creating an idea FOR this community quickly and not WITH the community. In this moment I realized that IE’s current system could not be used universally, especially if one is working on an idea for a moral or cultural social change. Historical injustices and cultural contexts matter when working for social change beyond economics, and IE’s current system silences and rejects this dynamic and relational context.

My professor encouraged me to do my best to apply the tools in a noneconomic approach and assume that I was “already accepted by the Penobscot nation and working with them.” However, I did not feel comfortable doing this because this reinforces whiteness’ historical and cultural oppression of the Penobscot tribe and indeed, all indigenous peoples. I also struggled to translate IE’s tools to create an idea to a service or program for social change. Eventually, I gave up entirely and just created an educational product tailored to Native people. I felt defeated, annoyed, and confused about IE’s system. Can IE even be used to create ideas for meaningful social change and is the program leaders willing to make necessary changes to their fail fast, fail cheap mentality? I do not know, but I am hopeful, because I believe that those involved in the program development of IE really want to do good for their/our communities and help our students be successful and engaged citizens.

CHAPTER 8

“PUT IT OUT THERE. PUT IT DOWN THERE.”

Overview

Now that *we* better understand that communication and (social) change, as taught and conceptualized within the IE program, reflected the cultural discourses of the larger ideologies and the oppressive limitations of an either/or approach, it is important to take a step back and understand the big picture. What were the moments of connection between innovation, communication, and (social) change at the macro-level of the IE program? Why did these findings necessitate a closer look at the cultural utterances that were shared, embodied, and performed in a program like IE and other SE education models, especially when the resulting change(s) may appear as miniscule or insignificant, if identifiable at all? Referring back to the example from Chapter Two, and how the historical (re)articulation of the dominant discourse that privileged straight, white women in the U.S. as the centripetal force in which all other conceptions of “woman-ness” were measured, may shed light in the way we (re)imagine a more socially just world. Ultimately, what may not have created global or systemic shifts in the dominant meanings of “woman,” the significance of the change still historically and culturally mattered in the U.S., especially for how women of color started to be included in this rearticulation. Here, we can see the constitutive power of communication at work, existing on a continuum, which can be used as either/or and both/and, insofar that communication is the source, the reason, and the solution to creating a more socially just world.

As such, Chapter Eight focused on answering the third and final research question: *What is the place of and connections between innovation, communication, and (social) change within the educational philosophy and practice of Innovation Engineering?* I found that the place of and

connections between innovation, communication, and (social) change within IE were centered around the theme of IE Praxis. This theme focused on how the teaching and learning practices of IE are reflective, experiential, strategic, and embedded within the overall design and structure of the IE program. The connections between innovation, communication, and (social) change within the theme of IE praxis emerged in three overarching areas: 1) the IE program facilitated a shift in (students') mindset; 2) the IE program was strategically engineered to offer opportunities to apply the content to the "real-world;" and 3) the IE program viewed itself as the saving grace (educational change) to spur economic opportunities in an economically weak context. Within these three overarching areas, I found two dominant discursive struggles throughout: 1) Dissemination-Dialogue (i.e., univocality-multi-vocality as internal display and diffusion-collaboration as external display); and 2) Integration-Separation (i.e., connection-autonomy as internal display, and inclusion-seclusion and control-emancipation as external displays).

I examined the connections from an organizational level, taking a holistic perspective to better understand how innovation, communication, and (social) change were framed and function together within IE. Taking a macro-level view may allow us to better understand how the IE program may be (re)imagined, (re)engineered, and (re)articulated through incorporating both a CCP and SE lens – a critical SE approach to IE. Stepping back to a macro-view of the program, I claimed that the IE program embodied an entrepreneurial approach to teaching innovation and communication guided by neoliberal values, with the goal of teaching students how to enact some sort of change (personal, product or service, and/or social) by cultivating a mindset shift, engineering a systems process for applying innovation, and developing educational change for economic opportunity. Despite the good intentions of IE, I find that IE, as an organization, took an individual approach to understanding the, "broader and deeper awareness of the social context

and environments within which change is proposed” (Enos, 2015, p. 63), and showcased the individual of IE as heroic and the program as the “saving grace” for the state of Maine. Here, the IE program failed to ask the tough and delicate questions needed for reflection and critical analysis that were encouraged by Zietsma and Tuck (2012): What are the possible unintended consequences of IE’s work, particularly as they affect the community at large? Is it possible that IE is doing more harm than good in teaching certain skills and orientations? How is IE holding itself accountable to its multiple stakeholders? Who is excluded from the group of “stakeholders” and what are the impacts of such inclusions/exclusions?

I first determined how the IE program connected innovation, communication, and (social) change by cultivating a mindset shift. Second, I explain how the IE program connected innovation, communication, and (social) change by engineering a systems process for applying innovation. Third, I discuss how the IE program connected innovation, communication, and (social) change by developing educational change for economic opportunity. Within each of these sections, I discuss the two aforementioned discursive struggles that emerged. Finally, I end the chapter with a chapter summary and a critical self-reflection.

Cultivating a mindset shift with the IE Praxis: Interplay of Dissemination-Dialogue and Integration-Separation Struggles

What emerged most often was the explanation and performance of the IE program being designed and taught in a manner that worked to create a mindset shift, or an “innovation mindset,” where there was “a bias towards action,” as one co-participant put it during an interview. Program leaders and instructors discussed how the IE program utilized various assignments and pedagogical practices, such as blended learning, group work, and the idea of failure as a positive motivator, to aid a shift in students’ mindsets, which was also highlighted in

Chapter Four through the articulation of *IE as experiential learning and market-oriented skill sets*. There was an understanding among co-participants, for the most part, that students were responsible for completing course assignments and participating during in-class activities, since students took the course for credit, and through this process, the potential for a shift in mindset towards “IE’ing” became possible. This was highlighted in the dissemination-dialogue struggle with how co-participants developed a mindset shift through experiential learning practices.

Many co-participants equated developing a mindset shift with being meaningfully unique, a principle of the IE program. Holly, an undergraduate student, described:

It's about that meaningful uniqueness. Looking for different opportunities and different ways to do things and have that creative mindset, but also the failing fast, failing cheap.

That way, you don't put a huge investment and see it wasted. You want to build on it, so that way you have a greater success rate or outcome.

Holly focused on how the IE program set up different opportunities and experiences. The dissemination-dialogue struggle is highlighted through new knowledge being gained through both communication as a tool and skillset in using the IE internally and externally program. She also pointed out how learning the flow of the program helped in building up skills and being more successful. The more one failed, the more one invested and can learn from the mistakes made. This helped in moving forward and building a more creative mindset while also positioning yourself as unique and different. But, this creative mindset lacked accountability for one’s actions in which failure and/or success is defined simply in terms of the idea/product. The privileging of the individual within the IE mindset may foster an awareness related to ethics of choice that is needed for (social) innovators (Enos, 2015). The privileging of the autonomous

individual where one developed their sense of being unique was also highlighted in the interviews with program leaders and instructors (discourse of individualism).

Michelle, an undergraduate student, explained how she applies the “innovation mindset” to the idea of failing fast, failing cheap and being meaningfully unique. She explained that,

There's the idea of failing fast and failing cheap and trying to be meaningful and unique. I apply it to myself and trying to best represent myself as trying to strive for being meaningful and unique, so that way I can stand out among other people and always looking for opportunities that might allow them to be commercialized or used in a certain way that they're not necessarily used for. Just in all different areas because it's a mindset. To try to just apply the innovation engineering principles into life to see what opportunities there are and to evaluate those ideas.

Michelle expanded by discussing her own personal experience and growth. She has gained knowledge from “failing fast and failing cheap.” With the knowledge learned through communication as univocality and diffusion, she can apply the content through different activities. Michelle’s experience highlighted the mindset that the IE program was promoting through its engineered system. This engineered mindset of failing fast, failing cheap, was also observed in one of the participant observations.

During one of the participant observations, after students completed a team project applying the tools of IE to create an idea for a product, a class discussion took place where a student connected the idea of an innovation mindset to failing fast, failing cheap. A student synthesized the activity after the lecture by explaining that,

Another way to look at it is learn fast learn cheap, because you learn from failure...before you go and implement your idea you need to fail fast and fail cheap so you don't waste

money...we are afraid to fail so we avoid the death threats, and by the time we tackle that death threat we are so deep in that we spent a lot of time and money wasted...all that we do leads up to this concept of fail fast fail cheap and come up with lots of ideas because what's going to happen is that when you run the idea through a cycle you learn it's not going to work, and we can then pick another idea from our stack and run through the cycle to see if we invest more time, energy, and money...we are so engrained to not want to fail but it's liberating to know you can fail.

This student also focused on the failing fast and failing cheap aspect of developing the IE mindset. The emphasis on not wasting time and money had to do with how the new knowledge is gained through working quickly. Once the knowledge of the tool was gained and used as a skill, the mindset then developed, and individual progress was made towards developing an idea. However, the lack of individual responsibility beyond the success of the idea itself was embedded within this mindset, and there was a complete disregard towards how an idea may influence/impact a community. Here, dissemination was privileged, since the IE mindset is one that focused on individual failure and learning through doing but disregarded completely the potential rhizomatic consequences of failing fast, failing cheap. Thus, the IE program did not answer critical calls for SE professors and programs to ask tough questions and consider how the work SE education is doing may have unintended consequences in our communities and with students (Zietsma & Tuck, 2012). This was problematic given that many co-participants proclaimed that once the IE mindset was developed, their identity “evolves” so that they cannot go back to their old way of thinking. As was previously discussed in Chapter Five, they had an internal connection to the IE community, based on a shared worldview that privileged entrepreneurship as individual, measurable success (discourses of individualism and rationality).

For example, Frank explained how the program's focus was on developing students' mindsets to be in alignment with the systems framework using IE. He stated,

One of the things we find is that once students have been exposed to this new mindset, they can never go back to the old way of thinking. What we need to do is that we need to continue to find ways to help people learn it faster and more effectively.

Frank discussed the program's philosophy by focusing on the new mindset that students developed through IE. Frank stated that people need to "learn faster," but given what Tim previously said about the failure that resulted in working "faster," and not "getting everyone on the same page," there obviously was a pedagogical tension with the educational approach to how this mindset was taught. This philosophy aligned with Carey's (1989) transportation metaphor, where he explained through the use of economic terms that the goal of "spreading the word" faster and more efficiently was employed for the purpose of control. Additionally, Frank's explanation of a primary focus, "against the front-line workers," which I understood as a comparison with students, paired with the following "of the people and for the people," articulated the IE mindset with tropes of revolution – to emancipate individuals, "the masses," from their oppressive control systems. However, the IE mindset used the same controlling tactics of learning faster and more effectively that may be experienced by many "front-line workers," and thus challenged the claim that the IE mindset is one that is, "of the people and for the people."

Evan also discussed how the mindset that the program works to develop focuses on "getting out of the box" with your thinking. He described:

I think we're developing a mindset where anything is possible. The weirder, the better.

Get out of the box. I've tried to do that from day one because I know, particularly on the

day one, I ask what their major is, what they're into and if I get a room full of engineers then I know that they're taught a certain way of thinking and that this is going to be a challenge for them. Right off the bat, I start saying, "Feasibility doesn't matter. Don't care. The weirder the idea, I want you to put it down even if you feel like you can't. I want you to put it down. Don't worry about how it's going to happen. Just put it out there." That's the environment I think we're trying to foster right from day one and that our earlier skills, that's what we're developing. Just be crazy. Put it down there.

Evan voiced an integration-separation struggle through the example he provided about the engineering students. He proclaimed that engineering students had a certain way of thinking; however, through the IE program, they had to change their mindsets and lose some of what they have always done in order to progress towards becoming “innovators.” Internally to the IE, integration-separation was voiced as the connection-autonomy tension (Baxter, 2011). Here, engineers as a whole were prompted to let go of some of their defining engineering mindset in order to belong in IE as innovators. Externally, in the “spaces” between IE and other programs, the integration-separation struggle was voiced as the inclusion-seclusion tension (Baxter, 2011). Here, Evan’s comment comparing IE mindset to the (presumed) engineering mindset worked to set IE apart from other programs.

Evan also discussed the creative aspect that the IE mindset allows. Students have the ability to “get out of the box” and push their old mindsets to the side. Here, Evan described the identity work that some may experience in the program while this mindset develops. Evan focused on the individual challenges that may arise from the change in mindset, while also recognizing the connection that the co-participants made with those in the IE community. The individual challenges that students experienced as they re-negotiated their identity were

discussed by some co-participants during the interviews. For example, Sheila explained how “uncomfortable” taking an IE course can be. She stated that, “the Innovation Engineering course really prepares you to take things as they come in the present and not forget about it. It's uncomfortable at first, I think, when you start in Innovation Engineering class.” Similarly, Jessica discussed that it was not easy getting there, but once she developed the IE mindset, everything started to “click.” Jessica explained,

Suddenly I feel like I'm understanding how I can use the program better. I'm seeing things a little differently. Now, suddenly I find myself thinking outside the box with the tools versus when I started the class, I was very, this is how it has to be done for this particular thing. That might just be because I was coming from the accounting MBA mindset. I noticed it when the undergrad create session, the engineer, was very specific in how he answered things. It was hard for him to go outside. I know it's not just me.

Like Frank, a program leader, Jessica also discussed her interactions with her engineering students. In the classroom, the connection-autonomy tension emerged between students and teachers, in the sense that teachers worked with students to develop this IE mindset and become a part of the IE community, which created the need for balance. Jessica started out by discussing how her change in mindset helped things “click” and then shifted focus to how she understood the students’ initial struggle with the IE program. She recognized her past struggle in her current undergraduate students. Students can be uncomfortable in taking an IE course because of the change in mindset that comes with it. The co-participants, especially those who have experienced being both a student and a teacher within the IE program, continuously re-negotiated their mindset while navigating between the two roles.

Other instructors and program leaders explained how they try to teach students how to use the IE mindset in their personal lives. Mary explained:

The students that go through this and they get that mindset shift, they're able to do it. They're able to understand people. It doesn't matter what you're doing. I mean I have my students think if you're going to try to convince your mom, your significant other, and your advisor that taking a two-week trip on spring break is a good idea, you have a different approach to all of that. It doesn't matter what in life, you always have a different approach. You always have to understand people. I'm always bringing it back to a marketing perspective. What's a successful ad look like, why do people love this, why do people hate that? If we do an AB test, why did one resonate over another? It all comes down to audience.

Mary's account of "understanding people" from a "marketing perspective" highlighted the dissemination-dialogue struggle. Understanding people was conceptualized as strategically needed in order to successfully disseminate/market a message instead of, say, building a mutual relationship. Here, the IE mindset of understanding people came down to persuading others to do what you want. Mary also conflates understanding people to an "AB test,"¹¹ where people can be controlled through restricting a message/relationship to the parameters, defined by the autonomous IE-er who is in charge. Embedded within the IE mindset was the belief that as long as you knew how to translate your message to various people, you could get the outcome that

¹¹ AB test is a marketing/web analytics tool that is a way to compare two versions of something to figure out which performs better (see this link for more information - <https://hbr.org/2017/06/a-refresher-on-ab-testing>).

you want. However, Deetz (1992) countered Mary's claim by arguing that, "the implicit faith that if people knew what they wanted and were aware of the system of constraints, they would then know how to act differently, has little basis" (p. 88). What if students reject the IE mindset's conceptualization of "understanding" people?" How may such rejection of the IE mindset be negotiated? What are potential consequences of treating and developing relationships with others through a control process?

One example that showcased how program leaders/instructors negotiated challenges to the IE mindset was offered by Frank. He reflected back:

I remember...having a huge debate with an 18-year-old. I'm like they don't know enough, it's not worth it. I think you sometimes get that, and the other challenge that I think I see probably most regularly, is your student that was like I was as a student. I don't fail, I've never failed at anything academically, so let me just figure out what you want and deliver that perfectly to you. You can't do that with Innovation Engineering, you can't game it because the good students know how to game it. They've always been able to game it, they've figured out okay, this is how I write a five-paragraph essay. I'm going to write it, it's going to be like MadLibs, it's going to be perfect and I'm going to move on with my life and I'm not really going to have any critical thought behind it...Those students struggle because they're not going to do it perfect the first time, and we'll send it back with a big red "x" that will bring them to tears. They're the ones that are like I just, this is so hard. It's because they're not embracing failure. Now it's really great to see your students who are barely scraping by and not sure that they should be in college, because they are right around like a 2.0, and they're freshmen. They're the ones that are like this is great. I failed it, and I get to do it again, because they just keep doing

it over and over again. They're used to failing, and they see it as like an opportunity that they don't get in other classes, because they don't get to revise it. They get a 57 on a test, and they just move on with life, whereas here if you fail, it's either pass or fail for each assignment. If you fail, you do it again until you master it, because we don't want C-level Innovation Engineers coming out. We want everybody to master all of it. They have every opportunity to do that.

Frank's reflection highlighted his role as a teacher, who was in charge and "all knowing," through his description of the student who challenged the IE mindset, as "they don't know enough, it's not worth it." Here, he positioned himself the IE expert, who knew all, and in this process silenced and denied the student's local knowledge – silenced their experience – and then moved on because "it's not worth it" to "debate an 18-year-old." The outright denial of the student's perspective, and then moving on, countered the critical communication pedagogy of care advocated by Cummins (2014), while also denying the opportunity to develop the whole student holistically, as advocated by Jensen (2014). Frank's silencing of students' voices may also have unintended consequences, since the student who may challenge Frank may be asking the tough and delicate questions lacking in many SE education programs (Zietsma & Tuck, 2012).

Additionally, Frank's comments surrounding those students who struggled with IE tended to be those who are "perfectionist" and/or never failed tests because these students cannot "game the system," disregarded these students' humanity by assuming that they want to "play" IE rather than have to work hard to not receive a "big red x." Here, Frank's comments highlighted how the IE pedagogical praxis of grading attempts to control students into embracing IE's mindset and way of doing, or they will fail, and this failure is one that they may not recover

from. His comments describing students who did well in IE are those who are “C-level” and embrace “failure,” suggested that these students have been marginalized by other academic programs that do not let students do revisions to their work. On the surface, IE’s approach to evaluation and development with letting students make revisions until they are proficient may seem like a good idea, as this is similar to calls for education to move towards a proficiency-based or skills-based grading system instead of a numeric grading system (Frey & Palmer, 2014). Here, IE articulated a growth mindset, where the premise focused on, “individual character and behaviors are primarily or solely the source of both success and failure” (Thomas, n.d., para. 5). However, teaching students to adapt a growth mindset failed to “go beyond individual attitudes, to realize that no mindset is a magic elixir that can dissolve the toxicity of structural arrangements” (Kohn, 2015, para. 21) – this IE (growth) mindset privileged the cultural discourses of individualism and rationality (Baxter, 2011). Frank failed to see the issues in IE’s structural arrangements and placed blame on the individual student if they did not understand the material or embrace the IE mindset instead of critiquing/questioning the program’s pedagogical practices and/or how content is disseminated. The lack of pedagogical reflexivity on the part of the instructor and the program, again, highlighted how the IE program and IE mindset avoided responsibility for its actions and accountability for its consequences.

Deetz (1995) explained that organizations attempt to silence and dismiss others through indirect control of participants by, “the presence of common sense, decisional rules, routines, role identities, and shared practices” (p. 93). In Frank’s testimony, we saw how such indirect control measures are embedded within the structure of how IE disseminates its content and provides feedback on students’ assignments. There was a “routine” in place for students to

submit their work online, to receive feedback, and should students get a “big red x,” there was a decisional rule in place where students “have every opportunity” to fix their mistake.

Through Frank’s comments the praxis pattern of denial was used, again, to dismiss those “perfectionist” students, because they did not “embrace failure,” and students have “every opportunity” to “master the skills.” But, as highlighted from both Sheila and Jessica’s previous comments, the feedback provided by instructors as to why students received an “x” was not always clear. If students did not understand the dissemination of the message, how can they embrace failure when the pedagogy that is used continues to privilege the banking model of education? If students continued to receive the red “x,” it was not clear what strategies, if any, were used by IE instructors or what system(s) within the IE program were in place to help students comprehend the material, which could potentially allow them to embrace the IE mindset. It was also not clear how exactly or what exactly students were learning from the failure-revision process. And if a student decided to not revise a “failure,” this might be a rejection of the IE program itself, but under the auspices of comments, such as Frank’s, such a rejection would be seen as an individual’s unsuitability to the IE mindset instead of as a possible valid critique of the program itself.

Just like in Mary’s statements, the practice of “failing fast, failing cheap” emerged throughout Frank’s testimony – he refused to engage in a “debate” or dialogue with a student who questioned the program, so Frank cut his losses and moved on. The program, the system, remained infallible. Frank also refused to engage in dialogue when students received a “red x” and privileged disseminating the feedback in a digital environment that is a one-way mode of communication. By dismissing students who challenged or critiqued the IE program, or who challenged the mindset of IE, the students eventually can feel frustrated and decide not to take

any more IE courses, as was the case with both Sheila and John. The process of denial, which emerged multiple times throughout this dissertation study, showed how the indirect control processes of/within IE perpetuated placing “blame” on an individual instead of the IE instructor and/or program (discourse of individualism). Placing blame on the individual essentially, “lessens the need for [IE – as an organization – to use] persuasion, influence, or other direct control processes,” (Deetz, 1995, p. 93) since students stop taking IE courses and/or just assimilate into the image of IE.

Through the analysis of this section, *we* learned that an IE mindset privileged the dissemination of knowledge by the expert teacher, where students developed this mindset by applying the disseminated knowledge through various experiential learning activities. *We* also learned that the IE mindset “understands people” as vessels who can be controlled, managed, and persuaded by those who embody the skills of IE. *We* also learn that students who rejected the IE mindset were not given opportunities to engage in dialogue because dialogue was “not worth the instructor’s time,” as expressed by John. Throughout the teaching philosophy and practices, the teacher and the IE system maintained control over how the mindset was disseminated (and developed) to students. Now that there was a better understanding of how the IE teaching practices worked to foster an IE mindset of failing fast, failing cheap, and embracing individual failure, how then is the IE system engineered with connecting innovation, communication, and (social) change? In the next section, I discuss how the IE program is engineered through a system’s process for applying innovation.

Engineering a Systems Process for Applying Innovation within IE Praxis: Interplay of Dissemination-Dialogue and Integration-Separation Struggles

Similar to Wyke's (2013) findings, co-participants in this study described their perceptions of the core phenomena of the IE program as a "process," "system," "structure," or "framework" for creating meaningfully unique ideas, where there was a "promise" that the idea to a problem or opportunity will culminate as an innovation. Co-participants emphasized how the IE program was engineered in a very specific and purposeful process, where this engineering process can be applied in any situation or context. Here, both dissemination-dialogue and integration-separation struggles emerged. For example, Eric described how IE was structured differently than other education programs, and has a, "unique way of attacking problems." Eric elaborated on how the framing IE through a system's perspective stood out to him. He stated:

I really loved the part about innovation engineering that is systems based. Where it looks at things as a system, as a whole. Like, for instance, a car is a system. It's got lots of processes in it and you can have all the best parts in a car, but if those parts don't work well together, because they're not made for each other than that car's not going to work well as a system. It may not work at all. Just kind of that systematic approach, looking at things as a whole.

Mason elaborated and explained how the process of IE allowed students to create ideas through a faster process. He said, "I think, though the process helps you so you can do things faster wherever you're going eventually work then slowly moving along which is sort of a waste of time, depending on what you're doing of course." Both Eric and Mason's testimony highlighted the dissemination-dialogue struggle.

In Eric's statement, he privileged the diffusion end of the spectrum by emphasizing how the focus of "looking at things as a whole" allowed him to better understand how certain processes may work together. Using the analogy of the car, or as a machine/mechanistic metaphor linked to the idea of "engineering," showcased how Eric conceptualized a "systematic approach" to innovation that focused on the process to innovation and how the innovation was shaped by and shapes our control systems¹². Here, integration-separation struggle, specifically the external tension of control-emancipation tension, was also highlighted with how Eric viewed the "systematic approach" as a way to apply innovation to external control systems and thus be emancipated, since one was "looking at things as a whole." Eric's testimony connects back to the articulation of IE as a *system with universal applications* – discourse of rationality (discussed in Chapter Four). However, the issue with looking at innovation through a systems lens that has universal application is that this perspective does not account for various cultural or contextual issues that may arise. For example, Eric's extension of the car system to being applied to people-oriented innovation was dehumanizing, articulating human and cultural systems as robotic. Here, the mechanistic view of systems failed to explain how meaning-making emerged within the social interaction, where IE's system's approach reflected the dominance of instrumental reason, which may reinforce already-existing oppressive structures/systems/meanings (Craig, 1999; 2007; Deetz, 1995; 2001).

¹² As discussed in Chapter Five, Control systems are part of the control-emancipation tensions when organizing for social change efforts, where this process "requires the disempowered to embed their actions in some control system that guides them to move from dependence to self-sufficiency... although rules and expectations limit freedom on the one hand, emancipation becomes possible as [others] act together to build capital (economic and social) and free themselves from oppressive relationships" (Papa, Singhal, Papa, 2006, p. 56).

The mechanistic view is also highlighted in Mason's statement through how he connects the systems view to "failing fast, failing cheap," which also favored dissemination of information. In Mason's statement, he privileged diffusing innovation in a "fast" manner since working slowly (collaboration) is a "waste of time." However, numerous students discussed how it was difficult to always understand the dissemination of course material, especially when feedback was provided online for course assignments.

For example, Sheila and John both commented on feeling overwhelmed by the large amount of content presented online, and the uncertainty and lack of clarity they felt with regards to knowing how to do revisions and/or how and what tools to use when making revisions/doing assignments. Sheila also specifically discussed the slow response time of the instructor providing feedback, which caused confusion with remembering the assignment/content in order to successfully fix the "big red x." Sheila explained that,

I feel like if you're going to have it online, you need quicker response time...there were a couple of assignments where I submitted at least seven times and it just kept coming back. I got red X and I was like, "I can't do this."... Because it's just like I don't know what I'm doing wrong.

John felt similar to Sheila about how content was disseminated online and the lack of clarity with how to use certain tools and methods that are a part of IE's system. John discussed how,

Even when reading some of the skills and they'd be like, "Oh, you use this." Like I was already supposed to know that but I never did. That's how I feel about the whole [systems] process...there's just so much content to look there and once you got too far back, it's kind of too late to catch up and really understand what you're doing within the system.

Both Sheila and John provided a critique of internal dissemination and a lack of dialogue insofar that the instructors were not dialogically engaging with the assignments and the students to help them learn, show them what they were seeing in the assignments, or help them make connections. This failure of dissemination of information and feedback caused them to feel like they never knew, “what I’m doing wrong.” Interestingly, Sheila connected the failure in response time to the idea of failing fast, failing cheap where the instructor needed to provide feedback “quicker” – where there is an implicit assumption that providing feedback in a fast manner will allow the student to fix the assignment quicker and not get a “big red x.” However, providing detailed and engaged feedback may take time, and thus may not be disseminated online quickly. Yet, it was not clear if the feedback disseminated online from the instructor was helpful or detailed anyway, since Sheila, “submitted [the assignment] at least seven times and it just kept coming back.” Both Sheila and John used the praxis pattern of balance to negotiate the dissemination-dialogue tension, which was seen in their attempt to fix the issue but ultimately decided to give up since they could not “do this.”

Some student co-participants, however, liked how the online section of the class was structured, since they liked that they could resubmit their assignments for a better grade. During the student/alumni focus group, Jessica and Sheila engaged in conversation about this, and discussed:

Jessica: I like that you can resubmit work and it's not just a final grade. You're actually involved in the learning process rather than just taking information like most classes are and you're not having that capability.

Sheila: I think that's good if you're learning from it. But a lot of the time when I would get red Xs, I was getting the same response every time that I got a red X, either it needs

more work or like they would say this one thing was wrong but not telling me what's wrong with it. So, I would resubmit it changing that one thing but then it was still wrong.

It's like can you just tell me what about it is wrong, not that it's wrong?

Here, Jessica viewed the disseminated information online as dialogic since students are, “actually involved in the learning process.” But, Sheila challenged Jessica’s dialogic claim since Sheila was not “learning” from how information and feedback were disseminated. It was important to note that both Sheila and John only took one INV class and had no desire to take any more after their academic struggles with the INV class they did take. They both mentioned in the interview that the structure of the course with how it disseminated information via blended learning was a big factor as to why they did not have a desire to go further in the IE program. Perhaps the manner in which course content was disseminated online, the lack of clarity with how to use the IE communication tools, and the lack of quality feedback should be redesigned through the lens of dialogue? As will be discussed in Chapter Nine, this would embody a critical approach to experiential learning where instructors/program leaders and students critically interrogate the knowledge claims of IE’s tools with the goal of potentially transforming them through a dialogic process (Breunig, 2005). How could these IE system processes be adapted, (re)imagined, and (re)engineered to incorporate a more dialogic approach to blended learning and instructor feedback?

Program leaders and instructors realized the struggle with how content was disseminated and were thinking about how to redesign courses beyond the Fundamentals course to allow more opportunities for dialogue. For instance, during the program leader/instructor focus group, Britney stated:

I don't know how Create is going to come out in the end, but what I saw and discussed with the group, is it also looks like there's not so much material that they're (students) overwhelmed. Because, not every piece of material fits with the next piece. A lot of them are individual skills which will build. But, not always. So I think that, shrinking down some of the material, pulling out the really important pieces, and then allowing them to be experts at those important pieces is really key.

Here, Britney offered a reflection by acknowledging that there was a current issue with how information was disseminated online, which caused students to feel “overwhelmed.” Britney then added that in future re-designs of the courses, the program leaders need to think about, “shrinking down some of the material,” so students become “experts.” Here, Britney advocated for a more situated learning approach with experiential learning when thinking about to change the curriculum, so students have more time to “dive deep” and explore the content (Jensen, 2014). Interestingly, Britney also negotiated the dissemination-dialogue struggle through how she described allowing students to become “experts” by providing more opportunities for students to apply a smaller portion of the content. Britney added that the goal of the Fundamentals course is to disseminate the IE system to students like other introduction courses:

Just like a lot of students take Introduction to Psychology but never take another psychology class. So, we want to give them a level of working knowledge that they can apply in their real life. But, people who go on, can become real experts in this.

What is interesting with this testimony was contrasting the difference/purpose between the Fundamentals course with developing students’ “working knowledge” so they can “apply it in their life” and upper level/advanced courses, where students “become real experts” by applying the content externally. However, if students did not fully understand how to apply the content in

the Fundamentals course through how content was disseminated, how then can students apply it to their life? Britney used the praxis pattern of balance to negotiate lowering the amount of information/content to disseminate so students had more opportunities to, “develop working knowledge” and apply the material to their “own life.” Here, students were not experts until they took advanced courses and applied the content externally and/or universally – thus, becoming “real experts” through this process. However, what was not clear was how the IE system will be (re)engineered to accomplish “shrinking” down the content.

In this section, *we* learned that the organizational identity of IE was strategically engineered through a systems approach that privileged a specific outcome and worked to develop a certain mindset of “failing fast, failing cheap” – which was also engineered within IE system. *We* also learn that how the content is disseminated through IE’s blended learning approach was not always effective with helping students to engage in the content/material and “buy-in” to IE’s system. Here, dialogue was limited as there currently were not opportunities for students to seek clarity, ask questions, and/or engage in conversations with their instructor or peers through the online learning process. Finally, *we* learned that the purpose of the Fundamentals course was to introduce students to IE’s engineered system, provide a “working knowledge” of the IE mindset, and then provide opportunities through the information that is disseminated to apply the content to students’ own lives. Students who were interested in “becoming experts” then took advanced courses to learn how to apply the IE system externally, with the goal of developing ideas for meaningful (social) change – specifically economic change. In the next section, I elaborate on how IE program co-participants believe that IE’s system can provide educational change for economic opportunity.

Developing educational change for economic opportunity within IE Praxis: Interplay of Dissemination-Dialogue and Integration-Separation Struggles

I found that the connection between innovation, communication, and (social) change at an organizational/program level of IE focused on providing an education that was different from other traditional higher education programs. The goal of the IE educational program was to teach students how to create economic opportunities, so an entrepreneurial culture emerged within the state of Maine – this goal was embedded in the neoliberal values of market-orientated skills and capitalism (Frey & Palmer, 2014). To accomplish this economic opportunity through entrepreneurship, the IE program worked to disseminate an IE mindset to students of, “fail fast, fail cheap,” and designed the IE curriculum in the framework of this mindset through a systems approach. The IE program leaders at the organizational level strategically designed experiential opportunities into the curriculum to teach students how to, “create, communicate, and commercialize meaningfully unique ideas,” (Innovation Engineering, n.d.) with the hope that students will use the knowledge disseminated to create future economic opportunities for themselves.

Overwhelmingly, co-participants spoke highly of how the IE program was a unique approach to educating in a college setting that also has the potential to empower others to improve economic conditions. Here, IE was described as being a “culture change” within the University (meso-level), within students and their relationships (micro-level), and within communities (macro-level).

For example, during an interview, Jay explained how the IE program and system was not, “just creating products and business ideas.” Jay discussed that he had two goals of the IE program being taught at universities: “I want these students to use this program, one, to better

their odds of being successful in life. Two, to take that success and make a meaningful impact in the world that's going to make us a better place. That's it.” Within Jay’s testimony, he sequenced individual “success” to “meaningful impact,” highlighting the privileging of the individual within IE’s framework, which showed that they are linked but distinctly different – discourses of individualism, rationality, and community (Baxter, 2011). However, it was not clear for whom and how benefits from the “meaningful impact” that Jay is referring to. He assumed that the success of the students will help, “make us a better place,” but who is “us” – entrepreneurs, Mainers, Americans? This provided an example of what Baxter (2011) called strategic ambiguity, where language was used to create “wiggle room” through the use of vague, ambiguous statements, and was focused more on individual behavior where meanings resided in the minds of individual communicators. Jay was essentially advocating that the IE educational program (meso-level) allowed for an individual cultural change – within students – (micro) who will then work towards creating a “meaningful impact” within our larger culture (macro) beyond graduation.

Specifically, with developing a “cultural change” in education at the University of Maine, Seth, a university official, connected how the IE program provided an educational experience where students get a “use-value” for the money, especially for students who may be majoring in the liberal arts or humanities programs. When asked about the benefits of the IE program and how the IE program aligned to the university’s mission, Seth described:

I think it's important because, well for several reasons. It's important for students to see that what they learn, they're not learning in a vacuum. So, we have many students come forward and say things like, "I don't want to take that class because I can't use it for something." Now, use-value is important. We have some faculty and staff, I think, who

would say that they're irritated or frustrated even by hearing that phrase. I'm not, I think parents who are paying \$20,000 a year for their students to go to U Maine have the right to ask what the utility of different courses are as their students are moving through the program. If you earn a degree and you come to find out at the end of four years that you can apply that degree to a job in your chosen field, or anyone of the number of fields, then you know we have done the right service for that student. But at the same time, I think you're able to say, "Okay, so I'm a sociology student, or philosophy student, and I have these ideas that I'm learning, and they don't exist in the abstract, they can be applied in the real-world context." The same is true for engineering students and forestry students and wildlife students; that the goal would be for students of any background to be able to come forward and say, "I can take what I'm learning and apply it in my life in the way that I want to." So, if you ever take a tour of the Advanced Structure Center, Habib, will tell you that of his many students working or interning for the program, quite a number of them are Humanities students. You don't associate students from humanities or psychology with working in a place where wind turbines are being built. But, that's exactly what they're doing, and they're applying their skills, which are different from the skills that an engineering, or mechanical, or civil engineering student would have. And they're helping to grow the product and grow the experience in that unit. And, I think Innovation Engineering serves that same purpose.

Here, we see how Seth equated and painted a picture that a liberal arts education/majors may not be worth students' money if they cannot understand how to apply the abstract to "the real-world context." Near the end of his testimony, Seth suggested that the IE program allowed students to major in liberal arts programs and learn a set of skills that will make students employable. The

goal, then, of a higher education that was highlighted here is “job-training,” where students are prepared to enter the market-place, giving an “use-value” to an academic degree. Seth privileged a neoliberal ideology toward the purpose of education (Giroux, 2012). In Seth’s quotation, we saw how he viewed students and parents as customers of higher education, where the higher education institution was providing a “service” to the students to make them job-ready. Since students and parents are customers who pay “\$20,000 a year... [they] have the right to ask what is the utility of different courses.” This view of higher education reinforced the dominant model of education in the United States as a, “corporate model that provides professional training to prepare students for marketplace careers” (Frey & Palmer, 2017, p. 362). However, different in Seth’s assessment about higher education, was how the IE program provided an educational change at the university with how it prepared students for their future career aspirations – applying the “abstract” concepts of IE in Maine communities.

Seth navigated the dissemination-dialogue struggle with the praxis pattern of balance through his explanation of how higher education needs to provide both opportunities to teach the abstract with the practical, so students develop both skillsets for their future careers (use-value), which also develops students’ agency to take what they are, “learning and apply it in [their] life in the way that [they] want to.” Here, again, we saw how the cultural change described by Seth focused on changing how higher education programs educates students to align more with job-readiness (educational change) through application, where IE is one education program at the University of Maine that provides this type of educational cultural change. Similarly to Jay’s view of how he saw the program providing a “cultural change,” this change described by Seth with how higher education educates students, provided a narrative of cultural change at the individual-student level. Here, students applied the knowledge of their education while in school

with the hope of gaining meaningful employment upon graduating, which will (hopefully) lead to increased economic “success” for both the individual and “our world.”

In the same vein, Britney elaborated on how the IE program evolved to include a summer *Innovate for Maine Fellowship*, which attempted to help solve two problems: increase students’ exposure to the IE academic program and grow the economy in Maine. Mary elaborated:

We identified this problem that was a dual problem which was that we still needed to get more students exposed to innovation and entrepreneurship and what was going in Maine. So many Maine students have a very pessimistic view of opportunities in Maine. We read when they submit applications for the program, and we ask them, "What do you think are opportunities or challenges to work on?" A whole bunch of them will say, "There are no jobs for me here," or "The pub and paper industry is dying and northern Maine is going to shut down," those kinds of really very pessimistic outlooks. The assumption that they have to go to Boston or someplace else to get a meaningful opportunity. On the other hand, we're working with a whole bunch of companies who said they couldn't find the talent that they needed. We're like, "Good. This seems like a really solvable problem."

Mary provided a concrete example of how the IE program offered an educational cultural change through the *Innovate for Maine Fellowship* program. The program aligned to Seth’s view of the purpose and role of higher education, and also Jay’s view of the purpose of IE with teaching students how to be “successful” while also “making an impact on our world.” Mary demonstrated a very cumulative view of how change happens (a cumulative view of education/learning and a cumulative view of cultural change), which was also very clearly articulated in Mary’s first sentence above, needing “more students exposed.” This was, once more, a missionary kind of orientation, “we need to convert more people” for the “good word” to

take hold – the discourse of community (Baxter, 2011), as described in Chapter Four. Mary negotiated the inclusion-seclusion tension by explaining how the IE program developed an external fellowship program to integrate community partners where students would “go out” to apply and expose the concepts of IE, while also showing students that there are “meaningful [employment] opportunities” in Maine. Reexamining this approach using a CCP perspective that is focused on “practices” on “how-to” is not enough. The commitments of CCP guide the application of practices, and here the commitments of IE, if they exist, are not very critically-oriented.

Mary used the praxis pattern of recalibration to negotiate the tension of inclusion-seclusion and how to reconcile the demands of “spreading” IE’s “exposure” to students and the community while also considering how IE can help grow Maine’s economy through changing students’ “pessimistic [employment] outlooks.” Through recalibrating, Mary highlighted how these two demands were viewed as no longer contradictory, since the *Innovate for Maine Fellowship* program was a, “response that transcends...but without resolving the contradiction on a permanent basis” (Baxter & Montgomery, 1996, p. 65). The *Innovate for Maine* program did not solve all Maine companies’ inability to “find the talent,” and also did not change all students’ “pessimistic views of employment opportunities in Maine.” However, the fellowship did serve a purpose with reconciling these two tensions by the IE program developing and including partnerships between the IE program and Maine companies (inclusion). Mary highlighted how the *Innovate for Maine* program was an educational change that had a goal of providing economic cultural change in Maine through training students in IE’s image (maintains control) and hopefully having a cultural shift of keeping graduated college students employed in Maine.

Echoing both Seth's and Mary's praise of how higher education should provide opportunities for students to apply and connect the content they learned to a "real-world context," multiple alumni of IE described how they felt that the IE program provided them with a solid education to go out and make change in their communities while they were still students. For instance, Tim described how he applied the concepts of IE through the *Innovate for Maine Fellowship* to help a local company in Maine create ideas for new products or services. Tim explained:

I was actually using the concepts of innovation engineering to partner with companies throughout the state of Maine to help them either bring to market either a new product or a new service that they can use in their business. We were actually working with a couple of job shops for manufacturing, mostly like precision metalwork and stuff like that, just trying to help them diversify what they were doing, because in that field, it's either feast or famine. You either have a big contract, and your guys are working 24 hours a day, or you're laying people off because there is no work. We were trying to see *how can we help* these folks kind of even out the times when there's not a lot going on, maybe by developing their own products, so that they have something they can continue to do during that time.

Tim provided a testimony to how he applied the concepts taught in IE to help a company in Maine diversify their products or services that could help keep the company's employees employed when the business was experiencing a slow-down in the market. Here, the goal for Tim was to see, "how we can help these folks kind of even out the times when there's not a lot going on, maybe by developing their own products." I asked Tim a follow-up question about the process of how ideas were created during his internship, and if he, "developed products for the

company to use or taught them how to use the IE system,” and Tim said “both.” He explained that he used the tools of IE (i.e., mind maps) to help brainstorm ideas and then used the “problem, promise, proof to communicate” what his ideas were and the benefits they offered. Here, mind maps may necessarily be dialogic – it was not about the number of people who participated in creating them, it was that creating them required the thinking from multiple perspectives and the inclusion of multiple voices. Tim added that during the process of creating the ideas during his internship, he “showed” various people in the company how to use some of IE’s tools to create ideas. Tim navigated both the dissemination-dialogue and integration-separation struggles when applying IE through his explanation of how he applied IE’s concepts in his internship and how the manufacturing company was an integrated partner of IE.

Tim’s testimony highlighted how he was in control and viewed as an expert in applying the IE system for idea creation. The use of “how we can help” signified that the manufacturing business that was being helped “bought-in” to IE’s approach to innovation. The use of “we” signified that Tim viewed himself as a part of the IE program, and that the IE program was providing a “service,” through Tim, to the manufacturing company. Tim’s repeated use of “working *with*” also suggested that the business is an integrated partner of IE. Therefore, Tim was gaining a “use-value” of his IE education at the University of Maine through applying IE’s “abstract concepts” to gain “real-world experience,” while simultaneously helping to develop potential new products/services in his internship that could (hopefully) spur economic growth/development in Maine. At the same time, Tim served as an IE missionary whose work “exposes” more people to “innovation and entrepreneurship,” to use Mary’s words. Such missionary work was justified (and perhaps its religious overtones muted) through its “use-

value” for both the student and the business; this articulation of IE being an educational Messiah was reiterated in chapter four through the analysis of the program documents.

Additionally, as discussed in Chapter Seven, Jay described how IE “innovators” came into a community to help develop a garden of micro greens during an Innovation Conference, and then left once the garden was created. Although Tim’s example showcased how he worked with the manufacturing company, he has no plan for continuity (no “IE church” is established). Tim’s use of “with” vis-à-vis “help these folks” as an articulation of integration-separation struggle – both were present in his words, suggesting a discursive negotiation. However, what was unclear, and was a limitation of this study, was how the company applied IE’s tools once Tim left. Did the manufacturing company (re)imagine or (re)apply IE tools in a different/new manner? Since this was unclear, future research may want to focus on the perspectives of those who interface with IE by looking at the integration-separation struggle from the outside in, focusing more on “outsiders” experiences of IE. Despite not fully understanding the manufacturer’s experience with IE and Tim, “listening” and/or “watching” were not at all mentioned in Tim’s comment, which may suggest him performing according to an IE ideology of dissemination. Here, the lack of talking about listening or watching in Tim’s comment when working with the manufacturing company may seclude opportunities for engaging in dialogue, and may privilege IE’s dissemination approach to idea generation. This dissemination approach to creating ideas of innovation for (social) change where the individual (IE-er) “helps” others continues to privilege a neoliberal framework of “consumer choice, localism, entrepreneurialism, and self-improvement” (Guthman, 2008, p. 437) instead of a community-centered approach that values “listening, watching, and not always helping” (Guthman, 2008, p. 443).

Similar to Seth's example of humanities students working at the *Advanced Structure Center*, Tim's example highlighted how students in IE applied the concepts to create a product or service for a manufacturing company in Maine. Given that manufacturing's total economic output in Maine is over 9%, and over 8% of Maine's total workforce is employed in the manufacturing sector ("Maine Manufacturing Summit Report," 2015), it is not surprising that the *Innovate for Maine Fellowship* and students in the IE program were encouraged to translate the skills and tools taught in IE to creating products/services in manufacturing. After all, Maine has a strong economic history of manufacturing, grounding a present hope that developing an entrepreneurial culture in Maine may foster manufacturing growth within the state (Kelly, 2014). When analyzing the program documents, IE was constantly cited in numerous state government and university reports as a model program that can help spur innovation within Maine's manufacturing sector (see Hall, 2013; Hemmerdinger, 2011; Kelly, 2014; Lukens, 2014; "The University of Maine's 2014 Annual Report," 2014). Although the hope for innovation-fueled economic growth in Maine was central to IE's mission, some co-participants saw their part in innovation as creating a product, while others wanted to apply the system to create an idea for social change.

However, the co-participants who expressed a desire to use IE's system for social change did not always know how to translate or adapt the IE system. For example, Eric explained that teaching students how to use IE beyond creating ideas for a business and "to make the world a better place," can only occur if "there's some interjections of that within the class, then the student can see how it can be used in that way instead of just on the product." Through Eric's testimony, we saw that the current iteration of IE's program did not necessarily teach students how to apply IE beyond creating an economic product for the marketplace because there were no

curriculum “interjections” of how to use IE’s system for social, moral, or cultural change. Eric’s critique of IE’s educational program not providing opportunities within the curriculum design to consider how to apply IE for social change was reiterated previously by Jessica, Sheila, and John during the student/alumni focus group. Here, these students/alumni discussed how they have a desire to apply IE’s system for social, cultural, and/or moral change but expressed frustration with not understanding how to create ideas for positive social change.

Through the analysis of the program documents and as discussed in Chapter Four, the experiential learning activities of IE currently focused and privileged a market-orientation to change by offering examples of how to use IE’s system to create product instead of providing case studies of how IE has been applied when creating ideas for social change. The experiential learning activities highlighted in the program documents essentially did not provide opportunities for students to engage in dialogue, critically think, and apply the IE system beyond market-orientated applications. This market-orientated approach to experiential learning within IE was problematic in that students did not critically examine the potential implications or consequences of the “doing”/application of the content (Breunig, 2005).

Essentially, what Eric, Jessica, Sheila, and John asked for, is for IE’s program leaders to consider how the experiential learning activities within the curriculum and system may be (re)imagined and (re)engineered so that IE students who want to apply IE for positive social change, learn how to organize for social change using IE’s system. Here, using the IE system to create ideas that allow students to organize for social change had the potential to be “empowering and transformative” (Papa, Singhal, Papa, 2006, p. 37), as students learned the, “process through which a group of individuals gains control of its future” (Papa, Singhal, Papa, 2006, p. 37). Evolving the program to include a more critical and reflexive approach to

experiential learning, as suggested by Breunig (2005), may be one possibility with how IE could teach students to apply IE when creating ideas for organizing social change. After all, if the goal of the IE program was to provide an educational change where students have “use-value” of their degree, so they can become economically “successful” and “make our world better,” based on the co-participants interviews and focus groups, it appeared students currently do not fully understand how to “make our world a better place” for social change using the current iteration of IE’s system.

Yet, during the interview with Jay, I informed him of how some students did not think or know how IE can be applied for positive social change in our society. I followed up this statement by asking him to elaborate on the impact IE has had and how, if at all possible, can IE be used for positive social change. Jay may have become irritated when I asked that question, as he made a chuckle before speaking, the volume in his voice raised, and he began to speak much quicker. He initially responded by aggressively claiming IE’s social impact is “all over the place,” and when I asked if he could provide examples, he exclaimed:

We've got non-profits, we've got a group in the inner-city of Cincinnati doing stuff.

We've got *CORE Change* in Cincinnati reducing gun violence is using it. I mean, there are hundreds and hundreds of non-profits using it. National Wildlife federation, the Student Conservation Corps, I mean there's lots of things. The fact that there's a question shows, in my mind, of what it is. It's about helping people work smarter, and we need to work smarter at everything we do in our lives. No matter if it's a business, a product, a service, a company, an internal system. It's just about working smarter.

In Jay’s testimony, he defined IE as “working smarter” and implied that this approach had applications and implications everywhere. However, Jay did not make a clear articulation of

“social change” beyond the non-profit, which was assumed to be an organization for the public good. There was no consideration of the work of social change, no problematization of the work of non-profits. This was important because Jay denied the complexity of the social world, where everything was subsumed under the simple vision of “working smarter.” Here, Jay was both strategically ambiguous where he used vague and ambiguous language (Baxter, 2011), and uses “missionary” overtones – “Jesus saves” is like “work smarter” – simple, yet so vague that it was just waiting to be filled with meanings, to seem believable, and to take hold. Jay also may have felt like I was challenging him through how he responded to my question by raising his voice, and by stating “the fact that there’s a question shows, in my mind, of what it is.” Despite this, other students (including myself) expressed that they do not fully know “what it is” with how IE can be applied when creating ideas for social change beyond economics or measurable outcomes.

Additionally, all the examples provided by Jay with how IE has been used for social change were not examples of how students in IE have applied the system but clients of the Eureka Ranch. Moreover, in analyzing the program documents and in the student/alumni interviews and student/alumni focus group, none of the examples that Jay described were provided in the curriculum maps/program documents, nor were talked about by student/alumni co-participants in this study. The only co-participants who mentioned some of the nonprofits that have used IE’s system to create an idea for social change were either instructors or program leaders. Jay used the praxis pattern of denial to negotiate the integration-separation struggle by attempting to dismiss what I, and other students, said about being unclear with how to apply IE externally for social change. Through denying students’ critique of IE, Jay may limit opportunities for the IE program to develop and transform, since “productive interaction

becomes progressively more difficult because [IE] responds only to itself; it does not allow an outsider or an encounter with otherness” (Deetz, 1995, p. 94).

Despite the lack of clarity among some students/alumni with how to apply IE for cultural change, specifically for social change, a reoccurring notion that emerged among program leaders, instructors, and university officials within the theme of developing educational change for economic opportunity, was teaching students how to use IE to create a sense of belonging in Maine through economic development – IE was viewed as the “saving grace” – the discourse of community. For instance, Frank enthusiastically discussed how he desires all students to take the Fundamentals course at the University of Maine. Frank explain that, “I’d want every student on this campus taking this class. Not because I want to teach 18 sections of this, but because I want to make Maine a better state. That’s my end motive.” Frank’s goal of having all students take the Fundamentals course to “make Maine a better state” connected back to the idea to why the IE program was created – to help spur economic development and growth in Maine (Kelly, 2014). The idea of IE being the “saving grace” of Maine to help spur economic development was also reflected in Chapter Four in the articulation of *entrepreneurial culture and economic growth* through the cultural discourse of community (Baxter, 2011). The purpose of an educational program being the “saving grace” reinforced a U.S. dominant cultural narrative of neo-liberal capitalist educational practices as being the answer to solving all problems in our society (Frey & Palmer, 2014; Giroux, 2012).

In this section, *we* learned that the IE program was considered to be worth students’ and parents’ money since it provided opportunities for students to apply the content in “real-world context.” However, this application to real world context did not include developing students’ critical thinking and/or working with their community, but rather privileged application of

content through activities that favored market-readiness – favoring market-readiness has the potential to reinforce already existing oppressive structures and systems (Breunig, 2005). *We* also learned that the “use-value” of an IE education has the possibility to “save” Maine’s lackluster economy. However, we also learned that co-participants were not able to clearly articulate or apply the IE system to create an idea for positive social change. Despite program leaders and instructors explaining how the IE system has been used for social change externally with nonprofits, it remained unclear how IE has or can be used for social change internally when teaching students how to apply the content. Now that there is a better understanding how the IE program as an organization connects innovation, communication, and (social) change, *we* can begin to think about where and how the program might evolve to be more democratic and incorporate CCP into their program – to embrace dialogue, listening, recognize cultural context and our positionality, and view students and our community stakeholders as agents of change (Fassett & Warren, 2007). In the next section, I offer a chapter summary and critical self-reflection.

Chapter Summary and Critical Self-Reflection

In this chapter, *we* learned that the place of connection between innovation, communication, and (social) change within the IE program all intersected with how IE: 1) attempted to cultivate a mindset shift in students; 2) strategically engineered an organizational system where students apply the content to “real world contexts;” and 3) equated the purpose of an IE education to fostering economic success. Within each of these connections, the discursive struggles of dissemination-dialogue and integration-separation were dominant. *We* learned that the narrative touted by IE co-participants proclaimed that IE, as an organizational entity, has the possibility to create educational change by developing in students an “IE mindset” of action,

where a fail fast, fail cheap mentality is embodied. *We* learned that to encourage students to embody the IE mindset, program leaders have strategically designed and engineered a system of skills that are disseminated and then applied experientially through various assignments. *We* also learned, that by embracing and embodying the IE mindset, and then successfully completing the course content, the hope of the IE program leaders and university officials was for students then apply the content externally with the goal of creating economic growth.

However, I found that the program did not provide opportunities to engage in dialogue, but privileged being in control (both individual control and IE system control) by silencing of alternatives. This discursive silencing may limit opportunities to make, “the classroom a democratic setting where everyone feels a responsibility to contribute” (hooks, 1994, p. 39). How then, could the IE program be (re)engineered so students are offered opportunities to “actively [reflect and] use their communication knowledge to shape the world in which they want to live” (Britt, 2014, p. 160) alongside using their communication knowledge to disseminate and control information? In the next and final chapter, I conclude this dissertation by providing a summary of this study and offering a possible direction for how the IE program, and other SE programs, may be (re)imagined and (re)engineered - towards a critical social entrepreneurship education model.

Success ... Change ... Impact ... reflecting on this chapter, these three words come to mind with how I see IE connecting innovation, communication, and (social) change. On the surface, these three words may offer inspiration, hope, and a vision – that is until you ask...success for whom, change for whom, and what type of impact? What are potential implications or consequences for the desired success, change, and impact? These reflective

questions that I pose are not asked of IE co-participants when they're creating, communicating, and commercializing their idea, which is very problematic.

Although I appreciate the vision IE has with helping to spur economic growth in Maine, I am concerned about the potential (ethical) implications of what the program is establishing: the continued commodification of higher education (Karpov, 2013; Shumar, 2004). Realizing this concern after writing this chapter, reminded me of a reflective email I sent my co-advisor, Lily, back in May of 2017. During this time, I was on the job-market where I had two on-campus interviews and also in the beginning stages of data analysis. I had a concern that the pedagogical approach that I took when I taught the Public Relations (PR) course in Maine and this dissertation study may be attempting to commodify CCP and social change. Part of my reflective email memo to Lily stated:

We do live in a consumer economy, and as someone who grew up in poverty getting an education was seen as the ticket to reaching our potential and having a better life, where college was/is thought to be viewed as preparing you for the job market, but at what cost is this? I do feel like I am 'prepared' to teach students a certain 'skillset' - how to commodify themselves, but there's more to life than this, and I don't know how to wrestle with this tension I am realizing. I have been teaching PR in a way that embraces commodification, with the goal of teaching students how to use strategic communication skills to gain employment and to work for positive change in their communities. I also just realized that this is how I "sold" myself to all the jobs I have been applying to, and this was received well at the campuses I visited, but I don't like this, as higher education is only further being commodified by this approach.

Yes, we need to make money to not only survive but have enough money to do meaningful work in the community because if we're struggling and stressed financially, how can you think about working for positive change in our community when you can't even take care of yourself/your own family? The end goal ends up doing what you can to survive, and that was my experience growing up (and to an extent I still feel like I am doing this to survive financially - and I know my parents are).

I get that we need to have certain skills for meaningful employment, but what I am realizing is this skill set is teaching students how to commodify everything, including ourselves. This was seen in how both Jessica and Michelle, when discussing the IE mindset, turned themselves into the “product,” quite literally dehumanizing themselves and reframing that as a positive thing. Reflecting on this, I realize that this may have such negative repercussions! What sorts of changes occur when we begin seeing our basic relationships with ourselves, each other, and the world as commodities? What happens when pedagogical practices embrace commodification (even when our theories and principles reject it)?

Is my dissertation essentially commodifying CCP and social change? If it is, are there any realistic alternatives to educating in a society dominated by commodification? I don't know the answers to these questions, but I also don't feel comfortable commodifying CCP, whether I am implicitly or not. I am also not sure if other critical scholars who may value a critical pragmatist approach (i.e. Frey & Palmer, 2014; Kahl, 2017, etc.) may be doing this (unintentionally) as well with what has been argued/researched. I think it is important to consider if and how SE and the IE program can embrace a more critically orientated approach, but will/does this hijack and commodify CCP and critical approaches to education?

Lily's response to my "reflective crisis" really helped me ask more questions about my intentions, possibilities, and the importance of acknowledging what has been learned and done. She asked, how do you live, and love, and work with/in a system that cannot and should not be avoided, but is badly in need of change? I do not have the answer to Lily's question, but I do think this question is important to consider when (re)imagining and (re)engineering possibilities for the IE program. What are the intentions of the IE program and IE program co-participants (i.e., students, instructors, program leaders, university officials, alumni)? What are possibilities of/with the program? What assumptions are embedded within the IE program? What assumptions are IE instructors, program leaders, university officials, students, and alumni making as they engage in/with and apply IE's system? If IE has been used for positive social change by nonprofits, why are these success stories not included within the curriculum? Why did Jay and other program leaders/instructors only provide examples of nonprofits that have used IE's system for social change during interviews, and could not think of how students/alumni have used IE's program for social change? These are important questions all IE co-participants should reflect on and ask themselves.

One thing that I believe is that we cannot afford to "try" and continue to fail at cheap fixes of education... AND this also means we cannot look for "quick results" or proof of how something works in education. We need to stop thinking in a fail fast, fail cheap mentality (Giroux, 1988; 2012). Change is happening, but it is unpredictable - dialogue begins in the past, happens in the present, and changes the future (Baxter, 2011). This is where CCP's commitments to dialogue and reflexivity matter – both are not looking for a full-proof way to "do" education – it is impossible to have such a way because the context is always shifting and changing? Dialogue produces constant change (however small) and so reflexivity, too, is not a

once-in-a-while nice thing to do, it is a continuous process... So, I don't know that there is a comfortable certain answer to the questions I pose, but that's exactly the point – perhaps a way to continue to resist commodification is to stop looking for “proof” that CCP works to facilitate some pre-set idea of change?...

CHAPTER 9

IMPLICATIONS & CONCLUSION: TOWARDS A CRITICAL SOCIAL ENTREPRENEURSHIP EDUCATION MODEL

Overview

The moral arc of the universe is long, but it bends towards justice.

– Martin Luther King, Jr.

Throughout this dissertation, I have aimed, albeit at times optimistically, to identify the ways in which cultural discourses contribute and perpetuate the oppressive and seemingly insurmountable forces weighing on U.S. culture. Ultimately, the goal of this project was to shed light on the power and possibility of communication and dialogue, and also to show how communication is the driving force behind change. Just as we saw the ability to shift mindsets, engineer identities, and rearticulate shared narratives in the process of becoming an IE-er, it was clear that dialogic communication had the power to reconstitute meanings and ideologies. As critical communication scholars, we must harness and embrace the responsibility of engaging in the process of justice, however daunting that task may be. Recognizing the imbalance of the dominant forces at work is a fruitless task if we do nothing with that understanding to establish and maintain a more equitable and just world.

In this concluding chapter, I provide a review of the overall dissertation study. I first offer a summary reviewing the findings discussed in each chapter. Next, I examine limitations, future directions, and implications of the study. Third, I propose that a critical social entrepreneurship education model (CSE) be developed and adapted by the IE program that incorporates a community-based participatory action research (CBPAR) framework. Here, I suggest an academic development path for IE to continue to prosper, grow, and be considered a more

“legitimate” interdisciplinary academic field in the United States. The path I suggest, guided by RDT, CCP and CBPAR, includes developing a stable, yet flexible, theoretical and methodological framework that acknowledges the epistemological, ontological, and axiological assumptions underlying IE’s concepts of creating, communicating, and commercializing innovative ideas for (social) change. Finally, I conclude by offering a critical self-reflection.

Dissertation Summary

By examining the IE program at the University of Maine, this dissertation study showcased the value in exploring how universities can work to educate for and effect social change, while simultaneously developing students’ career skills. Through this work, *we* can begin to understand the processes and cultural contexts within a communication education that may enable or deter participants from advancing personal, professional, institutional, and community (social) change. Chapter One provided an overview of this study: historical overview of the IE program, the purpose of social entrepreneurship education, and how a critical dialogic approach to communication education is conceptualized. I explained how the purpose of this study is to investigate the IE program so that we may better understand how CCP and an SE education framework may inform and transform one another toward a more critical and transformative social justice education. The purpose of this dissertation was to bring a perspective that a critical communication lens is uniquely positioned to offer, so that new possibilities may be (re)imagined or (re)engineered with how *we* teach and learn from/with students in higher education.

Chapter Two explored the existing literature focusing on RDT, CCP, and SE. Specifically, I argued that using articulation to expose hidden cultural ideologies and discourses in program documents, RDT to describe discourses in meanings, and CCP to evaluate the

described cultural ideologies and discourses in meaning within the IE program at the University of Maine may open a potentiality of ideas and actions for how *we*, as scholars and educators, develop students' and our own civic engagement, while also developing skills for the global job market. I then proposed the following three research questions: RQ1: How is communication conceptualized and taught within the Innovation Engineering program at the University of Maine?; RQ2: How is (social) change conceptualized and taught within the Innovation Engineering program at the University of Maine?; and RQ3: What is the place of and connections between innovation, communication, and (social) change within the educational philosophy and practice of Innovation Engineering at the University of Maine?

In Chapter Three, I discussed the critical qualitative methodological framework and methods utilized in this study to examine the three research questions: a critical ethnographic case study approach where I used an iterative data collection and thematic analysis process (articulation analysis and contrapuntal analysis). Data were gathered via analysis of program documents, participant observations, semi-structured interviews, focus groups, and intentional reflexivity. I found four prominent themes: 1. IE praxis (36.46% of overall coded data with 400 references); 2. Communication as engineered dissemination focused on economic outcomes/returns (26.89% of overall coded data with 295 references); 3. (Re)engineering possibilities for (social) change (25.98% of overall coded data with 285 references); and 4. Communication as engineered programmatic identity work (10.67% of overall coded data with 117 references). Two dominant discursive struggles emerged within the various themes: 1) Integration-Separation (arose in themes 2, 3, and 4); and 2) Dissemination-Dialogue (emerged in themes 1 and 4).

Chapter Four used articulation to examine what ideologies and cultural discourses were being communicated in the IE program documents, such as IE course materials, syllabus, the IE website, and other relevant IE documents. I found three main dominant cultural narratives articulated in IE's program documents: 1. IE as a system with universal applications; 2. IE as experiential learning and market-oriented skill sets; and 3. IE fostering an entrepreneurial culture that may lead to economic growth. I also found three common U.S. cultural discourses, as described by Baxter (2011): 1) the discourse of individualism; 2) the discourse of community; and 3) the discourse of rationality. I argued that these three articulations and discourses silenced any critiques by embracing a positivist worldview of knowledge and universal application. Taken together, the articulations and discourses placed blame on the critics that they just need to, "trust the system," which perpetuates the existing dominant cultural narrative in the United States regarding the purpose of an education as a market-based training (Frey & Palmer, 2014). However, there are openings and potentials of/with what is being articulated in the IE program documents, specifically the opportunity to teach students a set of entrepreneurial skills where students gain confidence in their ability to apply their education in meaningful ways that are important to the individual (Enos, 2015; Jensen, 2014). How then, could the IE program be (re)articulated and (re)imagined in a way that extends the entrepreneurial skills-based training towards an ethic of hope, an ethic of community, and an ethic of justice?

Chapter Five provided a summary of the results by discussing the relevant discursive struggles and the corresponded dialectical tensions and praxis patterns that emerged in each of the four themes, listed above. I found that the IE program encompassed two dialectical tension types (see Table 5.1 on page 127 for list of discursive struggle(s) in each theme): 1) Dissemination-Dialogue and 2) Integration-Separation. I also found that the discursive struggle

of dissemination-dialogue emerged as a discursive struggle and not as a dialectical tension, as was previously found by Papa, Singhal, and Papa (2006), which contributes new understandings of RDT. The two discursive struggles of expression-nonexpression and certainty–uncertainty did not emerge consistently, and as a result, were not the focus of this study. I found that these struggles were negotiated through five praxis patterns: denial, balance, recalibration, segmentation, and integration. Based on the interpretation of the data, I claimed that IE inspires an entrepreneurial spirit that embraces liberalism. More importantly, the emergence of recalibration and balance as a dominant praxis pattern with how co-participants negotiated the various struggles spoke to the potential to bring SE and CCP together and that any transformation should include commitment to dialogue. Recalibration praxis pattern focuses on how co-participants “reframes a contradiction such that the polarities are encompassed in one another...but without resolving the contradiction on a permanent basis” (Baxter & Montgomery, 1996, p. 65). I also claimed that in the moments where the co-participants used the praxis pattern of "denial," this may have been more difficult, since a denial praxis pattern undermined and rejected the existence of other dialectical poles. Here, a “denial response is destined to fail...[because]...the dominance of one opposing force creates an exigence for the neglected opposition” (Baxter & Montgomery, 1996, p. 61).

Chapters Six, Seven, and Eight discussed, in detail, the findings of the study through a thematic analysis of interactively-collected data, connecting these findings to the ideological articulations, as discussed in Chapter Four. Each of these chapters focused on answering one of the three research questions. Chapter Six answered how communication was conceptualized and taught within IE. I found that communication within the IE program was conceptualized as, “techne,” (Sterne, 2006), where communication was focused on engineering-specific skills that

promoted the development and spread of innovative ideas with the explicit aim of a universal application and economic success. Here, the dissemination-dialogue discursive struggle was dominant in the theme of communication as engineered dissemination where dissemination was privileged over dialogue. The teaching of communication within IE as a tool and a skillset that produced a product and an outcome, represented the program's basic goals of creating, organizing, analyzing, and evaluating meaningful and unique ideas. The struggle of integration-separation was dominant in the theme of communication as engineered programmatic identity work. I found that what was absent with how IE conceptualized and taught communication was acknowledgment of and attention to the constitutive power of communication that cannot be separated from the creative process of innovation, entrepreneurship, and (social) change. Here, the IE program's refusal to identify its own limitations, assumptions, and areas for growth, only worked to highlight how a lack of reflexivity produced stagnation and exposed the program's neoliberal ethics.

Chapter Seven answered how (social) change was conceptualized and taught within IE. I found that (social) change within IE was conceptualized and taught through an entrepreneurial lens where individuals, first, needed to have change within themselves – a mindset change of accepting the IE system in order to apply the IE system in any and every context (universal application of/to change). Here, I found that the integration-separation as a discursive struggle was dominant. Problematic in how (social) change is conceptualized and taught within IE was the continued privileging of individual autonomy and responsibility to go out and, “spread IE's good word” in order to create economic growth/opportunities. When economic growth and/or the successful application of IE's system externally failed, there was no responsibility of/on IE for this failure in/with the community. Failure for (social) change continued to be placed on either

the individual applying the IE system, or was placed on the communities/external entities for not fully embracing/adapting IE's system.

Chapter Eight discussed the connections between communication and (social) change within the educational philosophy and teaching in IE. I found that innovation, communication, and (social) change within the IE program all intersected in IE's efforts to: 1) cultivate a mindset shift; 2) strategically engineer an organizational system where students apply the content to "real world contexts;" and 3) equate the purpose of an IE education to fostering economic success. Here, the interplay of both discursive struggles of dissemination-dialogue and integration-separation emerged within each these three intersections. Although both prior research (Wyke, 2013) and co-participants in this study celebrated how IE fostered creativity, a deeper exploration of educational processes and experiences within the program suggested that it did not provide opportunities to engage in dialogue, but privileged being in control (both individual control and IE system control) by silencing of alternatives. Together, Chapters Four through Eight suggested that IE fostered an individual entrepreneurial spirit that viewed IE-ers as heroic in their crusade to apply and spread IE's system – privileging the cultural discourses of individualism, community, and rationality (Baxter, 2011). Conversely, I found that IE's engineering of communication and (social) change privileged a neoliberal approach to education, communication, and (social) change, which may fail to capture the complexity and dynamism of both communication and meaningful social change that recognizes various cultural processes/context.

Limitations, Directions for Future Research, & Implications

This dissertation research was limited in three key ways. First, and most important, since a critical qualitative case study was used, this study was subjective and not generalizable to all

SE and IE programs across the United States and Canada, but only that of the IE program at the University of Maine in this point in time. Future research could explore other IE programs in the U.S. and around the world to see what discursive struggles emerge in the conceptualization and teaching of innovation, communication, and (social) change. Since the discursive struggles of integration-separation and dissemination–dialogue were the dominant struggles that emerged in the University of Maine’s IE program, it would be interesting to explore whether or not this is similar to other IE education programs. The qualitative methodological design of this dissertation also did not allow for the explanation of the entirety of tensions that may have been experienced in the utterance chain but required an artificial classification of tensions into separate and distinct typologies. Therefore, the list of discursive struggles and dialectical tensions that emerged may not be exhaustive. Given that this study is focused on a particular moment in time, future research could consider investigating the long-term implications of the IE program. An example of a qualitative study could include phenomenological inquiries into student experiences and/or community partners’ years after students complete the IE program, while a quantitative study could include analyses of how the views of/on IE change over time and/or are applied in various contexts.

Second, the sample of the co-participants selected and gathered through the snowball approach for this study provided both a limitation and potential opportunity for future research. There may have been other co-participants who had different experiences than the co-participants who were observed, interviewed, and who participated in the focus groups. Therefore, future research could employ quantitative methods to analyze the general beliefs and experiences of those participating in the IE program. Additionally, there were a limited number of graduate students and alumni co-participants. Future research could consider the lived

experiences of graduate students and alumni with how they view, practice, and apply IE beyond the classroom. Future research could also focus studying the perspectives of those who interface with IE. This type of future research focuses on the importance of examining meaning production and negotiation in interaction, since the “engine of meaning making is the interplay of competing discourses” (Baxter, 2011, p. 15). For example, looking at the integration-separation discursive struggle from the outside in, focusing more on “outsiders” experiences of IE (e.g., examining the community partners in the *Innovate for Maine Fellowship*) or exploring the certainty-uncertainty discursive struggle with how alumni navigate applying IE externally. Future research could also investigate the dissemination-dialogue to see how this struggle emerges in various communication contexts. Furthermore, since all the IE program leaders and instructors and most of the students and alumni were white, this is a limitation, as it can be hard to see and critique the operation of ideological structures that privilege one’s group (Hall, 1985; 1989; Fassett & Warren, 2007; Giroux, 1988). Future research could consider exploring people of colors’ experiences, who are students, alumni, program leaders, and/or instructors of IE.

Third, this study was limited due to my role as the subjective researcher. Researchers are a part of the meaning-making process through the selection, interpretation, and analysis of the data collected during the study (Creswell, 2007; Maxwell, 2005). As part of the meaning-making process, my subjectivity is apparent given my personal experience with being a graduate student in the IE program and preconceived notions valuing critical pedagogies. Although subjectivity is not seen as a flaw among critical scholars, other research traditions (i.e., post-positivist) view critical research as problematic for being too political and “biased” (Craig, 2007; Maxwell, 2005). However, understanding one’s positionality and subjectivity and the centering of power relations within the process of critical research is what makes critical research valuable

compared to more post-positivistic approaches to research (Craig, 2007; Madison, 2006). Researcher reflective memos were written after each observation, interview, focus group, and during the data analysis process to illuminate the potential for my subjectivity and member check by co-participants of the transcripts was offered to help minimize potential misinterpretations of co-participants' experiences. Moreover, since I occupied several privileged social locations (i.e. American, white, college educated, male, Christian), this influenced how I viewed the purpose of an education and social change. While I truly value and believe that CCP can help me understand, acknowledge, and expose my various privileged locations, future research could privilege the voices of those historically marginalized and not in privileged social locations. For instance, future research could be done that examines SE and/or IE education programs through a non-Western, post-colonial lens as advocated by Simonis (2016).

Despite the limitations of a critical qualitative methodological study, qualitative studies allow for thick description of data that highlights complexities nested in real context by allowing the reader and researcher to better understand people's lived experiences (Creswell, 2007; Maxwell, 2005; Thomas, 1993). A critical qualitative research design also allows for hidden assumptions and ideologies that may oppress to be exposed so that new possibilities may be imagined (Creswell, 2007; Fassett & Warren, 2007; Frey & Palmer, 2014; Hall, 1989; Miles, Huberman, & Saldana, 2014; Tufte, 2017). This subjective understanding and exposing of dominant ideologies cannot be accomplished through research using quantitative methodologies (Creswell, 2007; Hall, 1989; Madison, 2006; Maxwell, 2005). Baxter (2011) explained that although quantitative research is, "useful in attempting to make statements about frequencies and patterns, in the end they privilege an oversimplified conception of discursive struggle and seek to finalize what is inherently unfinalizable" (p. 17). Specifically, for this study, using a critical

dialogic qualitative research design allowed for hidden ideologies, discourses, and tensions embedded within the IE program to be exposed, so that we can better understand how a SE education and a CCP approach to communication may inform each other so a new communication education approach could be (re)imagined – distal not-yet-spoken (Baxter, 2011). This study took Enos (2015), Kahl (2017), and Rudick and Golsan's (2014) calls for scholars to qualitatively investigate how higher education can both work to develop students' practical (communication) skills and sense of community engagement/social responsibility.

Additionally, this study had implications for the program at the University of Maine, specifically that the results of the study may allow for the IE program to re-evaluate the assessments of the programs, the curriculum design, and the overall model. Since the IE program is re-evaluated annually based on the data from student work and course evaluations, among other data points, this study provides another lens as to how the program may evolve and adapt. This, then, may have implications for how the IE program is taught and embodied at universities across the country and Canada, since those programs use the same curriculum design, educational approach to teaching and learning, and assessments with teaching innovation.

Beyond the IE program at the University of Maine, this study also had implications for other programs that may want to negotiate simultaneous career and social engagement education. There are implications for other (social) entrepreneurial and (social) innovation programs, as this study may allow for other programs to re-evaluate their curriculum design and overall model to better reconcile higher education's two demands. As such, through understanding the various dialectical tensions and meanings/practices with how communication and (social) change are negotiated, a critical social entrepreneurship (CSE) education model may emerge for future work.

Developing a Critical SE Education Model Guided by CBPAR

Informed by the results of this dissertation, I propose three commitments that outline a CSE model that integrates community based participatory action research (CBPAR). As introduced in Chapter Five, CBPAR embraces a dialogic democratic process with developing practical knowledge by bringing “together action and reflection, theory and practice, in participation with others, in the pursuit of practical solutions to issues of pressing concern to people, and more generally the flourishing of individual persons and their communities (Reason, & Bradbury, 2001, p. 2). What this means is that CBPAR is an inquiry that is done *by* or *with* insiders of our community, but never *to* or *on*. CBPAR (and CSE for that matter) values dialogue and sees the potentiality for transformative change.

CBPAR values the expertise of locals about their own problems and solutions instead of relying on just, “outside experts” to solve local problems – it values dialogue over dissemination (Herr & Anderson, 2015). CBPAR emphasizes the coproduction of knowledge between community and various stakeholders, instead of submitting to the trickle-down model often characterized with research done at universities – decenters the discourse of rationality (Lindenfeld, Hall, McGreavy, Silka, & Hart, 2012). CBPAR, then, is a “bottom-up” orientation to research/community work and not done in an authoritarian manner all too common within university research (Stringer, 2014). Here, CBPAR is more democratic where community members have influences/a voice over the implementation of community solutions. What this means is that the solutions may have a greater community impact since they are determined collaboratively, and thus work to imagine a more socially just world – distal not-yet-spoken (Baxter, 2011; Stringer, 2014). Jones, Warner, and Kiser (2012) argued that both SE and critical service-learning programs in higher education should collaborate by, essentially, embracing

CBPAR, because “the powerful benefits of a collaborative relationship between community partners, students, faculty, staff and administrators, can pull many more innovative thinkers into the process to share crucial information about the community itself and what the true needs are” (p. 11). A CBPAR approach aligns to both SE’s and CCP’s pedagogical and research approaches for (social) change – the discursive struggle of integration-separation. Specifically, with an SE education, CBPAR aligns to:

- Dees (2012) and Zietsma and Tuck’s (2012) calls for an SE education to work *with* a community and not *for* a community;
- Pache’s and Chowdhury’s (2012) call for SE education programs to teach students what SE looks like in various community contexts for social good (i.e. social-welfare, commercial, and public-sector), while also not forcing students to accept an SE identity;
- Jensen’s (2014) call for a “holistic person perspective” (p. 250) to an SE education where situated learning and culturally relevant teaching are incorporated (Bassey, 2016; Gay, 2006; Lave & Wenger, 1991);
- Martinez, Padmanabhan, and Toyne’s (2007) call for incorporating a globalized liberal-arts framework to develop students’ civic engagement and career readiness; and
- Enos’ (2014) call for higher education institutions to develop educational and research programs that incorporate together both a SE and critical pedagogies framework to educating students.

There are some SE education studies that can serve as exemplars on how CBPAR can be incorporated into an SE education, specifically by developing a service-learning course design. For instance, Litzky, Godshalk, and Walton-Bongers (2010) proposed an approach on how to develop and teach a service-learning course in SE and community leadership by discussing how

they developed a CBPAR service-learning course by pairing graduate student mentors with high school student protégés within teams. Gilmartin (2013) also developed a course for undergraduate nursing majors that combined service-learning with SE by partnering with a community partner. The goal of the course was to promote students' "understanding of the sources of inequality in the United States and providing the requisite skills to promote effective nursing action for social change" (p. 641). Abbott and Lear (2010) also developed a community service-learning (CSL) Spanish course with SE by having students partner with a local nonprofit. These scholars found that "all stakeholders in a CSL course can benefit when students move beyond class requirements to self-directed social action" (Abbott & Lear, 2010, p. 243). These three exemplar studies highlight how service-learning can be incorporated into an SE education and the benefits to both students and community partners. More importantly, these studies highlight how CBPAR and SE can be combined in disciplines outside of business where students and community partners work together to solve a local problem beyond economic development. However, these studies emphasize collaborating with local partners for community change, but continues to still privilege the individual student as the "heroic" actor (Zietsma & Tuck, 2012). This is something to consider when working towards a CSE model/approach to communication, teaching, and social change.

CBPAR also aligns to CCP, as highlighted in:

- Fassett and Warren's (2007) call for communication educators and scholars to embrace, "a nuanced understanding of human subjectivity and agency" (p. 52) and, "engage dialogue as both a metaphor and method for our relationships with others" (p. 54);

- Cummins (2014) call for a critical communication pedagogy of care where all (i.e. students, teachers, community partners/stakeholders) embody dialogue, empathy, and respect for one another;
- Simpson's (2014) call for a communication activism pedagogy where students learn how to, "recognize and understand injustices, and how to use their communication knowledge and skills to intervene into oppressive systems to reconstruct them in more just ways" (p. 78); and
- Tufte's (2017) call for understanding participatory communication is both a means and an end.

CBPAR has been utilized much more extensively in CCP, where an expanded CCP model that centers CBPAR has been developed. This expanded CCP model is known as communication activism pedagogy (see Frey & Palmer, 2014), where students first become aware of injustices and then learn how "use their communication knowledge and skills to [collaboratively] intervene to attempt to reduce oppression and to achieve justice" (Simpson, 2014, p. 87). Unlike in SE, the individual is not viewed as a heroic actor that is working to "save" the community but centers the community's needs where individual students work with the community (Frey & Palmer, 2014).

Studies combining CCP and CBPAR are more numerous, but a few exemplars also incorporate service-learning. For example, Enck (2014) proposed a feminist communication pedagogy with CCP by discussing how students worked with a local domestic violence center to raise community awareness surrounding gender and violence in their local community.

Jovanovic, Congdon, Miller, and Richardson (2014) found that by incorporating CBPAR with CCP may allow for powerful spontaneous moments to arise in class, where students learn how to collaboratively respond-in-time to community partners' needs that were not anticipated.

Connecting CCP and CBPAR to cultural dialogue, Willink and Suzette (2012) discussed the challenges of implementing community-based research courses with local social justice struggles. Through embracing a cultural dialogue, they found implementing CBPAR and CCP courses allows for a, “deeper and embodied experience of cultural dialogue and border crossing that abides and appreciates differences; allowing teachers, students, and communities to restructure pedagogical relationships through communication to reconstitute ways of knowing from a communal perspective” (Willink & Suzette, 2012, p. 209). CCP and a critical performance pedagogy of exposing whiteness also offers insight to how CBPAR and CCP can connect, specifically by embracing failure. Gutierrez-Perez (2017) advocated for “students and teachers to embrace failure not as a product, but through critical reflexivity and an embodied transformative pedagogy, I advocate for failure as a process of striving for social justice” (p. 10). These four studies showcased the emancipatory potential of a transformative pedagogy to emerge when CCP and CBPAR are connected – a pedagogy that encourages students to act and collaboratively intervene on their new-found knowledge of how oppression operates in our society.

By reviewing how CBPAR connects to both SE and CCP, we can better understand how a CSE model can be informed by a CBPAR framework. Based on the above connections and the findings of this research, below I outline three commitments for a critical approach to social entrepreneurship education – a critical social entrepreneurship (CSE) model. Specifically, I propose these three commitments in order to address the dominant discursive struggles of dissemination-dialogue and integration-separation as found in the current SE case study of IE. These three commitments are neither comprehensive nor exhaustive but serve as a starting point – a beginning conversation as to what could guide and inform a critical approach to SE and a SE

approach to CCP. Additionally, the commitments of a CSE model guided by CBPAR embrace Huber's (2013) framework of a "social justice-oriented help," as previously discussed in Chapters Three and Seven, since CSE focuses on developing community partnerships, embracing dialogue, and prioritizing local change. CSE takes a critical communication view of (social) entrepreneurship, where (social) entrepreneurship is defined as individualized expression of creative potential within a community and for the benefit of a community. I hope the program leaders and researchers of IE, SE, and CCP will use the results of this study to further develop IE's theoretical and methodological framework, academic identity, and pedagogical approaches.

Commitment 1: Acknowledge Positionality and Assumptions within and throughout

Pedagogical Praxis. On the level of program identity, the present study found that neoliberal values were central. For example, in the analysis of documents, the three articulations of IE as a system with universal applications, IE as experiential learning and market-oriented skill sets, and IE fostering an entrepreneurial culture that will eventually lead to economic growth/development, all embraced neoliberal values to education. Similarly, in the analysis of interview and focus group data, the theme of economically-measured outcome was central. This was foregrounded in comments, such as, "starting your own business," "helping somebody else succeed in business," and "keeping it (IE) in terms of the economic impact value of the idea is important for teaching students because it's simpler." Yet, there is no explicit acknowledgement and/or reflection in terms of how focusing on economic outcomes may reinforce existing oppressive structures and systems (Frey & Palmer, 2014). In fact, the study suggested that IE worked hard to invalidate any possible contextual critiques of its praxis. Through navigation of the dissemination-dialogue and the integration-separation discursive struggles, the program defined itself in positive terms as a proven system of/for idea generation, the impacts of which

were measured exclusively through the business success of the idea, and not its consequences in the community and/or in the program's educational approaches themselves.

Building on the findings of this study, as described above, and existing literature on CCP and SE, I suggest an academic development path for IE to continue to prosper, grow, and be considered a more "legitimate" interdisciplinary academic field in the United States. I highly encourage that the IE program explicitly acknowledges the positionality on the programmatic level. The path I suggest includes developing a stable, yet flexible, theoretical and methodological framework that acknowledges the epistemological, ontological, and axiological assumptions underlying IE's concepts of creating, communicating, and commercializing innovative ideas for (social) change where culture and diversity are centered and not additive. Such moments of disciplinary (re-)definition and ferment are not unusual in the journeys of academic fields, including Communication Studies (Chung, Barnett, Kim, Lackaff, 2013; Craig, 1999 & 2007; Mumby, 1997; O'Sullivan, 1999). Here, a social justice-orientated help is embodied through, "a willingness to live in discomfort, negotiate and reciprocate with students" (Huber, 2013, p. 60)

I also recommend that the program teach stakeholders (i.e., students, alumnus, community partners, etc.) to similarly acknowledge their positionality, which also encourages a social justice-orientated help through, "trusting [ourselves and others] to know something about themselves and what they want in their lives" (Huber, 2013, p. 60). Here, students would also be given the opportunity to integrate their positionality and assumptions by incorporating a critical approach to the experiential learning activities embedded within the IE program (Breunig, 2005). Having stakeholders acknowledge their positionality is important when generating ideas, especially since on the level of the individual, the study also finds that neoliberal values are

central where cultural context is disregarded. For example, in the analysis of the interviews and focus groups the theme of IE as a universal application was central. This was foregrounded in comments such as, “you can apply them anywhere,” IE as a “universal language,” and “You can use it in anything. If you're flipping burgers at McDonald's, you could use it. It definitely is applicable in anything.” Yet, there is no explicit acknowledgement that a universal claim is guided by a Western standpoint or that various locals and cultures may not have the same values or processes as an IE education (Siminos, 2016). One possible way to incorporate a critical praxis, where stakeholders acknowledge and reflect on their positionality, to some of the experiential activities is during the stimulus mining. Here, professors can ask students to integrate “what sources of knowledge are most frequently represented in the curriculum...generate a hierarchical list of what sources of knowledge are considered to be the most valid and what sources are considered to be the least valid” (Breunig, 2005, 113). Program leaders and instructors of IE could also apply this same strategy when evaluating their curriculum and uncovering the epistemological framework embedded in the curriculum.

Commitment 2: Embrace Dialogue in Collaboration with Various Communities, Partners,

and Others. Zietsma and Tuck (2012) called for SE educators and programs to consider the potential harm a SE education may have on communities, since, “ideology drives a lot of policies, and even the most well-intentioned ideas can get bogged down by ignorance of ground-level realities and inertia at the level of the implementer” (p. 516). To avoid any potential negative repercussions of SE and IE innovations, this commitment of CSE centers community involvement, where dialogue, reciprocity, and radical listening are valued. Reciprocity is the “ongoing process of exchange with the aim of establishing and maintaining equality between parties” (Maiter, S., Simich, L., Jacobson, N., & Wise, 2008, p. 305). Radical listening suggests,

being intentional about *hearing* and that listening is an ongoing act such that we continue to listen even after what is spoken has faded into the past...As we listen, we assume an open and humble stance as we stand at the edge of ever expanding possibility for our developing praxis and for the transformation of self/other and world. (Kress & Frazier Booth, 2016, p. 114).

After all, a SE education acknowledges that multiple partners need to be involved together-collaboratively (Hughes, 2005), and it is naïve and problematic to think that SE alone offers or promotes social change (Powell & Colyvas, 2008).

Commitment 2 views power as shared and fluid, similar to CCP, where listening is valued, which also emerged sporadically in the interactive data. For instance, Michelle explained how she, “just leads the group whether I am put in that role or not.” Here, we begin to understand how IE’s focus on teamwork through providing experiential learning activities may actually be developing leadership that is focused on building relationships with others by viewing power as shared and fluid in this context. Interestingly, this connected to the control-emancipation tension with how co-participants may develop agency to apply the skills externally through dissemination, which countered the valuing of dialogue in the relational leadership approach within this context. Here, the inclusion-seclusion tension also connected and countered a relational approach to leadership with how individuals of IE have no responsibility to include their communities when applying the IE concepts. It appeared that IE may foster and privilege dialogue through a relational leadership approach within the context of the IE classroom and/or working in teams with individuals who “buy-in” to the IE system. Yet, when applying the IE system externally and working with others “outside” of the IE community, dissemination appears to take hold where those who are “IE experts” remain in control, which reinforces the idea of fail

fast, fail cheap. This may have implications for how an IE education may collaborate and partner with others to accomplish goals for (social) change, since social change frameworks value a more dialogic and relational approach to creating ideas for change instead of a more individualistic-controlled approach.

Commitment 2 of CSE embraces, “a deep commitment to getting to know students [and the community/others] in context, both at a local level and as existing within multiple different systems at once” (Huber, 2013, p. 60), which embodies a social justice-orientated help. However, as shown in the interviews, focus groups, and participant observations, IE as a program and at the individual level does not consider fully the potential harm to communities that the ideas generated by co-participants may have on others. This is foregrounded in comments when discussing potential harms as “death threats” that “need to be turned into manageable risks,” as well as viewing IE as the “saving grace.” The IE program could incorporate service-learning into their courses and also expand the role of the partners in the Innovate for Maine Fellowship program, where community partners have a stronger-and-more-equal-voice in terms of how the IE system is applied and utilized (see Britt, 2014 and Enck, 2014 as possible examples). Here, IE would embrace spontaneous moments in-and-out of classroom settings that may emerge while working with community partners, ultimately promoting agency for both students and others (Jovanovic, Congdon, Miller, & Richardson, 2015).

Commitment 3: Encourage Smaller Scale (Social) Change Efforts that are Purposefully

Attentive to Local Contexts. Zietsma and Tuck (2012) explained that SE educators need to, “teach students to be more thoughtful and consultative about the solutions to be applied based on the context in which they were applied” (p. 515). Here, a CSE prioritizes a smaller scale change that is localized, where impact may or may not be necessarily quantifiable and/or large-scale, but

can be considered in its multiple and complex dimensions. Commitment 3 highlights a social justice-orientated help approach to embracing smaller scale (social) change, since this commitment requires, “compromise and negotiated decision-making” (Huber, 2013, p. 57). However, data collected in this dissertation showed that IE co-participants and the IE program privileged a quantifiable impact. This is highlighted in program documents, interviews, and focus group data, as suggested in the comments of “the focus has been on economic value but it's really about measuring impact,” and “what is the impact and how do I assign a value to my concept in order to compare ideas to each other.”

Synthesizing James and Logan’s (2016) view of “measuring” impact, Russell and Congdon (2017) explained how impact can be “summarized for students as academic, social, and civic growth; for faculty as the motivation to do similar work in the future and personal and professional development; and for communities as capacity building, and social and personal growth” (p. 374) through equitable inclusion on structural and creative processes. Here, CSE conceptualize and practice impact through framework offered by James and Logan (2016). This approach to impact aligns to RDT’s view of impact, since the autonomous individual is not centered, but “eschews the individual as the centerpiece of relational communication, arguing instead for a move to the social, in which meaning is located in the ‘between’ – that is, in the interplays between competing discourses” (Baxter, 2011, p. 12). One possible way in which the IE program could embrace smaller scale change efforts is incorporating ethics into the teaching of IE content, where students work to understand the local and cultural contexts and the implications of the idea that is being created. One course objective that may address this is offered by Artz (2017), where students “recognize that reforms may mitigate instances of injustice, but structures and relations of power may remain” (p. 369). Here, the IE program could

involve students, instructors, and community members in developing rubric models that evaluate the IE skills through the strands of theoretical/conceptual, strategic/tactical, practical/performative, and communicative/rhetorical traditions that highlight community change efforts at the local setting (Del Gandio, 2017).

In sum, this critical SE educational model, guided by CBPAR's framework, can only occur if:

- The IE program follows Zietsma's and Tuck's (2012) advice about being reflective and explicit about the theoretical and methodological assumptions of the program's praxis. For example, IE program should explicitly state the implications and limitations of Deming's (1956; 1986; 1988; 2000) and Ackoff's (Ackoff & Greenberg, 2008) frameworks that is used in the IE system.
- IE co-participants (i.e. students, instructors, program leaders, etc.) should critically reflect and interrogate their positionality relative to their meaningfully unique idea and the innovation process (see Bourke (2017) for an example), since our ideologies, "beliefs, values systems, and moral stances are as fundamentally present and inseparable from the research" (Derry, 2017, para. 1).
- Collaborate *with* the community, not for, on, or to the community by embracing reciprocal dialogue and radical listening (Frey & Palmer, 2014; Kress & Frazier-Booth, 2016); and
- Be open and adaptable to small scale change efforts that are catered towards the local community/context (Frey & Palmer, 2014; Zietsma & Tuck, 2012).

Through this critical CBPAR process, a CSE education approach to IE, may hold, “the potential to democratize and decolonize knowledge production by engaging communities and citizens” (Janes, 2016, p. 72).

Final Reflective Thoughts

As I finish drafting this dissertation, I am overcome with joy reflecting on this entire process...reflecting on my trajectory as a critical communication pedagogue...reflecting on my experience as an IE-er. Honestly, this study was not easy – it was challenging emotionally, where I consistently felt like an imposter inside academia, questioning whether I belong and where I belong. You see, I see myself as an activist educator first and foremost...not as a communication scholar...not as an IE-er. My road to becoming an activist educator – a critical communication pedagogue – started back in fifth grade when I was diagnosed with a learning disability and Tourette Syndrome (TS) (see Congdon (2015) for a more detailed autoethnographic account of my educational experience). I had an awful teacher who was a bully, did not understand how to teach students with TS, and as a result I became an academically “bad” student. This was the first time in my life where I honestly felt hopeless – my grades dropped, I was bullied by peers, I gained weight due to the numerous medications I was on for my learning disability and TS, and I eventually tried to commit suicide. My awful educational experience from fifth grade taught me the importance of great teachers – teachers who inspire their students...teachers who stand-up for and with their students...teachers who genuinely care about their students. This was why I became a special education teacher after graduating with my bachelor’s degree. I wanted to be a teacher who was the opposite of my fifth-grade teacher – I wanted to be a teacher who empowered my students and learned from and with

my students.... but this was challenging, and I was not always the activist teacher that I had hoped to be....

The first moment I remember where I messed up as a teacher was when I was doing my student teaching in Atlanta Public Schools teaching eighth grade algebra – a predominantly African American low-income school district. My experience here was one of the first times that I remember where I was blinded by my white privilege. I had an African American male student who would always come to class late, never completed homework, and smelled like he smoked weed prior to class – this student was failing my class (and I was failing him). One day I was meeting with my mentor analyzing student performance data. My mentor asked me about this student, and I told her my observations. She kept asking me questions having me dig deeper:

Mentor: Why do you think he's not doing his homework?

Me: I think it's because he's always late and doesn't understand what to do.

Mentor: Did you ask him why he's late?

Me: No.

Mentor: Why not?

Me: I guess I never thought to ask. I mean I have so many other students I need to attend to who are always there and need and want my help. He would always sleep.

Mentor: How did you respond to him in class when he was sleeping?

Me: I would ignore him. He didn't know what to do anyway, and he smelled like he smoked a blunt before class. He doesn't care about his education.

Mentor: So, what I hear you telling me is that your teacher actions when working with this student were nonexistent and dismissive because you did not think he cared about his education. Do you care about this student and his education?

It was at this moment that a light-bulb went off, and I could not believe what I had done. I assumed that because this student came in late, assumed he smoked weed, and assumed he did not complete his homework was because he did not care about his education. But the reality was that I did not care about him or his education, and I did not provide him opportunities to learn in a meaningful way. Here, is where my white privilege took over my actions as a teacher – I assumed that my poor African American student was lazy, only wanted to get high, and did not care about his education, so why should I care about him and his education – why waste my time? I was not better than my fifth-grade teacher – in fact I was worse because my teacher actions marginalized this student, and the discrimination I placed against him resulted in him not doing well academically.

After this moment with my mentor, I did change my behavior towards this student and reflected on how I was treating him and other students. I talked with him to ask how he's doing and why he had been late. I found out that he has a job after school and did not get home until late, but then had to help his single mom take care of his younger brothers and sisters when she went off to work. This was why he fell asleep in class – he would get little to no sleep at home. I also started to call on him during class, and we worked out a tutoring schedule for him to get caught up and the extra support that he needed. This student did end up passing my class - barely, but I know that he could have done much better if I had just cared...if I had engaged in dialogue with him...if I would have acknowledged my white privilege.

Reflecting on this moment still brings tears to my eyes. I do not know what ended up happening to this student, but I do know that I had learned from/with him. I learned the power and importance of acknowledging and reflecting on your positionality. I learned what it meant to truly embody a pedagogy of care. I learned that no matter how good of intentions that I may

have, I still will mess up. I learned the power and importance of listening...of asking questions... of engaging in dialogue. I failed my student through the actions that I took, but “that I’ve failed in these ways does not, however, mean that the process is a failure” (Fassett & Warren, 2007, p. 165). This learning moment transformed how I saw myself and my pedagogy. I continued exploring my white privilege by reflecting, talking with other educators, talking with students and their parents, becoming more involved in my local community by volunteering, redesigning my pedagogical approaches, going to trainings, and doing so much reading (e.g., hooks, 1994; 2003; Jensen, 2009; Lareau, 2011; Mackenzie & Mackenzie, 2010; Wise, 2008). Through this learning, exploring, and growing process, I realized that I wanted to get my M.A. and then Ph.D. in communication focusing on critical communication pedagogy and civic engagement.

As I finish up this dissertation, I genuinely hope that those reading it see the power, emancipatory potential, and importance of dialogue and radical listening. The IE program has impacted my own educational and pedagogical experiences. In my own classes, specifically when I teach public relations and social media, I do teach about and incorporate IE’s concepts of “meaningful unique ideas,” using “mind maps” to generate ideas, and “stimulus mining” with talking to others in the community for students’ service-learning projects. I do see value in the work IE is doing, especially with trying to teach students a set of skills that they can hopefully use to benefit their future career aspirations. I also see value in how IE is trying to spur an entrepreneurial culture in the state of Maine, especially given the bleak economic growth and high poverty that exists in many of Maine’s rural communities.

However, I also see areas of growth with how IE can improve what they are trying to do – improve so that cultural context matters and is incorporated within IE’s system. Here, I would encourage (and hope) that IE program leaders include and incorporate student voices as the IE

program continues to develop and expands (see Nastasia & Rakow (2010) for one possible way to incorporate student voices in program develop by using mind mapping). One thing that I have learned through this process is that I do not know everything, nor do I claim to know everything, but I do know that a critical communication pedagogy of care (Cummins, 2014; Fassett & Warren, 2007) is so important when learning and teaching with students. I see potential in developing and implementing a CSE education model to how we educate students in CCP, IE and in other SE programs. I see potential for CCP to learn from SE and IE – to learn from CSE. One valuable lesson that I learned from all my experiences as described throughout this dissertation is to stop, listen, and ask questions without jumping to conclusions. So, I ask one final reflective question/hope ... “may we all build a better tomorrow by listening to each other and imagining our futures together” (Fassett & Warren, 2007, p. 164)? ...

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APPENDICES

APPENDIX A: PARTICIPANT OBSERVATION SCRIPT

Participant Observation Script Template for classroom:

“Hello. My name is Mark Congdon Jr., and I am conducting a research study on experiences within the innovation engineering program and how communication is practiced within it. To better understand this, your instructor has given me permission to observe and participate in your class. This method is known as participant observation. I will not be taking down any personal information about you. If you are not comfortable having notes written about in this way, please tell me and I will not write about you in any detail. I will not be offended by such a refusal and your decision will not affect you in any way. If you have any questions or concerns feel free to ask me, call me, or email me at any point (give contact info, including IRB email). Are there any questions?”

Participant Observation Script Template for meeting:

“Hello. My name is Mark Congdon Jr., and I am conducting a research study on experiences within the innovation engineering program and how communication is practiced within it. To better understand this, your leader has given me permission to observe and participate in your meeting. This method is known as participant observation. I will not be taking down any personal information about you. If you are not comfortable having notes written about in this way, please tell me and I will not write about you in any detail. I will not be offended by such a refusal and your decision will not affect you in any way. If you have any questions or concerns feel free to ask me, call me, or email me at any point (give contact info, including IRB email). Are there any questions?”

APPENDIX B: PARTICIPANT OBSERVATION PROTOCOL

Date and time of observation:

Observing:

Location:

I will identify and explain the following while observing using descriptive notes/language:

- Set-up of space/area
- Tools and/or objects in the room
- Use of tools and/or objects
- Demographic of people observed
- Approximately how many people are present
- How staff/peers/advisor(s) interacts with the each other
- Types of roles (or ways of interacting) that peers, staff and/or faculty performs while in the room and how the other peers, faculty and/or staff respond to these roles
- Activities in the room
- How the faculty/staff/peers engage one another
- How faculty/staff /peers engage the material
- Dialogue that faculty/staff /peers engage in relating to communication, artifacts, values, assumptions, relationships and/or interactions between/with other staff/faculty/peers related to content discussions
- Who participates in these dialogues and in what ways? What are the topics of conversation and how they are taken up by participants?
- Overall environment

**APPENDIX C: SEMI-STRUCTURED INTERVIEW PROTOCOL FOR ALL
PARTICIPANTS**

1. What is your current role within the innovation engineering program? How long have you been involved with the program?
2. How did you learn about the Innovation Engineering program?
3. Describe why you decided to participate in the innovation engineering program?
4. How would you describe the course experience to someone who was considering enrolling?
5. What are your hopes or goals of the program?
6. When you hear “communication” in the context of the Innovation Engineering program what do you think of?
 - a. Follow-up: Describe the classroom or learning environment of the Innovation Engineering program?
 - b. Follow-up: How is communication practiced within the classroom environment of the innovation engineering program?
 - c. Follow-up: How did the learning environment contribute to your understanding of communication?
7. How do you practice communication within the Innovation Engineering program?
8. Describe how communication is taught within the innovation engineering program?
9. Tell me a story about how you applied/used communication within the Innovation Engineering program?
10. Tell me a story about how you applied communication using the tenants of Innovation Engineering outside of the classroom?
11. Describe how has your thinking of communication changed since being a part of the Innovation Engineering program?
12. How would you define social entrepreneurship? In what ways is social entrepreneurship part of the Innovation Engineering program?
13. Describe someone who you consider to be a social entrepreneur? Do you consider yourself to be a social entrepreneur? Why or why not?
14. What would effective communication look like in social entrepreneurship?
15. Can you think of a specific time when you either learned or did something important about communication?
16. What do you believe you gained from the experience of innovation engineering that you will take with you and use again?
17. What is your personal history with the program? How did you become connected to it?
18. What attracted you to the program?
19. What do you see as challenges to the program?
20. How do things happen between you and others in the program?
21. Describe any differences with how you conceptualize the mission/purpose of the program.

APPENDIX D: IRB INFORMED CONSENT

SOCIAL ENTREPRENEURSHIP AND COMMUNICATION EDUCATION: MEANINGS AND PRACTICES OF COMMUNICATION IN INNOVATION ENGINEERING PROGRAM

You are invited to participate in a research project being conducted by Mark Congdon Jr., PhD candidate in The Communication and Journalism Department at the University of Maine. with Dr. Liliana Herakova, PhD, Lecturer in the Communication and Journalism Department at the University of Maine serving as the faculty sponsor. The purpose of this study is to examine the meanings of communication that are being constituted and practiced within Innovation Engineering program. Findings from this study may be shared with you prior to publication for member check, and will also be shared with the broader research community through professional conference presentations and journal publications. As a researcher, I want to better understand the perceptions and experiences of how communication is being constructed in innovative curricular programs that use tenets of social entrepreneurship. You must be at least 18 years of age to participate.

What Will You Be Asked to Do?

If you decide to participate, you will be asked to participate in an individual interview that will allow you the opportunity to share insights regarding your perception, experiences, and practices of the Innovation Engineering program. The individual interview conversations will be recorded and transcribed. It should take roughly 60-90 minutes of participation time, with a possible follow-up interview that would last no more than 30 minutes. Some sample questions you may be asked include: “How do you see communication within the Innovation Engineering program?” and “How do you see the work of Innovation Engineering intersecting with your current (or future) work in your current position as [x]?”

Risks

The risks for participation are minimal. Only your time and inconvenience would be a potential risk.

Benefits

There are two main benefits to your participation. One is that you may enjoy reflecting on your development of the Innovation Engineering experiences. Another is that the study may help universities and the fields of communication and education identify successful curricular models of social entrepreneur development to students enrolled in higher education institutions.

Confidentiality

Your identity will be protected by keeping interviews confidential and by providing you with a pseudonym. A key linking your pseudonym to your name will be kept on a password-protected computer and will be destroyed after interviews are transcribed, no later than December of 2017. Data collection will include open-ended interviews will be recorded. The recordings will be transcribed by the investigator or by hiring a professional transcription service. The audio files will be transcribed by December of 2017, after which they will be deleted along with the destruction of the paper key. The interview data will be kept for an indefinite period of time as well on a password protected computer for ongoing data collection and publication purposes.

Voluntary Participation

Participation is voluntary. If you choose to take part in this study, you may stop at any time. You may skip any questions you do not wish to answer.

Contact Information

If you have any questions about this study, please contact the researcher at the information listed below:

Mark Congdon Jr.
PhD Candidate, Communication & Journalism
University of Maine
(207) 659-8707
Mark.congdon@maine.edu

Liliana Herakova, PhD
Faculty Sponsor
Lecturer, Communication & Journalism
University of Maine
(207) 581-1937
liliana.herakova@maine.edu

If you have any questions about your rights as a research participant, please contact Gayle Jones, Assistant to the University of Maine's Protection of Human Subjects Review Board, at 581-1498 (or e-mail gayle.jones@umit.maine.edu).

APPENDIX E: FOCUS GROUP PROTOCOL

Focus Group Script Template

Opening (10 Minutes):

“Hello. My name is Mark Congdon Jr. Today we would like to build off the conversations we previously had in your interviews your experiences within the innovation engineering program and how you view communication within it. What I am trying to accomplish before we leave here today is to get a better understanding of the meanings of communication that you see and practice within the innovation engineering program. Are there any questions?”

Respond to participant questions.

“Let’s go over some rules. First, let’s all turn off our cell phones so we are not interrupted. So we can keep track of what people are saying, remember that we have one person talking at a time. Please do not interrupt someone when they are talking. Also, everything you tell us today will be kept completely confidential, and here is a consent form that I would like everyone to read, and then can answer any questions you may have (I then will distribute the consent form). We will summarize the things you tell us and combine it with other focus groups we are giving. One of my jobs today as the moderator is to make sure we discuss all of the issues we planned to discuss. If I ask you questions while you are talking, I’m not being rude; I’m just making sure everyone has a chance to talk and that we discuss all of the issues.

Just to get us started, let’s have everyone tell us your name, which can be a pseudonym-just something so that we can address each other, and how you became involved with the innovation engineering program. (*Point to someone to start; randomly select people to demonstrate that people do not talk in sequence*). “Let’s begin.”

Question 1: Describe how communication is taught within the innovation engineering program?

Follow-up: What do you think are the potential benefits and limitations of communication being taught this way?

Follow-up: How has this changed and/or expanded your own perception of communication?

Question 2: Describe what effective communication looks like within the innovation engineering program?

Follow-up: How is effective communication practiced within the innovation engineering program?

Follow-up: How has your perception of communication been influenced by the innovation engineering program?

Question 3: How do you think the ideas of social entrepreneurship are brought within the innovation engineering program?

Follow-up: Describe how you practice social entrepreneurship within the innovation engineering program.

Question 4: Describe how you see effective communication within social entrepreneurship.

Question 5: Describe how you see yourself using effective communication in the future.

Question 6: Describe how you see yourself using social entrepreneurship in the future.

APPENDIX F: EMAIL CONTACT FOR FOCUS GROUP RECRUITMENT

Dear X,

I hope you're having a great day. You previously indicated that you're willing to participate in a focus group about your perception and experiences with the Innovation Engineering program and how you view communication. I have scheduled a date, time, and location for the focus group. The focus group is scheduled on [DATE] at [TIME], and will be held in [LOCATION]. The focus group will be between 30-90 minutes long, will be recorded for accuracy purposes. A full description of the study is attached to this email in the "Informed Consent" form. Please read this for more information. I hope you'll agree to participate in this study and look forward to discussing it with you soon. Please feel free to respond by email and indicate whether or not you're interested in participating in the focus group by [XXXX]. I can also answer your questions more fully at that time.

Regards,

Mark Congdon Jr.
University of Maine
Communication and Journalism Department

Liliana Herakova, PhD
Faculty Sponsor
Lecturer, Communication & Journalism
University of Maine
(207) 581-1937
liliana.herakova@maine.edu

APPENDIX G: TIMELINE OF IMPORTANT EVENTS OF THE IE PROGRAM

| Timeline of Important Events of the Development of the IE Program (Hall, 2013; History, n.d.; Kelly, 2014) | |
|--|--|
| Date | Event |
| September 2005 | The 1 st IE course was taught at the University of Maine |
| October 2006 | The Foster Center for Student Innovation at the University of Maine makes 'innovation coaching' available to the public and students for the first time on campus. |
| September 2009 | Innovation Engineering is approved as an undergraduate minor at the University of Maine |
| January 2010 | The University of Maine system awarded the Innovation Center a three-year, \$1 million Strategic Investment Fund (SIF) grant to spread the IE courses to the rest of the University of Maine System campuses. The SIF grant allowed for the training faculty from around the system, and supported the development of course offerings at each campus. |
| January - March 2010 | The 1 st three Innovation Engineering Leadership Institutes were held at the University of Maine and Eureka! Ranch in partnership with the Maine Development Foundation and the State of Maine Chamber of Commerce. |
| May 2011 | Two years after the IE minor was approved at the University of Maine, the first class of students who had declared and completed the requirements for the minor graduate. |
| September 2011 | The Innovation Engineering undergraduate program was rolled out to five additional colleges and universities in the University of Maine System and Louisiana. Since 2011, the IE program has been rolled out to an additional 7 universities and colleges across the United States and Canada. |
| April 2012 | The Innovation Engineering Graduate Certificate was approved at the University of Maine. |
| June 2012 | The 1 st year of the Innovate for Maine program was created and run, connecting undergraduate and graduate students enrolled in colleges and universities in Maine to Maine companies and business leaders across the state to help grow and create jobs throughout Maine. Since its inception in 2012, 118 companies have received assistance from an Innovate for Maine Fellow. |
| June 2012 | The Innovation Center began running and organizing the Innovation Convention, a statewide middle school competition that teaches innovate problem solving and inventing strategies to middle school students in Maine. Since 2012, the Invention Convention has included over 1,200 participants from more than 28 schools across the state of Maine. |
| July 2012 | Faculty members from across the University of Maine System completed the Innovation Engineering Faculty Training Program so they can teach the IE courses. |

| | |
|----------------|---|
| September 2012 | The Birth of Cycles to Mastery, a patent pending method of teaching to improve learning effectiveness using blended learning based on Benjamin Bloom's 2 Sigma Solution, was created and implemented into the IE curriculum and Black Belt training. This curriculum overhaul is known as 2.0. Early indications of this method of teaching from the first round of classes using the Cycles to Mastery approach at the University of Maine, found a 4x increase in the number of students achieving mastery of the skills taught versus teaching the IE classes the classic way. |
| September 2013 | The Innovation Engineering Institute was created as a joint venture between the Eureka! Ranch and the University of Maine. |
| October 2013 | All 7 campuses that make up the University of Maine System began offering the Innovation Engineering courses. |
| September 2014 | The first two courses of the Innovation Engineering curriculum were overhauled to create the next generation of curriculum of Create and Communicate. This curriculum overhaul is known as 3.0. |
| Summer 2017 | In the summer of 2017, the IE curriculum will go through another overhaul, known as 4.0. This overhaul will focus on changing the structure of the courses offered by offering an IE foundation course first and offer Topics courses. This curriculum overhaul will focus on redesigning the Cycles to Mastery to include both a blended learning approach and project-based approach with case studies and scenarios. |

APPENDIX H: DEFINITION OF KEY TERMS

Articulation. A framework that seeks to expose dominant cultural ideologies and worldviews by understanding the ways in which elements in cultural social formations are linked and affect relations of control and resistance through/in communication (Hall, 1985; 1989; Slack, 2006).

Centrifugal Force. The social force that moves away from the center; decentralization and disunification (Bakhtin, 1981a).

Centripetal Force. The social force that moves toward the center; centralization and unification (Bakhtin, 1981a).

Contrapuntal Analysis. A method of analysis that is focused on the interplay of opposing tendencies in narrative stories that captures the both/and aspect of Bakhtin's dialogism (Baxter, 2011).

Critical Communication Pedagogy. A critical praxis for examining relationships between power and communication in educational contexts, where communication is centered through the processes by which power relations are resisted and/or reproduced (Fassett & Warren, 2006).

Death Threat(s). A term used in the Innovation Engineering program that refers to risks of an idea that may "kill" the idea. The goal in the Innovation Engineering program is to use tools and methods to turn death threat(s) into manageable risks (Hall, 2013; Kelly, 2014).

Discourses. Uttered cultural worldviews or systems of meaning(s) (Baxter, 2011; Baxter & Montgomery, 1996).

Discursive Struggles. The interplay of centripetal and centrifugal social forces in relating which include, but are not limited to, integration-separation; certainty-uncertainty; expression-nonexpression (Baxter, 2011; Baxter & Montgomery, 1996).

Dialectic. Focuses on the struggle between competing discourses (Baxter, 2011).

Dialectical Tensions. Encoding/expressions of discursive struggles within (internal) and between (external) relational systems

Dialogism. The term coined by Holquist to describe Bakhtin's concept of the ceaseless interplay between unified oppositions or centripetal and centrifugal forces (Baxter, 2011).

Dialogue. The interpretation of different discourses or perspectives, where all meaning-making is dialogue (Baxter, 2011; Baxter & Montgomery, 1996).

Distal Already-Spoken. Links in the utterance chain that refer to utterances present in the culture that come alive when voiced by relating individuals (Baxter, 2011; Baxter & Montgomery, 1996).

Distal Not-Yet-Spoken. Links in the utterance chain that move beyond the immediate conversation and the partners themselves to an anticipation of how generalized others will respond to an utterance (Baxter, 2011; Baxter & Montgomery, 1996).

Innovation Engineering program. A type of Social Entrepreneurship education program created by the University of Maine and the Eureka Ranch that teaches a systematic approach to innovation by applying tools and methods for creating, communicating, and commercializing meaningfully unique ideas (Hall, 2013; Kelly, 2014).

Mind Map. An IE “communication” tool and resource for connection/participation to help externalize and schematize a creative process when creating ideas of/for innovation.

Multivocal. The multitude of competing differences or oppositions at any given point in time (Baxter, 2011).

Neoliberalism. The dominant ideological practice, as seen in the United States and other Westernized societies, that focuses on the privatization and commodification of discourse and knowledge, privileges individual responsibility and success over the public good, and values free-market solutions and enterprises (Giroux, 2012; McChesney, 1999, Simpson, 2014).

Praxis Patterns. The negotiation of communicative choices that are jointly enacted by relating parties that are created by past interactions and shape both present interactions and future interactions (Baxter & Montgomery, 1996).

Proximal Already-Spoken. Links in the utterance chain that refer to utterance of how relational partners interact based on their relational past (Baxter, 2011; Baxter & Montgomery, 1996).

Proximal Not-Yet-Spoken. Links in the utterance chain that refer to how relational partners interact based on anticipation of their relational future (Baxter, 2011; Baxter & Montgomery, 1996).

Relational Dialectic Theory. An explanation of the meaning-making process as fragmented, tensional, and multivocal that recognizes the interplay of simultaneous differences and searches to understand tensions that are manifested in social/cultural practices and ideologies (Baxter, 2011; Montgomery & Baxter, 1996).

Social Entrepreneurship Education. An entrepreneurial educational framework that combines academic lessons with real world application by teaching students how to apply business techniques to create innovative approaches to solve social issues/problems (Enos, 2015).

The Utterance Chain. The “chain of speech communication” where meaning-making occurs from uttered discourses from the past that come together in the present by anticipating discourses from others, and shape future discourses through four forms of utterance links – distal already spoken, proximal already spoken, proximal not-yet-spoken, and distal not-yet spoken (Bakhtin, 1981a; Baxter, 2011; Baxter & Montgomery, 1996).

Utterance. Any type of uttered communication from the past, present or future that is a site in the utterance chain. An individual utterance is an intertextual social unit that can be written or spoken words, phrases or sentences, or nonverbal such as sighs, glances, and/or silence. (Bakhtin, 1981a; Baxter, 2011; Baxter & Montgomery, 1996).

APPENDIX I: IRB APPROVAL

(KEEP THIS PAGE AS ONE PAGE – DO NOT CHANGE MARGINS/FONTS!!!!!!!!!!)

APPLICATION FOR APPROVAL OF RESEARCH WITH HUMAN SUBJECTS Protection of Human Subjects Review Board, 114 Alumni Hall, 581-1498

PRINCIPAL INVESTIGATOR: Mark Congdon Jr.
 EMAIL: mark.congdon@maine.edu TELEPHONE: 207-659-8707
 CO-INVESTIGATOR(S):
 FACULTY SPONSOR (Required if PI is a student): Dr. Liliana Herakova
 TITLE OF PROJECT: Communication education: Analyzing the meaning and practices of communication within a social entrepreneurship curricular program within higher education context

START DATE: 05/10/2016 PI DEPARTMENT: CMJ
 MAILING ADDRESS: 404 Dunn Hall
 FUNDING AGENCY (if any): N/A
 STATUS OF PI:
 FACULTY/STAFF/GRADUATE/UNDERGRADUATE Graduate

1. If PI is a student, is this research to be performed:

| | |
|---|---|
| <input type="checkbox"/> for an honors thesis/senior thesis/capstone? <input checked="" type="checkbox"/> for a doctoral dissertation? <input type="checkbox"/> other (specify) | <input type="checkbox"/> for a master's thesis? <input type="checkbox"/> for a course project? |
|---|---|
2. Does this application modify a previously approved project? N (Y/N). If yes, please give assigned number (if known) of previously approved project:
3. Is an expedited review requested? Y (Y/N).

Submitting the application indicates the principal investigator's agreement to abide by the responsibilities outlined in [Section I.E. of the Policies and Procedures for the Protection of Human Subjects](#).

Faculty Sponsors are responsible for oversight of research conducted by their students. The Faculty Sponsor ensures that he/she has read the application and that the conduct of such research will be in accordance with the University of Maine's Policies and Procedures for the Protection of Human Subjects of Research. **REMINDER:** if the principal investigator is an undergraduate student, the Faculty Sponsor MUST submit the application to the IRB.

Email complete application to Gayle Jones (gayle.jones@umit.maine.edu)

FOR IRB USE ONLY Application # 2016-04-04 Date received 04/11/2016 Review (F/E): E
 Expedited Category:

ACTION TAKEN:

- X Judged Exempt; category 2 on 4/15/16 Modifications required? Y Accepted (date) 4/22/2016
- Approved as submitted. Date of next review: by Degree of Risk:
- Approved pending modifications. Date of next review: by Degree of Risk:
 Modifications accepted (date):
- Not approved (see attached statement)
- Judged not research with human subjects

FINAL APPROVAL TO BEGIN 4/22/2016
 Date

08/2015

BIOGRAPHY OF THE AUTHOR

Mark Congdon, Jr. is from Hughesville, Pennsylvania and has two younger sisters. He is the first in his family to graduate from high school and college. In 2008, he received a bachelor's degree in Communication Studies from Wilkes University in Wilkes-Barre, PA. Upon graduating with a BA, Mark joined Teach for America as special education teacher and ultimately became the department chair in North Carolina. During this time, Mark received his teacher certification in K-12 special education, 6-12 social studies, and K-12 speech communication from East Carolina University. In 2013, Mark graduated with a MA in Communication Studies from the University of North Carolina Greensboro. Currently, Mark is a faculty member in the Department of Communication Studies at the University of North Texas in Denton, Texas. He recently accepted an Assistant Professorship at the College of Saint Rose in Albany, NY beginning in the Fall of 2018.

Mark is committed to community engaged scholarship aimed at increasing educational opportunities for students considered to be at-risk and has worked with two programs: Rethinking Education in Rural Spaces and Project Reach at the University of Maine. His scholarship and pedagogy explore innovative teaching and learning practices that increase the civic engagement and career readiness of students utilizing a service-learning pedagogy. Mark's work has been published in *Communication Education*, *Communication Teacher*, *The Qualitative Report*, and *Partnerships: A Journal of Service-Learning & Civic Engagement*, among others. Mark is a candidate for the Doctor of Philosophy degree in Communication from the University of Maine in May 2018.