HOW PROFESSIONALS EXPERIENCE CRITICAL THINKING WITHIN AN OCCUPATION: PEERING INTO THE PHENOMENA

by

Lyron Heath Andrews

Dissertation Committee:

Professor Lyle Yorks, Sponsor
Professor Stephen Brookfield

Approved by the Committee on the Degree of Doctor of Education

Date 11 February 2015

Submitted in partial fulfillment of the requirements
for the Degree of Doctor of Education in
Teachers College, Columbia University

2015

ProQuest LLC.
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106 - 1346

ABSTRACT

HOW PROFESSIONALS EXPERIENCE CRITICAL THINKING WITHIN AN OCCUPATION: PEERING INTO THE PHENOMENA

Lyron Heath Andrews

This study explores how six professionals experience critical thinking within their occupation. The research methodology employed for this study was hermeneutic phenomenology. The aim of the research was to reveal the essence of the experience of these critical thinkers as they encountered the guidelines, standards, and policies of their work environment and how these affected their ability to think critically.

From the oral record of the lived events, five major findings surfaced from these experiences: Tactics and Values, Emotional State, Critical Questions, Pre-/Post-Expectations and Beliefs, and Inhibitors to Critical Thinking.

There was a confirmed connection to the literature for critical questions, the emotional state, and tactics and values of critical thinkers, but no apparent thematic

connection in the literature was found regarding pre-/post-expectations and beliefs or a catalog of inhibitors to critical thinking.

Analysis of the findings led this researcher to the conclusion that leadership is the persistent and fundamental key to answering if an environment is appropriate or not for a critical thinker to flourish. The analysis also yielded recommendations for the critical thinker to catalog and be mindful of possible inhibitors to critical thinking within an occupation and for leaders within an organization to foster an environment that is hospitable to critical thinkers.

DEDICATION

To my beautiful daughter Chanel Coco Andrews:

May your life continue to be filled with the love, wisdom, and happiness that your coming into this world has imparted to me.

ACKNOWLEDGMENTS

It is important for me to recognize the stream of learning influences that has led up to this point.

Acknowledging everyone in the chronological order in which I experienced them, I first want to thank my parents, Lois and Leon Andrews, who instilled in me the beginnings of the love of learning. I recall them assigning my siblings and me homework out of the *Encyclopedia Britannica* during the summer months. Through much protest, because of not being able to use my summer the way that I wanted to, I began to appreciate learning accessibility. I thank my sisters, Kim, Tatia, and Lanita, along with my brother, Leon, for providing early companionship in experiential childhood learning that mostly involved exploring boundaries and limits set up by my parents. I thank my first grade teacher whose name I've long forgotten, yet I will never forget how she, just a few years after the U.S. executive order to integrate the public schools, had me sitting at the front of the class after I experienced a kindergarten teacher who kept me at the back.

I appreciate the rigorous scholarly counsel and thoughtful challenges presented to my research by Dr. Leodis Scott, and the unexpected and very welcome friendship and practical life insights offered by Dr. Philip Saigh. In connection with direct sponsorship and advisement for this dissertation, my first acknowledgment of deep gratitude and appreciation goes to my dissertation sponsor, Dr. Lyle Yorks, who has been a ceaseless source of support and counsel at the right time. By facilitating a learn-together environment in the classroom and in our personal discussions, I have brought to consciousness my love of learning and meaning making as I have in no other period of

my life. Dr. Yorks has been endless sources of rich wisdom, assistance, and encouragement during every step of the way.

Dr. Stephen Brookfield has been an inspiration from the first time he discussed critical thinking with my cohort during our first summer session in 2011. In that initial session, he related his willingness and intent to uncover and challenge the various permutations of corporate-sponsored hegemony. That discussion sharpened my own intent to pursue an understanding of how a professional experiences critical thinking in the work environment. Dr. Brookfield gave me access and personal support to pursue this interest as it developed into a researchable dissertation question. This personal support was meaningfully provided by facilitating access to previous attendees of courses he conducted on critical thinking who then became research participants for this study. Dr. Brookfield's transparency, authenticity, openness, and humility serve as a case for emulation by any who would take on the role of professor.

I appreciate the discussions and support in the AEGIS program from Drs. Terrence Maltbia, Jeanne Bitterman, and Victoria Marsick. I remember with fondness the friendship and support of Dr. David Severson and his cause for humanity in the classroom.

To my cohort members, Ashli, Betsy, Brian, Cindy, Donna, Gaby, Home, Jerry, Jessica, Katie, Kelly, Nicole M., Nicole W., Nyasha, Rachel, Ramone, Sean, Shelley, Shohreh, and Welton. I am forever indebted to you all for the rich learning and meaning making I experienced in group reflection, both audibly and silently. The friendships formed with this group will be cherished for the rest of my life.

Finally, I express my deepest appreciation and love for the six participants who gave generously of their time, personal lives, and experiences to shed light on the lived experience of critical thinking as they encountered the guidelines, standards, and policies of their work environment and how these affected their ability to think critically.

L. H. A.

TABLE OF CONTENTS

Page

Page

LIST OF TABLES

LIST OF FIGURES

Chapter I

INTRODUCTION

The purpose of this study was to explore how professionals who are engaged in critical thinking are impacted by their occupational setting. The research purpose was to illuminate how these professionals experienced the process of critical thinking with a view to revealing any barriers or hurdles that may be related to adherence to particular guidelines, standards, and policies in connection with their professional field of practice. This research employed hermeneutic phenomenological (van Manen, 1997) methods to describe the experience of these professionals. Hermeneutic phenomenology includes giving attention to both *descriptive* (how things appear) and *interpretive* (hermeneutic) phenomenology as a means to interview and transcribe the experiences of six critical thinking professionals. The research utilized the iterative nature of the *hermeneutic circle* (Merleau-Ponty, 1962) that considers the individual artifacts of the components of the research (singular participant responses, episodic events, critical incidents) and makes comparison and meaning of the components with the whole picture (the greater theme of critical thinking and phenomenology).

After noting that there is no single definition or consistent theory of critical thinking (reflection), van Woerkom (2010) stated, “Where some speak of reflection, others speak of critical reflection, reflexivity, critical self-reflection, or critical thinking. It is often not clear what the difference is, or even if there is a difference, between these

terms" (p. 340). This research utilized the term *critical thinking* to describe the locus of the intended research and the working definition supplied by Brookfield (2012) that connects four points to define the process:

1. identify the assumptions that frame our thinking and determine our actions;
2. checking out the degree to which these assumptions are accurate and valid;
3. looking at our ideas and decisions (intellectual, organizational, and personal) from several different perspectives; and
4. on the basis of all of this, taking informed actions. This includes a basic topology of different kinds of assumptions that critical thinking unearths and scrutinizes—paradigmatic, prescriptive, and causal. (p. 18)

This chapter begins with a contextual background of critical thinking as it relates to the workplace. Next, the research problem is identified with a brief review of the gap in the literature regarding the research problem and the need for additional research. The research purpose and questions set out the opportunities for expanding the body of knowledge that the research question presents. This researcher's assumptions, the rationale, and significance of the study conclude this chapter.

Context and Background

White, Fook, and Gardner (2006) employed the context of health and social care to discuss critical thinking (reflection) (p. vi). Their findings and manner of situating their research informed the context utilized by this research. The four stages to critical thinking (reflection) that White et al. (2006) enumerated include:

1. creating an awareness of how hidden assumptions behind our practice may be directly influenced by social context or social learning: be it cultural, professional, structural, political, or workplace;
2. a recognition of how thinking may be undesirable or restrictive, thus limiting the range of options for practice, and sometimes for self-recognition;
3. a more empowered identity, as professional practice is reframed, to include these possibilities, also as there is a growing awareness of how we as individuals are able to ourselves create and reframe our thinking freed from social expectations; and
4. an awareness of new skills/strategies, which become possible with this new way of thinking.

It is therefore apparent that critical thinking can be influenced, restricted, limited, or otherwise held captive by the un-surfaced assumptions that may be directly connected to, among other things, one's profession. It is within this first step that this research was developed and framed. Steps 2-4 are the desired outcomes or purpose for which this research can be utilized later.

Harris, Bruster, Peterson, and Shutt (2010) laid the foundation and importance of critical thinking by enumerating a step-by-step methodology to apply to a critical thinker's practice. Although using critical thinking in one's profession was considered within their research, they did not delve into the phenomena of that experience or situate occupational requirements that serve as impediments to critical thinking. Careful note was made that "Individuals do not automatically know how to reflect, and there are limited resources available for instruction. Too many times, individuals have mistaken

ideas about reflection, i.e. reflection is simply a listing of the day's happenings or summaries of events" (p. xiv). The specific focus of this study, then, was to better understand the experience of such professionals as they embark on the path of critical thinking. Brookfield (2012) emphatically stated that critical thinking was necessary beyond achieving academic success as a way of surviving in a corporate, political, educational, or cultural situation.

The authors researched for this study had no identical approach to either conceptualizing or applying a theoretical framework for critical thinking (Bradbury, Frost, Kilminster, & Zukas, 2010; Brookfield, 1994, 1995, 2012; Fook & Gardner, 2007; Harris et al., 2010). Argyris (1980) used critical thinking to pursue strategies within the workplace to question assumptions that are connected to business decisions. The questioning of assumptions is tied into loops of decisions and actions that have flexibility for making new decisions by reflecting on previous actions and assumptions. The workplace becomes the centerpiece to investigate ladders of inference or assumptions that come from the five critical intellectual traditions, including: analytic philosophy and logic, pragmatic, hypothetico-deductive method, psychoanalytic, and critical theory (Brookfield, 2012).

Research Problem

The focus of this research was to obtain an understanding of a professional's experience of critical thinking in different occupational contexts regarding policies, standards, and guidelines. The desire was to discover if there were any barriers they

experienced in the process of critical thinking that were directly related to the policies, standards, or guidelines of their occupation.

The authors who were considered included critical thinking theorists and practitioners who recorded their findings produced from engaging in workshops, seminars, and conferences as they facilitated the capture of various participants' experiences who came from a broad range of professions, including business professionals, teachers, executives, and managers (Bradbury et al., 2010; Brookfield, 1994, 1995, 2012; Fook & Gardner, 2007; Harris et al., 2010). The main focus of the literature reviewed that helped to establish what more can be learned pointed to the process of "doing" critical problem solving, while a smaller amount was devoted to "experiencing" the process of critical thinking (Jordi, 2001; King & Kitchener, 2002; Lyons, 2010; van Woerkom, 2010; White et al., 2006).

Lyons' (2010) argument concerning one's professional situation and use of critical thinking or reflection to learn is tied into taking conscious steps to align the person more closely to the profession by means of critical reflection. Lyons stated, "work pressure often leads to a focus on finding a 'quick fix'—a rapid solution for a practical problem—rather than shedding light on the underlying issues determining the situation at hand" (p. 529). The aforementioned scenario leads to a cycle of unconsciously providing standard solutions to problems without expanding thought or questioning long-held assumptions. Here, we find generic impediments (an unforgiving schedule accompanied by unrelenting responsibilities) to critical thinking that can be found across many occupations that are not necessarily related to a specific policy, standard, or guideline associated with a specific profession.

Peering into the workplace, van Woerkom (2010) uncovered challenges that were related to the aging of the workforce, speed of technological advancements, and operationalizing workplace learning as related to human resource development. The process of learning is considered in nursing settings, teaching, and call centers. While the learning activities were considered (by various contributing authors), the particular experience of critical thinking related to particular requirements associated with their profession was not thematically considered in the same literature.

Bradbury et al. (2010) gave attention to the education, health-care, and social-care professions. They explored the contradictions that this multifaceted group of professionals experienced concerning critically reflective thinking during one-day seminars, in which Bradbury and her associates used theoretical and empirical research lenses to assist with critical thinking to inform their communities of ways to improve work environments and processes. Part of the researchers' interest locus revolved around thinking that people will at times change careers as they migrate from one employment opportunity into another. As they migrate from one form of employment to another, certain aspects of their development can be repurposed or transferred into the new roles.

Brookfield (1994) set forth an extensive phenomenological review of 311 adult educators' experiences with critical thinking. The instruments that he utilized to collect the data included autobiographies, journals, and interviews. The five themes that surfaced from his study were impostorship, cultural suicide, lost innocence, roadrunning, and community (these will be explored in Chapter II). While a specific pattern of categories emerged in what was experienced by these educators as they reflected on the critical thinking process, it was not readily apparent to assume that these findings cannot be

distinguished from any other profession. Fook and Gardner (2007) related their experience with attendees who go to their critical thinking seminars and describe certain behaviors on the job, such as making up information as they go, in order to respond reflexively to swiftly changing environments without the benefit of mentoring and training. What the seminar attendees experienced relating to critical thinking facilitation in connection with their profession is not classified or categorized to any specific policies, guidelines, or standards relevant to a specific profession.

No thematic references concerning critical thinking inhibitors related to occupational rules and regulations, standards, guidelines, policies, or requirements were found in the literature researched. An extensive search of these terms was conducted in EDUCAT, CLIO, ERIC, Digital Dissertations, and the Super Search catchall. The aforementioned samples of critical thinking related to one's profession did not address critical thinking within the context of critical thinking barriers that may be imposed by policies, guidelines, and standards related to a specific profession. An opportunity exists to gather more data through a phenomenological method to contribute to what is known.

Research Questions and Purpose

The purpose of this study was to explore the experience of critically thinking professionals who attended a seminar conducted by Stephen Brookfield and had the understanding of the aforementioned four-step description given in Brookfield (2012), while they were mindful of the policies, guidelines, and standards associated with their professions to better understand how the requirements of those professions affected their critical thinking processes. This research sought to surface what barriers to critical

thinking were manifested that were directly associated with the requirements and responsibilities of a particular profession. The intent was to capture the experience in a methodological way that assimilates, categorizes, and catalogs the data to possibly assist other critically thinking professionals in experiencing a more informed method and mindset. Based upon the literature and research that followed, an anticipated outcome was that a critical thinking professional may catalog possible barriers or inhibitors so that critical thinking may become better applied.

Key questions that were considered included:

1. How does a person experience critical thinking in relation to his or her profession?
2. What are the inhibitors, barriers, or impediments to the process of critical thinking that he or she experiences in relation to the guidelines, standards, and policies of his or her occupation?
3. Under what organizational conditions is critical thinking best fostered? What would an organizational culture look like that fostered critical thinking?

Utilizing a hermeneutic phenomenological methodology of the experience of a critical thinking professional, and capturing, categorizing, and cataloging that experience for an emphatic understanding for the benefit of other critical thinkers, may provide a more informed method of critical thinking in the workplace.

Research Design

This study employed hermeneutic phenomenology circles that concentrated on both descriptive (phenomenological) and interpretive (hermeneutic) methodology (van

Manen, 1997). As stated earlier in this chapter, numerous terms are used to describe and define critical thinking; therefore, to secure a stable definition, this researcher utilized Brookfield's definition. Critical thinking professionals who have gone through his coursework or seminars over the last four years were likely to share a similar understanding of critical thinking that can be utilized for this research. By means of an online survey/questionnaire, this researcher ascertained the connection between the participants' use of critical thinking and their professions. The process included interviews and re-interviews with six professionals who held a minimum of an undergraduate degree and who had been through a seminar or coursework featuring critical thinking/reflection conducted by Brookfield. A sample size of six allowed the researcher to cull through deep hermeneutical circles to uncover the phenomenon, as opposed to a breadth of interviews that sought to develop a statistically significant sample size. The literature reviewed assisted in focusing the aim of the interviews with reference to which phenomenological lens the critical thinking was situated in, and which tools were used to gather and analyze the data.

Using hermeneutic circles (an interpretive process of giving attention to a phenomenon that forms the standpoint of its parts and whole), an iterative loop of investigating and reviewing the data gleaned from interviews, questionnaires, notes, recordings, and analysis allowed the researcher to view findings by means of the components and of the whole (Merleau-Ponty, 1962).

Researcher Interests and Assumptions

From 1985 until 1999, I worked as a full-time ordained minister affiliated with a proselytizing professed Christian ministry. In shepherding church members and in outreach to non-members, it was inevitable that I found challenges to critical thinking that were related to the requirements of my profession. In 1997, I began taking on corporate responsibilities that rapidly grew from being responsible for a few dozen reports to a few hundred. From that period of time until now, I have worked in five separate organizations in various forms of corporate leadership. In my personal experiences within these corporations, I have also seen pitfalls within my own ability to think critically that were specific to corporate environmental requirements. From 2006 to 2008, I worked as an information security trainer where a large portion of my classrooms was made up of military leaders. The manner of security that was taught included more than the physical or technical, but was also concerned with frames of mind. The military members in my classrooms had much exposure to physical and technical training, but less exposure to the frames of mind that are given to dynamic or innovative thinking. These military members were driven by a command and control hierarchy that had little space or use for questions. Through them, I was able to experience particular barriers to critical thinking that were associated with the constraints of that profession. This researcher's interest stems from that above-mentioned personal experience, combined with a desire to extend the experience beyond myself, yet to focus attention on what pitfalls or blocks are experienced by a greater community of professionals.

The first type of assumptions brought into this study were paradigmatic, perspective, and causal assumptions of the researcher's own experience (Brookfield, 2012). The meaning of the aforementioned assumptions will be explained in greater depth in the next section. Such assumptions cover the influence and perspective of this researcher's professional, educational, and societal views and have a bearing on the expectations of this study.

The second assumption was that those agreeing to participate would openly discuss their personal experiences of episodic critical thinking events within their work environment and how they made meaning of those events.

Finally, based upon the personal experiences of the researcher, it was expected that there would be a connection between the impact of the policies, standards, and guidelines of one's employment on their experience of critical thinking and the capabilities to experience critical thinking in an unrestricted manner (White et al., 2006).

Rationale and Significance

Some of the notions that lend relevance to the personalized experience of the critical thinker and the breadth of what can be experienced from a phenomenological perspective are further illuminated by the categorization of the assumptions that Brookfield (2012) suggested must be addressed in critical thinking, including the paradigmatic, perspective, and causal. The paradigmatic assumptions that are the most difficult to uncover connect with the generalized assumptions with which critical thinkers are challenged. This includes the challenge of differentiating between "views that we hold" and "views that hold us" (Mezirow, 2000). Being the most basic assumptions that

help us form a structure of how we visualize our own personal reality of the world around us, they are difficult to separate from ourselves and view objectively. Brookfield described the process of discovering and understanding paradigmatic assumptions as "hunting." For Brookfield, this included inflexible thoughts on adults being self-directed learners, critical thinking facilities being only available to adults, good adult educational processes being inherently democratic, and the inherently political aspect of education. These assumptions dominate the core decision-making capability of individuals. Prescriptive assumptions are related to what the critical thinker assumes should happen in a particular situation. They relate to how we feel people around us should behave and what obligations one carries based on those assumptions. These assumptions can also be induced or influenced by structural paradigmatic assumptions. The causal assumptions portend that if one follows a predictive order of actions, then one should enjoy a predictive result. Causal assumptions are also relevant when it comes to historical cause-and-effect assumptions (Brookfield, 2012). While all three of the assumptions could be relevant to "hunt" out, it can be seen how an individual's causal assumptions could be more relevant the longer they experience the profession to which they are connected. The connection between the three aforementioned assumptions and the critical thinkers within their occupations will be discussed in Chapter VI.

In Brookfield's (1994, 1995, 2012) extensive research and writing about the profession of teaching, connected to the need to develop critical thinking facilities, many anecdotal references point to the processes and challenges that are presented. His personal challenges, and those of other teachers, to barriers that are presented by the policies, standards, and guidelines of a teacher were to some degree made manifest

within their interviews, journals, and critical incident questionnaires. Brookfield (1994) captured the aforementioned data by means of a phenomenological study. Fook and Gardner (2013) looked at critical thinking in the professional occupation of a healthcare worker. The intent of this study was to look at an agnostic span of professions while paying close attention to the specific nature of blockages to their critical thinking that they may experience due to workplace requirements. Knowing what these blocks are may help to facilitate critical thinking within workplace environments.

Peering into the phenomenological experiences of a professional that relates to what she is undergoing as she is mindful of causal, prescriptive, and paradigmatic assumptions can yield information that is specific to individual challenges to critical thinking in a specific occupation.

Chapter I Summary

Chapter I laid out the purpose of this study with a working definition of critical thinking along with the context and background of critical thinking within an occupation, combined with the possibilities that work-related barriers to critical thinking may be influenced, restricted, and limited by the requirements of one's occupation (White et al., 2006). Finally, the research questions were listed, followed by the interest and assumptions of this researcher, along with a briefing of the research rationale.

Chapter II begins the discussion of the historical context of critical thinking and phenomenology.

Chapter II

HISTORICAL CONTEXT OF THE STUDY: CRITICAL THINKING AND PHENOMENOLOGY

The purpose of this study was to utilize literature related to critical thinking and phenomenology to support the exploration of the experiences that critically thinking professionals have in relation to their occupations.

Critical Thinking Background and Adult Learning/Development Relevance

Glaser (1941) elucidated that critical thinking has been a mainstay in philosophy for the past 2,500 years and established that thinking critically involves three elements:

1. an attitude or disposition to thoughtfully consider problems and subjects that come within the area of a person's experience;
2. knowledge of the methods of logical inquiry and reasoning; and
3. some skill in applying these methods.

Included in the above-mentioned elements is the ability to recognize that a problem exists while maintaining a healthy perspective that questions whether answers exist outside of one's own experience and knowledge. It requires the ability to recognize unstated assumptions and values, to gather pertinent data, and to analyze those data, recognizing how it might be affected by the observer's own experiences and beliefs.

Highlighting the varied descriptions of critical thinking, Facione (2011) related a comprehensive Delphi research project comprised of 46 men and women representing various scholarly fields from the United States and Canada who reached a consensus of elements that are core to critical thinking. The experts found that the overarching elements that are evident when critical thinking is in place include *cognitive skills* and *dispositions*. Within these two primary placeholders are specific attributes that assist in rounding out a working definition of critical thinking. Cognitive skills included: interpretation, analysis, inference, evaluation, explanation, and self-regulation. Dispositions included: critical spirit, probing inquisitiveness, keenness of mind, zealous dedication to reason, and hunger for reliable information.

Matthews and Lally (2010) extended the discussion of defining critical thinking by showing it to be part of a wider set of cognitive thinking that includes creative thinking, problem solving, and decision making. In Matthews and Lally's (2010) work, John Dewey was positioned as the modern-day originator of the critical thinking discipline, in which a person's belief systems are consistently checked through the practice of *reflective thinking*. This type of thinking involves deliberate reflection on beliefs and supposed knowledge positioned against other sources of information that may prove or disprove held perceptions. Schön (1983a) extended Dewey's theories in the realms of teaching, nursing, and medicine that encouraged reflective focus within one's profession.

Critical Thinking and Transformative Learning

Referencing the connection of the role of critical reflection in transformative learning, Merriam, Caffarella, and Baumgartner (2007) cited Mezirow (2000) and concluded that there are three types of reflection, namely: a) *content reflection*, thinking about the actual experience; b) *process reflection,* thinking about ways to deal with the experience; and c) *premise reflection*, which involves examining enduring beliefs, socially constructed assumptions, and values. A component of transformative learning is indeed critical thinking. Critical thinking is part of a conduit that allows one the capability to begin transformation. Remove critical thinking and one has a component lacking that will prevent the transformative learning process. Here, we can attach the transformative learning lens of adult learning through which we can peer into the activities of critical thinking (Mezirow, 2000).

The models of transformative learning espoused by Mezirow (2000) and Brookfield (1995) have similar events that cause one to reflect. These events are categorized by a "disorienting dilemma" and a "trigger." A key linkage between the models is a persistent call to think critically about one's experiences and actions. This includes awareness that we have a "habit of mind" and that adjustments happen either incrementally or in one fell swoop (Merriam et al., 2007). Elias (1997) drew further on the transformative process under the development of a "conscious I," which is the capability to exercise critical reflection as an imperative to transformative learning. King and Kitchener's (1994, 2002) reflective judgment model pulled from the work of Perry (1970), who formulated seven stages of development concluding with the use of critical

reflection. The critically thinking professional who develops within the focus of this phasic model will determine readiness to engage in critical reflection at the most mature stage of this model.

The critical thinker utilizes the process of transformation or the reorientation of assumptions to create new ways of perceiving one's environment (Mezirow, 2000). These transformations occur in either epochal or incremental transitions that may involve objective (task-oriented) or subjective (self-reflective) reframing views. In objective reframing, points of view are changed when we become critically reflective of the content of a problem or the process of problem solving. Habits of mind are transformed when we become critically reflective of the premise of the problem and redefine it. In subjective reframing, we become co-authors of the cultural narratives with which we have been mentally inscribed (Merriam et al., 2007).

Kegan and Lahey (2001b) explored the complexity of strongly held assumptions that are persistent and create an obstructive path for the one wishing to engage in critical thinking that can lead to transformative learning within an occupational setting. An individual can at once have interest in the possibility of transformation while at the same time be interested in preventing that change. They entertained the idea of a metaphorical immune system that causes one to resist options for change and to carry on down the same path of failure to surmount challenges. The successful praxis of getting past the "big assumptions" is critical reflection that questions the origin of the strongly entrenched beliefs of the critical thinker. The added understanding that closely held perspective and assumptions come with varying levels of emotional attachment indicates that personal interviews would yield specific data concerning the underlying phenomena of what

happens emotionally as the participants undergo the process of critical thinking in the workplace. The participants are guided to take up a position outside of their assumptive world. The act of facilitating this guided position-taking yields emotive data linked to the struggle of both identifying and breaking through strongly held assumptions (Basseches, 2005). Engaging in critical reflection can create discomfort and dissonance in the individual participating in critical reflection (Brookfield, 1994; Dewey, 1933; Reynolds, 1999). Getting to the elemental components that help to describe what is happening with a critical thinker closely relates to Brookfield's (2012) causal assumptions.

Critical Thinking and Critical Theory

Another lens of critical thinking stems from the domain of critical theory that has a definite bearing towards social justice, which is facilitated by means of critical conversations, collaboration, and reflection on the activists' own experiences (Horton, 2003). Creswell (2009) noted that the range of influence that critical theory affects includes helping people to transcend the boundaries of race, class, and gender. It is this researcher's expectation that these individual stories of transcendence may be described in the personalization of the critically reflecting professional. Guba and Lincoln (1994) expanded and deepened the list of critical thinking involved in social action by including "neo-Marxism, materialism, feminism, Freireism, participatory inquiry, and other similar movements" (p. 23). Existing literature reviewed by this researcher on critical thinking focused primarily on the process of "doing" critical problem solving and a lesser degree on "experiencing" the process (Jordi, 2001; King et al., 2002; Lyons, 2010; van Woerkom, 2010; White et al*.,* 2006). Freire's (2010) sensitivity to avoid the hegemony of

"banking" thoughts and ideas into students and rather "problem-posing" and "conscientization" to better understand the critical thinker's role within a social setting is an example of critical thinking utilized within critical theory. Sheared and Sissel (2001) reveal that a leading Marxist thinker, Antonio Gramsci (1891-1937), coined the term *hegemony* to call to mind political and economic dominance of one social class over another. The hierarchy of the employee/employer relationship is where this dominance is practiced, for instance, under the guise of process improvement that is really a "cover for manipulation and expansion of managerial pejoratives."

Guba and Lincoln (1994) uncovered the humanity or personalization of thinking as it relates to any paradigm that an individual is tasked to work with. Inevitably, an individual critical thinker's own values, constructs, beliefs, and views affect what reality "really is" and cannot be seen except through a "value window." This "value window" concept is of interest to this study as it shows underlying issues that critical thinkers must contend with since a professional engaged in his/her occupation will receive certain values, constructs, and beliefs based upon his/her employment criteria.

As seen above, it appears that practitioners of critical theory reflect a concern and remain aware of power. The awareness may be one of the factors that begin the process of upsetting the balance of power. A paradigm choice from a person in power may speak to a social-political predisposition that may be used to wield power effectively in eliciting a particular set of predicted responses from a group of subjects that satisfy a desired outcome. Since the very nature of critical theory is to question status quo and to bring about consciousness for liberation, it should be noted that those who are in authoritative positions are always expressing power over others (Freire, 2010).

Brookfield and Holst (2011) uncovered truly radical approaches to planning educational programs that are not based upon establishing techniques, but on love. They lean heavily upon the ideals of both Horton (2003) and Freire (2010) in that a teacher should treasure and respect the experiences of his student and to first love them. Horton and Freire leaned heavily upon the conceptualization of Che Guevara's beliefs that love must first be established in order to help free one from his oppression. Brookfield and Holst (2011) cited love and empathy being at the core of the civil rights movement that had central figures including Malcolm X and Martin Luther King, Jr. Love and empathy are summoned as the motivational force that caused John Brown to take action to relieve slavery. Citing these historic figures factored strongly into the intent of this study and the research to follow because many viewed King and Malcolm X as decidedly different from each other in their ideology. Since both men were leaders who were engaged in civil rights activities, it would be of interest to know how two distinct thinkers experienced critical thinking from the same general profession. How would they describe the ways in which they experienced critical thinking? What other things were they experiencing when they were thinking critically? Each was part of a religious institutional thinking that concentrated on civil liberation. How did their profession separate them in their critical thinking from those in other professions, say military or corporate?

Critical Thinking Within an Occupational Context

As previously stated in Chapter I, the initial step of the four-step process of utilizing critical reflection, as enumerated in the work of White et al. (2006), is referenced to situate the questions concerning the effect that one's occupational

requirements and expectations have on their ability to think critically in an uninhibited way.

After first establishing the importance of critical thinking, Brookfield (2012) noted, "This is one of the limits we should acknowledge about critical thinking. It cannot be considered separately from values and commitments, whether they be moral or political" (p. 31). Since Brookfield held that one cannot tease apart the critical thinker from the influence of the critical thinker's values, morals, and "religious commitments," it must follow that these reflect a distinct pattern of thought for that individual and even influence his or her critical thinking process. If these commitments are then bound to a profession, then what impact does this have upon the experience of critical thinking? This study sought information regarding the personalized phenomenological experience of the critical thinker to ascertain if there were perceivable similarities or differences in how these individuals experience critical thinking based on a practice or profession. The objective of this study was to explore the phenomenological nature of what professionals experience as they are engaged in critical thinking.

The field of critical thinking theorists and practitioners reviewed for this study is replete with records of workshops, seminars, and conferences, wherein the facilitation and anecdotal documentation of the participants' experience and behavior is captured in print (Bradbury et al., 2010; Brookfield, 1994, 1995, 2012; Fook & Gardner, 2007; Harris et al., 2010). The aforementioned references humanize the experiences of the critical thinker while they are in seminar practitioner sessions, being interviewed by the host of such sessions, or used as a general awareness prompt for those wishing to conduct such sessions. Brookfield (1994) set forth an extensive phenomenography of 311 adult

educators concerning their experience with critical reflection and gains insight into five main themes culled from their journals, conversations, and autobiographies that include impostorship (unworthiness to participate in critical thought), cultural suicide (risk of exclusion), lost innocence (from certainty to multiplistic reasoning), roadrunning (incremental struggles with new modes of thought), and community (support for those engaged in the critical process). The objective outlined for this study, of gathering and documenting the phenomena of the critical thinker, matched with Brookfield's (1994) study interest, but this research has a broader focus in choosing professionals across various professions and a narrower focus to enumerate barriers to critical thinking that are related to their specific profession.

Because the work of Bradbury et al. (2010) crossed multiple disciplinary and professional boundaries, they found that this caused some contradiction in understanding among their program participants that hailed from the different practices. They explored the contradictions by means of one-day seminars to engage critically with the seminar attendees in both a theoretical and empirical research format to inform practice for professional learning. The focus of Bradbury et al. (2010) in the above-mentioned work was the education, health-care, and social-care professions. Bradbury and associates considered reworking the "critical" in critical reflection. They noted that

> individuals are likely to change workplaces several times throughout their professional careers, or at least their workplaces will change around them. Therefore, individuals need to learn ways of learning which are transferable between workplaces, in addition to actions which are context relevant. (p. 39)

Here, attention is displayed to the significance of learning via critically reflective thinking that has relevance directly related to one's profession.

Bradbury et al. (2010) warned that a person's environment might change, or one may change his/her environment with a need to re-assimilate what was already learned so that it can be used in a new and unfamiliar setting. The relevance of one's profession and the utility of his/her critical thinking facilities were put together for further exploration. This researcher's interest was to gain an understanding of the phenomenological experience for the participants who were enrolled in the seminars of Bradbury and associates. Focusing on education, health-care, and social-care professions as distinct industries introduces the awareness that individual professions impact differences in operationalizing critical thinking. However, Bradbury et al. (2010) did not persist in explaining what those differences entailed or how knowing them can benefit the critical thinker attending a seminar where a facilitator is aware of the trends, pitfalls, and roadblocks that may be pertinent to his/her profession.

Drago-Severson (2009) made use of critical thinking in the context of teachers and administrators in educational settings under the auspices of *collegial inquiry* and *reflective practice*. The former is separated from the latter by means of requiring dialogic engagement of two or more participants. Osterman and Kottkamp (1993) recommended that a reflective practitioner needs also to be aware of her emotional and intellectual well-being as a major concern in her growth and learning. Bound up in the self-awareness of an individual's emotional and intellectual state would be the common focus of the critical thinker to surface her own assumptions and how these assumptions would inform and direct behavior. Because the most basic assumptions that guide our actions are inseparably tied to the very persons we are, Kegan and Lahey (2001a) termed these as "big assumptions" as they so accurately represent our perceptions. They inform our

actions as such a comprehensively and deeply ingrained part of us that we cannot easily see beyond them. Drago-Severson (2009) approached the challenges of surfacing these assumptions by not only being self-aware and reflecting on an individual level, but by having a dialogic interaction that comprises *collegial inquiry* with workmates who are seeking like goals and desires to improve teaching capabilities. Engaging in reflective practice of this sort opens one to a deeper understanding of behavior and provides an ability to reevaluate one's own thoughts, values, and actions with the ability to transform.

Fook and Gardner (2007) focused attention on the critical thinker in her professional setting who is challenged by unpredictable environments where context changes regularly and there is a lack of pertinent professional training (p. 66). These professionals feel that they often need to "make it up" on the spot or draw on personal resources or intuition. By observing participants who attended Fook and Gardner's critical thinking seminars, the authors made themselves aware of the tendencies of reticent and risk-adverse behaviors that must be addressed before they can host meaningful sessions. Before commencing the session, Fook and Gardner modeled vulnerability by introducing a personal critical incident that showed their own weaknesses to help allay participant anxiety. This information was pertinent to uncovering or realizing the phenomena that are associated with the critical thinker who practices critical thinking within her profession. Here, in the description of the critical thinking practitioners' environmental challenges was a specific statement about what may be a barrier to that critical thinking. Yet, again, the barrier was not specific to a particular profession. What connection exists between the environmental challenges to the critical thinking of the professional and his/her profession? If that professional was removed

from his/her existing environment into another, what challenges to critical thinking would remain the same based on the unchanged profession but new venue? While this phenomenon is situated in an environment where the critical thinker is placed with other newly introduced professionals, and this may not mirror the normal environment under which he/she engages in critical reflection, the responses that are noted add to the phenomenological record of the critical thinker's behavior. Missing from these data, for the focus of this study, were the participants' specific records of what particular blocks were experienced during their episodes of critical thinking.

Gambrill and Gibbs (2009) directly addressed the role of critical thinking in relation to one's profession. The intent of the authors was to induce an *evidence-informed* practice that was mindful of continuous growth by consistently and carefully examining the beliefs and actions that a professional should be aware of while comporting their work-related responsibilities. The challenges illustrate issues with critical thinking in relation to one's profession where fallacies can be perpetuated by means of *anchoring* and *insufficient adjustment*. The anchoring is locking in on (and not moving away from) initial impressions concerning data surrounding a problem or something that is being addressed. If the anchor is too strong, then the ability to adjust impressions concerning the problem will be affected, thus leading to insufficient adjustment.

Phenomenological Theory

This researcher considered two primary schools of phenomenology: descriptive (transcendental) and interpretive (ontological). The first school of phenomenology is descriptive and Edmund Husserl first placed it in the qualitative research arena. Husserl

(1965) asserted that the description of the experience is born of an application of transcendental phenomenology that makes meaning of a lived experience through reflection on observable and conscious data. Meaning is derived by means of a scientific logical deduction of elements from the experience that are not validly attached. Heidegger (1962) positioned the second school of phenomenology known as hermeneutics. In this instance, researchers grapple with the lived world experience by means of interpretations. Although Heidegger was at one time trained by means of Husserl, this difference became one of the primary lines of separation between the two theorists. Husserl relied heavily on deduction (and later reintegration) of internal and external data, and Heidegger used induction that was based upon hermeneutics to pay attention to the whole phenomenological event, which includes the researcher along with the researched (Keller, 1999).

Phenomenological Posture of Edmund Husserl

Regarded as the founder and father of modern phenomenology, Husserl proposed that it was necessary to bracket out the outer world with personally held presuppositions in order to approach the essence of a phenomenon (Jones, 1975; Klein & Westcott, 1994; Osborne, 1994). He developed his research approach by regarding the pursuit of essence gathering with the mind and intentionality of a mathematician. The bracketing, or holding aside of one's presuppositions, influences, experiences, and beliefs, are part of phenomenological *reduction,* which sets aside the natural influences of the researcher or observer so that they are moved outside of the observed phenomena. Klein and Westcott (1994) assigned three steps to this process: exemplary intuition, imaginative variation,

and synthesis. In step one, *exemplary intuition,* the researcher selects phenomena to be held in the imagination. Step two requires the researcher to take the held phenomena and describe similar experiences in her imagination. In step three, the researcher goes through an integration of the various experiences to reveal an essence. Given (2008) noted a four-step process that includes:

1. an enumeration of the actual brackets the researcher will place around the phenomenon;
2. understanding the nature of the internal and external suppositions, experiences, and beliefs that are suspended by the researcher;
3. the temporal structure the bracketing is situated within; and
4. the reintegration of data generated from the bracketing process.

In the first step, the researcher is conscious of how *porous* or *solid* the brackets are that were utilized. The question is: how well defined is the delineation between the researcher's beliefs, assumptions, and theories, with an understanding of how these may impact the phenomenon in its natural state (Given, 2008).

The second step is basically a cataloging of the assumptions, suppositions, and experiences that are held apart from the phenomenon within the brackets. The two ways of placing these would be internal (things held by the researcher) and external (associated with the phenomenon's history, definition, etc.). The researcher should be able to speak clearly to each of these bracketed items.

The third step is the temporal structure that determines a timeline for the bracketing period. There should be a well-defined start, duration, and conclusion to the bracketing. Examples of timing could be a researcher who chooses to begin bracketing

during the conceptualization, another may begin during or before the literature review, and others may start this process during data collection.

The fourth and final step would become evident during the time the researcher is ready to release the above-mentioned items held in the bracket back into the greater phenomenological research. Utilizing the mathematical notions that are evident in the Husserlian framework, the releasing of the bracketed materials would have an effect on the composite research, just as applying the numeric values within the bracket to the calculation outside of the bracket would have an effect on the final value.

Phenomenological Posture of Martin Heidegger

As Heidegger (1962) began to make meaning of phenomenology, he began to realize a foundational issue that is rooted in the understandings and assumptions that entail the philosophical tradition of what constitutes humans or any entities as "Beings." Since this very core understanding of "Being" was never set forth in the Western philosophical traditions or by the fathers of that tradition, then the whole tradition must be destroyed. Throughout Heidegger's career, his publications and lectures addressed Descartes, Aristotle, and Husserl by challenging the substance of their arguments from the standpoint of his belief in an ontological phenomenology framework. He advised that through the ontological phenomenology frame, there is really an inversion of the Husserlian frame that is transcendental. In other words, the very apprehension of being that is so dutifully sought out, acknowledged, and separated by the Husserlian frame should, from Heidegger's view, be embraced and eventually interpreted by hermeneutical awareness (Macann, 1993).

Heidegger (1962) did not share Husserl's view of a researcher's capability to fully bracket out the assumptions, presuppositions, and assertions from their phenomenological research, and it is therefore important for a researcher to be transparent concerning their views as they carry out their research. Heidegger's religious text training in hermeneutics gave him a perspective of all things being open to interpretation. He abstracted the human experience of being in the world with the fundamental process of experiencing a construct of our own experience, comprised of each person's judgment and perception that informs them of their reality. Heidegger also held that a focus on a person's *situatedness* or how he exist in the world, what his background is, and what his life experience is would be affected by what is brought into the purview held by a researcher. Heidegger illustrated this by noting states of consciousness and objects of consciousness, and how the two can at times be seamless, as when an individual holds a hammer in hand and it becomes an extension of that individual.

Compounding the *situatedness* that a researcher must manage is also the concept of *pre-understanding* that Heidegger (1962) defined to be the meanings attached to cultural understanding we are all born into, that hold a person so that he cannot view things outside of the *pre-understanding*. As a researcher embarks upon interviews and other forms of data collection, the experiences and cultural frame that are embedded in the researcher's being must be understood to have an effect on the outcome of the research.

Phenomenological Posture of Maurice Merleau-Ponty

Maurice Merleau-Ponty (1908-1961) attended École Normale Supérieure as a student and then as a teacher before he became a professor at the College de France. A mainstay of Merleau-Ponty's (1962) phenomenology is explained in his work *The Phenomenology of Perception.* This contains the influences wherein he explores the concept of *both* that is used to meld together the opposing philosophies of Heidegger and Husserl. The concept of *both* forms the glue to bind the philosophy of essences posited by Husserl and a philosophy of existences as put forward by Heidegger. *Both* manages the tension between the Husserlian notion of reduction and the Heideggerian recognition that the world is ever present. Merleau-Ponty does not aim to resolve the differences but finds utility in using the transcendental phenomenology of Husserl and the ontological phenomenology of Heidegger.

From Merleau-Ponty's (1962) research spring four themes of phenomenology: *description*, *reduction*, *essence,* and *intentionality*.

Description has emphasis on the lived experience. Husserlian purists follow a transcendental method and are sure to separate the pure description away from its interpretation (hermeneutics); they therefore would not include interpretation within the process of describing (Giorgi, 1985). van Manen (1997) uses *description* to include both the interpretive or hermeneutic as well as the descriptive or pure phenomenological sense. "A good phenomenological description is collected by lived experience and recollects lived experience—is validated by lived experience and it validates lived experience" (p. 27).

Reduction, as it began, was an idyllic process posited by Husserl that worked in a systemic way to realize and suspend one's own experiences and total consciousness so as

to not contaminate the object of phenomenological inquiry (McCall, 1983). The demand of Husserlian transcendental reduction was not accepted by either hermeneutic or existential phenomenologists simply because of the implausibility of completely removing consciousness from the living being. Husserl's (1970) description of *lifeworld* (Lebenswelt) was an attempt to refine his previously described transcendental separation by defining a phenomenological distinction between our theoretical attitudes of life and what is our natural pre-theoretical attitude to life.

Merleau-Ponty (1962) describes reduction on several levels. On the first level, an immense sense of wonder is awakened to the world that causes one to ask questions. On the second level, one overcomes personal predilections and subjective feelings. On the third level, the individual takes away known theories and concepts and allows the phenomena to stand on their own. On the fourth level, the aim is to set aside details and view the universal nature of the phenomena, seeing the whole process of reduction not as a Husserlian end in itself, but as a means to an end.

With *essence,* van Manen (1997) returned to the Greek etymology to describe the inner nature or true being of a thing: to be. *Essence* gets to what makes a thing what it is. Merleau-Ponty (1962) connected *essence* to the very study of phenomenology that is related to perceptions and consciousness. Phenomenology places *essences* as a means to understand the starting point of who we are as beings. Merleau-Ponty (1962) made an interpretation of the Husserlian lens of separating essences from the observed by the observer as primarily focusing on language and words used to define meaning. The *essence* is the recognition that there is a mixing of one's own universal consciousness with a particular consciousness. In this way, *essence* is tied to *reduction* because the rigor

of being conscious about the world and one's own view needs to be accounted for to get the best representation of what is concerning the phenomena under study.

Finally with reference to *intentionality,* van Manen (1997) associated every conscious experience as being directed activity. If one is thinking, understanding, imagining, planning, then one is behaving with *intentionality*. Merleau-Ponty (1962) expressed the revealed world as already being "there" and also what is experienced in one's life involving desires, how one evaluates the world, what one's emotions are, how things are perceived, what objective knowledge is, and how language is utilized when translating that knowledge.

Chapter II Summary

Chapter II began with an introduction that positioned John Dewey as the modern-day father of critical reflection/thinking as a practice. Fook, Gardner, Brookfield, White, and others transported critical thinking facilitation into the healthcare and teaching arenas. While the literature is replete with connecting critical thinking to the workplace, there is a dearth of recorded knowledge concerning the phenomenology of critical thinking connected to workplace barriers. Finally, the phenomenological theory of Husserl, Heidegger, Merleau-Ponty, and van Manen were presented to situate the research lens of this study.

Chapter III discusses how van Manen's phenomenological methodology was applied to this research and outlines the research process.

Chapter III

THE PHENOMENOLOGICAL METHOD AND RESEARCH PROCESS

This study was concerned with how a person experiences critical thinking in relation to his/her profession. The intent was to understand what if any inhibitors, barriers, or impediments to the process of critical thinking were experienced in relation to the guidelines, standards, and policies of a person's occupation.

This chapter considers matters related to research design, study sample, data collection and analysis, phenomenology theory and application, validity and reliability, and research limitations.

Phenomenological Methodology of van Manen Applied

Elucidating the distinction between *method*, *technique*, and *procedure*, van Manen (1997) related *methodology* to the "philosophic framework, the fundamental assumptions and characteristics of a human science perspective." *Techniques* are both "theoretical and practical procedures" that can be created to facilitate a particular research methodology. *Techniques* are associated with an "expertise in a professional or technical sense." *Procedures* are the rules and standards that are core to research science that include protection of human subjects, selecting subjects, interviewing procedures to assist in producing helpful and reliable data, and special instruments to assist with properly

situating the interview. Method is described as a "way" or "mode" and is closely associated with the theory behind the research (pp. 27-28).

van Manen (1997) set the stage for this research design which includes the phenomenological study of the critical thinking episodes of those actively reliving their experiences by means of writing and interviews. van Manen's hermeneutic phenomenological research path specifies six activities:

1. turning to the nature of lived experience;
2. investigating experience as we live it;
3. reflecting on the essential themes;
4. the art of writing and rewriting;
5. maintaining a strong and oriented relation; and
6. balancing the research context by considering parts and whole. (pp. 30-31)

Turning to a phenomenon, in the case of looking at professionals who experience barriers to critical thinking situated in a professional's occupational context, means that this researcher was immersed in the people and the thoughts they shared (van Manen, 1997). This researcher was connected to this study by his personal interest in understanding the experiences of others. With *investigating the experience as lived* is the intentionality of returning to the experience of the researched, as Merleau-Ponty (1962) postulated, and actually involves learning the essence of that experience again. *Reflecting on the essential themes* is the process of distinguishing between "appearance and essence, between the things of our experience and that which grounds the things of our experience" (van Manen, 1997, p. 32). Here, attention is paid to our own personal attitudinal disposition and the essence of what is being considered. Gadamer (1975)

highlighted and developed themes associated with *the art of writing and rewriting* by enumerating how speaking, thinking, and writing share the same etymology. The researcher needed to think in terms of clarifying and understanding what the lived experience is. The pitfall of straying from the original focus is the reason the admonition is given in *maintaining a strong and oriented relation.* The idea of full and uninterrupted engagement with our object of research is encouraged. An obvious application of this would be to avoid distractions to questions that are not part of the central question related to the research.

Finally, concerning *balancing the research context by considering parts and whole,* van Manen (1997) stated, "It also means that one needs to constantly measure the overall design of the study/text against the significance that the parts must play in the total textual structure" (p. 33). Here, there is a tension between looking on the overall study basis and looking at the components (hermeneutic circle) that combine to make what is visualized overall. The components must lead to and be in existence to inform what the overall landscape is, and the overall landscape informs the components.

Research Design

Robson (2002) described a framework for research design that includes five components that were utilized to situate this research:

- *Purpose(s):* What is the study trying to achieve? Why is it being done? Is it hoped to change something as a result of the study?
- *Theory*: What theory informs your study? How will you understand the findings? What conceptual framework links the phenomena you are studying?

,

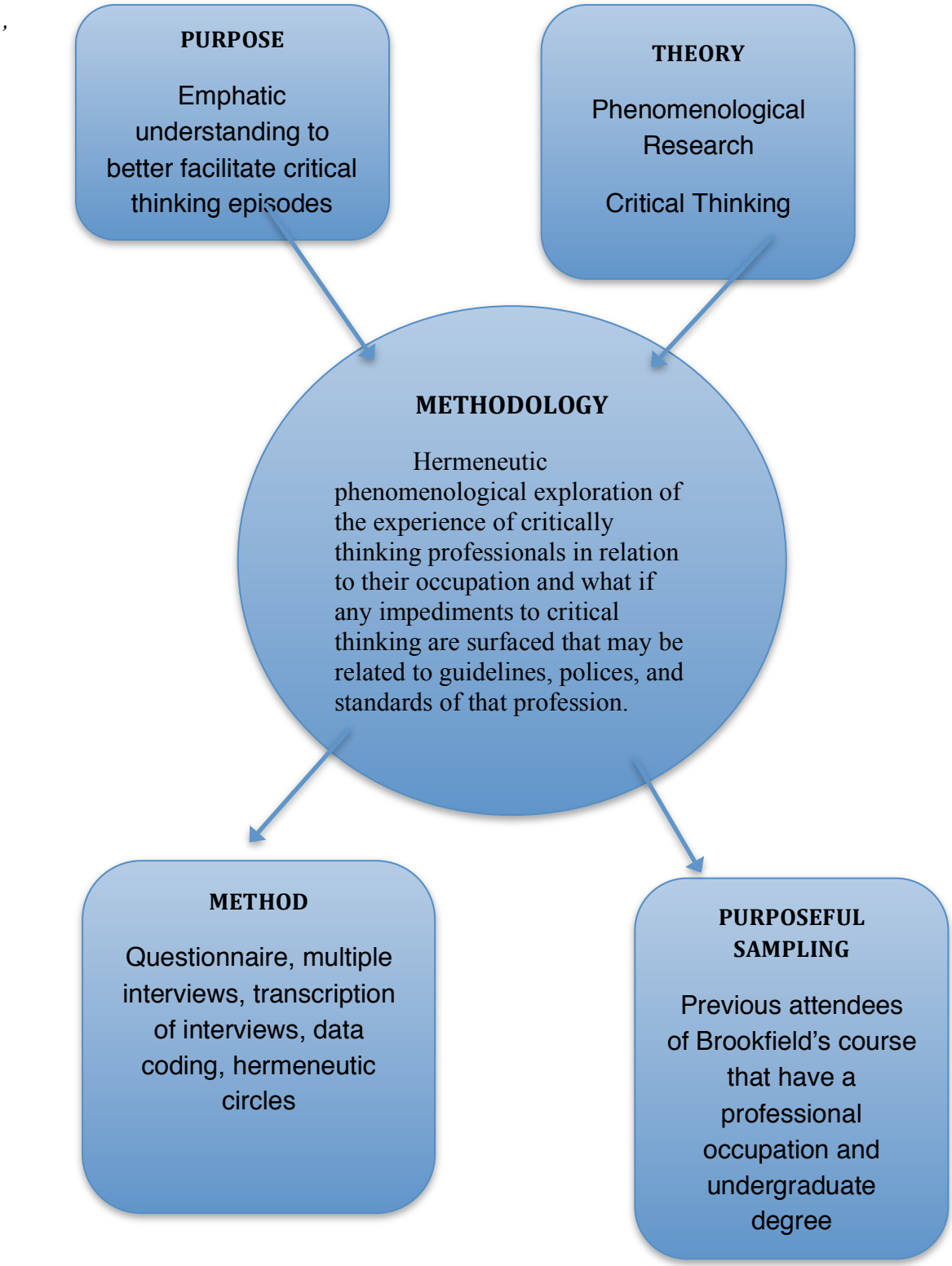

Figure 1. Conceptual diagram

- *Research questions*: To what questions is the research geared to providing answers? What do you need to know to achieve the purposes of the study?
- *Methods*: What specific techniques will you use to collect data? How will the data be analyzed? How do you show that the data are trustworthy?
- *Sampling strategy*: From whom will you seek data? Where and when? How do you balance the need to be selective with the need to collect all of the data required? (p. 81)

The purpose of the study was to gather an understanding of how a professional's occupation may inform how he or she experiences critical thinking. Understanding what connections there are may lead to a specific understanding about particular blocks to the critical thinking process that are bound to an individual's specific discipline and work responsibilities.

Table 1 below illustrates how the research questions led to a need for information that was driven by a data collection and analysis method.

Research Sample

The sampling size was initially targeted for 10-13 professionals. The invitation went out to 226, with 8 responding to participate. Of the 8 who responded, 6 participated. The invitation to participate in the research and the selection of the participants were both purposeful and criterion-based upon attendance to one of Dr. Stephen Brookfield's courses on critical thinking (Maxwell, 2005). While having participants who attended one of Brookfield's courses (Developing Critical Thinkers or Critical Theory and Adult Learning) helped to situate a common definition of critical thinking, it also limited the

Table 1

Information Needed and Processed

Research Questions	Information Needed	Data Collection Methods	Data Analysis Methods
How does a person experience critical thinking in relation to his/her profession? What are the inhibitors, barriers, or impediments to the process of critical thinking that he/she experiences in relation to guidelines, standards, and policies? Under what organizational conditions is critical thinking best fostered? What would an organizational culture look like that fostered critical thinking?	First-hand responses from the proposed participants. Understanding if the participants had a connection between blocks to critical thinking and the requirements of their occupation.	Internet survey. Two rounds of in-person interviews not to exceed 90 minutes each. Follow-up member check for validity. Voice recordings. Journal and field notes.	Read responses and confirm if the participant claimed using critical thinking in his/her work environment. Use of specialized tools to analyze, code, and synthesize the transcriptions of the interviews. Field notes provide a context with which to frame the participants' responses.

pool size of possible study participants. The aim, as stated at the onset of this chapter, was to uncover the depth, not the breadth of the phenomenon of the lived experience of a critical thinker in an occupation. Two separate interviews lasting between 45 and 90 minutes were conducted with each participant. Each interview was captured with digital audio recording. The audio recordings of the interviews were then sent out for professional transcription.

Maxwell (2005) argued that using the term *sampling* creates problems for qualitative research because this term is more readily associated with statistical probabilities found in quantitative research. His argument continues that qualitative research calls for neither probability nor convenience sampling, but for "purposeful selection," "criterion-based selection," and "purposeful sampling" (p. 88). The thinking here was to be deliberate about the selection of the six participants to ensure that they were the best ones to inform answers to the research questions. This researcher's interest was to select from a group of participants who:

- must have attended at least one course on critical thinking hosted by Stephen Brookfield;
- must have at minimum completed a bachelor's degree;
- must have worked in a professional setting for a minimum of two years; and
- must have been aware of using critical thinking (as defined by attendance to any of Dr. Brookfield's critical thinking courses/seminars) in their work environment.

These interviews were arranged to take place with the informants in a private space outside of their work environments.

Research Methods and Techniques

Data Collection Survey Questionnaire

Concerning data collection methodologies, Maxwell (2005) stated, "There is no way to mechanically 'convert' research questions into methods; your methods are the means to answering your research questions, not a logical transformation of the latter" (p. 92). To gather participants, this researcher made use of an online questionnaire that can be found in Appendix D. It was designed to surface which potential participants utilized critical thinking episodes within their practice. Included in the questionnaire were queries concerning the potential participants' highest level of education, a description of their occupational roles and responsibilities, and their view of using critical thinking in their occupations. Robson (2002) provided guidance when managing surveys to use standardized questions with descriptive prompts for best results. The intent should be to know the kind of information one wants to collect. The questionnaire focused on whether the participants had finished a minimum of a bachelor's degree or above, if they were in a professional field, if they were given to critical thinking episodes in their place of work, and if they had attended a seminar or course work with Stephen Brookfield.

Data Collection Interview

The researcher was aiming to have 10-13 participants, but a total of 6 participants were qualified and selected. As this researcher moved from written responses located in the questionnaire to interviewing participants, there was a deliberate intention to make space for the dynamic nature of being face-to-face with these participants. Kvale and Brinkmann (2009) noted one phenomenological method that can include "bracketing"

which allows the placement of common-sense and scientific foreknowledge about the phenomena in parentheses to foster unprejudiced descriptions of the stated phenomena. Instead of attempting to completely remove one's own assumptions and preconceptions, van Manen (1997) promoted a methodology that forthrightly states one's assumptions and preconceptions. This researcher's own assumptions and preconceptions were previously stated in Chapter I. By means of two detailed phenomenological interviews and a follow-up member validation, the data were collected.

The interviews occurred in person at quiet lounges or conference rooms. The member checks occurred via email and over the phone, and they included each participant reviewing the transcript for accuracy and having a chance to comment on or clarify meaning. Creswell (2009) encouraged that even if video or audio recordings are done, some form of note taking should be embarked upon as a backup to major electronic failure and as a means of augmenting electronically recorded data. This researcher used computer-recording software and took minimal notes so as to not distract the participant and to pay close visual attention to the relived experience of the participant. Cloud-based secure backups were used for the audio recordings and transcripts.

The initial interview was designed to ascertain the description of the "lived experience" of the professionals, as they give space to critical thinking while engaged in work. The exact questions can be reviewed in the interview protocol found in Appendix C. Included in the initial interview was a request for the participants to describe their roles and responsibilities over the last two years, a time of great importance when they engaged in critical thinking within their work environment, what circumstances surrounded this episode, the issues that drove them, and what they concluded from the

episode. The second interview sought to ascertain a deeper understanding of the participants' experiences, including a description of what, if any, kind of constraints or hesitations were presented during the episode of critical thinking related in the first interview. An effort was made to get a description of the barriers that were present during the critical thinking episode. At the conclusion of the interview, the participants were asked to recount known policies, standards, and guidelines that were most prominent and utilized on a day-to-day basis. Member validation took place after the second interview was completed. The objective was to validate the previous two interviews with the participants to ensure that accurate data had been captured. In addition to these previously mentioned means of data gathering, this researcher made use of memos as a supplemental means to gather data in drawing upon a narrative that described the mood, disposition, and environment and where the interviews took place. These memos also contained descriptive information about each participant's background (Maxwell, 2005).

Looking for ways to use normal language is important to understanding the participant, the researcher, and the ability to provide an understandable output for the findings. Having openness to new and unexpected material allowed the experience to be "what it is" from the researcher's perspective and can add to new thematic descriptions that come from the face-to-face interviews (van Manen, 1997). Relating an experience includes more than using a verbal language. Communicating an experience includes using facial expressions, tone of voice, and posture, given the realization that nonverbal communication may lead to further enriching the collected data. Follow-up interviews were conducted after the initial interview was completed to further develop and clarify the participants' answers. The interview guide that was utilized can be found in Appendix

C. It was comprised of open-ended questions to surface and explore the phenomena. The researched used a hermeneutic phenomenological cognitive approach based upon qualitative research by interviewing a total of six professionals who held a minimum of an undergraduate degree and who attended and completed a seminar or coursework featuring critical thinking or reflection and conducted by Dr. Stephen Brookfield. By means of an online survey, this researcher sought to ascertain the participants' interest and familiarity in using critical thinking within their profession.

The method selected for recording the interviews was voice recording. Included in the consent to participate in the research was a notice about recording the participating informants' responses to the interview questions (see Appendix B). Kvale and Brinkmann (2009) described a transformation of going from spoken to written language that comes out of the process of transcription. Getting the interview voice recorded allows for replaying it at the researcher's own pace. A series of two interviews were conducted with the six participants. Each interview was no more than 90 minutes in duration. A follow-up member check was done to verify and clarify the validity of the data collected.

Data Validity and Reliability

Maxwell (2005) introduced validity that is specific to qualitative research, not as a concept that attempts to provide a boilerplate solution to resolutely prevent invalid data, but rather to foster awareness regarding "validity threats" (p. 106). Quantitative research typically provides some means of building statistical controls into the design as a means of preempting threats; by contrast, qualitative data tend to exceed many scientific or logical controls. While Maxwell (2005) disparaged "bracketing," "member checks," and

"triangulation" as the author of a proposal viewing such elements as "magical charms" and "supernatural powers" (p. 107), he nevertheless furnished encouragement to be sensitive to bias (researcher beliefs, theories, and perceptual "lens") and reactivity (researcher influence and informant variability) (p. 108). This researcher saw wisdom in using the awareness of bias and reactivity as a tool to activate when engaging in bracketing, member checks, and triangulation. As an example, this researcher expected a link between blocks in critical thinking and the demands one has with specific professional requirements. Knowing this bias creates awareness that the question design should leave as much of an open-ended response as possible and that secondary questions should be asked in a way that helps to avoid leading the informant—thus skewing the validity and reliability of the data.

The transcription process involved verbatim dictation of the digital voice recordings made in the interview. Careful attention was paid to the accuracy of the translation by understanding the context of each transcription and then offering transcript copies to the participants and obtaining their responses to their accuracy.

To foster validity, this researcher made use of hermeneutic circles of visualizing the components of the research as related to the whole and these components were attended to iteratively. Themes and new insights emerged by considering the research questions, the literature, and the interview questions as they related to the interpretations and repetitive member checks, verifying the accuracy of the two interviews, and journaling.

Data Analysis

Coding is one part of a three-pronged approach to data analysis that also includes memos and connecting strategies (Maxwell, 2005). This researcher made use of the online data analysis tool called *Dedoose,* which has the robust quantitative and qualitative ability to house and assist in analyzing transcripts. Memos assisted in keeping a stream of consciousness flowing to provide revealed insights and focus upon the research. These memos were ascribed to excerpts of transcriptions that were later identified as themes. The process of coding in qualitative research requires making new meaning of transcribed data and rearranging the data into new categories that aid in developing theoretical concepts. Maxwell (2005) stated that the categorization planning contains three containers that are "organizational," "substantive," and "theoretical" (p. 97).

Organizational categories are designed to predispose or situate a broad area of interest before the interview. These outcomes are easily predicted based upon the obvious assumptions of the area of research. *Substantive* categories emerge when a participant's concepts and beliefs are noted and are closely associated with the data, typically with headings and subcategories. *Theoretical* is the category for more abstract placement of data, as would come from theoretical frameworks previously chosen or inductively developed with new or unexpected findings. Chapters I-III contain theoretical frameworks that provided the basis for initiating the study, while Chapters VI-VII contain both original theoretical frameworks along with unexpected theoretical frameworks that arose with study findings.

This researcher made use of a journal to keep track of meaning making gained during the interviews, while continually updating understandings by rereading the literature framework. The placeholders described above were used in the data collection process that helped to set up placement of information in a categorical way. Pre-data gathering ensured that "organizational" themes were set up and preparation was made to capture and place new data in the proper categories.

Limitations

Participants of this research may find it impossible to distinguish between what blocks to critical thinking exist because of the policies, standards, and guidelines of their occupations and what blocks may be present due to their own "habits of mind" or what they may be predisposed to think, feel, and do outside of any occupational influence.

Empirical quantitative methods were not employed for this study and therefore external validity was neither sought nor established for this study to be representative of any statistically significant population.

Methods for Assuring Protection of Human Subjects

None of the participants' names were used or referenced during the course of this research or any related publication. Due diligence and care were taken to ensure that all shared information was properly coded so that personally identifiable information was obscured as related to participant identities.

Chapter III Summary

This chapter connected the phenomenological methodology of van Manen to the processes followed in this research. A conceptual diagram and a table referred to the research questions and what information was needed to answer them. Next, the research design, sample, and methods were discussed to illuminate how the research was operationalized.

Chapter IV introduces the participants and their work environment along with their awareness and definition of critical thinking.

Chapter IV

PARTICIPANTS' PROFILES: WORK ENVIRONMENT, AWARENESS, AND DEFINITION OF CRITICAL THINKING

In order to address the purpose of this research on how professionals experience critical thinking within a profession, the researcher sent out invitations to 226 previous attendees of at least one of Dr. Stephen Brookfield's seminar (Developing Critical Thinkers or Critical Theory and Adult Learning) to help situate a common understanding of critical thinking. Six were available and qualified to participate. The aim, as stated in Chapter III, was to uncover the depth, not the breadth, of the phenomenon of the lived experience of a critical thinker in his or her occupation. Two separate interviews lasting between 45 and 90 minutes were conducted with each participant and captured in digital recordings. The audio recordings of the interviews were then sent out for professional transcription.

What follows is an overview of the participants' demographics, a description of each participant's work environment, and an episode where the participants were mindful of applying critical thinking.

Demographics

The participants interviewed for this research were comprised of five women and one man. Two of the women described themselves as Asian, two White, and one Black; the man described himself as White. The incidental yet common connection between all participants was that they were all involved in a profession related to learning and or development. The youngest in the group was 31 and the eldest was 43. The work experience within each participant's field of practice ranged between 8-16 years. Four of the participants were involved in completing the requirements to receive a doctoral degree in adult education and organizational leadership. A fifth participant had completed her Ed.M. and the sixth participant was completing her Ed.M. in the spring of 2014. Demographic data are summarized in Table 2.

Meet the Participants

Lee

Lee has worked as an Arts Educator/Museum Educator/Teaching Artist in the New York City area for 14 years. She is a White female who is 38 years of age. Her various responsibilities included providing instruction for children ages 14-19. She is engaged in work towards receiving a doctoral degree in Adult Education and Organizational Leadership.

Lee's definition of critical thinking was as follows:

> It has the essence of solving problems . . . and thinking about them from many different angles. [She described the angles as being philosophical, psychoanalytical, pragmatic, scientific, and critical theory.] I would read books and be really interested in that, so I think that those ways of thinking have always

Table 2

Participants' Demographic Data

Informant	Age	Gender	Race	Employment	Years of Experience	Degree	Pursuing Doctoral Degree
Lee	38	Female	White	Educator	14	M.A.T. Art Education Ed.M. Art and Art Education	Yes
Ima	33	Female	Asian	Education Team Leader	8	Ed.M.	No
Dina	43	Female	Black	Talent Management	8	M.A. Business Education	Yes
Laren	38	Female	White	Coaching Consultant	15	M.A. Organizational Psychology	Yes
Hans	35	Male	White	Military Trainer	18	M.A. Adult Learning and Leadership	Yes
Kay	31	Female	Asian	Education Developer	6	M.A. Adult Learning and Leadership	No

> been the way I deconstruct ideas or make sense of ideas from when I was a teenager. I mean, I guess I always thought critical theory was higher-order thinking to solve problems, but I never realized that it had these different methods of attack, I suppose, to getting at a problem.

An episode when Lee was mindful of using critical thinking was as follows. She was tasked with formulating a program for the youth whom she supervised and trained. This required her to apply for funding from the museum benefactors in order to cover the expenses. Lee observed that she had a manager who "would deny it and try to make me not do it because it would cause her [her manager] to actually have to do more work." Lee further exclaimed, "My manager would have just thrown it under the rug and nothing would have ever gotten done." The funding benefactor who was located had a stipulation that required partnership with an approved organization on their list. The organization that Lee selected as a partner had the resources necessary to foster light on the African art study that was proposed. Since the project had strong dependencies on technology, the funding benefactor felt that the only way to go about accomplishing Lee's plan was to include an employee from her company that the benefactor had experience working with on other projects involving technology. The funding organization stated, "This is kind of weak. It's not strong enough and we want you to have [the technical expert] on this project. If you don't have [the technical expert] on this project, you're not going to get funded." Lee described the technical expert as someone she liked but who did not get along with her department. Regarding the relationship that the technical expert had with her department, Lee stated, "She doesn't get along with my department . . . because [my] department had always sort of been scared of technology." Lee also mentioned that the benefactor required her to read and make use of the principles within a specific book. Lee stated, "I didn't have time to read that book that they had. I started reading it but I had all

that other work. I didn't have time to sit down and really read the book that the [benefactor] had shown us as an example." Lee also related that the benefactor organization wanted her to be innovative. Regarding this, she said:

> I didn't really know . . . what does that mean? What does 'innovative' mean? Do you want us to be trendy or do you want good? . . . For me, from my perspective, I feel like I'm a really good educator and I can design a curriculum that gets the students engaged, but it may not necessarily be innovative.

Ima

Ima worked as a subject head in a school, managing a team of teachers located in an unnamed Asian nation. She is of Asian descent. Ima is 33 years old and has worked in her field for 8 years. She has worked in the ministry of education in her country. Ima holds an Ed.M. in Organizational Leadership.

Ima's definition of critical thinking was as follows:

> I think it is easier to use proxies to define what critical thinking looks like to me. So maybe if I use things like reflecting . . . it's not critical thinking, it's a proxy for it, but I can see it. So if I have a practitioner who is reflecting on their work, who looks at the consequences as well as the rationale behind why he/she wants to do something. What is my philosophy for doing something? And whether or not what was done matches that philosophy. If it does not match that philosophy, why am I still doing it? What are my assumptions going in? Who am I, even, to be doing all of this? What is my role? What is my authority? What power do I hold?

An episode when Ima was mindful of using critical thinking was as follows. Ima's critical thinking episode involved two colleagues who reported to her. Ima had received responsibility for these colleagues just a few months before she was aware of their desire to resign from their posts and move on to something different within government services. Their previous manager had supervised them for eight years and was familiar with them wanting to resign for at least half that time. Regarding this scenario, Ima

observed, “So even though these two officers had told her four years ago that they wanted to resign eventually, she didn’t take it seriously.” The previous manager and Ima were peers. Regarding taking on the responsibility to become the manager of the two colleagues, Ima stated, “She [Ima’s peer] was away on a training program that lasted like three months. So just as she left, I entered, and then just as the term ended, she came back. And in between, I was the interim manager.” Ima continued:

> So towards the end, we had colleagues that decided that they wanted to leave the organization. And I spoke to them, and I found out, why do you want to leave? They were starting to feel that they were not being valued. They were starting to feel that the system could really be fine without them. They don’t want to be part of this, they’re going to leave the country, and I’m like, okay. So I didn’t think that it was going to be that desperate, and I wanted to stop where they were going, that downward spiral. And I supported their decisions.

Speaking of her peer’s response to this news, Ima stated, “She met up with them individually and blew up . . . she saw it as an act of betrayal.”

Dina

Dina worked in a Fortune 100 insurance company in New York City as a talent management and organizational development specialist. She is Black and 43 years of age. Dina has been involved in work related to talent management for eight years. At the time of the study, she was engaged in work to receive a doctoral degree in Adult Education and Organizational Leadership.

Dina’s definition of critical thinking was as follows:

> For me, critical thinking means discerning judgment by going through a process of checking, testing and correcting assumptions to get to a more fact-based decision-making process that limits the likelihood of drawing one’s own conclusions. Critical thinking is about unearthing truth and falsehood. I believe it can be learned and mastered through experience and reflection.

An episode when Dina was mindful of using critical thinking was as follows:

> So when I was leading the innovation work, I would say it was a trial and error in critical thinking. So I assumed that my role was to go and play, so I thought I was this internal incubator and I painted the walls yellow and orange and I had white furniture and I thought I would just lock myself in this room with my team and we're just going to come up with ideas. And I think my Aha! moment is when we were presenting things and no one got it. And I said, okay, let me look at my resources. I have a team, it was a very interesting team as it was a hybrid team, so I was the only one that was full-time, I had two people that were twenty-five percent. Okay, so we know in corporations that that means nothing. That's very hard to measure, so that means the majority of their time they are actually leading other pieces of work.

Dina became quickly dissatisfied with her work and found that she began asking such questions as, "Why was it that we were presenting and people were looking at us blank-faced? What are the assumptions that I had actually made about the role?" With these questions in mind, Dina decided to foster an environment where employees could go and "play" for two hours a week. She stated, "They could watch a Ted talk, read a book, they could come and do . . . different activities that we were running virtually . . . but based on the critical thinking episode: since our fearless leader wanted us to be research-based." From the leadership within her company, Dina noted resistance by stating, "They were just going off a historical, we've always done it this way, and now you are introducing something that will change the way that we have done things."

Laren

Laren owned and ran a professional coaching practice in New York City geared towards driving cooperative culture change and problem-solving business strategies. Laren is a 38-year-old White female with 15 years of experience in her field. She was engaged in work to receive a doctoral degree in Adult Education and Organizational Leadership.

Laren's definition of critical thinking was as follows:

> It's what we call strategy in business. I mean, it's a combination of problem solving. Aligning the purpose of what you're doing to what you're actually doing. So when there is a disconnect, you can use critical thinking to correct it. Or, I think, when there is an alignment, it's usually because you did critical thinking to arrive at that.

An episode when Laren was mindful of using critical thinking was as follows. Laren had been hired to do a workshop by one of her clients who had:

> managers that were often calling with issues to HR [about] their team members, usually something about their team member's performance or how they showed up at work. They started to realize a trend, that perhaps it had something to do with generation Y versus X, and baby-boomer type things.

The client HR team would often advise the concerned managers to review certain articles regarding the challenges of managing across generations. Laren was asked to design and deliver a generation-training program that was comprised of a two-hour workshop concerning understanding one's own generation and others with critical thinking. Laren experienced an internal conflict because she felt that the client "didn't target the people who had the issue and it doesn't necessarily solve the problem." She asked herself, "To what extent do you force that issue? Just say no, I can't do the program because you're not going to solve your problem?" Laren also felt that the problem might have very well been more complex than generational differences, which included management abilities and other differences. She stated, "There's all these other things, and sometimes I think as a desire to simplify, it gets turned into a single solution." She decided to go on with the project by reasoning, "Well, I guess I thought, if I start, it does open up a dialogue. Another belief is that you need to start where the client is, so if the client isn't ready for a more systemic, more complicated look at it, I'm not going to keep them from getting some type of benefit." Laren also felt that the managers in attendance:

> could have got at the Gen Y issue deeper . . . without making it a big, formal, interviewing process. It could have been iterative. But, because that didn't happen, it wasn't possible that the managers in the workshop, when they did come, they couldn't really raise those issues because they were sitting next to the Gen Y people.

Hans

Hans was an educational officer in the military who was responsible for leading a school that trains others to be trainers. Hans is a 35-year-old White male with 18 years of experience in his field of practice. At the time of this study, he was engaged in work to receive a doctoral degree in Adult Education and Organizational Leadership.

Hans's definition of critical thinking was as follows:

> It's often confused with creative thinking and I have to force myself and my colleagues to divert from that. It's thinking of, I hate to say outside the box, but it's . . . placing yourself within the society and of . . . I don't want to use the word critical, I'm trying to avoid that . . . but reflecting deeply on your station in life and position within the society, and taking into consideration those outside forces, which put you in your current situation.

An episode when Hans was mindful of using critical thinking was as follows. Hans was mindful of using critical thinking when he became aware of a problem involving an infantryman who had received an adverse fitrep (fitness report) when he caustically challenged a question of an instructor during a class session. Hans related:

> But I think he should get a little leeway, knowing that's the culture he's been in longer. He's been in the infantry culture longer than he's been in the American culture. I would have given him a pass, and I would have welcomed such disagreement. First, I never would've written a question on trait leadership theory, but if I did, hopefully that'd be the response I'm looking for, is something to have discourse with. So instead of being able to explain himself why he thought it, and mind you, he didn't volunteer, he was ordered to participate, he requested respectfully not to, but he was told that he would. He stood up and said, that's a stupid [expletive] question, and she then told him to get out, instead of asking him to elaborate.

Hans further elaborated on the policy for an instructor towards classroom participants:

> It's in the order of education command, that . . . nothing will be attributed to the individual once they make a comment. It's repeated in their policy and in their order for education command that nothing should be [brought back] to that individual during a discussion so they can have an open democratic discussion.

Kay

Kay has worked as a researcher and program developer in Korea, teaching critical thinking concepts to college students. Kay is a 31-year-old Korean female with six years of experience in her field. Kay was completing her Ed.M. in Organizational Leadership.

Kay's definition of critical thinking was as follows:

> Critical thinking is where you allow yourself or open yourself up to various perspectives and opinions other people have for what is out there, without making a judgment or making an evaluation. But having the ability to listen and to understand and allow that to process within me to kind of compare with what I have. And I can learn from it, or I can grow from that or I can strengthen the opinion that I have. That is what I call critical thinking.

An episode when Kay was mindful of using critical thinking was as follows:

> Critical thinking is almost nonexistent in K to twelve education in Korea because it's a vigorous education system where the students are required to go to school from early in the morning to in the afternoon. And after that, they go to private academies where they take after course subjects until very late at night. So the education system is vigorous where they have long hours from eight a.m. to midnight where they are at school or private academies. And even though they are at these places, what education looks like in these places is very banking, top-down memorization. You have to learn what I tell you. The teachers are the authorities and they just go and learn and receive without them thinking or processing and thinking and sharing. There's no output. There's no "let me think about this." No "why is this important for me to learn?" It's "I need to learn this because it's going to be on the exam." "I need to learn because I want to go to a good university, for the university entrance exam." So that's all the education system from K to twelve. So, if you are educated and you are used to that kind of method, when you hit college, there's a lot of ambiguity and confusion. You kind of lose your identity. In college, you are totally required to think and make your

> own decisions. And to make your decisions and choices you need to critically think about that. But they do not have that. It's not developed.

The assignment lasted for four days. Kay's initial reaction to her environment was:

> They didn't want to come off like that by not knowing what critical thinking is. So there was a lot of resistance there. They were definitely having this fear, uncertainty, and also losing their reputation because in Korea you don't want to look unintelligent. You want to make sure that you know what you are talking about.

When she completed the course, Kay found:

> The way they asked questions was different. The way they commented on things was different. Whereas on the first day you could tell when someone wasn't a critical thinker by the way they shared things, the way they listened, the way they asked questions. And it was very thought-provoking, very open to different ideas by the end of the training.

Kay's critical thinking was further challenged by a very difficult relationship dynamic with the person to whom she reported.

Chapter IV Summary

The profiles of these six professionals provided insight into their views of and the work settings in which they are aware of using critical thinking.

Chapter V examines the participants' lived experiences of using critical thinking in their occupational setting against the five major findings that surfaced.

Chapter V

FINDINGS

The purpose of this study was to explore the experience of critically thinking professionals as they were mindful of the policies, guidelines, and standards associated with their professions in order to understand better how the requirements of those professions affected their critical thinking process. Specifically, this researcher was looking to surface what barriers to critical thinking were manifested that were directly associated with the requirements and responsibilities of a particular profession. The researcher believes that understanding the experiences of these professionals through in-depth interviews can contribute to fostering work environments that are conducive to critical thinking.

The research questions that informed this study and guided the interview questions were:

1. How does a person experience critical thinking in relation to his or her profession?
2. What are the inhibitors, barriers, or impediments to the process of critical thinking that he or she experiences in relation to the guidelines, standards, and policies of his or her occupation?
3. Under what organizational conditions is critical thinking best fostered? What would an organizational culture look like that fostered critical thinking?

Findings

This chapter presents the key findings of this study. The following five primary findings surfaced from the participants' lived experiences:

- Finding 1: Tactics and Values - Beliefs and actions that often translate into codes of conduct or chosen behavior.
- Finding 2: Emotional State - The participants' environmental involvement with their full being—feelings, beliefs, commitments, and emotions.
- Finding 3: Critical Questions - The types of questions the participants asked in their work environment that gave evidence to each individual that they were engaged in critical thinking.
- Finding 4: Pre-/Post-Expectations/Beliefs - The expectations and beliefs the participants had about their critical thinking episode experience that was yet to come and what expectations and beliefs they had about it after the experience.
- Finding 5: Inhibitors – The roadblocks to action and plans of action participants experienced that are born of the thinking that is prescriptive of thinking critically.

The first four findings are tied to the first research question, while the fifth finding relates to the second and third research questions. Each of the five findings are discussed in turn, illustrated by excerpts from the interviews and concluding with a summary at the end of each section.

Table 3

Guide for Finding Frequency

	FINDING FREQUENCY* Number of times finding occurred during the interviews					
Participant Names	Tactics and Values	Emotional State	Critical Questions	Pre-/Post-Expectations/Beliefs	Inhibitors**	Total
Hans	4	8	1	3/5	23	44
Kay	4	3	1	3/7	18	36
Lee	2	8	8	2/3	8	31
Dina	4	2	3	2/2	11	24
Laren	7	1	2	1/1	4	16
Ima	2	1	6	3/4	9	15
Totals	23	23	21	14/22	73	166

*Frequency represents unique instances that the finding came up in the interview in thematic form yet not the number of times stated within a unique reference point.

**Inhibitors: This finding carries multiple sub-findings that are broken out and occur in Table 4.

Finding 1

Finding 1: Tactics and Values - Beliefs and actions that often translate into codes of conduct or chosen behavior.

The first major finding is that the tactics and values of the research participants were a core part of their lived experience when they were being mindful of how they experienced critical thinking in their work environment. The tactics and values of these participants were noticed as value statements or codes of conduct and beliefs that were part of their action and behavior. The beliefs or values they held were inextricably tied to some action or activities that the participants sponsored. In some instances, the statements of tactics and values related to the participants' behavior served a purpose for a specific episode and were not otherwise apparent in their belief system.

When faced with choices that hovered between preferred and undesirable, the participants exhibited a pattern of foregoing the immediately desirable decision (be it winning a negotiation or argument) of choice in order to secure a longer-term win of greater consequence. When Hans was engaged in a disagreeable situation, he took an approach that was able to weigh giving up one thing to attain another. He stated, "Well, I'm willing to give if I can gain somewhere else." Speaking specifically of an incident when his management wanted him to follow a teaching technique that led students to an answer rather than allow for a constructive discourse, he stated, "I'm willing to give on certain areas to gain, and more important, I'm willing to say, yes. It's semantics." His tactics were embedded in having greater concern about winning the strategic change and not the process change. He stated further, "I'm willing to give on other areas so I can make the change and facilitate a guy to discussion instead of leading, so I can start to

change the verbiage and mindsets." Although he referenced the above-mentioned tactic in relation to a specific episode where he was aware of critical thinking, he was holding the tactic as something he was "willing" to do. He stated it in another way as follows: "I'm extremely passionate so once I did give in, and was okay with giving in, and I didn't look at it as losing battles but starting this discussion, I was okay with it."

When Ima faced a situation where she was going to lose two employees who were temporarily under her charge, she found herself formulating her reasoning around broader issues that were more than just a concern about losing the resources that could help her carry out her day-to-day work. She reasoned:

> So if you go to another arm of the public service, still in the family, [it] doesn't really matter, and you are skilled, and you are competent, and I'd rather you go within the organization, and I use the public service as an organization, as opposed to leaving altogether.

Here again, as was seen with Hans, Ima was willing to lose ground on something that may have meant a certain amount of loss, but she could forego that loss to gain something perceived to be more important. Ima also found that she was flexible with the application of her values within the school system to which she was attached, and when her philosophical bearings were not accepted, she stated:

> I had to accept that because of where I was and where I'm being placed. So I didn't push back. So once that feedback was given to me, I moderated my behavior to match that. Because I think that there is more than one way to bring a message across. And I've got time. So I've just joined the organization, it's been about two or three months, I think . . . they're still getting to know me, I'm still getting to know them. And I've got time, so we change behaviors. Largely because . . . so it's kind of odd. One thing they've done to me is that they've isolated me because I'm an outsider, but because I'm a scholar, I'm also valued in the organization. So they had to give me certain kinds of power, so to speak. So I'm biding that time, I'm waiting to see what happens next year, but yeah.

Laren was faced with a client that had self-prescribed a solution to a challenge they were having between managers and employees. She felt that the solution they called on her to deliver did not fully cover the scope of the issues or even uncover all of the possible issues that comprised the challenge. She felt she had a choice to either let the potential client know of her concern and see if they would adjust the scope and therefore risk having to take a stance on accepting the training request, or take on the assignment as specified by the client. In a confident and matter-of-fact way, she recalled, "Well, I guess I thought, if I start it, it does open up a dialogue. Another belief is that you need to start out where the client is, so if the client isn't ready for a more systemic, more complicated way to look at it, I'm not going to keep them from getting some type of benefit." Laren felt that she was as good a choice as anyone else, so even though it would mean not engaging the problem at a level she felt it needed to be engaged, she would be connected to the client so that she would have the opportunity in the future to enjoy a greater influence in helping the client address greater issues. In fact, she formulated a particular plan to accomplish this when she noted enthusiastically, "Now when I do my follow-up meeting, I'll come with a page of recommendations, of suggestions for how they can embed this a little more and think more broadly about it. So I always know it's not just a one-time shot."

In some instances, the participants were pressed by their environment to perform outside of the parameters in which they felt most comfortable. Lee was tasked with implementing a project plan for an art program for older teenagers attached to a museum program. She described her environment as being fraught with difficult interactions. She had a manager who she felt was uninterested in doing anything that would take effort, a

client/benefactor who had numerous and unreasonable process hoops for her to jump through, and an interdepartmental environment that was adversarial. Her response to this environment was to form alliances: "I'm going to bring in one of my other colleagues on this project because she might . . . she runs a program and I might be able to fold in this project into her program." With this key alliance, Lee was then set to become the central point to get the project moving. Lee explained, "Then with her . . . between all the conversations that everybody was having—between my manager and I, the colleague, with development and with IT—we developed a curriculum."

Dina's discovery of a specific tactic was derived from how the person to whom she reported perceived what were credible and non-credible methodologies to pursue when responding to learning needs. Dina found that her manager was fixated on backing up any proposals to take action with data. She stated, "So it couldn't come across as I was thinking about this and my gut and inner gut, my feelings told me I had to say, 'According to [Dr. Scott Isaacson] at the University of Buffalo, he had done these studies at IBM or whatever and this is what it takes to create an environment.'"

Some of what Dina used in her tactics and belief toolbox was fostered out of the experience of many meetings and proposals where she felt she did not get the outcome she expected or wanted to get. Instead of getting to the end of a proposal or plan and discovering it did not fit, she stated:

> I even run meetings now where I'll stop the meeting and I'll go through a series of questions and keep asking is this really the problem and then leave it open-ended. I ask people, let's not leave this meeting with you giving me the answer. Let's leave the meeting with, if this is the problem we're trying to solve let's go and gather more data.

When Kay was challenged with developing and delivering curriculum for college and college-bound students, she described a gradually growing disagreeable atmosphere with her manager that she attempted to quell. Reflecting on the problem, she stated, "Until later, I was like, I should just talk to him, which I did. It wasn't better, but at least I expressed how I felt very honestly with him." As the critical episode drew to a close, Kay began the process of re-evaluating her actions and feelings. She stated circumspectly, "I took those steps of kind of reflecting and thinking about a lot of things . . . and trying to understand from his perspective why he would feel upset and offended."

Summary of tactics and values. The tactics and values that the participants held were resident in their actions, plans for actions, and value statements. While they held their values in high regard, they were willing to negotiate the application of values in a tactical or strategic way if they could arrive at a broader or more meaningful transformation of an environment. Environmental changes at work and unforeseen pressures allowed the adjustment of tactics to accommodate new tactics in uncomfortable settings. The ability to be flexible in applying values and tactics when involved in negotiation or when there was understanding that the current values and tactics were not accomplishing their goals was also consistently evident within the participant group.

Finding 2

Finding 2: Emotional State - The participants' environmental involvement with their full being—feelings, beliefs, commitments, and emotions.

The emotional state of the participants was apparent and in concert with the critical thinking episode. The participants' responses to their environment were not simply cerebral and process-oriented, but they also involved their full being—their

feelings, beliefs, commitments, and emotions. While the dominant emotional response was largely negative, there were instances of positively felt responses. This section discusses the particular states of the participants' emotional responses, noted in connection with critical thinking episodes.

Ima's work environment was one in which she was caring for the management and development of two employees whom she was assigned as a substitute for a peer who was not available. While the peer was away, the two employees made known their desire to move on to other careers that would take them from their current place of employment to other locations within the larger government system. After Ima had helped to facilitate and support their decision to move on, her peer returned from leave and was very unhappy about the support and facilitation Ima had provided, notwithstanding that this peer knew for a number of years that the two resources wanted to leave. When Ima reflected on the situation, she considered the larger organizational system that informed her peer's behavior and the lack of critical thinking that informed the organizational behavior. In a tone that still seemed shocked, she related, "But what I saw in this organization is a distinct absence of that, to the point that there are physical absences [absenteeism of employees]. So I was aghast, because I was amazed also that there would be this kind of leadership."

Hans was faced with an environment of peers and management in a military setting that he perceived had a fixed belief system that did not provide space for a discursive learning environment. In an episode in which he was aware of thinking critically about his peers and superiors wanting to follow a very restrictive teaching model because they felt that "Marines are too stupid" to do anything else, Hans recalled

the ensuing argument causing him to feel “emotionally . . . excited,” “frustrated,” “my temperature rise,” “flushed,” “heart rate quicken,” and “defensive.”

Because some episodes of awareness of thinking critically lasted over multiple months, the participants exhibited a greater range of emotions. While Lee worked to formulate a plan for funding and implementing her art project for her students, she recalled a “roller coaster” of feelings that were both positive and negative as she interacted with her seemingly endless environment of dependencies, shifting goals, and reneged-upon promises. She emphatically related, “While this was happening, I was so excited about it and was so excited about what the kids were learning, then I was deflated that it didn’t get funded; again!” Lee spoke of trying to “make sense” of what was going on and feeling “frustrated” that the funding process was taking up so much time and shifting from one direction to another.

Dina’s episode in which she was aware of thinking critically occurred over multiple months. She was assigned the responsibility to create and foster an innovative environment for her colleagues. As she created the groundwork for this environment, she adopted the self-developed understanding that her role required the modeling of a particular “persona,” with an energy-level definition that had to be met. When she saw the results of engaging her peers with this energy but did not feel supported by the executive sponsorship, Dina related her feeling as if she “hit roadblocks.” She spoke of needing to be at “100%,” “exuberant,” and “hav[ing] excitement.” Being at this level and not getting the expected support from her peers and management made her reflect a follows: “I was just worn out, I was like, ‘I can't do this.’ I was disappointed, I was tired, really fatigued to the point where I was like, ‘I want to lay down for three days.’”

Kay's experience was over the course of many weeks as well. When she was reinforcing the tenets that she believed were important to maintain and promote within her teaching environment, she was stunned by the rapid change in behavior of the manager to whom she reported when he began countermanding the agreed-upon strategy he had originally appeared open to supporting. She related:

> I did not feel respected as an employee as a competent person. I felt incompetent because he made me feel incompetent and publically incompetent too. So disrespected and incompetent and those two are the most nonnegotiable values that I personally hold. And he did not meet those two. So that led me to low self-esteem and lack of motivation. And before, I had such a positive view of the organization and what they were doing, the values that they were using. I still had it but it was less so because of him. Usually for me I want to say that I am a self-motivated person and I tend to have a positive outlook on things. And I tend to enjoy, I take joy out of what I do. I felt bitter towards him. I felt frustration, not understanding why he would get all sensitive.

Some emotional connections to the critical thinking environment were also made with short-lived episodes. Laren's connection to an emotional response during an episode when she was aware of using critical thinking came when the client executive sponsor at a coaching session she was conducting showed up only at the beginning and end of the session. She recalled putting in a great deal of effort to situate a safe environment by contracting with the attendees to form agreed-upon norms and expectations. The executive sponsor was in attendance at the time the norms were discussed and then left soon after. These norms and expectations were modeled throughout the session and then were drawn upon to culminate the session. When this executive then showed up again at the conclusion of the session, Laren felt this was a disruption of the safe environment because he had missed the contracting. She lamented, "I was pissed off, annoyed. And you know, I thought about the whole purpose of why we're there. So now I have to act like he carries more power in this." Laren spoke of not knowing if he just wanted some of

the cookies that were in the room or if he was there to provide feedback, and this caused her to be distracted.

Summary of emotional state. As each person brought to bear his or her critical thinking skills and awareness, the interaction with the environment did not leave each person void of feelings and emotions. Some of the episodes were over many months and some of the episodes were contained within a day. The emotions ranged from joy and fulfillment to mental tiredness and despair. At times, the interaction with a single individual influenced the participants' feelings towards a whole system or organization connected to that individual.

Finding 3

Finding 3: Critical Questions - The types of questions the participants asked in their work environment that gave evidence to each individual that they were engaged in critical thinking.

The types of questions the participants asked in their work environment gave them evidence that they were engaged in critical thinking in their roles at work. The critical questions captured in this section arose during the incidents which the participants experienced and shared spontaneously as they reflected on their lived experience. The questions they recalled reflecting on during their episodes of critical thinking served to surface assumptions, delineate broader contexts than were being considered, and open up thought that surmised more than questioning whether things were being done right, but rather whether the right things are being done.

With reference to creating a larger context and wondering if the right things were being done, Hans found conflict in the way he engaged his environment and the way the

institution he worked within encouraged him to engage his environment. As he navigated around this conflict, questions arose for him concerning the very meaning of terms and how people made meanings of those terms. Within his military school, Hans wondered how he could effectively teach the concepts of the whistleblower law when the very institution tasked with applying the law did not protect the whistleblower. He also found that the definition of who could be called a whistleblower was at issue before one could really teach the law. Drawing upon recent events in the news, Hans asked:

> When the federal government's the issue, who are you going to go to? You can't go to the federal government, they're the issue, so you go to Russia apparently [laughs] or you go to a court martial. You have the two options. Those are the two biggest . . . or WikiLeaks [laughs], that was the other option.

Ima took a broader and more strategic view of a problem that was previously being visualized at a narrower and more operational level. When two employees under her temporary supervision approached her about resigning their post to look for other opportunities, she became introspective with her critical questions and asked, "If I'm an implementer, what's the point of having middle management? What's the point of having leaders if they don't add to the experience?" She questioned the system function of her role and the limitations of how she showed up. She recalled that she was looking at the needs of the disgruntled pair and the larger educational system with a view towards retaining their talent if she managed the situation correctly.

When she navigated the disagreement with her peer concerning the career flexibility of two resources who wanted to move on to other opportunities, Ima was able to take a step back to see a broader view and found herself reasoning, "I also question why I am so strong about this? What's my point? Why do I have to be so different?" When her peer was being inflexible about the two resources staying put, Ima

brainstormed questions for her that included, “What made you think that you need to baby certain people, and what made you think they were not taking you seriously? Or that you felt that you were being taken for granted, when actually they felt they were?” Then in a comparative way to Hans, Ima integrated her perceptions and questions about her counterpart’s perception and concluded, “And then I was wondering, so my critical thinking there was, what assumptions did I assume she had versus the ones that she really did have? Where did she think I was coming from?”

When Lee responded to the constraints placed before her as she developed an art program for youth, she began asking questions about meanings of terms and shared outcomes. Lee was concerned about shared meaning and whether the smaller group using them understood the terms in the same way. She recited:

> We want you to be innovative. We want you to be innovative” and “I didn’t really know what they . . . like, what does that mean? What does “innovative” mean? Do you want us to be trendy or do you want good . . . for me? From my perspective, I feel like I’m a really good educator and I can design a curriculum that gets the students engaged, but it may not necessarily be innovative.

Then Lee’s question moved from whether she correctly understood the commission to be innovative to whether innovation was the right thing for the situation. This encouraged her to consider:

> The question that I think grew out of the philosophy investigation that I was doing; what does this mean? How is this helpful for education? What does this mean for learning? What is good education? What can I provide as a teacher? What will the students be getting out of it? My expertise is in education and teaching art education, so how do I do this with minimal expertise in other areas and still be able to move it forward?

Unconnected to any specific incident or episode but rather seen through the lens of various experiences, Dina found that in order to engage her work environment with a critical thinking demeanor, she had to ask questions. Dina was mindful of the obvious

pressure in a corporation to deliver on goals while she found a need to maintain a broader view and uncover assumptions. In a matter-of-fact fashion, Dina stated, “Instead of being someone that always has to give an answer, which if you’re in the corporate world if you’re a thought leader that’s kind of how people look at you to use critical thinking as an opportunity to ask more questions. What do we mean by that?” Dina recollected developing the ability to be mindful of periodically asking the question: What problem are we trying to solve? When working with developers who were developing a product, she began asking, “Why are we developing that, is there a need? How do we know that there is a need? Well, how do we know that’s true?”

Worldviews and systems awareness also become part of the critical questions asked in a working environment. While investigating an environmental need specific to training delivery, Laren found tension between delivering a course that answered a particular problem for her client and not being so solutions-oriented that opportunities for greater understanding were missed. This caused her to be very aware of how things were related to the parts and the whole. She opened herself to the thought, “So, does the whole culture or the system of the way we do things go against a critical thinking philosophy? Where is there room for critical thinking? Do we stifle it, just to make things look more organized and clean?”

Kay’s thinking in favor of critical questions came from her philosophy of generalized purposeful critical thinking that can be applied within a society. She formed questions in the following context:

> Without the ability to critically think, reflect, even though you go and become a leader of a company or become president or a government congressman, it is not going to help the society move forward. It’s going to continue to just focus on the materialistic; that is, the short-term gain, rather than what is the deeper meaning

of this. What are we not seeing? What are we understanding and not understanding?

Summary of critical questions. Critical questions arose in a dynamic and unsolicited fashion from the participants as they shared their lived experiences. The questions surfaced assumptions, wonderment of shared meaning, and a desire to have a broader view, and they took a specific view of questioning that was more than doing things right but, rather, doing right things related to their roles and assignments. In some cases, the critical questions were specific to a particular episode; in other cases, it was the adoption of a particular posture for how they managed their role or how they showed up in their work environment. In all, critical questions were part and parcel of the critical thinking episode and a repetitive part of the work assignment of the participants.

Finding 4

Finding 4: Pre-/Post-Expectations/Beliefs - The expectations and beliefs that the participants had about their critical thinking episode experience that was yet to come and what expectations and beliefs they had about it after the experience.

As the participants reflected on the episodes in which they were aware of thinking critically, they often described the expectations and beliefs they had about the experience yet to come, and what expectations and beliefs they had about it after the experience. The post-expectations and beliefs most often did not match up with the pre-expectations and beliefs.

All of the participants began their episode in which they were aware they were thinking critically predisposed with some belief of what the outcome would be. When Lee contemplated the project plan to create a learning environment for teenage

participants, she knew that she also "wanted to increase my skills with technology and have that on my resume. Because I thought that that was important and can develop my skills moving forward in the future." She was also attempting to secure hardware for her department that they could continue to use after the project was completed. After the project was completed and Lee went over the mental inventory of things she expected, she concluded, "I felt like . . . we created something that was good education. . . . We created an environment for them to ask questions, to answer their own questions, to investigate and do research." Although the funding request was the initial need for the project, it was not renewed because the project "couldn't be packaged." She also did not feel she became any more technically savvy from the experience.

Han's pre-expectation/belief system was constituted from a behavioral and environmental awareness. After establishing that he had already encountered an environment resistant to change and the adoption of new standards, he volunteered, "I went in authentically with a real want, and understanding all the barriers to one change. Obviously people are feeling that there's a loss, and some people are even feeling that I'm calling their baby ugly." Here, his beliefs prepared him for a full set of activities associated with a change-resistant environment. Hans therefore began checking his own way of showing up and developing a purpose to approach his pitch for change. He continues, "My intentionality is to bring us all into the classroom and make decisions as a collective, and not at me as an individual, as a director, saying this is what we are going to do with the schoolhouse." Hans's reflection on critical thinking that came after his episode was in many ways at the opposite end of the expectations spectrum that he had before going into his episode. He flatly admitted:

> I've been doing this for eighteen years now. I knew the barriers and the resistance for the change, specifically at the schoolhouse. I was not ready for the resistance—because I was getting briefed about the resistance that I was going to get at the other schoolhouses and headquarters. I knew this, and I've been a part of these processes before, to change things in our formal education system. I was not ready for the resistance I was receiving on topics we have discussed and agreed on by people within our own school, and they were the largest.

Here, Hans expressed a discontinuity between his expectations and beliefs before going into an episode and what he expected and believed after the episode.

Ima's beliefs and expectations were anchored in the thought that greater good could be accomplished if she made allowances for the departure of the two resources who reported to her. Rather than demand they stay, she encouraged them to help out elsewhere in the greater system that existed in the Asian country from which she comes. She stated in her own words, "You're not leaving an entire system, that's impossible. You're still working in Asia, you're still at the end of the day working towards good governance. So to me, at that point in time, I didn't really care about the day-to-day implementation of work." At the post-expectation and belief juncture, Ima found that if she were going to consider the whole system, it would account for her allowance to see the greater good of letting two employees change organizations, and then she must also include considering her peer in that system. Speaking of her peer (who disagreed with her decision and was hurt that Ima made it without consulting her), Ima cited, "So one thing that I definitely need to do is before I do anything on my own, I need to speak with my peer, to find out what investments she has already made with the department."

Dina's description of what she expected and believed was tied into the needs of the organization's demands for creating an innovative environment. She felt that a benchmark needed to be set in order to initiate any activities. The validating instrument

she wanted to utilize was a climate survey. She wanted to get a measure of the activities pre/post and then a year later. Her leadership did not agree with doing a survey. Concerning this, Dina said, “What I was told was that we already have a climate survey, we already had an organizational survey, and there was going to be fatigue in the organization if I went forward with the survey.” Yet her post-expectations and beliefs had less to do with the technical tools utilized or the statistical outcome, but more with what kind of environment she was fostering. Dina continued:

> What I concluded from this is that creativity is definitely a process and that you have to create the space, it’s about a culture of creativity and not necessarily getting caught up in it. “Is there an innovation coach, is there an innovation counsel, head of the counsel” we can get caught up in the process, but if you create an environment where people have trust, where they feel they can put their ideas on the table, that is really what changes the organization more than the workout on its own.

Laren was faced with conducting a learning intervention designed around a self-diagnosed problem that her client organization surmised was because of generational disconnect. She was concerned that the diagnosis was not deep enough. Her expectations and beliefs were as follows:

> So the managers may be benefited by saying, “Wow, I didn’t even know they didn’t see themselves that way.” But we didn’t get to have the next level of conversation. And what we’re not doing is creating an opportunity for that to happen. If this was a real learning organization, critically thinking, focused organization, that might happen. Otherwise, maybe a couple of smart people did go in and do that. But we’re not really creating that next level of problem solving.

The post-expectations and beliefs caused her to feel that “ . . . a lot of critical thinking came out of the two-hour workshop” and this caused her to do a lot of other research. She engaged in the generational issue by suggesting additional interventions and keynote speakers which expanded to another region and then globally.

Before experiencing her troublingly episodic event with her manager, Kay had a definite impression and expectation of support and agreement from him on the tenets of education she espoused. She felt, “Before he would really value my different perspectives, he would really value that I would make suggestions about the importance of reflection and sharing, just really thinking outside of the box and opening it up to two different opinions.” After she embarked on implementing the educational strategy and beginning the process of teaching the students, Kay found that her manager was often upset at her and countermanded what she proposed, even scolding her for not recognizing his body language to leave the lunch table when he expected her to. She noted, “I took those steps of kind of reflecting and thinking about a lot of things. And trying to really have myself see the things I may have missed out on and trying to understand from his perspective why he would feel upset and offended.”

Summary of pre-/post-expectations/beliefs. The pre-expectation and beliefs were integrally grounded in the previous experiences germane to a specific environment. Some of the pre-expectation and belief systems allowed for comprehensive planning, and at times, action-taking designed to prepare the way through known barriers. The post-expectations and beliefs, in every case to one degree or another, were different from the pre-expectations and beliefs. The differences between pre- and post-expectations came from environmental changes, behaviors of others that held a stake in the activities, and adjustments of priorities and assumptions for the participants.

Finding 5

Finding 5: Inhibitors - When participants experience roadblocks to action and plans of action that are born out of thinking that is prescriptive of thinking critically.

The participants experienced a range of five inhibitors that blocked or constrained their ability to think critically. The inhibitors to critical thinking were the most expansive, with the deepest finding located in this research. The participants described these inhibitors generally as roadblocks to action and plans of action that are born of thinking that is prescriptive of thinking critically. The five inhibitor findings were:

- Finding 5a: Organizational Standards - The full spectrum of organizational standards and procedures also included policies, guidelines, procedures, and institutionalized barriers.
- Finding 5b: Leadership - The issues included espoused beliefs of leaders that were not congruent or consistent with actions of the leaders, actions that were debilitating to implementing agreed-upon or sanctioned plans, and leadership lacking the will or ability to see environments within a different frame.
- Finding 5c: Cultural/Societal Norms - These included inhibitive responses and attitudes from an occupational environment that arose because a normal set of activities and beliefs appeared to be threatened by the critical thinker.
- Finding 5d: Positionality - How the participants were situated within their assigned hierarchies and how the hierarchy instilled implicit or explicit inhibition to critical thinking.
- Finding 5e: Lack of Time - Experiencing a lack of time either by explicit order from a reporting hierarchy or experiencing it as an implicit part of their profession.

Table 4

Inhibitors to Critical Thinking Frequency

	Inhibitors to Critical Thinking Frequency*					
Participant Names	Organizational Standards	Leadership	Cultural/Societal Norms	Positionality	Lack of Time	Total
Hans	16	0	4	0	3	23
Kay	7	4	6	1	0	18
Lee	4	2	0	0	2	8
Dina	9	1	1	0	0	11
Laren	1	0	0	3	0	4
Ima	5	1	1	1	1	9
Totals	42	8	12	5	6	73

*Frequency represents unique instances where the finding came up in the interview in thematic form, not the number of times stated within a unique reference point.

Finding 5a: Organizational Standards - The full spectrum of organizational standards, procedures, policies, guidelines, procedures, and institutionalized barriers.

The organizational standards and procedures created institutionalized barriers to critical thinking for the participants. The full spectrum of organizational standards and procedures also included policies, guidelines, procedures, and institutionalized barriers that served to inhibit the process of critical thinking.

One example of this was when Laren experienced an institutionalized barrier when she was approached to put together a seminar to address generational gaps. She related that human resources in the client organization "didn't want to call out managers" by having them join the course, so in this instance she was not able to address the problem holistically due to the HR guidelines.

Another example of experiencing an institutionalized barrier as a block to critical thinking was when Ima was shocked that "the principal actually came out and said that if you want to be the leader of a school, you cannot think exactly, you must be able to follow the manual, follow the standard operating procedures, and you must guarantee the results according to that." Here, the command was to *not* think but follow the written procedure.

Lee's experience was within the Education Department and the siloes that each department had with each other and with technology. As she was trying to bring her project together that was born of a critical question about "what would be good education for her students," she found there was a block to proceeding at every turn. She summed it up by saying, "My department doesn't really know that much about technology and since

they weren't communicating with each other, they went on tangential directions and never came together."

Hans encountered both policy and standards that were obstructive to critical thinking, as he observed:

> Our training is education. I mean they're inseparable. Yet we do that, we have the training and education command. We were talking about Bloom's Taxonomy and I want to get away from that so we can just start talking about the marine holistically. And they said no, I think it's a good tool.

His aim was to have constructive discussions with the soldiers, but of the organization that was responsible for training them he said, "They have an answer. There is an answer that they believe their job is to lead that student to, instead of having an authentic discussion on something, and then engaging in discourse."

Finding 5b: Leadership - The issues included espoused beliefs of leaders that were not congruent or consistent with actions of the leaders, actions that were debilitating to implementing agreed-upon or sanctioned plans, and leadership lacking the will or ability to see environments within a different frame.

Leadership beliefs and actions were an integral connection to the critical thinking inhibitor list. The issues included espoused beliefs of leaders that were not congruent or consistent with actions, actions that were debilitating to implementing agreed-upon or sanctioned plans, and leadership lacking the will or ability to see environments within a different frame. In some ways, this crossed over with the organizational or institutional beliefs. For instance, when Ima's principal alluded to "not thinking but knowing the manual," it was a system that was at once both part of the policy and part of the leadership beliefs and actions. Ima clarified this by stating:

> Well, reflecting back on it, I just am a bit stunned by how much lack of, like I mentioned earlier, of critical thinking is happening amongst the leadership in the school. I had. . . . I was thinking about how the leaders, they set the tone, because the current leadership has been in place for about five years, has essentially set the tone for what the middle managers are doing, and that goes back down to the teachers, on what was necessary and what was not necessary, and critical thinking, or reflection. . . . Just reflection is the first thing that's thrown out the window when it comes to implementation.

Of implementing more holistic critical thinking methods, Kay explained, "Well, my leader did not fully support me in that. I didn't really talk about it. I mainly talked about me being a trainer and program developer for these guys. But I guess because being my leader at the organization, he was not used to critical thinking."

Dina's leader expressed some analogies about what she saw within other companies and how she felt it fit within her current company. While her leader was focused on these analogies, Dina was concerned about loss of talent, replacing talent and employee engagement. She questioned:

> Well, with all good intentions you get people trying but when people start to leave, if you don't have in place how you're going to replace them, how are you going to keep people, how are you going to check in on people's commitments?

Dina's leader was not interested in these questions at the same level and would not engage in activities to seek better understanding to answer them.

Lee had a more direct issue when she felt that she went through a process of asking critical questions: "I always felt that if I went directly to my manager and told her about a program that I wanted to do, she would deny it and try to make me not do it because it would cause her to actually have to do more work."

Finding 5c: Cultural/Societal Norms - These include inhibitive responses and attitudes from an occupational environment that arise because a normal set of activities and beliefs appear to be threatened by the critical thinker.

The finding of cultural and societal norms acted as an inhibitor to critical thinking when the participants received inhibitive responses and attitudes that surfaced because a normal set of beliefs in their work environment seemed threatened by the critical thinker.

Kay experienced this tension on a number of fronts when she postulated, "Thinking means not producing right away and that is bad. That is being unproductive, that's being inefficient. And that's the norm in Korea and that's why within fifty years [South] Korea went from rags to riches." Speaking more directly about her students, Kay continued, "Because of the culture, they are so used to what the authority tells them to do but then they do it because it's for the society, for the family, for the community, without critically thinking why they need to do that." When Kay approached her manager to try to understand why he seemed to be constantly admonishing her actions and plans, she discovered that he thought she should know she was behaving in an insubordinate way. "But then," she continued, "he expected me to know without him saying. I think that's the typical Korean leadership that they expect from subordinates." Kay concluded:

> When we were talking one-on-one, it is the Korean way to look down if you are subordinate. You don't look into his eyes. You don't make eye contact. I make eye contact when I talk to people. For me, that's a sign of respect. For me, if I am not looking it means I am not listening, but he felt threatened. He was like, why are you looking at me like that? So those little things are just so different. I thought I was showing respect, he thought I was disrespecting him or challenging him.

In the Asian nation where Ima was located, she noted, "Because a lot of my colleagues . . . were trained as public servants, we assume we are very rational, that everything is logic. . . . I find that critical thinking is avoided, actually." Ima noted that the thought of thinking critically during a strategy sessionwass viewed as counterintuitive because all objectives and variables were already known.

Dina was focused on "where" and "what" when it came to implementing something new regarding creativity and innovation. She related, "There's a set culture that has some deep-rooted norms and ways of doing things such that it doesn't matter who you are." She felt that "the sky is the limit, we can do this," but the realities of what she was dealing with from a cultural standpoint could inhibit critical thinking when it came to carrying out or acting upon creativity or innovation initiatives.

Hans spoke of a Russian immigrant who was disciplined for how he responded to an instructor in the class. A poorly formed question was asked and he refused to answer it. When asked why he responded with "That's a stupid [expletive] question," Hans explained that the students were given exemption to speak freely in the classroom session, so his being kicked out of the military should not have even been considered at this point, although it was. Hans set up the reasoning here by also making reference to the fact that "he has more knowledge of the military English jargon and actions, and he's an infantry member which means he curses every other word, and that's obvious. . . . He's been in the infantry culture longer than he's been in the American culture."

Finding 5d: Positionality - How the participants were situated within their assigned hierarchies and how the hierarchy instilled implicit or explicit inhibition to critical thinking.

The finding of how the participants were situated within their assigned hierarchies and how the hierarchy instilled implicit or explicit inhibition to critical thinking was evident throughout the relating of incidents in which they were aware of thinking critically. For instance, Ima identified:

> The constraint that I would have would be my positionality. Both in being the newcomer to the organization, I was very, very aware that not only was I the

> newcomer, I was also identified as being a scholar. Because I just came back from my Master's degree, from an overseas Master's, which would be, technically, very rare in the school. And I was relatively young for having completed my Masters and my school. Mostly, and this was something that was told to me several times, most people that they expect to finish a Master's would have completed at least twelve years of serving with the organization. What? And this was . . . so it was iterated how much of an outsider I was to the organization, so that positionality, so therefore how much . . . or how low my thoughts mean.

When Kay's manager stepped into the room and "pushed everyone" to think critically, she retorted:

> It wasn't very conducive to critical thinking, especially to those who are not used to it. And so they feel forced. They didn't know what to say, they feel forced that they had to come up with something intelligent to say. So it wasn't authentic and he did it once but then he never did it again.

When Kay hinted they were perhaps moving too fast, she was severely rejected by her manager, which further inhibited her critical thinking.

Laren felt that when she showed up as a learning facilitator for her client, she was taking on an important role and making assumptions about "constraints." The thinking here was more introspective and not about the response or stipulation she received from the client. Rather, she was someone who was leading others in a set of activities and how that affected power dynamics with the learning she wanted the class to participate in.

Finding 5e: Lack of Time - Experiencing a lack of time, either by explicit order from a reporting hierarchy or experiencing it as an implicit part of their profession.

Experiencing a lack of time, either by explicit order from a reporting hierarchy or experiencing it as an implicit part of their profession, was a finding that resonated with the experts in their interviews. In particular, Lee referenced this finding several times in relating the experience of developing the art project. Speaking about completing the application and running multiple programs at once, she stated, "So I really had to think of

what to do in the limited amount of time." The programs she was already running required her to apply the tenets of critical thinking and she felt as though she was not devoting the necessary time to do this fully because of time pressures. She also felt that she did not have time to read the book associated with the requirements to be funded.

Hans felt that the intense push to get the training done under a proposed time schedule was affecting "active learning," reducing the sessions to nothing more than lecturing. He lamented, "You can't have fourteen- or eighteen-hour training days. We just have some nine and a half-hour training days, so you can't push those two together and have good results." He found himself facing a greater challenge by noting, "We do everything to reduce the amount of time that our students are in courses."

Summary of inhibitors to critical thinking. The inhibitors connected to *how* the professionals experienced critical thinking within their profession was the most frequently occurring finding in the research; it appeared more than three times the amount of the nearest frequently occurring finding. The sub-findings included lack of time, organizational standards or procedures, positionality, leadership beliefs and actions, and cultural and societal norms. Lee experienced interdepartmental squabbles between leadership teams that showed up as an inhibitor to critical thinking planning formation. Ima found herself part of an organizational system that was in tune with the process and procedure of that organization, but was not concerned with the tenets of critical thinking. Laren was concerned with how she showed up, position-wise, when she engaged with a client in a learning intervention, and how the client members showed up with her.

Each of the findings above are connected to the second research question that addresses profession-specific roadblocks or impediments to the process of critical

thinking that a critical thinker experiences in relation to the guidelines, standards, and policies of his or her occupation. Each research participant was mindful of how a work-related policy, guideline, standard, or procedure was connected to how critical thinking was impacted. In addition to impediments being related specifically to requirements of the job, some inhibitors also directly related to lack of time, positionality, leadership beliefs and actions, and cultural and societal norms.

Chapter V Summary

This chapter introduced the findings that emerged from the research which included tactics and values, emotional state, critical questions asked, pre-/post-expectations/beliefs, and inhibitors. These five findings made up the complete findings for this research.

An analysis of the research findings alongside the research questions is presented in Chapter VI.

Chapter VI

ANALYSIS AND INTERPRETATIONS

The purpose of this study was to explore how professionals engaged in critical thinking were impacted by their occupational setting. The research purpose was to illuminate how these professionals experienced the process of critical thinking with a view to revealing any barriers or hurdles that may be related to adherence to particular guidelines, standards, and policies in connection with their professional field of practice. This study used hermeneutic phenomenological (van Manen, 1997) methods to describe the experience of these professionals. Hermeneutic phenomenology includes giving attention to both *descriptive* (how things appear) and *interpretive* (hermeneutic) phenomenology as a means to interview and transcribe the experience of six critical thinking professionals.

At the outset of this research in Chapter I, it was noted that the literature considered for this research offered no single definition or consistent theory of critical thinking (reflection). As van Woerkom (2010) stated, "Where some speak of reflection, others speak of critical reflection, reflexivity, critical self-reflection, or critical thinking. It is often not clear what the difference is, or even if there is a difference, between these terms" (p. 340). The researcher then determined that this study would utilize the term *critical thinking* to describe the locus of the intended research and the working definition,

as supplied by Brookfield (2012), that connects the following four points to define the process:

1. identifying the assumptions that frame our thinking and determine our actions;
2. checking out the degree to which these assumptions are accurate and valid;
3. looking at our ideas and decisions (intellectual, organizational, and personal) from several different perspectives; and
4. on the basis of all of this, taking informed actions. This includes a basic topology of different kinds of assumptions that critical thinking unearths and scrutinizes—paradigmatic, prescriptive, and causal. (p. 18)

The study was framed by the following research questions:

1. How does a person experience critical thinking in relation to his or her profession?
2. What are the inhibitors, barriers, or impediments to the process of critical thinking that he or she experiences in relation to the guidelines, standards, and policies of his or her occupation?
3. Under what organizational conditions is critical thinking best fostered? What would an organizational culture look like that fostered critical thinking?

The research included a review of pertinent literature, in-depth interviews, memoing while reading and listening repeatedly to the recorded and transcribed interviews, and member checks to ensure meaning making was consistent with transcribed interviews. These professionals had all attended at least one of Dr. Stephen Brookfield's seminars on Developing Critical Thinkers or Critical Theory and Adult Learning. While attendance at Dr. Brookfield's seminar was a requirement to frame a

consistent meaning of critical thinking, a specific type of profession was not a requirement. All of the participants happened to be involved in one form of learning and development or another, and included three teachers, a corporate coach, a talent/ leadership professional, and a military instructor.

How a Person Experiences Critical Thinking in Relation to His or Her Profession

The first research question is concerned with how the professionals experienced critical thinking within their profession. The five findings shed light on the multifaceted way in which the professionals in this study experienced critical thinking within their profession. In their occupational environment, these professionals experienced connecting their tactics and beliefs, feeling a full range of emotions (positive and negative), being actively engaged with critical questions, having definite beliefs/expectations that were pre- and post-episode, and having an awareness of specific inhibitors.

Tactics and Beliefs

Critical thinking awareness allowed the participants to see a broader picture of their environments and sacrifice strongly held preferences and beliefs in order to receive what was perceived to be greater gain, usually at a later time. Their behavior mirrored closely what is described as American Pragmatism by Perry (2009), who stated: "Pragmatism is not a Machiavellian philosophy of expedience, which cast principles aside. Instead, it demands that we judge principles by their broad consequences" (p. 7). The critical thinkers comprising this research were nimble and capable at judging principles by their broad consequences in order to arrive at new tactics and beliefs. This

would be akin to the analogy of losing the battle to win the war. Regarding this, Hans stated, “I’m extremely passionate so once I did give in, and was okay with giving in, and I didn’t look at it as losing battles but starting this discussion, I was okay with it.” The participants created new paths of thinking and behaving by reflecting in a critical way on what mattered most in accomplishing an objective or goal. This ability to acquiesce on a committed belief was seen in how Hans was capable of cooperating with his organization in a very narrow way of instructing the students. In the classroom setting, he preferred to teach from a constructivist vantage point and not from that of “banking” (Freire, 2010), where the students have the answers or information poured into their heads. The participants could adjust their tactics and beliefs as a means of negotiating change in their environments.

The Emotional Being of the Critical Thinker at Work

Osterman and Kottkamp (1993) connected a reflective practitioner with being aware of one’s emotional and intellectual well-being. This self-awareness is helpful in surfacing an individual’s assumptions to inform and direct desired behaviors. Emotions had a strong bearing on the outlook and consequential behavior of the participants. Consequently, they had self-awareness about how they were interacting with their environment. At times, the participants found themselves mentally tired and needing a break, or feeling upset, angered, aghast, and disappointed. The participants also registered feelings of joy, fulfillment, exuberance, and hopefulness. Negative feelings were typically tied to critical thinking episodic events while in progress or after the culmination or completion. Positive feelings were typically connected to pre-episodic events before a real exposure and experience of the event. Goleman (2000) framed out

the description of this use of emotions in a work environment, described as emotional intelligence or EI, as the ability to use emotions to facilitate thinking, to manage within oneself and relationships, and to understand one's emotions. The participants regularly related the experience of how emotions, both positive and negative, precipitated critical thinking that then led to actions derived from critical thought. Goleman (2000) also recommended that emotional intelligence allows a person to persist in his or her goals, though beset by serious work-related frustrations, and retain the ability to not allow the emotions to deter thinking and keep focused on a goal while remaining hopeful.

Kay's very negative experience with her superior caused her to feel discouraged and disengaged with the whole work environment. With every interaction becoming progressively degrading (reprimanding her in front of students and upbraiding her about her interactions being disrespectful of him), Kay started feeling incompetent about her role and she began questioning her own capabilities and the purpose of her even being there. She lost her enjoyment and developed a low self-esteem and lack of motivation. Kay was associating the treatment that her supervisor was giving her to her ability to perform. Here, emotional well-being was directly tied to her intellectual well-being. The more she experienced this adverse treatment from her supervisor, the more she felt she was not capable of doing the job. Kay was always very joyful about her work, and as she began experiencing adverse treatment from her manager, she became concerned that she would lose her primary reason for working there. She recalled forcing herself to list the benefits of why that work was meaningful for her. On a daily basis, she worked to put her manager out of the picture while she was mindful of helping others to engage in critical thinking.

Kay gave space and paid attention to her emotional state. She was then able to integrate the tenets of emotional intelligence to understand that while the situation with her supervisor was not optimal, she wanted to be able to retain a measure of satisfaction with the work she was doing (Goleman, 2000). This understanding led her to approach her supervisor and discuss with him how she felt about her interaction with him. Although she did not feel as if the discussion made things any better in the relationship, Key did feel internally content that she made the effort and was able to express herself.

Burke (2006) laid out the characteristics of a good leader in an organization by counseling for the re-examination of the criteria for positions where employees are responsible for directing and leading others. He argued that just because a person is technically proficient, there is no automatic evidence that this translates into being a good people manager or leader. He continued:

> While job knowledge is important for credibility as a manager or leader, more important are such qualities as conceptual ability, emotional intelligence which includes self-awareness, and a controlled desire to make a difference, i.e., not for personal reasons such as self-aggrandizement, but for reasons that are associated with organizational goals.

The episode of Hans dealing with the emotions brought about by his peers speaking derogatorily of the ability of Marines to engage in critical thought is a poignant example of this "self-awareness and controlled desire to make a difference." Although Hans was mindful of trying not to "grandstand," he did feel that arguments being posed against his desire to engage the Marines were ridiculous. Hans's awareness of his emotional state was clear in that his temperature rose, his speech and heart rate quickened, he felt excited and flushed; he said, "I had to regroup myself, calm myself down, and then tell myself I'm committed to this task." Hans was aware of the full range

of emotions he was experiencing. He agave these emotions attention and space and then utilized them to focus on his task.

Laren felt emboldened to take an executive client to task when he "pissed her off" for disrupting her seminar. The executive only showed up at the beginning and end of the seminar. She felt he had destroyed the contractual environment that had been set up for the attendees to feel safe, despite the issue that power differentiators were at play in the class. When he "waltzed" in and stood at the back of the room, she felt this violated the contracting she had worked so hard to build up. She was aware of the personal agitation this brought her and she began thinking about how to respond to the situation. As she collected her reasoning together, Laren's emotional/intellectual well-being registers caused her to take corrective action and speak to him about returning to a future session.

In some cases, there was a connection between the emotional response of the participants and the amount of information lacking that was associated with an incident or their job in general. Fook and Gardner (2007) related the frustration that critical thinking professionals can suffer when the environments they are in have habitual context change and a lack of professional training or direction.

When Ima arrived for her first day of work, she discovered that the management team receiving her had found out on the Friday before the Monday she arrived that she would be coming in. When she arrived, she found she was not on any work schedule and "I didn't have a desk, I didn't have anything." There then began a flurry of activity around her as other employees were "firefighting." Ima spent the next few weeks figuring out how she would do her job as she noted this strange flurry of activity around her. Ima's "feeling utterly useless" was directly related to the lack of direction she received in

her work. As was the case with the other participants, she also gave attention to the emotions at play and utilized them to formulate critical thought concerning what actions she should take to integrate into her new work environment.

Critical Questions Asked in the Work Environment

The critical thinking lens that situates this research and the experiences of the participants is grounded in the history of critical theory that reflects the social justice aim of removing the incessant bounds of gender, class, and race (Creswell, 2009). The process of identifying and checking the validity of assumptions that support these bounds are serviced by the use of questions (Brookfield, 2012). The ability to ask questions that challenge the *status quo* is the essence of critical theory. The questions formed while one is engaged in the exercise of critical thinking are termed *critical questions*. The participants in this research showed a strong predilection toward constructivist and "problem-posing" work environments that encouraged bringing the experiences of the group to bear on answering problems versus "banking" that seeks to pour knowledge into a recipient and is often accomplished through memorization (Freire, 2010). Asking critical questions was an integral and organic part of the lived experiences of the participants of this research.

Hans wanted to attain a classroom environment that had an authentic discussion and then engage in discourse. Hans was very wary of the "indoctrination" that was being encouraged to model in the classroom and he asked himself and others what they were trying to accomplish and why.

Kay's thinking was fueled by overarching questions about the societal problems she would be engaging. She incorporated questions that included "What are we not

seeing? What are we understanding and not understanding?" Kay felt that without the ability to critically think or reflect, a person is left deficient regardless of whether they are a leader in a company or a government. Kay believed that a paucity of critical thinking capabilities leads to a rash of short-term gains without seeking deeper meaning.

Here, Kay was concerned about the society-at-large, not just her classroom. She was accessing a worldview to solving the problems she was addressing in the classroom. She got to make that assessment by means of questions.

As Lee began experiencing the challenges of working in an unfamiliar technical and process-oriented environment, she began asking what she described as philosophical questions that included "How do I make this an educational experience for the students? How do we improve this? How do we make this better? What does this mean for learning? What can I provide as a teacher? What will the students be getting out of it?"

Critical Thinking Before and After an Episode at Work

The participants had more beliefs and expectations tied to the completion of a matter than they did to the initiation of a matter. On average, the respondents spoke 2.2 times about their pre-episodic expectations and beliefs, reflecting on and being aware that they would embark on an incident where, in some cases, they would be aware that they would be utilizing critical thinking. On average, this same group spoke 3.6 times about their post-episodic expectations and beliefs as they reflected on how they felt their expectations and beliefs were or were not aligned with the actual outcome. The constitution of the post-episodic beliefs was made of new thinking and actions generated by seeing the outcome of the episode that was now completed. In some instances, there were no conscious and specific pre-episodic expectations and beliefs to associate and

compare with the post-episodic expectations and beliefs. In most instances where there was an association with the pre and post, the expectations and beliefs consistently changed. An interesting connection to this is how the finding of critical questions also fits into the timeline of an episode; typically most of the critical questions were asked during or after the completion of an episode.

Schön (1983a) expressed concern about the workplace practitioner who utilizes "technical-rationality" as the grounding for professional knowledge. A contrast was drawn against focusing on the expert type of learning and utilizing reflection *in* action and reflection *on* action. In this way, the professional is a reflective practitioner. Schön (1983b) stated:

> The practitioner allows himself to experience surprise, puzzlement, or confusion in a situation which he finds uncertain or unique. He reflects on the phenomenon before him, and on the prior understandings which have been implicit in his behavior. He carries out an experiment, which serves to generate both a new understanding of the phenomenon and a change in the situation. (p. 68)

The participants of this research consistently expressed the desire to re-think, question assumptions, and reconstitute knowledge and behaviors in their post-episodic beliefs. This would align with the habits of a reflective practitioner alluded to by Schön. When the work environment (expectations and commitments) shifted around them or when employers created stifled working atmospheres, the participants would try to understand how they might have personally contributed to the unfavorable situation, either directly or indirectly.

Schön (1983a) introduced the reflection in action and reflection on action that can be found in the experiences of the participants. Reflection on action involves thinking back on previous actions in order to decipher what may have been done that contributed

to an unexpected outcome. Reflection in action gives thought to reflecting in the midst of action without interruption, which has the capacity to detect and correct error before the action is complete. The experiences of the participants of this research were replete with examples of making corrective steps that came from reflection in and on action. Laren's experience of having an executive sponsor disrupt the summation portion of her coaching seminar housed an example of a participant reflecting in action. After becoming conscious of her viscerally negative reaction to the executive sponsor's disruptive behavior, she began reflecting in action and was able to take steps to reshape what she was doing.

While a substantial amount of the literature reviewed aligned with the findings of this research regarding the reflective nature of the critical thinker in action and on action, reflection that precedes action or is before action is not immediately apparent. There are no real terms or definitions in the literature that align with the pre-episodic belief contemplation that was found in this research. The pre-episodic beliefs of the research participants were many times associated with critical incidents that were not yet initiated and/or completely new. Below are a few examples of the incidents:

- Ima's surprise assignment of two direct reports who wanted to change jobs.
- Lee's assignment to create a learning environment by collaborating with departments and people that were at odds with each other.
- Dina's assignment to create an innovative environment that lacked flexible leadership and buy-in from the leadership.
- Kay's working under the direction of a manager who wanted her to predict his societal and social norms in her interactions.

The reflection found in the literature is usually anchored upon existing or known challenges that are part of an environment, not upon new environmental or work-related challenges. Kegan and Lahey (2001b) illustrated the approach they took to assist companies with organizational growth by means of a three-stage process:

1. managers guide employees through a set of questions designed to uncover competing commitments;
2. employees examine those commitments to determine the underlying assumptions at the core; and
3. employees start the process of changing their behavior. (p. 4)

The three-stage process listed above works within the framework of existing issues that individuals in an organization are challenged to change. In many cases, the commitments show up as complaints linked to how an individual wants things to be different. Through a four-column exercise, an employee's "big assumptions" are uncovered in order to diagnose their immunity to change. The key here is that a desire to change things implies there is a situation that already exists. The narrative of the participants in this research was that they did pay attention to pre-episodic beliefs and critical thinking that were at times tied to issues they had not yet experienced; the literature did not shed immediate or sustained light on pre-episodic thinking that is unattached to previous experiences or current issues.

Summary of Experience of Using Critical Thinking Within a Profession

This section encompasses the phenomenological essence of the lived experience of critical thinkers as their occupational setting impacts them. The essences addressed the first research question of how a person experiences critical thinking in relation to his or

her profession. While investigating the lived experience of the critical thinker in his or her profession, the essences of that thinker come to the fore. Along with the experience, the literature that illuminates the experience is shared in this chapter, including the tactics and beliefs linked to the emotional being of the critical thinker seen through the lens of emotional intelligence (Goleman, 2000), and the pre- and post-episodic reflection having congruency with reflection on action and reflection in action (Schön, 1983a). We now turn to the second and third research questions.

The Pitfalls and Inhibitors to Critical Thinking in the Work Environment

The second and third research questions were related to what are the inhibitors, barriers, or impediments to the process of critical thinking that a professional experiences in relation to the guidelines, standards, and policies of his or her occupation, and under what organizational conditions is critical thinking best fostered or what would an organizational culture look like that fostered critical thinking. As previously stated, five sub-findings arose in addressing these research questions. The five sub-findings are organizational standards, leadership, cultural/societal norms, positionality, and lack of time.

The participants were least enthused and engaged about their work environments when their leadership did not act in concert with the same things they spoke about. Dina's leadership spoke of fostering an innovative and creative work environment, but was not supportive of the steps needed to get there. She found herself tired and disengaged. Conversely, the participants found they were most engaged in an environment where the leadership modeled what they spoke about by taking action. Argyris and Schön (1974)

pioneered research under the *theories of action* that would define how people plan out and then take and review their actions. Two contrasting theories of action are formed unknowingly in most people: theory-in-use and espoused theory. Some theories are an implicit part of what we do inside of an organizational system and other theories are verbalized to represent what a given action will be. When a person is engaging her environment and receives a query on what course of action she will take, the answer that she will ordinarily access and verbalize is housed in her espoused theory. The espoused theory is the one that forms the reality and belief system with which she is most closely aligned to access a response between the two theories of action. The actual activities that comprise the actions she carries out are housed in the theory-in-use. The theories of action present a challenge to practitioners to be aware of the differences in their espoused theory versus theory-in-use. While gaps between the two theories are normal, understanding the distinctions between the two are important for developmental awareness. Argyris (1980) made the case that congruence between the two theories creates greater capability and work effectiveness.

To create a deeper understanding of the theory-in-use, Argyris and Schön (1974) further illuminated a model of what is involved by showcasing three components: governing variables, action strategies, and consequences. Governing variables are the limits and rules that impact actions, action strategies are the plans adopted and steps taken within the governing variable, and consequences are what happen as a result of the actions taken—which can be both intended and unintended. When the consequences match the intended aim of the steps taken, then the theory in use is confirmed. If the consequences are not confirmed, then there is a mismatch between the intention of the

action and the consequences. When a mismatch is confirmed, the typical step that follows is to look within the governing variables or rules for another strategy to see what can be done to create steps that create intended consequences. Argyris and Schön described this as *single-loop learning.* In essence, an individual would be asking, "Are we doing things correctly?" Yet if the same circumstance of a mismatch between intentions and consequences allows one to question the governing variables that set up the strategies, then the person moves from the single loop of asking, "Are we doing things correctly?" to the *double-loop learning* of asking, "Are we doing the correct things?" At *double-loop learning,* it is possible to alter the governing variables by means of questioning the validity or rightness of what is being done. *Double-loop learning* allows one to challenge assumptions connected with the very existence of the governing variables. Challenging assumptions by means of critical questions is the foundation of critical thinking. *Double-loop learning* was clearly used by the participants that are part of this research.

Dina's leadership was incessantly fixated on the "doing things correctly" (*single-loop learning)* questions when she was tasked with creating an innovative environment. The questions from leadership hovered around *how* she went about setting up the program: Did she use a noted researcher for the basis of the program? How many years of research was behind the program? The *double-loop learning* questions concerning "What are we trying to do?" were being entertained only at Dina's level, but not from the leadership. Ima's leadership principal told her, without equivocation, "If you want to be the leader of a school, you cannot think, exactly; you must be able to follow the manual, follow the standard operating procedures, and you must guarantee the results according to that." This resolutely pointed to Ima's leadership as championing and endorsing single-

loop learning as the only way to get the expected results. What steps does an organization take to solve a problem when it is commissioned to work without qualification within the governing variables of a written manual? Since Ima's organization promoted single-loop learning as a standard, what happened when the outcome of the governing variables did not match the intention? Ima shed light on what happened when she related an incident where an employee was not able to take bereavement time for a person who was not her biological father but was her surrogate father in every other way, having raised her from her youth.

Edmondson and Moingeon (1999) presented their findings regarding this type of learning when they stated:

> The underlying theory, supported by years of empirical research, is that the reasoning processes employed by individuals in organizations inhibit the exchange of relevant information in ways that make double-loop learning difficult—and all but impossible in situations in which much is at stake. This creates a dilemma as these are the very organizational situations in which double-loop learning is most needed.

Here are a few situations involving the participants of this research "in which much was at stake."

Hans had to manage through a situation in which a student in his program was kicked out of the program and in danger of having his military career brought to an unceremonious end by means of a ftrep (fitness report) that would have shaded him in a very poor light. All of this happened because the student spoke out in an environment where the governing variables actually stated that it was okay for students to speak out and they would be kept safe in doing so. Since the leadership was interested in now expelling this soldier, the very theory espoused by the leadership was not the theory in use.

The governing variables of how Lee had to collaborate with institutions and employees who did not share a common interest in the development of her students caused problems with completing her project and impeded funding. The inflexible imposition of the governing variables dictating the actions that Lee took directly inhibited the intended outcome of creating a sustainable learning environment for the students enrolled in her class. Because her leadership expressed a strict follow-through of the governing variables, this precluded any discussion around questioning the validity or usefulness of the governing variables applied.

The governing variables that involved Kay's work were undefined and/or seemingly arbitrary. The governing variables that were known or demonstrated depended heavily upon societal/cultural norms of where she was based rather than any codes of conduct or company policy. Her manager stressed that she needed to be ready to stop eating lunch and move away from the table when he was ready to leave and this should be accomplished by her responding to his nonverbal cues. She should not offer her opinion to him of how the classroom environment for which she was responsible should be conducted. She should not make eye-to-eye contact with him when he was talking, as this was a sign of disrespect. The obvious challenge of existing within those unfamiliar societal/cultural-governing variables was compounded by the above-described interactions also occurring with her manager while Kay was conducting her course.

Expanding on the application of their *theories of action*, Argyris and Schön (1978) completed the picture by explaining that two models of organizational thinking and behavior help to describe theories of use that either encourage or discourage double-

loop learning. The two models that represent the very different *theories in use* are *Model I* and *Model II.*

Model I behavior is linked with single-loop type thinking that utilizes unilateral decision making, holding strong inferences about the behavior of others without verification, and treating personally held views as the only correct views. Model I behavior leads to strained relationships, defensive interactions when their views are questioned, and constrained freedom imposed upon others. *Model II* behavior is linked to thinking that facilitates double-loop learning that can be referenced to validate inferences, collaborative decision making, and working with conflicting views. Model II behavior leads to minimally defensive relationships, greater freedom of choice for others, and personally held views to be questioned. The participants in this study constantly sought ways to engage Model II behavioral patterns towards their organizations and individuals. Even if they were initially shocked or thrown off by others' behaviors, they sought to find ways to integrate views and collaborate.

It was the Model II organizational behavior with which the critical thinkers involved in this research found the most congruence. The ability to be in a collegial environment where their leaders have the capacity and willingness to question and change the governing variables that constitute the policies, standards, guidelines, and procedures within their organization gave them the strongest feelings of comfort and commitment. Model II work environments that facilitate double-loop thinking are the work environments that foster critical thinking.

Summary of the Pitfalls and Inhibitors to Critical Thinking in the Work Environment

The five sub-findings of work environment in inhibitors are organizational standards, leadership, cultural/societal norms, positionality, and lack of time. In response to the inhibitors, the participants closely aligned with *double-loop* and *Model II* learning were comprised of the *theories of action* proffered by Argyris and Schön (1978), which allowed them to see beyond what the rules were in a given situation and look towards greater encompassing principles and ethics. In this learning, they found cause to look at the governing variables or rules to question not only if they were doing things correctly, but more aptly were they doing the correct things. In some instances, the supervisors of the participants not only resisted double-loop learning, but also made statements endorsing the short-sightedness of memorizing procedure and never taking action outside of the stated manuals.

Chapter VI Summary

This chapter presented an analysis of the research questions concerning how critical thinkers experienced critical thinking and the inhibitors they experienced in relation to the work climate. The cited literature lent context to the two questions in light of known theories and practices.

In the next and final chapter, the conclusions, recommendations, and reflections are offered.

Figure 2. Essence of critical thinker within an occupation

Chapter VII

CONCLUSIONS, RECOMMENDATIONS, AND REFLECTIONS

This qualitative phenomenological research was designed to investigate the lived experience of how professionals used critical thinking in their occupational settings. The investigative results of their lived experience led to the emergence of five major findings of tactics and values, emotional state, critical questions, pre-/post-expectations/beliefs, and inhibitors to critical thinking. The purpose of the research was to understand if profession-specific pitfalls to critical thinking can be identified and what organizational cultures that foster critical thinking would look like.

This final chapter establishes the conclusions drawn from the research, recommendations to critical thinking practitioners and organizations that sponsor them, and finally this researcher's own reflections on this qualitative phenomenological research.

Conclusions

The following are three fundamental conclusions made concerning this study.

1. Critical thinkers are aware that the primary impact to inhibit their ability to nurture a critical thinking environment is tied to whether or not their leadership is supportive of critical thinking.

2. Critical thinkers maintain dynamic flexibility in their beliefs and actions in ways that assist them in accomplishing goals born of critical thought.
3. Critical thinkers marshal a full range of emotions to integrate capabilities to respond to inhibitors.

Each of these conclusions is summarized in the next three sections.

Leadership as a Key to Foster Critical Thinking

Critical thinkers are most successfully engaged in their work environments when their leadership supports actions born of critical thought and are most detrimentally affected when their leadership inhibits such actions. The six participants valued the practice of surfacing and questioning assumptions within their work environment, but met the strongest resistance in that practice from their leadership. The ability to take informed action based on looking at ideas and decisions from different perspectives is the outcome of critical thought, which surfaces and identifies assumptions and examines the degree of validity of the assumptions (Brookfield, 2012). The most visceral responses from the participants came from sharing the lived experiences of the ineffective, obtuse, or shortsighted deportment of leadership that was carried out in their company. With very little variance, the leaders discouraged the participants from growing in powers of discernment and more often challenged them to follow the written and prescribed rules. The leaders discouraged investigation into a better understanding of what was going on and wanted the participants of this research to make immediate decisive action. The leaders did not encourage the participants to question long-established organizational precepts in the light of problems, but wanted the participants to follow the organizational rules undeterred.

In response to the hegemonic leadership practices mentioned above, the participants were left feeling tired, muted, undervalued, and isolated. The impact of the leadership not supporting a critical thinking occupational environment was directly related to the critical thinker fostering critical thought outcomes.

Of the five inhibitors revealed in this research, the effect of leadership as an inhibitor to fostering critical thinking integrated the other four inhibitors into a common essence and causal factor.

On the whole, the participants described being governed by organizational leadership behavior that was reminiscent of *Model I theories of use* (Argyris & Schön, 1978), which involves strongly held views that are validated by personal beliefs, defensive interactions when the beliefs are questioned, constrained freedom of movement placed on others, and unilateral decision making.

Flexibility in Response to Occupational Constraints

The critical thinkers who participated in this study maintained elasticity in beliefs and actions in order to navigate and negotiate challenging relationships and activities involving their peers and leadership. These critical thinkers were sensitive to personal intransigence and were highly capable of ferreting out values and actions that needed to be adjusted to accomplish greater good. White et al. (2006) confirmed that the ability to surface assumptions is central to critical thinking and this leads to the important ability to reframe beliefs and actions so that they may be integrated into changed contexts and new understandings. The participants in this research were transformative learners who continually made a reorientation of assumptions to create new ways of perceiving their environment (Mezirow, 2000). Their own recollection showed that they transformed in

both epochal and incremental ways, either in outward problem solving or inward transformations of "habits of mind" that allowed for rearticulating the premise of a problem in order to define it differently (Merriam et al., 2007).

Transformative learning is how the critical thinkers in this research were willing and capable of generating broader governing variables to try in different situations. Many times this meant reassessing, realigning, and reissuing their own beliefs and principles in order to manage concerns that could not be handled by their current governing principles (Argyris & Schön, 1978). As noted in the previous section, this capability to adjust was often suppressed by the intractable belief systems of the participants' leadership that were either reinforced or initiated by organizational policies. The research participants operationalized their ability to change their precepts by having the awareness and thoughtfulness of double-loop learning, which meant that they were able to question their own beliefs, be collaborative in decision making, and work with conflicting views to develop new frames of action.

The Critical Thinker's Use of Emotion

The six critical thinkers in this study marshaled the full range of their emotions in order to integrate the full capabilities of their tactics, values, beliefs, and critical questions as transformative learners. In elucidating the 10 phases or steps involved in transformative learning, Mezirow (2000) connected the first step to experiencing a disorienting dilemma, which comprises an acute external or internal personal crisis due to the individual's environment no longer integrating with the perception that is held. The second step is tied to the self-examination of feelings that can be connected to fear, guilt, shame, or a host of other feelings and emotions. The participants consistently recalled

engaging their lived experience of critical thought in their profession with hopefulness, sadness, frustration, disappointment, relief, thankfulness, and joyfulness. The negative emotions were all reactions to various disorienting dilemmas that they experienced. Mezirow (2000) formulated that after examining the emotional response tied to a disorienting dilemma, the transformative learner is then prepared to make a critical assessment of assumptions; recognize that one's discontent is shared with others; explore new roles, relationships, and actions; plan a course of action; acquire knowledge and skills for plan implementation; try on new roles; build competence in new roles; and reintegrate one's life based upon new perspectives (p. 22).

Table 5 loosely maps the findings connected to the participants of this research with Mezirow's (2000) 10 phases of transformation.

There is no constrained sequence in which the critical thinking participants of this research experienced transformations due to disorienting dilemmas. It is also not implied that all phases must or would be experienced by the participants. For instance, *shared discontent*s cannot be cross-referenced as a consistent part of the lived experience of the research participants, but they line up appropriately with what could be a post-expectation or belief. When answering the research question related to how a person experiences critical thinking within an occupation, a central component of that experience is tied to the emotional state the participants felt. An example of the aforementioned in the literature can be understood in how Fook and Gardner (2007) tied in a lack of workplace knowledge and drifting priorities to employee frustration. When the critical thinkers experienced frustration because they lacked essential knowledge at

Table 5

Mezirow's (2000) Phases of Transformation/Research Findings

Mezirow's (2000) Phases of Transformation	Research Findings
Disorienting Dilemma	Inhibitors
Examination of Feelings	Emotional State
Critical Assessment of Assumptions	Critical Questions
Shared Discontent	Pre-/Post-Expectations Beliefs
Exploration of New Role, Relationships, and Actions	Tactics and Values
Planning a Course of Action	Tactics and Values
Acquiring Knowledge for Plan Implementation	Tactics and Values Pre-/Post-Expectations/Beliefs
Trying New Roles	Tactics and Values Pre-/Post-Expectations/Beliefs
Building Competence for New Roles	Tactics and Values Pre-/Post-Expectations/Beliefs
A Reintegration Based on New Perspective	Pre-/Post-Expectations/Beliefs

developmental turns, they would invariably allow that frustration to drive them to reflect more deeply on what was happening and then begin a path to take action born of critical thought.

Recommendations

Recommendations for Organizational Leadership

Leadership in organizations should develop a culture of appreciation and support for identifying, acquiring, and retaining professionals who practice critical thinking in line with their professional domain, thus behaving as *learning organizations*. The *learning organization*, postulated by various researchers, has the characteristics of continually expanding its capacity to create sought-after results by undertaking the expansive thinking of the collective, facilitate the learning of all individuals with a view to continual transformation, and engage employees completely in a process of collaborative and accountable transformation that is accomplished by using the shared values and principles of the individuals (Pedler, Burgoyne, & Boydell, 1996; Senge, 1990; Watkins & Marsick, 1993). The learning organization should espouse and act upon the commitment to support, develop, and reward critical thinking behaviors that include evidence-based results of collaborative inquiry (Drago-Severson, 2009), and learning that leads to the transformation of governing variables (Argyris & Schön, 1978) or rules that do not lead to the intended outcomes of the organization. Learning organizations should also develop modeling of what critical thinking is and how it can be embedded within the career domains of employees. The learning organization banner should be upheld within the mission statements, the credo, and the overarching guidelines of the organization.

In order to socialize the practice of placing critical thinkers at the forefront of organizations, the learning organization should be structured on the concept of communities of practice. Wenger (1998) stated, “Communities of practice can connect with the rest of the world by providing peripheral experiences . . . to people who are not on a trajectory to become full members” (p. 117). Here, the importance of existing as a community of practice is defined as having connections to other disciplines in a fashion that is elastic enough to accommodate shared experiences, but exists as belonging to different careers or assignments. This community of practice for the critical thinker could contain constituents that reside in multiple work environments that are engaged in various disciplines. For instance, a member could come from each tower of the organization that includes human resources, information technology, business development, marketing, and legal.

Representatives from each part of the business would have a common understanding of critical thinking that included a glossary of terms or common language that could be used to frame critical thinking awareness and engagement. The common language would be established through meaning making or negotiation as a group. In connecting the meaning-making principles that would be applied when a group is forming new understandings, Wenger (1998) called the process a *negotiation* and stated, “The negotiation of meaning is a process that is shaped by multiple elements and that affects these elements. As a result, this negotiation constantly changes the situations to which it gives meaning and affects all participants” (p. 53). This negotiation is introduced as neither being classified solely as pre-existing nor made up, but as being both. On the surface, when the group is initially formed, it may seem that their experience as a group

may indicate they are absorbing only pre-fashioned and fixed understanding, but closer examination will most likely reveal they are at once taking in that which is established understanding and making their own understanding collectively and individually. This reification being in association with each other in "negotiating meaning" links them in a community of practice.

The process of forming and becoming a community of practice leads to what Wenger (1998) termed *belonging* and has three components: engagement, imagination, and alignment. Engagement includes three processes: "1. the ongoing negotiation of meaning, 2. the formation of trajectories, and 3. the unfolding of histories of practice" (pp. 173-174). Imagination involves "expanding our self by transcending our time and space and creating new images of the world and ourselves" (p. 176). Finally, alignment is a way for "participants to become connected through the coordination of their energies, actions, and practices" (p. 179). The formation of trajectories describes both the common and uncommon paths that support the belonging. An obvious shared trajectory of a community of practice that is aiming to embed critical thinking into the fabric of the work environment would be the use of tools and mindfulness that encourage adoption of critical thinking awareness and behavior in the whole person. A trajectory that may not be shared is how two critical thinkers from different disciplines decide to implement tools to overcome inhibitions to critical thinking that are uniquely connected to their different disciplines. Investigating the unfolding histories of practice would entail the critical thinkers looking both to their internal practice of critical thinking and the broader community they belong to outside of the organization within which they work. Here, they

pay attention to the evolution, growth, and development of their own profession in the broader arena of critical thinking.

If the organization, and specifically the leadership in the organization, places a high value on space and time dedicated to the practice of critical thinking, it would position itself to lay the groundwork for the rest of the organization to follow the practice.

Recommendations for Critical Thinkers

In Chapter I, the researcher referenced White et al. (2006) to set up the context and background for this research. White and associates enumerated four steps or stages to use critical thinking/reflection within the context of health and social care. The steps are:

1. creating an awareness of how hidden assumptions behind our practice may be directly influenced by social context or social learning, be it cultural, professional, structural, political, or workplace;
2. recognizing how thinking may be undesirable or restrictive, thus limiting the range of options for practice, and sometimes for self-recognition;
3. empowering identity, as professional practice is reframed to include these possibilities, and as there is a growing awareness of how we as individuals are able to create and reframe our thinking freed from social expectations; and
4. being aware of new skills/strategies, which become possible with this new way of thinking.

Chapter I of this research placed the investigation of Step 1 listed above as the scaffolding for how to engage the main research questions undergirding this study. This study sought to understand the experience of critical thinkers within their occupations and to discern what, if any, inhibitions to critical thinking were experienced as a connection

to those occupations. As stated in Step 1, this research bore out that the study participants experienced the ill effects of poor leadership that was affected and directed by hidden assumptions "influenced by social context or social learning, be it cultural, professional, structural, political or workplace" (p. vi). In Steps 2-4, it is recommended that critical thinkers give attention to the multifaceted influences of the hidden assumptions recited in Step 1 and realize how that environmental thinking may be "undesirable or restrictive, thus limiting the range of options for practice."

Here is where application of the second research question for this study is applied: How, if at all, can this understanding lead to an emphatic understanding and consequential cataloging of profession-specific pitfalls to facilitate critical thinking development? Critical thinkers are encouraged to think specifically of how critical thinking is related to their practice. In particular, critical thinkers in the work environment should be cognizant of how their inhibited critical thinking can limit the range of practices that could be applied to their profession. As they become further cognizant of the range of practices that can be applied in the work environment, they will be able to develop a newly formed and empowered identity to re-imagine the range of practices that are free from the social contexts that can inhibit critical thinking. Critical thinkers should then understand what new skills and strategies could be called upon that have been discovered due to this awareness.

While the critical thinkers in this research were able to adopt an overall broader worldview or governing variables during or after their episode, how would they have been served by pre-episodic critical thinking based on the knowledge of their environmental norms? In order to facilitate the development of the environmental norms

that are congruent with specific professions, the critical thinkers associated with this research and critical thinkers outside of this research can catalog specific inhibitors to critical thinking that are consistent with their environment. These data could serve the purpose of critical thinking facilitation for new employees who are not familiar with the profession-specific pitfalls to critical thinking that accompany a job domain. For instance, military training is heavily driven by documented procedures and a spirit of indoctrination. These two elements showed up clearly in Hans' experience of critical thinking within his professional military training domain. It was his desire to engage the soldiers in the classroom to think critically and uncover assumptions about their ways of making meaning. At every turn, Hans found obstacles of written orders and an insistence on indoctrination. If Hans were to catalog the often occurring obstacles, he could develop a playlist of what to expect for a critical thinker working in a military environment. Being comprehensive about developing such a list would also create more mindfulness for practitioners because they are now thinking in a pre-episodic mode about their environment and can catalog inhibitors to critical thinking apart from an episode.

If a catalog of specific inhibitors was developed to be related to a specific profession, it could be used for training all new employees in that profession concerning pitfalls to critical thought.

Recommendations for Future Study

While the literature often spoke in terms of critical thinking that accompanies action or occurs after action, also known as reflection on action and reflection in action (Schön, 1983b), it was not similarly apparent in the literature how critical thinking is connected to pre-episodic reflection that is unconnected to an ongoing or previously

encountered episode. While it was true the participants of this research did more of their critical thinking during and after an episode, it cannot be ignored that they also demonstrated situational awareness to think intentionally critically *before* certain episodes began. The participants shared how they questioned assumptions connected to a new assignment or role and were alerted to think about how they were making meaning of something that was yet to occur. The emotions connected to pre-episodic beliefs and thinking were typically positive, hopeful, and exuberant. Cataloging those emotions and making associations with the environment would help to expand what is connected to pre-episodic beliefs and thinking. Relevant statements from the participants that were under heavily laden policies, such as Hans's military training environment or Ima's government-regulated education system, showed that developing a catalog would be possible. Hans and Ima had tangible manuals that mandated the day-to-day activities in which they were involved and were cited as being the very basis for inhibitors to critical thought and actions.

The phenomenon of experiencing pre-episodic beliefs and expectations for events that critical thinkers are getting ready to embark upon is an area for additional research. The participants in this research did experience the ability to have pre-episodic beliefs and expectations that were grounded in critical thought. If critical thinkers look back into the past before a critical incident occurs, certain triggers could alert them to mindfulness and help them begin to imagine how they can show up as critically thinking practitioners *before* action. Can a checklist be devised that allows critical thinkers to pose questions about environmental dynamics that may be associated with a specific discipline? What things should critical thinkers be aware of in general? Here, the aim of research via case

studies or interviews would be to develop a comprehensive catalog of inhibitors to critical thinking that are connected or linked to a particular profession.

It strikes this researcher that certain inferences can be drawn concerning what an organizational culture would look like if it was supportive of employing critical thinkers. A further study could be posed that asks such questions as: Under what organizational conditions is critical thinking best fostered? and What would an organizational culture look like that fostered critical thinking?

While the unsavory experiences of the participants might imply what an organization would not look like if it fostered a critical thinking environment, the participants also made explicit statements about the environments they felt were supportive of critical thinking. When Kay first began the process of planning the program to teach critical thinking to a group of Korean students, she felt a sense of belonging and support that came from her supervisor. She found this constructivist environment with her supervisor to be a place where she could comfortably challenge the status quo and question if there were better ways to create deeper learning in the classroom. Such examples of what organizational environments that foster critical thinking would look like could be found in each participant's experience of critical thinking, but further research can focus on the dynamics of the organization.

Personal Reflections

Recently I went with my daughter to the Guggenheim Museum to see the Carrie Mae Weems exhibition, *Three Decades of Photography and Video*. Her works uncover the racial, societal, and gender hegemony which in large part is associated with the

experience of Black women. Through her pictures, videos, and words, Weems takes these experiences of her family and neighbors and reframes them and other previously marginalized representations into an "intimate and unvarnished portrait" (Weems, 2014).

A particular pictorial representation of Weems' work captured my attention and thoughts. In the picture is a bureau that holds a free-standing oval mirror, and in the mirror is the image of a woman resting her hand against a bedpost with her head slightly leaning to the right and looking down; she has her back to the mirror. The caption under the picture states: "Standing on shakey [sic] ground I posed myself for critical study but was no longer certain of the questions to ask."

The attitude and position of the subject were such that they perfectly described the statement. As I pondered the striking statement and photograph, I found they immediately resonated with the feelings I had over the span of time starting with choosing a researchable subject for this study to choosing my final words for this dissertation. As I "posed" myself for critical study, I found myself time and time again "no longer certain of the questions to ask." I recall learning at the earlier stages of this process of the need to surface my own assumptions about the research subject I was engaging. I had a definite frame of mind concerning my own experiences with feeling inhibited towards critical thought in a religious environment where I had clergy/laity responsibilities and in corporate environments. There came a time when I in good conscience could no longer place upon the laity what I felt were heavy burdens. Before I discontinued my affiliation with the religious order where I had served in a clergy role, I was deeply influenced by the speeches and actions of Henry Ward Beecher as an abolitionist and social reformer, whose church served as a station on the Underground Railroad to free the slaves of the

South. In many ways, his thinking and actions were iconoclastic for the times in which he lived and had a specific design of freeing the physically and mentally oppressed (Applegate, 2006).

This type of thinking served as a premise for my own challenges in what I felt was a debilitating religious environment. I experienced the same type of critical thought inhibition in secular work environments and took steps to free myself of the inhibitions to critical thought. Since my own experiences could not be dismissed from the research, I made a journal of them to become more aware of how these could impact how I made meaning of the literature, the interviews, the transcripts, and the analysis. I found that the aforementioned components of this research greatly expanded and enriched my own experiences and meaning. I find myself thinking back often on how my life has been enriched by the experiences of these participants and how they navigated their occupation and their world in the frame of critical thought.

REFERENCES

Applegate, D. (2006). *The most famous man in America: The biography of Henry Ward Beecher*. New York, NY: Random House.

Argyris, C. (1980). *Inner contradictions of rigorous research.* New York, NY: Academic Press.

Argyris, M., & Schön, D. (1974). *Theory in practice: Increasing professional effectiveness.* San Francisco, CA: Jossey-Bass.

Argyris, C., & Schön, D. (1978). *Organizational learning: A theory of action perspective.* Reading, MA: Addison-Wesley.

Basseches, M. (2005). The development of dialectical thinking as an approach to integration. *Integral Review, 1*, 47-63.

Bradbury, H., Frost, N., Kilminster, S., & Zukas, M. (Eds.). (2010). *Beyond reflective practice: New approaches to professional lifelong learning*. New York, NY: Routledge.

Brookfield, S. D. (1994). Tales from the dark side: A phenomenography of adult critical reflection. *International Journal of Lifelong Education, 13*(3), 203-216.

Brookfield, S. D. (1995). *Becoming a critically reflective teacher*. San Francisco, CA: Jossey-Bass.

Brookfield, S. D. (2012). *Teaching for critical thinking: Tools and techniques to help students question their assumptions.* San Francisco, CA: Jossey-Bass.

Brookfield, S. D., & Holst, J. D. (2011). *Radicalizing learning: Adult education for a just world.* San Francisco, CA: Jossey-Bass.

Burke, W. W. (2006). *Conflict in organizations.* In M. Deutsch, P. T. Coleman, & E. Marcus (Eds.), *The handbook of conflict resolution: Theory and practice* (2nd ed.) (pp. 781-804). San Francisco, CA: Jossey-Bass.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative and mixed method approaches* (3rd ed.). San Francisco, CA: Sage.

Dewey, J. (1933). *How we think*. Boston, MA: D. C. Heath.

Drago-Severson, E. (2009). *Leading adult learning: Supporting adult development in our schools.* Thousand Oaks, CA: Corwin/Sage.

Edmondson, A., & Moingeon, B. (1999). *Learning, trust and organisational change: Contrasting models of intervention research in organisational behaviour*. London, UK: Sage.

Elias, D. (1997). It's time to change our minds: An introduction to transformative learning. *Revision, 20*(1), 2-6.

Facione, P. (2011). *Critical thinking: What it is and why it counts*. San Francisco, CA: Academic Press.

Fook, J., & Gardner, F. (2007). *Practicing critical reflection: A resource handbook*. Maidenhead, UK/New York, NY: Open University Press/McGraw-Hill.

Fook, J., & Gardner, F. (2013). *Critical reflection in context: Applications in health and social care.* New York, NY: Routledge.

Freire, P. (2010). *Pedagogy of the oppressed.* New York, NY: Continuum.

Gadamer, H. G. (1975). *Truth and method*. New York, NY: Seabury.

Gambrill, E., & Gibbs, L. (2009). *Critical thinking for helping professionals: A skills-based workbook.* Cary, NC: Oxford University Press.

Giorgi, A. (1985). *The phenomenological psychology of learning and the verbal learning tradition*. Pittsburgh, PA: Duquesne University Press.

Given, L. M. (2008). *The SAGE encyclopedia of qualitative research methods.* Thousand Oaks, CA: Sage.

Glaser, E. M. (1941). An experiment in the development of critical thinking. Unpublished doctoral dissertation, Teachers College, Columbia University.

Goleman, D. (2000). *Working with emotional intelligence*. New York, NY: Bantam.

Guba, E. C., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.)*, Handbook of qualitative research* (pp. 105-117). Thousand Oaks ,CA: Sage.

Harris, A. S., Bruster, B., Peterson, B., & Shutt, T. (2010). *Examining and facilitating reflection to improve professional practice.* Lanham, MD: Rowman & Littlefield.

Heidegger, M. (1962). *Being and time*. New York, NY: Harper.

Horton, M. (2003). *Horton reader: Education for social change*. Knoxville, TN: University of Tennessee Press.

Husserl, E. (1965). *Philosophy as a rigorous science in phenomenology and the crisis of philosophy* (trans. Quentin Lauer). New York, NY: Harper & Row.

Husserl, E. (1970). *Logical investigation.* New York, NY: Humanities Press.

Jones, W. T. (1975). *The twentieth century to Wittgenstein and Sarte* (2nd ed.). San Francisco, CA: Harcourt Brace Jovanovich.

Jordi, R. (2001, May). Reframing the concept of reflection: Consciousness, experiential learning, and reflective learning practices. *Adult Education Quarterly, 61*(2).

Kegan, R., & Lahey, L. (2001a). *How the way we talk can change the way we work: Seven languages for transformation.* San Francisco, CA: Jossey-Bass.

Kegan, R., & Lahey, L. (2001b). *The real reason people won't change.* Cambridge, MA: Harvard Business Review.

Keller, P. (1999). *Husserl and Heidegger on human experience*. Port Chester, NY: Cambridge University Press.

King, P. M., & Kitchener, K. S. (1994). *Developing reflective judgment.* San Francisco, CA: Jossey-Bass.

King, P. M., & Kitchener, K. S. (2002). The reflective judgment model: Twenty years of research on epistemic cognition. In B. K. Hofer & P. R. Pintrich (Eds.), *Personal epistemology* (pp. 37-62). San Francisco, CA: Jossey-Bass.

Klein, P., & Westcott, M. (1994). The changing character of phenomenological psychology. *Canadian Psychology, 35*(2), 133-157.

Kvale, S., & Brinkmann, S. (2009). *Interviews: Learning the craft of qualitative research interviewing*. Thousand Oaks, CA: Sage.

Lyons, N. (Ed.). (2010). *Handbook of reflection and reflective inquiry: Mapping a way of knowing for professional reflective inquiry*. New York, NY: Springer.

Macann, C. E. (1993). *Four phenomenological philosophers: Husserl, Heidegger, Sartre, Merleau-Ponty*. Florence, KY: Routledge.

Matthews, R., & Lally, J. (2010). *Thinking teacher's toolkit: Critical thinking, thinking skills and global perspectives.* London, UK: Continuum.

Maxwell, J. A. (2005). *Qualitative research design: An interactive approach*. Thousand Oaks, CA: Sage.

McCall, R. J. (1983). *Phenomenological psychology. An introduction, with a glossary of some key Heidegger terms.* Madison, WI: University of Wisconsin Press.

Merleau-Ponty, M. (1962). *The phenomenology of perception.* Evanston, IL: Northwestern University Press.

Merriam S. B., Caffarella R. S., & Baumgartner L. M. (2007). *Leaning in adulthood.* San Francisco, CA: John Wiley & Sons.

Mezirow, J. (2000). *Learning as transformation: Critical perspectives on a theory in progress.* San Francisco, CA: Jossey-Bass.

Osborne, J. (1994). Some similarities and differences among phenomenological and other methods of psychological qualitative research. *Canadian Psychology, 35*(2), 167-189.

Osterman, K., & Kottkamp, R. (1993). *Reflective practice for educators: Improving schooling through professional development*. Newbury Park, CA: Corwin Press.

Pedler, M., Burgoyne, J., & Boydell, T. (1996). *The learning company. A strategy for sustainable development.* London, UK: McGraw-Hill.

Perry, D. K. (2009) *American pragmatism and communication research.* Mahwah, NJ: Lawrence Erlbaum.

Perry, W. G. (1970). *Forms of intellectual and ethical development in the college years.* Austin, TX: Holt, Rinehart & Winston.

Reynolds, M. (1999). Critical reflection and management education: Rehabilitating less hierarchical approaches. *Journal of Management Education, 23*(5), 537-553.

Robson, C. (2002). *Real world research: A resource for users of social research methods in applied settings.* Malden, MA: Blackwell.

Schön, D. A. (1983a). *How professionals think in action.* Cambridge, MA: MIT Press.

Schön, D. A. (1983b). *The reflective practitioner: How professionals think in action*. New York, NY: Basic Books.

Senge, P. M. (1990). *The fifth discipline: The art and practice of the learning organization*. New York, NY: Deckle Edge.

Sheared, V. & Sissel A. (2001). *Making space: Merging theory and practice in adult education.* Westport, CT: Bergin & Garvey.

van Manen, M. (1997). *Researching lived experience: Human science for an action sensitive pedagogy* (2nd ed.). London, Canada: The Althouse Press.

van Woekrom, M. (2010). Critical reflection as a rationalistic ideal. *Adult Education Quarterly*, *60*(4).

Watkins, K., & Marsick, V. (Eds.). (1993). *Sculpting the learning organization: Lessons in the art and science of systematic change.* San Francisco, CA: Jossey-Bass.

Weems, C. M. (2014). *Carrie Mae Weems*. New York, NY: Yale Press.

Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity.* New York, NY: Cambridge University Press.

White, S., Fook, J., & Gardner, F. (Eds.). (2006). *Critical reflection in health and social care.* Maidenhead, UK: Open University Press/McGraw-Hill.

Appendix A

Letter to Participants

Teachers College, Columbia University
Adult Learning and Organizational Leadership

Dear Prospective Participant,

This letter serves as an invitation for you to participate in a research study concerning the use of critical thinking within your profession. I am a doctoral student in the Adult Learning and Organizational Leadership program at Teachers College, Columbia University. This research is the focus of my dissertation. By means of two separate interviews, that will not surpass 90 minutes each, a discussion will be used to gain an understanding of your experiences with critical thinking in your occupation.

Your participation in this study by no means constitutes an agreement for any remuneration or financial gain. No direct benefit will result to you by participating in this study. A possible indirect benefit to you may be of non-material nature related to the positive experience that may come from the reflective discussions concerning your episodes of critical thinking in your work environment.

Your name will not be used or referenced in the course of this research or any related publication. Due diligence and care will be taken to ensure that all information that you share will be properly coded so that personally identifiable information will be obscured as related to your identity.

If you are interested in participating in this research please send an email to la2024@tc.columbia.edu and I will forward you a link to an online questionnaire that will help us to gauge mutual interest before proceeding.

Thank you so much for taking the time to read this invitation.

Gratefully,

Lyron Andrews

Appendix B

Participant Rights and Informed Consent Form

Teachers College, Columbia University
Adult Learning and Leadership

Dear Prospective Participant,

Invitation

This letter serves as an invitation for you to participate in a research study concerning the use of critical thinking within your profession. I am a doctoral student in the Adult Learning and Organizational Leadership program at Teachers College, Columbia University and this study is the focus of my dissertation. By means of two separate interviews, that not surpass 90 minutes each, a discussion will be used to gain an understanding of your experiences with critical thinking in your occupation.

Risks

There are no significant risks that are envisioned with this study or your involvement. Participation in this study carries the same amount of risk that individuals encounter during a typical professional conversation. Notwithstanding the belief that no significant risks are associated with this study every effort will be undertaken to minimize any emotional discomfort or unforeseen reactions.

Benefits

Your participation with this study by no means constitutes an agreement for any remuneration or financial gain. No direct benefit will result to you by participating in this study. A possible indirect benefit to you may be of non-material nature related to the positive experience that may come from the reflective discussions concerning your episodes of critical thinking in your work environment.

Confidentiality

Your name will not be used or referenced in the course of this research or any related publication. Due diligence and care will be taken to ensure that all information that you share will be properly coded so that personally identifiable information will be obscured as related to your identity.

Rights

Your participation in this study is entirely voluntary, and can refuse to participate at any point without concern for penalization. You also have a right to privacy. Your real name will not revealed or connected to any elements of this study. A pseudonym of your choice will be used during all phases of the research. You have the right to access all audio recordings, transcripts, and to review, and potentially, withhold interview material (or portions of interviews) at any point. The researcher has the right to discontinue the research with any participant at any time.

Authorization

I have read and understand this consent form and I volunteer to participate in this research study. I understand that I will receive a copy of this form. I also understand that the digital audio recording materials will be used only by me and members of the research team.

I voluntarily choose to participate, but I understand that my consent does not take away any legal rights in the case of negligence or other legal fault of anyone who is involved in this study. I further understand that nothing in this consent form is intended to replace any applicable Federal, state, or local laws.

Summation of Rights

- I have read and discussed the research description with the researcher. I have had the opportunity to ask questions about the purposes and procedures regarding the study.

- My participation is voluntary. I may refuse to participate or withdraw from participation at any time without repercussion.

- The researcher may withdraw me from the research at his professional discretion.

- Any information derived from the research that personally identifies me will not be voluntarily released or disclosed without my separate consent, except as specifically required by law.

- I should receive a copy of the Research Description and this signed and dated Participant's Rights document.

- If at any time I have comments, or concerns regarding the conduct of the research or questions about my rights as a research subject, I should contact the Teachers College, Columbia University Institutional Review Board /IRB. The phone number for the IRB is (212) 678-4105. Or, I can write to the IRB at

Teachers College, Columbia University, 525 W. 120th Street, New York, NY, 10027, Box 151.

- If, at any time, I have questions about the research or my participation, I can also contact the researcher, Lyron Andrews, who will answer my questions. The researcher can be reached by phone at (646) 625-0030 or email la2024@tc.columbia.edu .

Audio-recording is part of this research. Only the principal researcher and his academic advisor may have access to written or digital audio recording materials.

My signature confirms that I agree to participate in this study.

Signature of Participant:

_____

Date: _____/_____/_____

Please Print Name:

_____

Phone: _____

Email: _____

Appendix C

Interview Protocol and Questions

Research Questions

1. How does a person experience critical thinking in relation to his profession? What are the inhibitors, barriers, or impediments to the process of critical thinking that he experiences in relation to the guidelines, standards, and policies of his occupation?

2. How, if at all, can this understanding lead to an emphatic understanding and consequential cataloging of profession-specific pitfalls to help facilitate critical thinking development?

3. Under what organizational conditions is critical thinking best fostered? What would an organizational culture look like that fostered critical thinking?

Introduction

Thank you for allowing me to interview you at your place of employment. As we have discussed I am researching what is the occupational influence upon those that utilize critical thinking in the workplace. During the interview what I have to say will be limited so that I can hear and pay attention to what you have to say.

Your written consent signified that you are giving me permission to record this interview. The purpose of the recording is to capture your expressions in the most accurate way and to allow me to give you my undivided attention with minimal note taking. This recording will stay confidential and under my custody for the full duration of my research and will be limited to my use only. I may make some limited notes during our session to help contextualize the discussion when I transcribe the audio recording. I will make the transcription available to you so that you can confirm the accuracy. With your permission I'd like to reach out to you periodically to help clarify and emerging questions.

Do you have any questions for me before we begin?

1st Interview:

1. In your own terms what does critical thinking mean to you?

2. Can you describe the roles and responsibilities that you've had over the last two years?

3. Describe an important episode when you engaged in critical thinking within your work environment in the last two years.

4. What were the circumstances surrounding precipitating that episode; what was the issue, what were the drivers? What intentionality did you have with that episode?

5. What did you conclude from the episode?

6. What actions did you decide to take?

Conclusion:

I want to thank you for your generosity of time, for your insights, for your openness. Before we conclude:

Is there anything I have not asked you that I should?
Is there anything else you would like to add?

2nd Interview:

1. As you reflect on our initial interview is there anything else that you'd like to add to your description of your experience of critical thinking in your work environment?

2. What constraints or hesitations did you experience? What were the indicators that you were being inhibited?

3. How did you respond to those inhibitors?

4. How would you categorize the inhibitors to critical thinking that you expressed in the last interview? Under which occupational/professional category would they fall under: standards, guidelines, or policies? What other categories would you list?

5. What barriers did you feel? Can you elaborate upon how else you felt by these inhibitors or recall any other emotions that arose?

6. What were some of the things that you took into account? How did your accounting to these other matters factor into our decision-making process?

7. What are the prominent and most often utilized or referenced policies, guidelines, standards in your place of the work and how are these utilized on a day-to-day basis?

Conclusion:

I want to thank you for your generosity of time, for your insights, for your openness. Before we conclude:

Is there anything I have not asked you that I should?
Is there anything else you would like to add?

Appendix D

Questionnaire and Critical Incident Form

Please check your highest level of education:

- 2-Year College Degree (Associates)
- 4-Year College Degree (BS, BA)
- Master's Degree
- Doctoral Degree
- Professional Degree (MD, JD)

1) Do you recall when you attended Dr. Stephen Brookfield's course on critical thinking? YES / NO. If so what year?

2) What is your current Title: _____ Role:_____

3) How long have you been in this role? 1-2 years, 3-5 years, 6-10 years, over 10 years.

4) Do you feel that you engage in critical thinking in your occupation? Yes, No

5) Would you consent to being interviewed in person for the purposes of a research study? Yes, No

Please include your telephone number that you wish for me to use when I contact you and a good time to call.