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Critical Thinking in Social Work Education: A Delphi Study of Faculty Understanding

By

Patricia Louise Samson

A Dissertation
Submitted to the Faculty of Graduate Studies
through the School of Social Work
in Partial Fulfillment of the Requirements for
the Degree of Doctor of Philosophy
at the University of Windsor

Windsor, Ontario, Canada

2018

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**Critical Thinking in Social Work Education: A Delphi Study of Faculty
Understanding**

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ABSTRACT

Critical thinking is a topic that is important to both teaching and learning in higher education, yet the effectiveness of universities in producing graduates who have the capacity to think critically has been debated. For the profession of social work, dedicated to an agenda of social justice for marginalized populations, the ability to engage in critical thinking and reflective practice is paramount. In this light, a reconceptualization of what critical thinking is in social work education and how it can be fostered within the changing landscape of teaching and learning in the 21st century is essential.

In a qualitative Delphi study conducted with 28 social work faculty members internationally, six themes emerged from a thematic analysis of the data. A qualitative research design was utilized to gain a rich understanding of what critical thinking is in social work education, specifically addressing the following: how do expert social work faculty understand critical thinking, how is critical thinking operationalized in the classroom, and how do social work educators know when students are thinking critically. After three iterations, consensus was achieved on several points, including the view that critical thinking is a multidimensional process. The emerging themes of critical thinking as a multidimensional process, epistemological influences and understanding, pedagogy, critical perspective and anti-oppressive lens, lack of a shared understanding, and assessment identified from this study are described as being interrelated and reciprocal. There is richness in the diversity of thought and pedagogy that informs social work education, which participants suggest is an

asset in promoting the understanding and development of critical thinking in students. Findings from this study will aid in informing both curriculum development and a pedagogy to support the development of these skills for the next generation of social workers.

DEDICATION

To my boy Jesse, whose devotion and calming presence helped ground me on a daily basis through much of this process...you are thought of and missed every day. To Mattie, whose life-force provided much-needed diversions along the way. We have both grown older, and somewhat calmer I hope, on this adventure.

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To Len...I did it!

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Chapter 1 – Introduction

The research study in this dissertation seeks to understand expert social work faculty's understanding of critical thinking in social work education in order to inform both curriculum development and pedagogy to support the next generation of professional social workers. Critical thinking is a topic of debate across a wide range of academic disciplines, where there is a diversity of understanding regarding the definition, importance, and presence (or lack of) in the curriculum. This dissertation represents an account of the perceptions of 28 social work faculty members internationally, on what critical thinking looks like specifically within social work education. Faculty participants were interviewed and consulted for feedback and follow-up over three successive iterations of this Delphi study. The findings help us understand how critical thinking is understood, conceptualized, and operationalized within social work education from a faculty perspective. This dissertation includes a synthesis of the research literature, an outline of the methodology that was implemented for this investigation, a presentation of the research findings, engagement in a discussion of the findings that is situated within the research literature, and highlights the implications for social work education, policy and research.

In this first Chapter, I will outline the rationale for this study, provide brief definitions of key terms, provide a theoretical framework for understanding critical thinking via the meta-theories of learning, and introduce a conceptual model to aid in understanding critical thinking in social work education. I will also examine my own assumptions in relation to this topic, as they have helped inform my interest in this chosen topic.

1.1 Rationale for the Study

There has been a growing recognition of the need for multiple and creative forms of thinking and reasoning in our modern world (Lim, 2011). A lack of critical thinking and reflective practice in human services today may have led to what some refer to as ineffective and inefficient organizational management (Soffe, Marquardt, & Hale, 2011). Critical thinking has been debated within higher education across a wide array of academic disciplines and there has been an ongoing question as to whether the role of the university is merely to impart knowledge or to produce individuals who have the capacity to understand, analyze and resolve problems in society (Lim, 2011). Included in this debate is whether or not universities should/do prepare students for employment. There is a call from university graduates for a more collaborative approach to support them as they enter the workforce (Lindsay, 2017). According to a report by Lindsay (2017), given the rapid changes that occur in society and the unforeseen employment opportunities of the future, joint initiatives between the education sector, private industry and government sectors are important in facilitating transitions from the education sector to the work environment. Harvey (2010) highlights the benefits of supporting *transformative* learning that fosters both “flexibility and empowerment” (p.3) in students, so they can translate those traits to the employment sector and be committed to a process of lifelong learning. Employment-based training and experience are identified as mechanisms that improve employment opportunities for university graduates and support critical thinking (Crammer, 2007).

According to Miller, Tice and Harnek-Hall (2011), critical thinking is a “curricular bridge between being an educational outcome and comprehensive skill; it supports the examination and critique of society, which differentiates social work from

other disciplines” (p. 36). For the profession of social work then, the ability to ensure graduates have the skills to think critically in examining society and its influences on people is important. Critical thinking is essential for professionals working with human beings in order to engage in effective practice and decision-making, within the relevant Code of Ethics (CASW, 2005; IASW, 2017; NASW, 2008) and Standards for Professional Practice (CASW, 2017; BASW, 2015; NASW, 2017) for social work practitioners. For social work educators, key questions include: what is the best way is to incorporate critical thinking into the curriculum; and what teaching methods best support an environment that fosters the development and enhancement of these skills? Recent discourse on Evidence-Based Practice (EBP) and its relationship with critical thinking, and some of the tensions therein, have come to the foreground in social work education (Gibbs & Gambrill, 2002; McCracken & March, 2008; Yunong & Fengzhi, 2009). This will be discussed further in the literature review in Chapter 2.

Curriculum in social work education can serve as a foundation through which people can deliberate over issues of social justice, inequality and oppression and advocate for effective social change that can lead to transformation. As a profession dedicated to working with humanity, social work can play a key role in this process. It is important for social work educators to incorporate into the classroom the components necessary to teach students to think critically and reflectively to support the concept of learning as a lifelong process. In fact, it may well be a requirement of professional membership, as explained below in the role of accreditation standards and competency frameworks.

1.1.2 the role of accreditation standards/competency frameworks in social work education.

Within social work education, curriculum standards are in place both nationally and internationally to set expectations, requirements, and/or competencies for the delivery of social work education, and in some cases, the outcomes associated with practice behaviours and related competencies as a result of this education. Competency has been described as having the ability to make professional judgements and practice actions through praxis, within the context of professional values and social work codes of ethics (CASWE, 2008). Competency-based education is reported to encompass the ability to “integrate and apply social work knowledge, values and skills to practice situations with intention and purpose, to promote well-being” (CSWE, 2015, p. 6). Competency-based education is described as an outcome-based approach to designing social work curriculum, to ensure social work graduates have the skills to meet the identified competencies in practice at all levels (CSWE, 2015). Assessment criteria to measure achievement of outcomes is not explicit; hence, there can be great variability across social work programs in both the implementation and measurement of educational outcomes (Carpenter, 2011; Higgins, 2015).

In 2004, the International Association of Schools of Social Work (IASSW) and International Federation of Social Work (IFSW) released *Global Standards for the Education and Training of the Social Work Profession* in a joint conference. Within these curriculum standards is a standard to “ensure curricula helps social work students to develop skills of critical thinking and scholarly attitudes of reasoning, openness to new experiences and paradigms, and commitment to lifelong learning” (IASSW, 2016, p. 5).

Within Canada, the Canadian Association for Social Work Education (CASWE) provides the accreditation standards for Bachelor of Social Work degree programs in

Canadian Schools of Social Work, to ensure students are “broadly educated and prepared for general practice with sufficient competence for an entry level social work position” (CASWE, 2008, p. 7). Contained within the *Core Learning Objectives* for students is a standard to “employ critical thinking and reasoning, including critical analysis of assumptions, consistent with the values of the profession, which they apply in their professional practice to analyze complex social situations and make professional judgement.” (CASWE, 2016, p. 10)

In the United States, the Council on Social Work Education (CSWE) is the governing accreditation body responsible for establishing the standards for social work education and practice, referred to as the *Educational Policy and Accreditation Standards* (EPAS). As stated by the CSWE (2008), the CSWE uses the EPAS to accredit social work programs and establish “thresholds” for professional competence” (p.1). According to the 2008 EPAS explicit curriculum standards, one of the identified *core competencies* was to “apply critical thinking to inform and communicate professional judgements,” noting that critical thinking “requires synthesis and communication of relevant information” and acknowledging that it is “augmented by creativity and curiosity” (CSWE, 2008, p. 4). The CSWE has recently implemented new and revised EPAS (CSWE, 2015) and the explicit identification of critical thinking as a core competency has been removed; some of the sub-components of critical thinking such as application, reflection, and critical analysis are evident in the revised competency standards (CSWE, 2015).

Within the United Kingdom, a National Competency Framework has been established to govern the implementation and standards for social work education and

practice. Its focus is to clearly articulate social work roles across the profession and provide clear expectations of the knowledge and skills required to provide service delivery at different levels of practice (BASW, 2017). While critical thinking is not listed as an explicit competency, some of its sub-components are evident in the form of the capability of critical reflection, where “critical thinking, reasoned discernment, creativity and curiosity” are highlighted as central features (BASW, 2017).

It is noteworthy that across countries the accreditation standards or competency frameworks provide guidelines and expectations for certain general outcomes, but are not implemented in an identical manner across academic institutions. Within social work education in Canada, for example, graduation from an accredited school of social work implies that the student has the values, skills and knowledge required for ethical and competent professional practice (Westhues, 2005). Schools have the latitude to incorporate multiple perspectives into the curriculum, within the framework and specifications of the accreditation standards. These standards do not make course content nor pedagogical approaches explicit, so there is variation from one program to the next.

Within Canada, a plan for a competency-based model of social work was introduced in 2011 by the Canadian Council of Social Work Regulators (CCSWR) that included both meta-competencies and procedural competencies for practitioners (Aronson & Hemmingway, 2011; Taylor & Bogo, 2014) defining practice behaviours/expectations that result in *competent* social work practice. According to Taylor and Bogo (2014), meta-competencies are connected to higher ordered thinking processes, including reasoning and judgement, which parallel some components involved in critical thinking. While there are supporters for this type of practice framework,

including the CCSWR, there is also resistance to a competency-based model that is viewed by some as limiting, itemizing and de-professionalizing social work (Aronson & Hemmingway, 2011; Campbell, 2011; Rossiter & Heron, 2011). Currently, the CASWE accreditation standards govern requirements and expectations for social work education in Canada, while professional Colleges/Associations outline standards of professional social work practice.

In terms of competency-based education, it is noted that with the implementation of EBP and expectations of quality in the delivery of social work services, the attraction of standardization has grown (Ponnert & Svensson, 2016). Ponnert and Svensson (2016) indicate that the concepts of transparency, evaluation, and best practice in the “best interests of the client” are the drivers behind EBP and the push toward standardization. The influence of the market economy on non-profit and human services has resulted in expectations of evaluation, use of standardized tools, and transparency as markers for both quality and accountability for human service organizations (Ponnert & Svensson, 2016). The challenge with competency-based frameworks is that “pre-packaged” interventions or approaches to practice are not responsive to addressing the needs of the human condition, given life’s unpredictability (Barter, 2012). As such, it is argued that social workers need to be innovative and creative in addressing the complexities of practice in the new world order (Barter, 2012).

There are many tensions and debates surrounding competency-based models of education, including concern about analyzing professional practice based on itemized work tasks or constructs framed within a positivist conception of practice (Bogo, Mishna, & Regehr, 2011). Concern has been expressed that framing social work within these

types of parameters is “reductionistic” and will lead to “deskilling the profession” (Bogo, Mishna, & Regehr, 2011, p. 277), greatly limiting the role of critical thinking and reflection in action (Schon, 1983) for practitioners in the field. According to Campbell (2001), a move toward competency-based practice represents a privileging of one specific understanding of social work theory and practice over others, at the expense of recognizing the multiplicity of ways of knowing and responding; it can become exclusionary.

1.1.3 why this study?

Critical thinking is important for social workers because professional practice requires practitioners who are able to analyze, interpret, assess, communicate, evaluate and intervene using multiple sources of knowledge and information, in a manner that respects the dignity and diversity of persons served (Deal & Pittman, 2009). Skills required for thinking critically in social work practice have been identified in some of the literature as including: clear problem identification; understanding meaning; thinking through all implications; identifying models, theories and paradigms that inform thinking; determining gaps, values and assumptions; seeing issues from multiple perspectives; and being reflective (Plath, English, Connors, & Beveridge, 1999). The ability to think, analyze, evaluate and integrate is essential for thinking critically. The research literature related to critical thinking also links critical reflection with critical thinking, highlighting the need for practitioners to be aware of what they bring to the situation, both as professionals and as individuals (Fitzgerald & Baird, 2011; Kondrat, 1992; 2002; Lay & McGuire, 2010; Schon, 1987; Soffe et al., 2011). Given the varying definitions and conceptions of critical thinking, this study aims to determine what it means within the

context of social work education. The literature makes connections between critical thinking and critical theory, but within the context of social work they do not necessarily have the same meaning. These concepts will be examined in the course of this study.

There are challenges facing social work education in an era that sees a continued decrease in financial resources to support both education and practice. For social work students, the costs of post-secondary education continue to climb, with the average cost of tuition for a four-year undergraduate degree in Canada being in excess \$23,088/year as of 2013-2014 (Financial Consumer Agency of Canada, 2016). Additional costs for books, other supplies, food, shelter, etcetera, compound the financial load. In addition to the financial burden for students in attaining the qualifications necessary to practice social work, there are ethical imperatives for social work educators to graduate students who are deemed competent to practice in the field and do no harm to clients, through engaging in ethical, competent standards of practice as prescribed by social work regulators across the country. The challenge to the profession, and in particular those focused on social work education, is the need to graduate practitioners who are capable of thinking critically in order to meet the expectations of regulatory colleges, professional associations and the mandate to protect the public. More importantly, having the ability to understand the effects of oppression, the importance of respecting diversity, and the achievement of both equity and equality are keys to promoting an agenda of social justice and supporting the need for critical thinking in social work students. These elements are central to core competencies and expectations within the educational milieu (CASWE, 2008; IASSW, 2004) and support the importance of the need for students, who will eventually become practitioners, to be able to engage in critical thinking. Failure to ensure students have the

ability to think critically and engage in critically reflective practice could result in adverse impacts on client systems and the growth of the profession.

The literature related to the importance of critical thinking reveals a gap in how to incorporate critical thinking into the social work curriculum. There are multiple and varying definitions of critical thinking which impact this perceived gap. While most educators support the concept of developing critical thinking skills in students, many develop their teaching pedagogies through trial and error and acknowledge that incorporating activities promoting critical thinking into the curriculum can be very time-intensive (Halx & Reybold, 2006; Schneller & Brocato, 2011). With such variation and lack of consensus on effective teaching pedagogies, developing a framework to support critical thinking across the curriculum in social work education will be a challenge. Additionally, Abrami et al. (2008) note that there is a lack of agreement about whether critical thinking involves a set of generic skills that apply across subject fields or whether it is dependent upon the context in which it is taught.

1.2 Definition of Terms

1.2.1 defining critical thinking.

There are multiple and varying definitions of critical thinking, due in large part to the multiple fields of study that try to define what it is. The research literature related to this concept will be examined in further detail in Chapter 2, but in support of the rationale for this study, a brief examination here will outline some essential features of how the definition of critical thinking is considered for this study.

Central features of critical thinking identified across disciplines include the ability to analyze, evaluate, and consider alternative viewpoints, along with skills in evaluation,

decision-making and problem-solving processes (Almeida & Franco, 2011; Celuch, Black & Warthan, 2009; Deal & Pittman, 2009; Facione, 1990; Lim, 2011; Paul, 1993; Plath, English, Connors, & Beveridge, 1999; Vandsburger, Duncan-Daston, Akerson, & Dillon, 2010).

Celuch, Black, and Warthan (2009) put forward a definition that views critical thinking as a higher-order process of reasoning that gives students the opportunity to look beyond individual views and analyze a much broader spectrum of issues. Critical thinking involves the concepts of reasoning, decision-making and learning *how to learn* (Celuch et al., 2009). It is described as a “dynamic process that relies on content and context” (Miller, Tice, & Harnek-Hall, 2011). For the purpose of this study, critical thinking is defined as a combination of the above-noted concepts of analysis, evaluation, hypothesis generation, integration and synthesis in considering information and examining alternative viewpoints and courses of action on issues. From a constructivist and critical lens, critical thinking occurs in an atmosphere of creativity, critique and questioning that embraces contradictions, ambiguity and uncertainty (see Figure 1.0).

1.2.2 the debates and challenges with critical thinking.

The veritable wealth of critical thinking definitions has an impact on how it can be taught and operationalized by students and practitioners. There is concern broadly identified across the higher education spectrum as to whether universities are effectively teaching students to think critically or not (Arum & Roska, 2011). In a study examining the results of tests on over 2300 college students in the United States, Arum and Roska (2011) found that 45% of students failed to demonstrate any improvement in the development of critical thinking skills during the first two years of their education.

Though the findings of this study are controversial in that they paint a picture of institutions of higher education as mechanisms for students to obtain employment credentials after obtaining degrees where little studying effort was put in or required, it leads to questions about the efficacy of traditional educational approaches in supporting the improvement of student capacities to become critical thinkers.

There is debate about whether critical thinking should be taught independently to students or included as part of the content in discipline-specific courses (Deal & Pittman, 2009; Ennis, 1989; McPeck, 1981; Smith, 2002; Williams, Oliver & Stockdale, 2004). There is also debate about the efficacy of generic or discipline-specific definitions of critical thinking (Deal & Pittman, 2009; Ennis, 1989; McPeck, 1981). The nursing profession has engaged in much scholarship regarding critical thinking and came to a consensus agreement on a discipline-specific definition of critical thinking (Scheffer & Rubenfeld, 2000), but this has not been followed up through further scholarship within the field (Deal & Pittman, 2009). The consensus definition for critical thinking in nursing, according to Scheffer and Rubenfeld (2000), is:

Critical thinking is an essential component of professional accountability and quality nursing care. Critical thinkers in nursing exhibit these habits of the mind: confidence, contextual perspective, creativity, flexibility, inquisitiveness, intellectual integrity, intuition, open-mindedness, perseverance, and reflection. Critical thinkers in nursing practice the cognitive skills of analyzing, applying standards, discriminating, information seeking, logical reasoning, predicting and transforming knowledge (p. 6).

Given the debates and varying definitions of critical thinking, achieving a clearer understanding of critical thinking specifically in social work would be of benefit for both social work education and practice.

1.2.3 measuring critical thinking.

The research literature related to measuring critical thinking will be examined in more detail in Chapter 2. For the purpose of framing this study, a brief introduction to the concept of measurement will be undertaken here.

Abrami et al. (2008) note that agreement is lacking about whether critical thinking involves a set of generic skills that apply across fields or whether it is dependent upon the context within which it is taught. There have been a number of different measures and tools used to measure different constructs of critical thinking which presents challenges in identifying, categorizing and evaluating outcomes on critical thinking in education in general and specifically within social work. The current tests that measure for critical thinking skills involve multiple choice and open-ended formats, which can produce a varying range of results if administered separately (Ku, 2009). Ku (2009), in a study assessing critical thinking performance in students, recommends the use of a multi-format approach to measurement that captures the essence of those skills required to think critically, including questions that demand analysis, synthesis, evaluation, and judgement. Ku (2009) notes that the definition used to capture critical thinking influences the way that will best measure its constituent components. Table 1.0 *Measures of Critical Thinking* highlights the predominant tests utilized in multiple contexts in the research literature related to critical thinking (see Appendix B). Table 1.0 shows the multitude of different constructs used to try to capture, identify and measure critical thinking and

reinforces the notion that how critical thinking is measured is largely determined by how it is understood or defined.

1.3 Theoretical Framework and Conceptual Model

For the purpose of this study, an understanding of critical thinking is woven together within a conceptual model to better understand the processes involved in thinking critically. This will form the theoretical framework for this study: linking together central tenets of the meta-theories of learning, Bloom's educational objectives, critical theory, and experiential learning.

Five meta-theories of education have been identified and include behaviourist, cognitivist, humanist, social learning and constructivist schools of thought. Each of these theories will be analyzed and critiqued, through a lens focused on the impact and implications for the development of the skills necessary to think critically.

1.3.1 the purpose of learning and education.

A central figure and theorist of education in the 20th century was John Dewey. Dewey (1916) described the very essence of life as a "self-renewing process" involving interaction with the environment. According to Dewey (1916), the make-up of society is a process of "transmission and interaction" that consists of the communication of peoples' thoughts, emotions and habits of living. Both teaching and learning were identified as key components for the maintenance of society, and Dewey (1916) equated the process of living with education. According to Dworkin (1959), Dewey viewed education as a social process that involved the continual restructuring of experience.

In understanding the process of human learning, a common thread amongst all theories is the view that learning is a complex process lasting a lifetime (Jarvis, 2006).

From an epistemological perspective, the very essence of learning means that there are multiple ways of knowing; hence, viewing the learning process from the perspective of a single discipline limits our understanding of the process. A constructivist view of learning recognizes a more holistic process of knowledge creation.

Jarvis (2006) describes learning as a transformative process that goes beyond the development of knowledge, skills and attitudes; learning is as a holistic process that involves the mind, body and spirit. At the centre of this is the relationship between the person and the world around them (Dewey, 1916; Jarvis, 2006; Kolb, 1984; and Mezirow, 1990).

MacKeracher (2004) describes learning as a natural and dialectical process that is cyclical and individualized in that learners have their own preferred strategies for learning. Learning occurs within a context; it is impacted by physiology, emotions, values and beliefs; and involves the process of learning how to learn (p. 5). Overall, learning encapsulates the process of “gaining knowledge” (Knowles, Holton, & Swanson, 1998).

In terms of the relationship between the concept of learning and education, Dewey (1916) conceptualized education as a social function, where the “social medium” was the environment in which learning occurs through the process of communication. Language has been described as the central component of all learning (Dewey, 1916).

In order to conceptualize the theoretical framework that informs critical thinking, an analysis of the five meta-theories of learning will be conducted. These theories inform our understanding of both teaching and learning, and can provide a comprehensive understanding of key components that foster skills to think both critically and

reflectively. Linkages will also be made to Bloom's Taxonomy of Learning in order to make connections from theories of learning to educational objectives.

1.3.2. constructivist learning theory.

The central tenets of constructivist learning theory are that knowledge is built from within by thinking; the nature of cognition is functional and adaptive; and the purpose of cognition is to help people organize their experience of the world (Cakin, 2008). People need to integrate new information with prior knowledge in order to promote deep learning (Vogel-Walcutt, Gebrim, Bowers, Carper, & Nicholson, 2011). Deep learning involves the integration of new information with prior knowledge, promoting a process of transformative learning where students engage in meaning-making activities rather than tasks requiring rote memorization (Gordon & Debus, 2002). According to Gordon and Debus (2002), deep learning promotes analytic and critical thinking skills, and taps into a student's motivation to learn via a constructivist approach to the teaching and learning process.

Key theorists who will be examined include Vygotsky and Mezirow. Constructivist theorists posit that knowledge is bound to the context and people make meaning of their experiences through a process of constructing their own reality (Marquardt & Waddill, 2004). Baviskar, Hartle and Whitney (2009) note that constructivist theory is based on the cultural context, so groups construct knowledge through dialogue and interaction. According to Bonk and Kim (1998), learning is situated within social, cultural, institutional and historical contexts.

A key constructivist theorist was Lev Vygotsky, whose ideas have been connected to the Marxist tradition. Vygotsky (1963; 1978) stressed the social situation of

development and learning, emphasizing the importance of dialectic interaction (Beliavsky, 2006; Blunden, 2011; Packer, 2008; Vygotsky, 1963; 1978). Vygotsky (1978) developed the concept of *The Zone of Proximal Development* in explaining human learning, which emphasized the concept that cognitive development of children happens within the social environment (Beliavsky, 2006; DeVries, 2000). According to Beliavsky (2006), this zone allows educators to understand how the processes of maturation impact learning. From Vygotsky's perspective, learning occurred first, followed by development (Beliavsky, 2006).

Among the criticisms of Vygotsky is a lack of specificity about what constitutes guidance for learners in the Zone of Proximal Development (DeVries, 2000). Packer (2008) notes that cultural differences are treated the same as historical differences, which resulted in ambiguity regarding definitions and an inattention to the role of social class on learning and development.

Another constructivist theorist of significance is Jack Mezirow (Marquardt & Waddill, 2004). Mezirow (1997) developed Transformation Learning Theory, which has been defined as "the process of effecting change in a frame of reference" (p. 5). Frames of reference are defined as a set of experiences people have gained that included assumptions, concepts, values, emotions and conditioned responses that define their world (Mezirow, 1997). Mezirow (1997) equated transformative learning with the development of autonomous thinking in adults.

According to Mezirow (2003), transformation in learning occurred when frames of reference were made more inclusive, open, reflective and able to change. Key concepts in transformative learning theory were derived from the work of Jurgen Habermas and

include instrumental and communicative learning (Mezirow, 2003). Instrumental learning has been referred to as controlling and manipulating the environment with a focus on improving the ability to predict outcomes and performance, while communicative learning refers to understanding the meaning (Mezirow, 2003).

Mezirow (1997) highlighted two key components relating to frames of reference: habits of mind and point of view. Habits of mind referred to “habitual ways of thinking, feeling and acting” (Mezirow, 1997, p. 6). A point of view referred to “beliefs, values, judgements, attitudes and feelings that shape an interpretation” (Mezirow, 1997, p. 6). According to Mezirow (1997), the key process through which transformation was possible is critical reflection; transformative learning is described as a metacognitive process (Mezirow, 2003).

For Mezirow (1997), critical reflection on taken-for-granted frames of reference was the key to transformation. When these taken-for-granted assumptions were challenged or changed, learning occurred. From this transformative perspective, the pedagogical approach that would foster critically reflective thought was “learner-centred, participatory and interactive” (Mezirow, 1997, p. 10). Instructional methods that have been identified to support this educational approach include activities such as small group discussions, concept mapping and participation in social action (Mezirow, 1997).

Baviskar, Hartle, and Whitney (2009) identify four constructivist criteria connected to critical thinking: eliciting prior knowledge; creating cognitive dissonance; application of the knowledge with feedback; and reflection on learning. In constructivist theory, knowledge is connected in a series of facts, concepts, experiences, emotions, values, and their reciprocal relationships with each other (Baviskar et al., 2009).

From an overall pedagogical perspective, constructivism supports processes of peer collaboration; hypothesis generation; cognitive structuring that organizes, evaluates and groups together perceptions, memories and actions; and teaches students to be more self-regulated and self-directed in their learning (DeVries, 2000; Mezirow, 1991; Schunk, 1996). All such processes can be equated with essential characteristics of thinking critically. In terms of the impact of this view on curriculum development, the belief is that students should be active participants in their learning process and teachers should provide experiences that challenge thinking, values and beliefs (Baviskar et al., 2009). Constructivism embraces the uncertainty and ambiguity of not knowing by acknowledging the multiplicity of knowledge and the view that there is no universal truth. The thrust of the educational experience is seen as one that should develop active, collaborative and authentic learning experiences (Bonk & Kim, 1998).

In critiquing constructivism, Delay (1996) describes it as being *relativist* in that there is no serious attempt to identify “acceptable constructions” or ways of doing things from this perspective. It leads to questioning who differentiates between right or wrong (Delay, 1996).

1.3.3 behaviourist learning theory.

Behavioural theorists have contributed greatly to an understanding of how people learn through the systematic study of behavioural responses to events. Analysis of these behaviours is based on a paradigm of scientific realism with an analysis of mechanistic reactions to external events that impact on people (Pittenger & Gooding, 1971). From a behaviourist perspective, learning happens as a result of “mechanistic associative processes” (Pittenger & Gooding, 1971, p. 76). Three important behaviourist assumptions

have been identified: behaviour change signifies learning; elements in the environment determine learning; and repetition and reinforcement of learning behaviours serve to build the learning process (Marquardt & Waddill, 2004).

Edward Thorndike, a behaviourist, theorized that learning was the result of a process of accumulations of rewards (Pittenger & Gooding, 1971). According to this theory, a stimulus elicits a response from the person, and if this response is rewarded, learning happens (Knowles et al., 1998; Pittenger & Gooding, 1971; Thorndike, 1933).

Thorndike's theory revolved around the concept of *connectionism*, where a specific response is connected to a specific stimulus when it is rewarded (Knowles, Holton & Swanson, 1998). Thorndike (1933) developed three laws governing learning: *the law of readiness* which involved a learner's willingness to learn; *the law of exercise* which involved the strengthening of stimulus-reward connections; and *the law of effect* which described the strength of a connection to a stimulus-response action as a result of its consequences (Knowles et al., 1998, p. 25). This stimulus-response reaction is illustrated by Pavlov's conception of classical conditioning of stimulus-response reactions to events (Schunk, 1996). Here, any response that is reinforced is more likely to be repeated; hence, educational aims should be structured to produce a "desired" behaviour (Knowles et al., 1998; Pittenger & Gooding, 1971; Schunk, 1996).

According to Schunk (1996), behaviourists exclude thoughts and emotions from learning; rather, learning is based in the environment and on the person's history of responses. From a pedagogical perspective, behaviourist theory suggests that both the learner and educator need to be aware of what components are required to perform well;

the role of the teacher is then one that “manages” the learning environment (Pittenger & Gooding, 1971).

A critique of the behaviourist approach to education is that it can be authoritarian and regimented (Knowles et al., 1998). From this view, behaviour is viewed as standardized and predictable with teaching styles that are authoritarian (Knowles et al., 1998). Such an approach does not foster dialogue, self-direction, or creativity in the learning process as its aim is to focus solely upon the mechanistic factors associated with learning.

In linking behaviourist theory to the concept of critical thinking, Thorndike’s *law of readiness* could be connected to the concept of motivation, which has been identified as an important component for thinking critically. This also suggests that critical thinking is something that would need to be practiced and rewarded. Almeida and Franco (2011) note that students must be motivated to engage in putting into action those actions (behaviours) necessary to think critically.

1.3.4. cognitivist learning theory.

Psychology has made a tremendous contribution to the study of human behaviour through developmental stages of cognitive development. Pivotal theorists who will be examined here include Piaget and Lewin. The main concepts identified in the cognitivist domain revolve around thinking, perceptions and knowing. From a cognitive learning perspective, the focus is on how people learn to understand through the use of internal processes of acquiring, understanding and retaining knowledge (Marquardt & Waddill, 2004). According to Marquardt and Waddill (2004), cognitivists believe that learning

occurs when people recognize experiences and make sense of environmental inputs via the processes of insight, perception and meaning attribution.

Clinical psychology has conducted extensive research and theorizing about how people learn. Knowles, Holton and Swanson (1998) identified components essential to cognition that included schema theory, information processing and memory. Schema theory has been defined as “cognitive structures that are built as learning occurs and these experiences accumulate and are stored in memory” (Knowles et al., 1998, p. 140). Three different ways of learning have been identified and include: *accretion*, where facts are learned with little cognitive change occurring; *tuning*, which involves incremental changes to a person’s schema; and *restructuring*, where new cognitive structures are created (Rummelhart & Norman, 1978).

Schema theory has been described as similar to the concept of mental models (Knowles et al., 1998) which are the cognitive structures that come from a person’s experiences and can pose barriers to change because people are likely to resist changes that do not fit their mental model (Knowles et al, 1998). For adults, cognitive processes and motivation are said to be guided by affective goals more than in adolescence or in childhood, which results in more self-directed and reflective perspectives on learning (Pascual-Leone & Irwin, 1998). According to Pascual-Leone and Irwin (1998), adults are more likely to bring their life experiences to both what and how they learn. The process of integrating life experiences with learning is often referred to as experiential learning--a process of learning through action involving activities of observation, reflection, and abstract conceptualization that inform further actions/experiences as described by Kolb

(1984) in his cyclical model of experiential learning. According to Kolb (1984), reflection on prior learning experiences informs ongoing actions and new experiences.

Two key aspects in the cognitive domain are identified as knowing and thinking (Jarvis, 2006). According to Jarvis (2006), the concept of knowing is about both knowledge and belief, which includes attitudes and values. Thinking is described as a rational process that involves reflection upon experiences and planning for the future (Jarvis, 2006). Types of thinking include memorization, interpretation, creativity, critical thinking, problem-solving, decision-making, and deductive and inductive reasoning (Jarvis, 2006).

A key theorist in the realm of cognitive development was Jean Piaget, who pioneered research into the influence of learning on the development of thinking skills (Jarvis, 2006; Muuss, 1967; Piaget, 1970; 1973). A key tenet of Piaget's stage theory of cognitive development was his focus on the very structure of knowing and development (DeVries, 2000).

The major developmental concepts of Piaget's stage theory encompassed four stages: sensory-motor, preoperational, concrete operational and formal thought (Jarvis, 2006; Muuss, 1967; Piaget, 1973). Pascual-Leone and Irwin (1998) equated these four stages with levels of constructive abstraction. According to this theory, the development of cognition and thought is conceptualized in evolutionary stages, beginning with sensory-motor reactions, and becomes more developed and complex as people grow and learn (Knowles et al., 1998). From Piaget's perspective, structures play a key role in the development of cognition (Muuss, 1967; Piaget, 1970). Structures were defined as "those organizational properties of thought that determine the nature of the child's behaviour"

(Muuss, 1967, p. 287). These stages have been described as “evolutionary” and are built over time, from the point where a child learns to differentiate themselves from the external world in infancy to thinking abstractly in adolescence (Jarvis, 2006; Knowles et al, 1998; Muuss, 1967; Piaget, 1970; 1973).

Another key tenet of Piaget’s stage theory of development was the concept of operations. Operations referred to “complex and differentiated cognitive skills” and imply the concept of having a meaningful understanding of the structure of a given problem; a person can identify problems within multiple contexts and understand the relationship of parts to the whole (Muuss, 1967). This concept of operational thinking can be linked to the development of critical thinking skills in the sense of recognizing multiple contexts and understanding connections and relationships in the thinking process.

Piaget developed a concept of *reflecting abstraction*, which encompassed components of experiential learning. Reflecting abstraction has been described as an abstraction that “mirrors or reflects experientially the causal feature of an objective experience” (Pascual-Leone & Irwin, 1998, p. 37). From an adult learning perspective, personal factors and a person’s life history impact learning and the strategies and types of abstraction a person will choose in a given learning situation (Pascual-Leone & Irwin, 1998).

One of the main criticisms of Piaget’s cognitive theories is that there is an overemphasis on cognitive skills at the expense of affective or emotional development (Knowles et al, 1998). DeVries (2000) adds that Piaget focused too much on individual

development without recognizing the large role social factors play in the overall development of human beings.

Kurt Lewin was a cognitive theorist who developed field theory and action research (Knowles et al., 1998). Lewin (1948) focused on resolving social conflict by learning to understand and restructure people's perceptions of their world. Lewin (1948) completed in-depth work on action research, which is an approach to learning about groups that included processes of group participation, interpersonal relations and change. From Lewin's field theory perspective, behaviour was seen as the result of the interaction between people, material goods, thoughts and tensions (Knowles et al, 1998; Lewin, 1948; 1951). According to Lewin (1948), learning emerged from changes in cognitive structures that resulted from either a change in the structure of the cognitive field, or a change in the needs or motivation of the person. Lewin (1948) posited that group behaviour involved symbolic interactions and forces that impacted both group structures and individual behaviour; therefore, the behaviour of the individual was seen as a function of the group environment (field) (Burnes, 2004; Lewin, 1948). Keys to learning from this perspective involve reflection and motivation (Burnes, 2004). The central tenet of this view is that behaviour is a function of the person and the environment (Coghlan & Jacobs, 2005).

Criticism of Lewin's work includes a description of his work as "too simplistic and mechanistic" in an environment where organizational change was seen as an ongoing, continual process (Burnes, 2004). Burnes (2004) adds that Lewin provided no room to accommodate transformational change; since his theory did not address the role and importance of politics and power within the organizational context. As well, he

promoted a “top-down” approach to change, which meant that change was driven by management structures rather than the organization as a whole (Burnes, 2004).

The relevance of cognitivist learning theory to social work is its contribution to the understanding of thought, knowledge creation and the role of perceptions in learning. Awareness of these components and how they influence critical thinking allows social work educators to consider the varied learning needs of individual students and the impact life experiences will have on these processes.

1.3.5. humanist learning theory.

The central components of the humanist perspective on learning revolve around the concepts of self-actualization and self-directed learning. Humanist theories of learning emphasize the affective domain in the development of human beings (Marquardt & Waddill, 2004). According to Marquardt and Waddill (2004), the humanist perspective sees a person as one who is looking to achieve self-actualization through learning and embraces the concept of self-directed learning. Prominent theorists in this area have been identified as Maslow (1954), Rogers (1951) and Knowles (1980; Knowles et al., 1998; Marquardt & Waddill, 2004; Schunk, 1996).

Maslow (1954) developed a *Humanistic Theory of Motivation* that emphasized a person’s striving to develop their full potential (Maslow, 1970; Schunk, 1996) as well as a *Hierarchy of Needs* that has been used as a guide to understanding behaviour (Maslow, 1954). Schunk (1996) noted that Maslow viewed human behaviour holistically, where all action represented peoples’ attempts to satisfy needs. His hierarchy placed lower-order needs (including that of safety) as those having to be met first before higher-order needs can be actualized (Schunk, 1996). Maslow’s emphasis was on motivation as an impetus

to develop one's full potential (Maslow, 1954; Schunk, 1996). Maslow's theory has been criticized for being "conceptually vague" in defining terms such as *deficiency* (Schunk, 1996). Additionally, research on the qualities of self-actualization has been mixed (Schunk, 1996).

Another pivotal Humanist theorist was Carl Rogers (1951) who related the concept of client-centred therapy to that of student-centred teaching (Knowles et al., 1998). He viewed learning as a *constructivist* concept with an emphasis on both cognitive and affective processes in learning (Schunk, 1996). From Rogers' perspective, the experiences of people and how they interpreted them impacted both development and learning (Schunk, 1996). Learning occurred through a process of active participation, combined with self-criticism and self-evaluation by learners who are impacted by the environment (Rogers, 1983; Schunk, 1996).

Malcolm Knowles (1980) is another theorist who has been situated within the Humanist tradition. Knowles (1980) developed the theory of andragogy, which Harper and Ross (2011) describe as a "conceptualization of how and why adults learn" (p. 161). Knowles' (1980) model of andragogy identified six core principles. The first principle was the learner's need to know, which encompassed the why, what and how of the learning process; second was the self-concept of the learner, which was considered to be autonomous and self-directing; third was the prior experience of the learner, including their resources and mental models; fourth was the learner's readiness to learn, that was related to life and maturation, as well as developmental tasks; the fifth principle was orientation to learning, which was problem-centred and contextual; sixth was the learner's motivation to learn, which was an intrinsic value in the adult learner with the

expectation and anticipation of a personal payoff from the learning endeavor (Knowles et al., 1998, p.182).

In Knowles' theory of andragogy, the role of the educator was *facilitator* of the learning process (Knowles et al., 1998). Within this theory, individual and situational differences were acknowledged as influencing factors on the learning process and learning contributed to the growth of both individuals and society (Knowles et al., 1998).

In critiquing the theory of andragogy, Jarvis (2006) suggests that learning also involves both physical sensations and emotional components, in addition to cognitive dimensions. Jarvis (2006) also notes that there are challenges inherent in an entirely student-focused approach to teaching and learning, in relation to institutional barriers, differences in student learning needs, and time constraints within classroom settings.

1.3.6. social learning theory.

Social learning theory captures the essence of learning via the interaction of people's behaviour and cognition with the social environment. The concept of *consequences* is a key factor that is reported to impact learning from this perspective. Key theorists from this tradition include Bandura and Dewey. Overall, social learning theory examines the social context within which individuals learn (Marquardt & Waddill, 2004). From this perspective, learning occurs in the social environment, where people gain knowledge, skills, attitudes, beliefs and strategies via the observation of others (Bandura, 1977; 2001; Schunk, 1996). Bandura (1977) uses the term *continuous reciprocal interaction* between cognitive, behavioural and environmental determinants of behaviour. According to Bandura (1977), behaviour involves an *interaction* and is not just an outcome of a response to something happening around someone.

According to social learning theory, most behaviour is learned through observation via modelling (Bandura, 1977). The concept of consequences in the learning process also plays a role in this theory, in that the consequences of behaviour let people know the appropriateness of their actions (Schunk, 1996). According to Bandura (2001), people are *agents of experiences* that involve cognitive as well as behavioural processes. Agency has been defined as “acts that are done intentionally and when a person engages in planning agency, it can be used to generate different outcomes; outcomes are the consequences of acts of agency” (Bandura, 2001, p. 6).

Bandura (2001) identifies forethought, generative and reflective capacities as being essential for human survival. In linking Bandura’s work to the concept of reflection, people are seen as agents of their experiences who are proactive and reflective, not merely reactive to events occurring in their lives. The concept of *forethought* refers to the motivation of people to anticipate likely consequences of their actions, which allows them to generate actions that produce the desired outcomes; it involves the anticipation of future events (Bandura, 2001).

One of the central tenets of social learning theory is that once people acquire the cognitive skills and operations necessary for processing information, they can develop alternate solutions to issues and evaluate a range of possible outcomes as they decide on courses of action (Bandura, 1977). This can be equated with processes related to thinking critically about situations, specifically as they relate to the thinking processes involved in the evaluation and synthesis of information in order to consider alternative viewpoints, both of which have been linked directly to thinking critically. Overall, social learning theory recognizes that there is a complex exchange between personal, biological and

socio-structural determinants of human functioning (Bandura, 2001). Life involves complex and multiple influences that impact thinking and learning.

In critiquing Bandura's theory, Phillips and Orton (1983) note that Bandura's findings are not new and that his concept of reciprocal determinism is "ambiguous." A change in one system in the social environment will not necessarily alter other systems interacting in the environment (Phillips & Orton, 1983); hence, the argument in support of this particular concept is lacking.

John Dewey's work has been categorized within the framework of social learning theory as well. The foundational view of his work was based on the premise that life was a "self-renewing process" through a person's interaction with the environment via communication, which included thoughts, emotions and habits (Dewey, 1916). Dewey (1916) viewed life as a continual process of both teaching and learning, and saw education as a social function of society. According to Dewey (1916), learning occurred through social interaction in the classroom.

In some respects, Dewey's theorizing places him in the constructivist orientation in the sense that he viewed growth and development as a process of transformation that involved mind, body and spirit and where there is no *absolute* or goal of achieving a *perfect state* (Fishman & McCarthy, 1998). Dewey viewed the student-teacher relationship as a *dialectic* or *dualism* (Dewey, 1916). He incorporated the concepts of thinking and reflection with regards to education (Dewey, 1916), which will be analyzed in more detail within the framework of experiential learning and how it informs critical thinking. A criticism of Dewey was that his main terms were "vague" and not well-defined (Dworkin, 1959).

From a social work perspective, a key component involved in social learning processes is that of reflection (Brookfield, 1987; Profetto-McGrath, 2005). Critical reflection supports and enhances the development of critical thinking skills (Brookfield, 1987; Profetto-McGrath, 2005), which is a key ingredient social work educators need to incorporate into the curriculum. In critiquing the contributions of the aforementioned learning theories, the information presented comes from a psychological framework and as such, misses some important social work principles including concepts such as the person-in-environment, social justice, and the importance of being both reflective and reflexive. It is noteworthy to point out that our current knowledge on learning is not from a social work perspective, so there may be important components missing when it comes to applying these theories to social work education.

1.3.7. Bloom's taxonomy of learning.

Bloom's *Taxonomy of Educational Objectives* was developed from 1949 to 1954 by a committee of College and University examiners (Paul, 1985). Bloom, Engelhart, Hill, and Krathwohl (1956) identified three domains of learning: cognitive, affective, and psychomotor. The major focus was on the cognitive domain, which included the educational objectives related to recall or recognition of knowledge and the development of intellectual skills and abilities (Bloom et al., 1956). The affective domain was reported to include those objectives that described changes in attitudes and values (Bloom et al., 1956). According to Bloom et al. (1956), the psychomotor domain was not developed.

Bloom et al. (1956) arranged the educational objectives in hierarchical order and organized them into six major classes of knowledge, comprehension, application, analysis, synthesis and evaluation. Appendix A provides a visual representation of the

taxonomy. Educational objectives were defined as the “explicit formulations of the ways in which students are expected to be changed by the educative process; the ways in which changes will occur in thinking, feeling and acting” (Bloom et al., 1956, p. 26), and also the ways in which critical thinking could be fostered via the achievement of these educational objectives. According to Bloom et al. (1956), these objectives shaped both course curriculum and evaluation methods.

1.3.8. defining Bloom’s educational objectives.

The overall purpose of having a taxonomy of *educational* objectives was to identify specific educational goals that students could achieve, which could then be used in curriculum development and assessment. The skills identified could be equated with outcome expectations (Bloom et al., 1956). The first step of Bloom’s taxonomy was knowledge, which was defined as those behaviours that emphasize the remembering of ideas, material or phenomena and included processes of relating and judgement (Bloom et al., 1956). The second step was comprehension, which was defined as those objectives, behaviours or responses that represent a literal understanding of something and involved processes of translation, interpretation and extrapolation (Bloom et al., 1956).

Application was the third objective highlighted, and referred to applying what was learned to *real life* situations (Bloom et al., 1956). The fourth objective was identified as analysis, described as breaking down material into its *constituent* parts, which allows for further comprehension; analysis examines the elements, relationships and organizational principles of material (Bloom et al., 1956). Bloom et al. (1956) identified the fifth objective as synthesis, the process of pulling together all of the elements to form a whole picture; synthesis involved working together all of the pieces to form a pattern that was

not present before. The final objective identified was evaluation, which was described as the criteria and standards of appraisal and the process of making judgements about the value of things (Bloom et al., 1956). For Bloom et al. (1956), the evaluative component involved a combination of all of the other objectives previously identified and significantly impacted further learning and development. As students integrate these skills highlighted in the taxonomy, particularly in relation to synthesis and evaluation, and incorporate the processes of judging, relating and extrapolating to other situations, the ability to think critically is fostered. In later revisions of the original taxonomy, Anderson, Krathwohl, Airasian, Cruikshank, et al, (2001), further refine the model to include a two-dimensional framework that involves both knowledge and cognitive processes. The cognitive process dimensions were renamed to represent more action-oriented language and include: remember, understand, apply, analyze, evaluate, and create (Krathwohl, 2002, p. 215). The boundaries between categories are also more relaxed in this revised version of the original taxonomy, recognizing there may be areas of overlap (Krathwohl, 2002).

A key concept involved in this taxonomy is prior knowledge. Dochy, DeRijdt, and Dyck (2002) note that a person's current knowledge base has a significant impact on further learning and development. Prior knowledge is defined as a person's entire knowledge available before a new learning task is undertaken and is both explicit and tacit, and involves components of metacognition (Dochy et al., 2002). Dochy et al. (2002) report that prior knowledge is one of the most important variables in student learning and is a significant component in developing knowledge that is both integrative and generative, since it leads to knowledge creation.

According to Dochy et al. (2002), Bloom's concept of cognitive entry behaviours which refer to prior knowledge, fits with the contemporary educational framework and is linked with problem-based learning. Problem-based learning is described as a strategy that compliments a constructivist learning environment that promotes cooperative learning, problem-solving and the acquisition of knowledge (Dochy et al., 2002).

Metacognition is a term often used to describe a person's knowledge and the regulation of cognition, while metacognitive skills are used to regulate cognitive performance (Schraw, 1998). According to Schraw (1998), metacognition consists of three types of knowledge: declarative, procedural and conditional. Declarative knowledge is that knowledge about ourselves as learners that influences our performance; procedural knowledge is about strategies; and conditional knowledge is knowing when to use a strategy (Schraw, 1998).

There is a link between metacognition and critical thinking. Schraw (1998) notes that people with higher levels of conditional knowledge are better able to assess and determine the particular demands of a specific learning situation and choose the most effective strategies for that particular situation. This demonstrates a Bloom-level response that aids in the selection of those skills of comprehension, analysis and synthesis (Schraw, 1998) and is an example of critical thinking.

1.3.9. a critique of Bloom's taxonomy.

While Bloom's taxonomy has been thought as useful in curriculum design, it has been criticized for not being useful in assessment of learning due to the linear nature of the levels (Fallahi & LaMonaca, 2009). An additional criticism is found in the hierarchical nature of the objectives, where each step is dependent on the one before so

the levels of knowledge, comprehension, application, analysis, synthesis, and evaluation are not necessarily mutually exclusive (Athanassiou, McNett, & Harvey, 2003). A strict hierarchy may limit creativity, reflexivity and more constructivist learning environments that foster self-directed learning and a multiplicity of ways of knowing. An alternative view of the taxonomy is to utilize it as a mechanism to scaffold learning for students (Athanassiou et al., 2003). Paul (1985) critiques the linear and hierarchical nature of Bloom's taxonomy, noting that these components are "restrictive and irreconcilable with a commitment to critical thinking skills and abilities" (p. 38). Paul (1985) views the one-sided hierarchy as limiting insight into critical thinking, which has no simple "recipe" to draw upon to foster these skills. Athanassiou, McNett and Harvey (2003) criticize Bloom's taxonomy on the basis of the strict hierarchy as well, given that the levels are not always distinct. On a positive note, Athanassiou et al (2003) highlight the fact that the progression through each level fosters the development of critical thinking skills.

More recent conceptions of learning taxonomies have been developed in more circular conceptions such as Fink's taxonomy of 2003 and Shulman's taxonomy of 2004 (Fallahi & LaMonaca, 2009), but none resonates as well as Bloom's foundational taxonomy that established the "gold standard" of educational objectives and are still widely used today. Fink's model of learning identifies six learning categories: knowledge, application, integration, human dimension, caring, and learning how to learn (Fallahi & LaMonaca, 2009). Shulman (2004) developed a table of learning that includes six levels of learning ranging from knowledge and understanding to engagement/motivation, performance/action, reflection/critique, judgement/design and commitment/identity (Fallahi & LaMonaca, 2009).

1.4 Critical Theory

The roots of critical theory are frequently traced back to the theorizing of Karl Marx (Levinson, 2011). Marx's work moved forward from that of Hegel's who first suggested that individuals were products of their society (Blunden, 2011). In a shift of this perspective, Marx viewed the concept of consciousness as the relationship of the individual to the environment (Levinson, 2011).

A cornerstone of critical theory is to engage in transformation through processes of emancipation, challenging the status quo and seeking social justice within the context of a critique of power in order to promote improved social practices. Critical theory recognizes that a person's social location in society directly impacts access to resources such as power, opportunity and information, which are all influenced by knowledge (Kondrat, 2002). Hence, critical social scientists must question whether beliefs, values and interactions in society express dominant relationships that can be changed (Welton, 1993).

In identifying the *critical* in critical theory, Brookfield (2001) notes that critical theory is grounded in political analysis; critical theory is about the critique of the existing social order and peoples' struggles against it. The over-arching aim of critical theory is providing people with knowledge and understanding with the intent that they will free them from oppression (Brookfield, 2001).

A post-Marxist theorist contributing much to the development of critical theory is the German thinker Jurgen Habermas. According to Welton (1993), Habermas developed a view of the relationship between knowledge, learning and the human condition that provides a mechanism for understanding the diversity of learning processes and

outcomes. His work is used widely within the field of education, particularly related to the larger sociocultural context and its influence on people's thoughts, motives and actions (Gouthro, 2006).

In his theorizing, Habermas recognizes the importance of language and developed his theory of communicative action (Welton, 1993) which is premised on the notion that all human communication involves validity claims that support the concept of *ideal speech*. Four criteria for measuring these claims are outlined: 1) comprehensibility, where people reveal their meanings to each other; 2) sincerity, that involves the expression of interests and intentions; 3) appropriateness or legitimacy, that concerns determining appropriate roles and contexts; and 4) truth, which is guided by creating an inventory of the evidence (Habermas, 1981; Levinson et al, 2011; Welton, 1993). For Habermas (1970), meaning, truth and knowledge encompass the realm of social interaction where shared meanings allow people to communicate; hence, communication provides the framework for social and cultural integration in the world (or life world) (Habermas, 1970; Levinson, 2011). According to Levinson (2011), Habermas' work has been important to education by revealing how communication occurs within the classroom and for teaching processes of critical reflection.

Another critical theorist who examined the social and cultural reproduction of inequality in society was Pierre Bourdieu. He has been recognized for his explanations of the power of educational institutions to reproduce conditions of inequality (Levinson, 2011a). From Bourdieu's perspective, the social and cultural reproduction of inequality occurs through the cultural context in which people make meaning (Bourdieu, 1998; Levinson, 2011a). According to Levinson (2011a), Bourdieu, along with sociologist

Anthony Giddens, synthesized a number of theories in an effort to understand the recursive power of social structures. Structure is defined as “a shifting and dynamic set of social forces and arrangements anchored in institutional practices and memory which make up society” (Levinson, 2011a, p. 116). The term agency describes the creativity of people through the subjectivities that are fashioned both by and through the structures they come across (Giddens, 1984; Levinson, 2011a). For Bourdieu, the concept of *practice* developed as a mechanism for attributing how both structure and agency joined in the process of social existence (Bourdieu, 1977; Levinson, 2011a).

According to Levinson (2011a), Bourdieu and Giddens demonstrate how people internalize the structures of power and domination in society. The main focus for Bourdieu was the relationship between culture and power, with recognition of the historical and cultural nature of human behaviour that was deeply entrenched in how people conduct themselves (Bourdieu, 1998; Levinson, 2011a). The work of Bourdieu has been impactful on the field of education. His concepts of *capital*, *habitus*, and *field* are widely used in educational research, particularly as they relate to the social and historical privileging of certain groups that has limited access to education and literacy for certain groups over others (Compton-Lilly, 2009). The term *capital* refers to the currency of social, political, economic, and symbolic values; *habitus* encompasses a system of embedded ways in which people see the world around them and influences how they respond to that world; and *field* refers to the social and physical spaces people occupy (Bourdieu, 1987; Bourdieu, 1998).

In linking critical theory to education, the concepts of power, knowledge and identity are central components. According to Levinson (2011), a person’s social position

and options are shaped by a sense of who they are relative to other people (identity), by what they know (knowledge), and what they are capable of (power). One theorist who viewed power as being ever-present was Michele Foucault. Foucault argued that all reactions be critically scrutinized, as he recognized the connection between knowledge and power (Metro-Roland, 2011). According to Metro-Roland (2011), the *critical* in critical theory for Foucault meant a process of “constant checking.” If the role of education is to produce and convey knowledge, then critical theorists recognize that some processes of education support the existing power relationships while others seek to challenge it (Metro-Roland, 2011).

In looking at issues of knowledge and power, another critical theorist who should be examined is Antonio Gramsci. Gramsci’s work precedes that of Bourdieu, but contributes significantly to critical theory and cannot be overlooked because his theory of hegemony adds to the understanding of how domination survives in the structures of society and impacts the concepts of both knowledge and power, with implications for education (Gross, 2011). Hegemony is defined as “an active process where legitimacy is sought and maintained by the dominant group by balancing consent (for the position of the dominant group) and coercion (the threat or use of force)” (Gross, 2011, p. 53). According to Brookfield (2001), hegemony refers to the way people learn to accept an unjust social order in a way that is in their best interest. Gramsci’s theory focused on the role of both culture and ideology in providing legitimacy and maintaining domination of those in power (Gross, 2011). Brookfield (2001) defines ideology critique as a process that helps people understand how they learn concepts such as political ideals, morality

and social philosophy within the institutions of society that include schools, friends and family.

Gramsci viewed education as fundamental to fostering a sense of *critical consciousness* (Gross, 2011). Critical consciousness is defined as “the process of reflecting critically on one’s position in society relative to broader social structures (religion, culture and the state), which is described as the means through which hegemony is visible” (Gross, 2011, p. 56). Hegemony helps people understand how dominant groups maintain their power. It is through awareness of such power relationships that change efforts can be targeted to challenge oppression and inequality at multiple levels in society, which is particularly relevant for social work as a profession.

From this viewpoint, education presents two contradictory stances where from one perspective it legitimizes the ideology of those in power by fostering consensus in how things should be done, while from another perspective, education and knowledge production challenges the status quo (Gross, 2011). One way to challenge those hegemonic views is by fostering critical thinking (Gross, 2011). As Freire (1970) notes, a liberating education supports dialogue, which in turn fosters creativity and a commitment to humanity. This connects to the role of social work educators in producing graduates who are capable of independent thought, analysis, and the ability to hypothesize and recognize alternative viewpoints in order to synthesize information and work to improve conditions for individuals and communities.

1.4.1 critical theory in social work.

A prominent principle of social work as a profession is a view of the person in their environment; awareness of the social context and its impact on people is

foundational. Fook (2002) identifies elements of a critical approach to social work practice which include commitments to the structural analysis of problems, including their relationship to socio-economic structures; to emancipatory forms of analysis and action through the incorporation of anti-oppressive practices; a position of social critique that includes acknowledgement of the relationship of the social work profession to issues of social control via the welfare state; and a commitment to social justice and social change.

Kondrat (2002) views people as co-constructors of their social environments. Their social location in society has a direct influence on their access to resources, power, opportunities and information, all of which are directed by knowledge which is influenced by power (Kondrat, 2002). According to Giddens (1984) and his structuration theory, the two components of power are resources and rules that are acted upon in a repeated interaction of people and their environment. In structuration theory, people are not only acted on by the forces of structural imposition, they act back via challenge and resistance (Giddens, 1984). This is particularly relevant for social work as a profession in terms of both practice and education because of its critical and activist concept of the person, where the individual constructs society through social interactions (Kondrat, 2002). Rules and resources organize social systems and the institutions within them (Giddens, 1984) and since social work espouses that people have the capacity to change their world, the question of what has happened to our activist roots should be asked. How can we support a critical pedagogy that fosters critique by our students and a drive to challenge the status quo?

Brookfield (1985) advocates for a *critical practice* in adult education, which by extension, would directly benefit social work students in challenging the status quo. This critical approach to education includes: critical awareness, which involves the notion that truth is relative; transformation occurs through the abandonment of inauthentic assumptions; and critical reflectivity, which causes an internal change in consciousness through the interactions between teachers and students (Brookfield, 1985). A critical pedagogy is one that supports students in realizing that knowledge is socially and culturally constructed and constantly open to creation and re-envisioning (Brookfield, 1985).

1.5 Experiential Learning

Experiential learning theories draw upon many of the central tenets of behaviourist, cognitivist, humanist and social learning theories of education, which combine to support the creation of knowledge and skills for learners. The practical context that links the pragmatism of Dewey, the cognitive development of Piaget and the action learning of Lewin is experiential learning (Kolb, 1984). The central tenet of these theoretical orientations is the concept of learning from experience and a view of learning as a lifelong process (Kolb, 1984). According to Kolb (1984), learning is best generated in a setting where there is dialectical tension and conflict that promotes a learning environment through a process of inquiry and understanding. Experiential learning theory is a practice theory that is a “holistic and integrative perspective on learning that combines experience, perception, cognition and behaviour” (Kolb, 1984, p. 21).

Kolb (1984) developed a theory of experiential learning that is largely informed by the work of Dewey (1916; 1938), Lewin (1947) and Piaget (1970; 1973). Dewey’s

philosophy of pragmatism saw experience as an organizational focal point for the learning process that included the components of cooperative leadership, dialogue and scientific humanism (Kolb, 1984). Lewin's view of learning as a lifelong process and the dialectic learning from experience involving the processes of assimilation and accommodation from Piaget, that addresses the relationship between learning and knowledge, contributes to Kolb's theory of experiential learning (Kolb, 1984).

The central components drawn from these theorists, which Kolb integrates into his theory, provide linkages and weave together central features of the cognitivist, humanist, social learning and behaviourist theories of education. In order to advance this theory through the lens of a progressive social work education agenda that fosters the development of critical thinking, critical and constructivist concepts should be incorporated into this framework.

Kolb (1984) identifies three characteristics of experiential learning that view learning as a process grounded in experience, where learning results from the resolution of conflicts between dialectically opposed ways of adapting to life. The centrepiece of Kolb's theory is the identification of four modes of experiential learning through which new knowledge, skills or attitudes are achieved--concrete experience, reflective observation, abstract conceptualization, and active experimentation (Kolb, 1984). Kolb (1984) describes the learning process as a holistic cycle that integrates thoughts, emotions, perceptions and behaviour. Consistent with Mezirow (1990), Kolb (1984) views the process of acquiring knowledge as a transformative process that is continually being recreated.

Jarvis (2006) criticizes Kolb's learning cycle, stating that it is too simplistic and cannot be replicated. While acknowledging contributions from the cognitivist, behaviourist and humanist traditions, Kolb fails to consider critical and constructivist contributions to the understanding of how human beings learn; hence, his conception of *holistic* needs to be expanded (Jarvis, 2006).

1.6 The Importance of Critical Reflection to Experiential Learning

Critical reflection is an essential component identified for thinking critically. Mezirow (1978) defined this as a process where "learners become critically aware of the cultural and psychological assumptions that influence the way they see themselves, their relationships and the way they pattern their lives" (p. 101). Important aspects of the reflective process include developing an understanding of the reasons, nature, justification and logic regarding assumptions (Mezirow, 2003). Reflection aids in the development of insight and ultimately of learning. It is a process of exploration, not only of one's thoughts, values, beliefs and attitudes, but of others as well.

Soffe, Marquardt and Hale (2011) identify the importance of fostering a reflective analysis in relation to adult learning. This involves a "critical assessment of assumptions" that leads to a better awareness and understanding of experience (Soffe et al., 2011). According to Brookfield (2009), the reflective process is one that questions the power relationships of a particular practice. The *critical* piece has its focus on discovering and challenging the power dynamics that frame social work practice, challenging the assumptions that support hegemony via a critical theory lens (Brookfield, 2009). Central to this process is recognizing individual biases and assumptions that impact behaviour at all levels.

Reflection, according to Schon (1987), examines those “indeterminate” zones of practice where the conflict in values, uncertainty and ambiguity exist. In examining critical reflection, Brookfield (2009) describes differing perspectives that inform this process. From the viewpoint of critical theory, reflection looks at the power dynamics; from a psychoanalytic perspective, people become aware of learned responses from childhood that impede full development as adults; from an analytic philosophical basis, criticality involves learning to recognize forms of reasoning, logic and language; and from a pragmatic and constructivist lens, critical reflection is demonstrated when people learn that they co-construct their own experience (Brookfield, 2009).

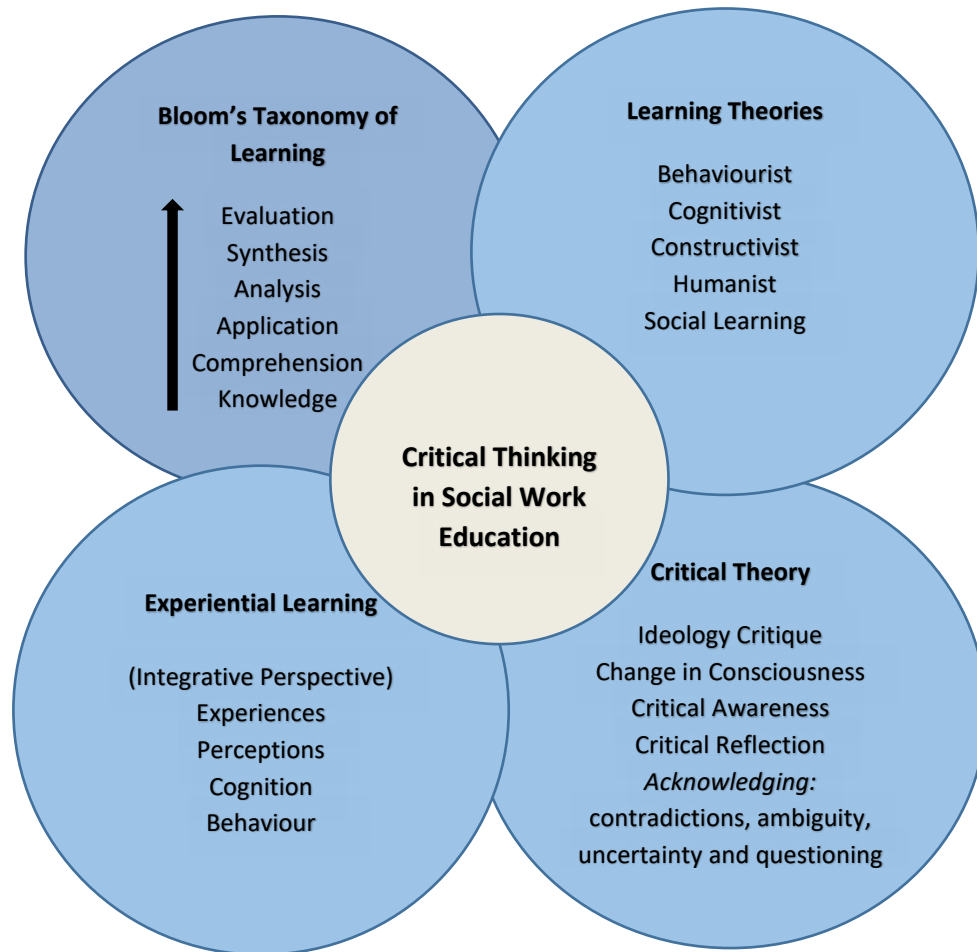
In linking critical reflection to critical thinking, the reflective process directs the critical examination and assessment of the evidence, arguments and alternative points of view (Mezirow, 1997). The central tenets of critique, reflection and discourse aid in the development of critical thought (Brookfield, 2003). Jarvis (2006) connects critical thought to skepticism; the legitimacy of everything should be tested from this view.

From the perspective of social work education, critical reflection should be built into the curriculum (Lay & McGuire, 2010). Lay and McGuire (2010) suggest that incorporating critical reflection and critical thinking into social work education could be supported via the student-teacher experience as co-learners and co-constructors of knowledge. Schon (1987) recommended the use of reflective practicums in professional education to support this process. The benefit of having reflective practitioners is that it helps in making the difficult decisions inherent in practice with human beings; a set of “critically examined core assumptions” provides a basis and grounding for practitioners to focus on the work they are trying to accomplish (Brookfield, 1998).

1.7 Conceptual Model

Dewey (1916) conceptualized education as a social function, where the “social medium” was the environment in which learning occurs through the process of communication. The constructivist tradition emphasizes this social context of learning and the construction of knowledge through dialogic interaction. Within the worldview of this paradigm, there are multiple realities that are “socially and experientially constructed” (Guba & Lincoln, 1994, p. 110). According to Guba and Lincoln (1994), both the researcher and subject of investigation are connected; therefore, knowledge is created as the research investigation unfolds, via a “dialectical interchange” (p. 111). Williamson (2000) describes the concept of *knowing* as a “mental state” (p.23); so, from a constructivist perspective, knowledge is something created or generated by the mind rather than a product that is *discovered* (Schwandt, 1998). Within this paradigmatic view of constructivism, the conceptual model proposed in Figure 1.0 identifies the theoretical framework that undergirds an understanding of critical thinking for this investigation.

Figure 1.0 Conceptual Model for Critical Thinking in Social Work Education



Within this figure, the central tenets of each of the meta-theories of learning, combined with those features informing experiential learning within the context of key parameters highlighted in Bloom's Taxonomy of Learning inform this conceptual model of the development of critical thinking skills within social work education. All of the circles intersect, influencing and informing one another. This conceptual model is a starting point in understanding the processes involved in thinking critically that will be informed by the data from the research project described in this dissertation. All five education theories are included, as they all inform processes related to thinking critically.

The process of experiential learning (Kolb, 1984) is a mechanism for thinking critically through a combination of a person's experiences, perceptions, cognition and behaviour. By incorporating a critical perspective highlighted by the central tenets of critical theory, a comprehensive process for thinking critically is revealed.

Within this model, the mechanics of thinking critically encompass processes of analysis, hypothesizing, evaluation and integration/synthesis to inform action and decision-making (Bloom's Taxonomy of Learning), intersecting with the core tenets of the over-arching meta-theories of learning. Critical theory adds a framework that embraces an awareness of power dimensions, oppression, contradictions, ambiguity and uncertainty. The lens that focuses all of these processes is reflection that is operationalized through a process of critique to challenge the status quo, forces of domination and marginalization in society. It emphasizes self-awareness and a sense of *critical consciousness* that can be mobilized by social workers to effect social change and challenge oppression at all levels. According to Freire (1970), critical consciousness refers to one's awareness of social, political and economic oppression at all levels of society and how to challenge them. The practice theory of experiential learning (Kolb, 1984) helps operationalize the processes involved in thinking both critically and reflectively, where knowledge is re-envisioned and created on an ongoing basis, with recognition that it is socially and culturally constructed.

1.8 A Critique of Critical Thinking

Critical thinking has been viewed within the context of a *western world* bias, noting that the dominant themes, definitions and discourse originate largely from western, democratic societies (Teo, 2011). From Teo's (2011) perspective, this means

that the dominant global ideology is embedded with western values, ideas, beliefs and assumptions, which include a view that anything outside of this framework is “inferior.”

Brookfield (2003a) extends this view to adult education and the concept of racializing the criticality in this forum. Brookfield (2003a) notes that the concepts defined in education generally embody the dominant discourse of society where the concepts of self-direction, critical reflection and transformative learning are valued and identified largely by white, American, European and Commonwealth scholars. The challenge is how best to incorporate these components into a curricular agenda that fosters the principles embodied in critical thinking in an environment that embraces cultural diversity and multiplicity and supports the excitement and artistry of teaching and learning. A constructivist paradigm may best support a broad-based approach to fostering these concepts, as it recognizes that there are multiple ways of knowing and it embraces ambiguity, uncertainty and critique.

A key question in the analysis of critical thinking in social work education is *do human service organizations want social workers who can think critically?* In a neo-liberal era where fiscal resources for health and social services continue to shrink and demand for services steadily increases, the focus of most organizations has been to establish an outcome-based model of care. Terms such as *effectiveness* and *efficiency* (Rino, 1985; Rino, 1988) seem to rule the day and are operationalized via models of *case management* which, from a critical perspective, could be viewed as a means to limit and ration services to those most in need (Dominelli, 1999; Lorenz, 2005).

The traditional service delivery network established to ensure everyone has access to needed supports and resources has been eroded (Dominelli, 1999; Lorenz, 2005).

Arguably, organizations prefer to have workers who are specifically trained on the job rather than having the ability to critically question what is occurring both organizationally and from a service perspective. Perhaps the very skills and abilities required to think critically can be harnessed to generate alternative methods and ideas to support provision of a comprehensive social service sector that is capable of meeting the needs of its citizens in new, innovative and exciting ways.

Just as there is no one definition of critical thinking, there is no one way to incorporate teaching these skills into the social work curriculum. Rather, fostering a critical pedagogy that incorporates these processes at multiple levels in classes and within the context of student-teacher and peer interactions may be more effective.

1.9 Summary

Critical thinking is an important topic within higher education and is of particular import for the profession of social work, with its mandate to support and advocate for vulnerable populations in achieving equity and social justice (CASWE, 2008). Social work curriculum establishes the educational requirements necessary to engage in social work practice. Given the wide variation in definitions and understanding of critical thinking, placing this concept within a constructivist paradigm, framed within the conceptual model highlighted here, is the foundation upon which this dissertation is built.

1.10 Organization of the Dissertation

This dissertation is organized in a series of Chapters. This Chapter, Chapter 1 highlighted here details the rationale for this study, identifies and critiques the relevant learning theories and models that combine to inform an understanding of critical thinking, and describes a theoretical and conceptual model for understanding critical

thinking in social work education. Chapter 2 provides a review of the relevant research literature specifically as it relates to critical thinking. Chapter 3 highlights the methodology used in this study. Chapter 4 discusses the findings from study participants. Chapter 5 discusses the findings and how they link with the literature, and highlights the implications of these findings for social work education, policy and research.

The purpose of this research study is to develop a framework to explain social work faculty members' understanding of critical thinking in social work education and to explore how it is experienced and operationalized by social work students from a faculty members' perspective. The research questions for this study are:

- 1) How do expert social work faculty understand critical thinking?
- 2) How is critical thinking currently operationalized in the classroom?
- 3) How do social work educators know when students have achieved the ability to think critically?

Chapter 2 – Literature Review

This Chapter examines the scholarly literature related to how critical thinking is defined, taught and measured in terms of outcomes. It includes research literature from the broader social and health sciences, and specifically within social work. An electronic search was completed using multiple data bases including Social Service Abstracts, OVID, ProQuest, and ERIC. Multiple search terms were used including “critical thinking;” “critical thinking” and “education;” “critical thinking” and “outcomes;” “critical thinking” and “critical reflection;” “critical thinking” and “evidence-based practice;” “critical thinking” and “teaching;” and combinations of critical thinking, social work, and the following: “pedagogy;” “epistemology;” “reflection;” “teaching and learning.”

2.1 The Research Literature on Critical Thinking in Higher Education

A wealth of studies exists on critical thinking within higher education. Key commonalities involve the concepts of critical thinking as encompassing cognitive abilities, knowledge, problem-solving and abstract thought. Those central ingredients of analysis, synthesis and evaluation in guiding one’s actions are consistent themes across studies. In this section, I will examine the research literature by discussing studies that define critical thinking, followed by a discussion of those studies that seek to measure this construct, and conclude with an examination of studies examining how to teach it.

2.1.1 the literature defining critical thinking.

Critical thinking is a complex concept that has been the subject of numerous investigations in attempts to effectively define it. Central features of critical thinking identified in scholarship across disciplines include the ability to analyze, evaluate,

consider alternative viewpoints, decision-making and problem-solving processes.

Almeida and Franco (2011) define critical thinking as encompassing higher order reasoning involving the expression of ideas, meaning-making, consideration of alternative arguments, decision-making, problem-solving and evaluation.

Deal and Pittman (2009) describe critical thinking as “purposeful, reasoned and goal-directed thinking” (p. 88). According to Lim (2011), the main components of critical thinking involve analysis, evaluation and the construction of an argument. Key skills involved in thinking critically are those of logic and argument analysis (Lim, 2011). Paul (1993) defines it as an “intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing and/or evaluating information gathered by observation, experience, reflection, reasoning or communication, as a guide to belief and action” (p. 22).

For the profession of social work, critical thinking is described as informed action that involves decision-making (Plath, English, Connors, & Beveridge, 1999). According to Plath, English, Connors and Beveridge (1999), social workers need to be able to think critically in order to deal with the complexities of professional practice. They contend that critical thinking skills can be taught, suggesting that providing intensive courses on critical thinking would increase student abilities to think critically (English et al., 1999). Gambrill (2013) adds that critical thinking in social work is “purposeful; responsive; supports humility, integrity, perseverance, empathy and self-discipline; self-assessing...results in a well-reasoned answer; and recognizes opposing views” (p. 95).

Three key activities have been identified as crucial to critical thinking: displaying open mindedness, identifying and challenging taken-for-granted assumptions, and

examining alternatives (Vandsburger, Duncan-Daston, Akerson, & Dillon, 2010, p. 302). According to Hughes (1996), critical thinking skills are related to processes of interpretation, verification and reasoning. In a review of Ennis's work, Buraphadeja and Dawson (2008) highlight critical thinkers as those who are open-minded, are mindful of alternatives, show good judgement on the credibility of sources, ask clarifying questions, formulate plausible hypotheses, and are capable of drawing conclusions. McPeck (1981) equates critical thinking with the concept of "reflective skepticism." Robinson (2011) links critical thinking skills to higher-order cognitive skills that include the use of judgement, analysis and synthesis. These are the same components identified as higher order thinking skills in Bloom's Taxonomy of Learning. Hughes (1996) connects reasoning skills to the principles of logic. Debate continues as to whether critical thinking is best taught as an independent topic or if it should be integrated within discipline-specific or course-specific contexts (Ennis, 1989; McPeck, 1981), which has resulted in a vast amount of scholarship examining a multitude of varying constructs and contexts in relation to critical thinking.

In his seminal work defining critical thinking and developing a comprehensive standardized test to measure its constituent components, the California Critical Thinking Skills Test (CCTST), Facione (1990) conducted a Delphi study and achieved consensus on a definition of critical thinking:

...critical thinking [is] purposeful, self-regulatory judgement which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which judgement is based...a critical thinker is habitually

inquisitive, well-informed, trustful of reason, open-minded, flexible, fair-minded in evaluation, honest in facing personal biases, prudent in making judgements, willing to reconsider...persistent in seeking results... (Facione, 1990, p.3)

This definition suggests that the skill of critical thinking involves making judgements that are informed by some of the objectives highlighted in Bloom's taxonomy of learning, and containing other elements that are relevant to personality traits, biases, and assumptions.

2.1.1.1 the role of critical reflection in understanding critical thinking.

A comprehensive review of the literature across disciplines links critical reflection to some critical thinking processes. According to Brookfield (2009), critical reflection "involves a recognition and researching of the assumptions that undergird our thoughts and actions" (p. 295). Reflection consists of four interrelated processes that include: "a disorienting dilemma; examining the evidence in order to judge the validity of the assumptions from the dilemma; taking different perspectives in making sense of assumptions (scrutiny); taking informed actions on the basis of the analysis" (Brookfield, 2009, pp. 295-296). This process of reflection has been linked with thinking critically (Askeland & Bradley, 2007).

Critical reflection is described as a process that involves challenging and changing assumptions (Brookfield, 2009). It is a form of critical analysis of one's actions within a contextual framework that allows for the discovery of alternative courses of action that can be taken in social work practice (Karvinen-Niinikoski, 2009). According to Fook (2012), critical reflection encompasses an understanding about how one's own social location influences decisions and actions. With the process of critical reflection, there is recognition of a diversity of perspectives and how they influence knowledge;

recognition that perspectives and knowledge are contextual and can shift (Fook, 2016). Critical reflection involves awareness and questioning of the power relations surrounding how knowledge is created and understood, and how these influence values and beliefs at a societal level (Brookfield, 2009); it considers the influence of context on knowledge construction (Oterholm, 2009).

The process of critical reflection is connected to thinking critically because it generates an awareness of assumptions that can impact someone's thinking (Fook & Askeland, 2006). It also supports a process of ongoing learning, growth and development that is strengthened through experiential learning (Brown & Rutter, 2008). As Savaya and Gardner (2012) highlight, identification of the assumptions driving someone's actions can promote questioning, which may then lead to alternate choices or behaviours being implemented based on this analysis. Gray and Gibbons (2007) connect both critical thinking and critical reflection to the process of ethical decision-making.

Ethical decision-making in social work practice is defined as "a complex problem-solving activity that requires the application of critical thinking, as well as an ability to make judgements on the basis of knowledge, theories, practice experience, and values [of both the practitioner and client]" (Gray & Gibbons, 2007, p. 226). Gray and Gibbons (2007) place an emphasis on the person engaging in the decision-making process, not just on the Code of Ethics or particular framework or decision-making model being used to solve dilemmas in practice. According to Miller, Tice and Harnek-Hall (2011), reflection that occurs as part of critical thinking supports students in assigning meaning to the learning activities in which they are engaged. It also helps students learn

to cope with the discomfort of uncertainty and ambiguity in the decision-making processes involved in social work practice (Carey & McCardle, 2011).

The tensions identified in the literature regarding critical reflection revolve around the multitude of approaches used to teach critical reflection and a lack of concrete assessment criteria with which to measure it (Dyment & O'Connell, 2011; Fook & Gardner, 2007; Testa & Egan, 2016). This seems to mirror similar tensions and criticisms that have been identified in relation to critical thinking discussed above.

2.1.1.2 the link to evidence-based practice (EBP).

According to Oancea (2010), EBP is linked to critical thinking and decision-making in social work practice. A review of the literature related to EBP highlights a model for implementing EBP that involves asking questions, engaging in a systematic review of the research literature to look for answers, critically appraising the research and evidence, applying results to policy/practice decisions, and evaluating the outcomes of these components (Gambrill, 2013; Gibbs & Gambrill, 2002; Oancea, 2010; Plath, 2014).

Ciliska (2005) defines EBP as an “integration of the best research evidence with clinical expertise and patient values to facilitate clinical decision-making” (p. 345). Profetto-McGrath (2005) describes critical thinking as important to EBP and links in the skills of questioning, critical appraisal, application and evaluation that are connected to EBP and are also considered to be “influenced by and necessary for critical thinking” (p. 365).

In contrast to the linear model of EBP mentioned above, Plath (2014) proposes a new, “cyclic model” of EBP that captures and adds a process of ongoing reflection in relation to EBP for organizations. According to Plath (2014), this cyclic conception of

EBP recognizes that the factors influencing decision-making in practice are both related and context-based. Critical thinking, critical reflection and EBP have all been identified as important components in making professional judgements/clinical decision-making in practice (Kuennen, 2015; Profetto-McGrath, 2005), which are essential factors in critical thinking.

Problem-based learning (PBL) approaches and critical reflection have been identified as effective mechanisms to teach EBP (Gibbs & Gambrill, 2002; Kuennen, 2015; Mullen, Bledsoe, & Bellamy, 2008). PBL involves posing answerable questions and consulting the literature to search for evidence and answers, engages students in problem-solving activities, and mirrors the 5-stage model identified for EBP (Gibbs & Gambrill, 2002; Profetto-McGrath, 2005). Critical reflection adds in the layer of critical analysis and connecting learning across multiple situations and contexts so that future actions can be guided by prior experiences (Kuennen, 2015).

There is ongoing tension and debate surrounding EBP. Proponents of EBP stress the importance of integrating *best evidence* and research findings into practice in support of effective and efficient decision-making and lifelong learning that meets Standards of Professional Practice and Codes of Ethics (Gibbs & Gambrill, 2002; Kuennen, 2015; Mullen et al., 2008). Criticisms of EBP include the costs related to maintaining access to expensive research databases, lack of agreement on what comprises “sufficient scientific evidence” (Petr & Walter, 2009, p. 225), the fact that there is scarce empirical evidence on the efficacy of EBP in social work practice (Mullen et al., 2008), and concern that the EBP “rhetoric” creates a power imbalance between researchers and the practitioners who apply the knowledge generated (Epstein, 2011).

2.1.2 the research literature measuring critical thinking.

In a review of studies conducted to measure critical thinking in education between 1994 and 2009, Behar-Horenstein and Lian (2011) found that, of the forty-two studies examined, 60% utilized a quasi-experimental design with a pre-and post-test measure to determine the effectiveness of the teaching methodology as it impacts levels of critical thinking among students. Of these studies, only five used qualitative measures while the remainder used the California Critical Thinking Skills Test (CCTST), Cornell Critical Thinking Test (CCTT) or Watson Glaser Critical Thinking Appraisal (WGCTA; Behar-Horenstein & Lian, 2011). Table 1.0 highlights the tests that have been identified across the literature in measuring critical thinking (see Appendix B). It demonstrates the variety of attempts undertaken to more thoroughly understand this concept.

The *California Critical Thinking Skills Test* (CCTST), developed by Facione (1990), measures the cognitive skills of interpretation, analysis, inference, evaluation and explanation (Huff, 2000). According to Behar-Horenstein and Lian (2011), this test predicts the strength of critical thinking skills in problem-solving situations by having those taking the test engage in analysis, interpretation, drawing inferences and explanations, and explaining the relative strength or weakness of a given point. The CCTST (2011) contains thirty-four multiple choice items with five subscales that are directly linked to Bloom's educational objectives of analysis, evaluation, inference, deductive and inductive reasoning (Behar-Horenstein & Lian, 2011).

The second instrument widely used to measure critical thinking is the *Cornell Critical Thinking Test* that requires the use of knowledge processes to identify assumptions and judge the credibility of arguments (Plath et al., 1999). The questions on

this test are all multiple choice and results have been found to be predictive of student grades in graduate school (Behar-Horenstein & Lian, 2011).

A third measurement tool is the *Ennis-Weir Essay Test*, which requires the person to make judgements based on available information then use reason to defend their position (Plath et al., 1999). According to Plath et al. (1999), this test measures numerous components related to decision-making.

The fourth standardized tool frequently utilized is the Watson Glaser Critical Thinking Appraisal (WGCTA), which measures critical thinking as a composite of attitudes, knowledge and skills that target inference, assumptions, deduction, interpretation and evaluation (Miller, Harnek Hall & Tice, 2009). The WGCTA is a forty-item inventory that assesses skills in inference, recognition of assumptions, deduction, interpretation and evaluation of arguments (Behar-Horenstein & Lian, 2011).

Abrami et al. (2008) note that a lack of agreement about whether critical thinking involves a set of generic skills that applies across fields or whether critical thinking is dependent upon the context within which it is taught. There have been a number of different measures and tools used to measure various constructs of critical thinking which present challenges in identifying, categorizing and evaluating outcomes on critical thinking in education in general and specifically within social work. The current tests that measure for critical thinking skills involve multiple choice and open-ended formats, which can produce a varying range of results if administered separately (Ku, 2009). In a study assessing critical thinking performance in students, Ku (2009) recommends the use of a multi-format approach to measurement that captures the essence of those skills required to think critically, including questions that require analysis, synthesis,

evaluation, and judgement. Ku (2009) notes that the definition used to capture critical thinking impacts the way that best measures its constituent components.

2.1.3 teaching critical thinking.

In identifying a pedagogy that supports and fosters the development of critical thinking skills, Abrami et al. (2008) found that improved critical thinking skills (cognitive abilities) and dispositions (behaviours) were associated with how the critical thinking instruction was provided. The most effective approach to teaching critical thinking was the mixed approach identified by Ennis (1996), where critical thinking is taught as an independent topic within a specific course. Overall, Abrami et al. (2008) report that the best way to maximize impact on teaching these skills is for educators to make critical thinking objectives explicit in courses and integrate them into both student and faculty development. A review of the literature on teaching critical thinking reveals that, while most educators support the concept, many develop their teaching pedagogies independently and acknowledge incorporating critical thinking into the curriculum takes significant work (Abrami et al., 2008).

A number of the studies assessing critical thinking have focused on the effects of online learning and support to increase critical thinking skills (Burgess, 2009; Carmichael & Farrell, 2012; Carter, 2008; Guiller, Durndell, & Ross, 2006; Mandernach, 2006; Martin, Thompson, & Richards, 2008; Richardson & Ice, 2010; Rumpagaporn & Darmawan, 2007; Schellens, Van Keer, DeWever, & Valcke, 2009; Snodgrass, 2011; Szabo & Schwartz, 2011; Yang, 2008; Yang, Newby & Bill, 2005; Yeh, 2012). According to Mandernach (2006), online instructional supplements to courses offer increased opportunities for teachers to support student self-directed learning, which has

been shown to increase their critical thinking capacities. These additional supplements available in the on-line environment are referred to as blended learning environments. When online (virtual) learning experiences are combined with face-to-face teaching and learning contexts in courses, both student engagement with course concepts and improved levels of critical thinking skills result (Burgess, 2009; Carmichael & Farrell, 2012; Snodgrass, 2011; Yeh, 2012).

In a study conducted by Schellens, Van Keer, DeWever, and Valcke (2009) to determine the effects of asynchronous online discussion groups on critical thinking, it was discovered that computer-supported collaborative learning through online, asynchronous threaded discussions that allowed students to question the instructor and each other beyond the confines of the traditional classroom setting showed positive effects on student processes of metacognition, problem-solving, knowledge creation and critical thinking. A number of other studies have demonstrated similar results via online discussion forums, particularly as they allow for activities that provide time for analysis, questioning and other activities that promote processes of reflection, exploration and evaluation (Al-Fadhli & Khalfan, 2009; Arend, 2009; delang, Dolmans, Muijtens, & van der Vleuten, 2009; Garcia & Hooper, 2011; Szabo & Schwartz, 2011).

Concept mapping, scaffolding and problem-based learning teaching strategies show positive effects on improving critical thinking skills in students (Behar-Horenstein & Lian, 2011; Mackinnon, 2006). In a study utilizing a two-dimensional concept mapping process to build critical thinking within science education, findings suggest that this type of organizational framework for understanding a contentious issue and working through it leads to an enhanced ability to form arguments, engage in effective discussions

and justify the conceptual frameworks developed (Mackinnon, 2006). Some other experientially-based teaching strategies that have been linked with improved critical thinking skills in students include peer coaching, case study approaches, debates, open-ended and/or topic discussions, and inquiry-based learning (Behar-Horenstein & Lian, 2011; Mackinnon, 2006; Richardson & Ice, 2010).

Overall, findings suggest that improvements in critical thinking skills are more likely to occur when the teaching of such skills is made explicit (Crenshaw, Hale, & Harper, 2011; Friedel, et al., 2008; Hofreiter, Monroe, & Stein, 2007; Johnson, 2011). Other factors identified as having an impact on critical thinking skills include: the setting or learning environment in relation to class size and how conducive the classroom is for in-depth discussions/debates (Behar-Horenstein & Lian, 2011); educator training, skill and experience both in teaching critical thinking skills and in being proficient in critical thinking themselves (Behar-Horenstein & Lian, 2011; Blondy, 2011; Zygmunt & Schaefer, 2006); prior knowledge of students (Dochy et al., 2002); and the interactions between teachers and students, given a constructivist teaching and learning environment promotes interaction and the social construction of knowledge, which in turn fosters a climate that promotes critical thinking development (Behar-Horenstein & Lian, 2011; Dochy et al., 2002; Jonassen, 1994; Loyens & Gijbels, 2008). According to Behar-Horenstein and Lian (2011), a consistent finding across studies is that increases in and changes to critical thinking development are more apparent with a longer intervention period, such as a semester or longer. From a pedagogical standpoint, a constructivist learning environment is utilized most across studies, where students engage in active learning, which helps them connect learning to their experiences. Salient features of

constructivist learning environments are: more than one representation of reality; recognition of multiple realities supports a realization of the complexity of real life; an emphasis on knowledge construction, rather than merely reproducing what is already known; emphasis on authentic learning within relevant and meaningful contexts; case-based learning grounded in real life examples to encourage reflection on the learning experiences; and emphasis on collaboration in the construction of knowledge through the social interaction of learners and teachers (Jonassen, 1994; Loyens & Gijbels, 2008). These components are supported in what Barr and Tagg (1995) refer to as a shift in educational paradigms to a *learning* paradigm that focuses on supporting the learning process for students rather than on institutional outcomes/objectives. The aim of creating a learning paradigm is to foster collaborative learning spaces (between and among students and faculty) that encourage student success in multiple formats including face-to-face and virtual environments that focus on learning outcomes and growth in students. It is a paradigm that recognizes the complexity in empowering the learning process and sees faculty as *designers* or facilitators of this process (Barr & Tagg, 1995). Supporting collaborative learning in authentic environments that are considered to be safe spaces is important. According to Keppell (2014), authentic learning environments encourage learning through addressing real life scenarios in learning environments that are considered safe spaces, founded upon ethical practices (Preez, 2012). This is significant given the need to develop and support an effective pedagogy to foster critical thinking skills in students within the context of higher education.

Limitations to many of the studies reviewed regarding critical thinking in higher education include the use of relatively small convenience samples with high rates of

attrition (Behar-Horenstein & Lian, 2011). The variability of research designs and teaching strategies used to promote critical thinking skills differed greatly among those studies reviewed by Behar-Horenstein and Lian (2011), and a lack of detail regarding the teaching strategies used to improve critical thinking skills poses barriers to gaining a better understanding of how to effectively and more consistently assess these strategies (Behar-Horenstein & Lian, 2011). Additional barriers to students engaging in activities that promote critical thinking include the amount of time and effort necessary to explore and test ways of thinking, the uncertainty and ambiguity involved in activities that foster critical thinking, large class sizes, and limited teacher and peer interactions (Behar-Horenstein & Lian, 2011).

2.1.3.1 problem-based learning as an effective pedagogy for critical thinking.

The literature on educational theories and objectives joins the concept of cognitive entry behaviours outlined in the educational objectives of Bloom's Taxonomy of Learning with the core features of problem-based learning (PBL), all of which have been connected to skills essential for thinking critically. While difficult to define, PBL has been identified as a type of experiential learning in *real life* situations and is reported to help students engage in an active learning process (Hmelo-Silver, 2004). PBL is an active learning approach that teachers can use in their classrooms to engage students (Prince, 2004). Pease and Kuhn (2010) note that a key feature of this approach to learning is the contextualization of learning via a problem that is presented to students who have no prior preparation on the topic. Generally, the problem is both the stimulus and context for learning, where small groups of students are given a problem to address by identifying what they need to know to determine a course of action to solve the problem

(Hmelo-Silver, 2004; Parton & Bailey, 2008; Pease & Kuhn, 2010). According to Hmelo-Silver (2004), students formulate and analyze the problem assigned; gain an understanding and generate hypotheses surrounding possible solutions and identify areas where knowledge about the problem is lacking; then these gaps in knowledge become the focus of the student self-directed learning process. Utilizing this learning process, students engage in questioning, research, analysis, synthesis of information gathered, communication, and evaluation of possible responses, which brings to life many critical thinking components.

These problem scenarios in PBL are examined in small groups where learners bring their experience and knowledge to bear on the problem (Parton & Bailey, 2008). PBL is aligned with the central tenets of a constructivist paradigm. Parton and Bailey (2008) identify key themes in PBL including: a view that PBL has problem-solving at its centre and as such, knowledge is viewed as fluid and not predetermined; the process is open-ended with no definite answers; and a critique of everyone's views and experiences is encouraged.

According to Hmelo-Silver (2004), the educator assumes the role of facilitator in problem-based learning. PBL has been linked to the development of critical thinking skills in terms of the processes students go through while engaged in the work of this method (Parton & Bailey, 2008). Approaching learning through solving problems emphasizes the role of students in the active construction of knowledge in a collaborative group environment (Hmelo-Silver, 2004).

Dochy, Segers, Van den Bossche and Gijbels (2003) report that research supports the efficacy of problem-based learning. Dochy et al. (2003) conducted a meta-analysis of

PBL and found this approach had positive effects on students' skills. Pepper (2010) reports that PBL offers flexibility and diversity in the learning process given the fact that it can be operationalized in multiple ways in a variety of contexts. Williams (2001) identifies PBL as a way to facilitate the development of critically reflective practice. Studies assessing the effectiveness of PBL in supporting the development of critical thinking skills have also shown positive results, particularly where processes of evaluation, problem-solving, discussion and collaboration contribute to the learning environment (Chang & Wang, 2011; Chiang & Fung, 2004; Schell & Kaufman, 2009; Sendag & Odabasi, 2009). It is also an effective mechanism to engage both faculty and students in active learning (Prince, 2004).

In critiquing problem-based learning, some researchers identify concerns about the perception that there is little *teaching* involved in PBL. Sweller, Kirscher and Clark (2007) note that a primary component involved in PBL is the de-emphasis on direct instructional guidance with a focus on the self-directed learning by the students. Sweller et al. (2007) argue that PBL places too much of a cognitive load on students who spend the time and effort searching for answers to problems that may be better addressed via the educator providing an effective outline and solution. Wong and Lam (2007) have criticized PBL, noting that studies of the effectiveness of this approach to learning show mixed results.

From a social work perspective, PBL is an effective way to prepare students for practice by providing *real life* scenarios to work through in the classroom setting, which assist in their preparation to engage in similar processes in field practicums and eventual work placements. According to Altshuler and Bosch (2003), providing complex problem

scenarios for students to work through allows them to address the problem, learn to be flexible and change as new information is revealed, to see multiple perspectives in viewing the situation, and supports the development of critical reflection and thinking skills when there are no definitive or pre-set answers to these complex problems.

Overall, PBL is an approach to teaching and learning that can promote learning through uncertainty and ambiguity. From a constructivist and critical paradigm, these qualities will challenge the status quo and foster creativity and critical thinking in the learning process.

2.2 The Research Literature from Social Work Studies on Critical Thinking

There is a relative paucity of studies on critical thinking specifically aimed at social work education. A review of the studies conducted highlighted a variety of research designs, methods and subsequent findings. A total of thirteen studies were identified over a twenty-two-year period, which largely involve pre-experimental designs that use a pre-and post-test measure or make a comparison to a normative group sample over a short period of time, ranging from one month to one semester. Table 2.0 summarizes the social work studies conducted between 1995 and 2017 directly on critical thinking in social work, capturing the noteworthy features and findings of each study.

Table 2.0 Summary of Key Aspects from Social Work Studies on Critical Thinking

| Study | Sample Size | Research Design | Key Aspects of Study | Measure & Timeframe of Measurement |
|---|-------------|------------------------------|--|--|
| Gibbs, L., Gambrill, E., Blakemore, J., Begun, A., Keniston, A., Peden, B., & Lefcowitz, J. (1995). <i>A measure of critical thinking about practice</i> | 115 | Pre-experimental | -this study assesses the ability to engage in critical thinking about adopting a treatment method (or not), using a measure called PRIDE -little association between research knowledge and critical thinking ability about social work practice was identified | PRIDE; one month, pre-post test |
| Plath, D., English, B., Connors, L., & Beveridge, A. (1999). <i>Evaluating the outcomes of intensive critical thinking instruction for social work students</i> | 19 | Pre-experimental | -evaluation of intensive critical thinking instruction for social work students; uses 2 measures to assess critical thinking -results suggest “explicit and concentrated instruction on critical thinking” improves critical thinking abilities | 1. Ennis-Weir Essay Test 2. Cornell CT Test Single point in time |
| Huff, M. (2000). <i>A comparison of live instruction versus interactive television for teaching MSW students critical thinking skills</i> | 62 | Non-equivalent control group | -study compares live instruction vs interactive TV with MSW students -no significant differences are identified between in-person or distance students; both groups showed marked improvement in critical thinking skills on completion of a policy course -differences are noted in relation to ethnicity (African-American students scored lower the white students) | CCTST; One semester pre-post test |
| Kersting, R., & Mumm, A. (2001). <i>Are we teaching critical thinking in the classroom?</i> | 46 | Pre-experimental | -study examines student integration of critical thinking after 1 semester in a generalist practice course -minimal increases in critical thinking are found, suggesting more time may be needed to develop critical thinking skills, beyond 1 semester | PRIDE; One semester pre-post test |
| Clark, H. (2002). <i>A comparison of the critical thinking skills of BSW and MSW students</i> | 84 | Pre-experimental | -study examines scores on the CCTST of students recently graduated from BSW and MSW programs -minimal differences are found between levels of critical thinking in BSW and MSW students | CCTST; Single point in time |

| | | | | |
|---|-----|--|--|--|
| Jones, K. (2005). <i>Widening the lens: The efficacy of the case method in helping direct practice MSW students understand and apply mezzo and macro dimensions of practice</i> | 49 | Pre-experimental, cross-sectional survey | -study examines case method teaching and learning effectiveness, where critical thinking was just one variable being measured among a number of others; a standardized tool was not used to assess critical thinking, rather assessing “perceived capacity for critical thinking” (p. 197) -results show a small increase in perceived abilities to think critically | Researcher-developed tool; Single point in time |
| Heron, G. (2006). <i>Critical thinking in social care and social work: Searching student assignments for the evidence</i> | 54 | Qualitative | -study looks at critical thinking via student assignments at different time intervals in the learning program -categories of <i>development</i> , <i>recognizing contradictions</i> , and <i>providing evidence</i> (p. 215) demonstrated the most evidence of critical thinking in student assignments -identifying components of critical thinking described as “challenging” (p. 217); minimal evidence of critical thinking was demonstrated, and restricted to above-noted categories | Framework developed by Maclellan & Soden (2011) highlighting key abilities involved in critical thinking |
| Tucker, T. (2008). <i>Predictors of critical thinking as a component of an outcomes assessment in a graduate level school of social work</i> | 104 | Pre-experimental | -study examining an MSW course using an “infused approach” highlighted by Ennis, to improve critical thinking skills -findings were not statistically significant and showed no real improvement in critical thinking skills | CCTST; One semester |
| Miller, S., Harnek-Hall, D., & Tice, C. (2009). <i>Assessing critical thinking: The use of literature in a policy course</i> | 124 | Pre-experimental | -study examines assessing critical thinking via a BSW social policy course-no differences were found in levels of critical thinking; differences were noted in relation to ethnicity | WGCTA; One semester |
| Deal, K., & Pittman, J. (2009). <i>Examining predictors of social work students’ critical thinking skills</i> | 72 | Pre-experimental | -study examines levels of critical thinking between BSW, MSW, and PhD social work students -students testing as “more open to experience on a personality inventory, took chemistry in college, and reported both parents having a degree” (p. 87) demonstrate increased levels of critical thinking skills; higher levels of critical thinking skills are also identified as academic levels move higher | CCTST; Single point in time |
| Vandsburger, et al (2010). <i>The effects of poverty</i> | 101 | Pre-experimental | -study examines a poverty simulation project, where critical thinking was one of a number of other variables being assessed -results demonstrate a small increase in critical thinking abilities | Researcher-developed tool; |

| | | | | |
|--|-----|---------------|---|---|
| <i>simulation, an experiential learning modality, on students' understanding of life in poverty</i> | | | Incorporating discussions and simulations in assignments is reported to increase the impact of experiential learning, which supports critical thinking | One-month pre-post test |
| Schneller, D., & Brocato, J. (2011). <i>Facilitating student learning, the assessment of learning, and curricular improvement through a graduate social work integrative seminar</i> | 36 | Mixed methods | <ul style="list-style-type: none"> -study assesses learning outcomes from an integrative seminar, where critical thinking was one among a number of items being assessed -assessment of learning outcomes should inform curriculum design; developed a measure of student mastery of specific program objectives (p. 185) -results present data related to the overall pass rate for the seminar course and not critical thinking specifically, however, agreement among faculty doing ranking mastery was lower for this component | Researcher-developed tool (Faculty rating of Student Mastery [critical thinking is 1 factor rated]) |
| Sheppard, M. & Charles, M. (2017). <i>A longitudinal comparative study of the impact of the experience of social work education on interpersonal and critical thinking</i> | 170 | Longitudinal | <ul style="list-style-type: none"> -study measures critical thinking and interpersonal capabilities over 4 cohorts -interpersonal capabilities are part of the learning process at both BSW & MSW levels -critical thinking capabilities are a predictor of performance at the MSW level, but not BSW -no evidence that the social work programs improved critical thinking; relationship between assessments used and critical thinking at MSW level, supporting the point that teaching & assessments may be related -it cannot be assumed that social work programs automatically improve critical thinking | WGCTA; three years |

Overall, amidst variability in definitions, conceptual frameworks and theoretical approaches, the findings suggest that both demographic and personality variables are related to levels of critical thinking skills in social work students. Deal and Pittman (2009) found that higher socioeconomic status was correlated to higher levels of critical thinking. Key instructional interventions, from a social work perspective, that are correlated to higher levels of critical thinking in students include explicit and concentrated instruction on critical thinking; diverse learning activities focused on student-centred learning; case method seminars; and student learning through formative assessments (Deal & Pittman, 2009; Jones, 2005; Plath et al., 1999).

The findings of these social work studies are limited; sample sizes are small, ranging from 19 to 124 participants, and findings are not generalizable (Samson, 2016). Samson (2016) conducted a meta-analysis of the quantitative social work studies involving critical thinking in social work education with students between 1995 and 2010 (Clark, 2002; Deal & Pittman, 2009; Gibbs et al., 1995; Huff, 2000; Jones, 2007; Kersting & Mumm, 2001; Miller et al., 2009; Plath et al., 1999; Tucker, 2008; Vandsburger et al., 2010) and notes that all studies assessed different components of critical thinking, with most findings showing little to no improvement in critical thinking abilities. One study, conducted by Huff (2000), did reveal significant positive increases in critical thinking abilities in students that is noteworthy. Huff (2000) examined face-to-face class instruction compared to an interactive television format, incorporating virtual assignments, group presentations and exams as assignments, to see if there was an impact on critical thinking skill development. Findings reveal an 81.6% increase in critical thinking skills for both groups (in-person and online) over a period of one semester

(Huff, 2000). The influencing factor in this study was a learning environment that challenges students' views of the world; a challenge can promote critical thinking skill development, whether in-person or virtually (Huff, 2000).

It is noteworthy that there are considerable limitations to these studies, including the fact that in a number of the studies, critical thinking was only one factor under examination. However, findings do suggest some practical significance with regard to pedagogical approaches to support critical thinking skills in social work students that align with constructivist teaching and learning approaches: the teaching methods used in courses do influence critical thinking skills in social work students (Samson, 2016).

McLeod (2015) suggests that new, innovative and creative ways are needed to engage students in active and meaningful learning experiences to foster and promote the development of critical thinking skills. McLeod (2015) introduces the concept of "higher level multimodal learning," where thinking is combined with class activities and exercises that merge arts, writing, and field experiences to promote decision-making in simulated situations to assist in developing critical thinking skills. According to McLeod (2015), findings support some positive student learning experiences, suggesting that multimodal learning approaches may be beneficial in promoting critical thinking in social work courses. Rowan, Mathis, Ellers, and Thompson (2013) support the contention that fostering skill development in critical thinking can be operationalized through a variety of course activities and assignments, ranging from writing exercises to role play scenarios. The important factor is to assess the components of thinking over successive assignments that take place over a period of time. In a project created to improve students' critical thinking via a course on writing skills for social work students in a BSW capstone course,

results show an improvement rate of 88% in scores related to critical thinking over the course of a semester (Rowan et al., 2013).

Schon (1987) recommended designing reflective practicum placements for students, where they can learn the nuances of practice in the field and apply them to knowledge from the classroom (Schon, 1987). This process would allow students to develop both problem-solving and thinking skills via the reflective environment (Schon, 1987). These concepts directly link with some social work studies assessing critical thinking through field and integrative seminar experiences such as those demonstrated by Schneller and Brocato (2011), in their qualitative study on student learning, assessment and curricular improvement. Schneller and Brocato (2011) promoted student learning through formative assessments that further critical thinking and include peer and instructor feedback throughout assigned projects; it is an ongoing assessment process in a supportive learning environment (Schneller & Brocato, 2011).

Carey and McCardle (2011) suggest that encouraging critical reflection for students following field experiences is another avenue to prepare students for both practice and ongoing critical thinking. It is important to note that field education is viewed as an essential educational tool for enhancing the growth and development of critical thinking in students (Robichaud & Dumais-Michaud, 2012; Schon, 1987). According to Robichaud and Dumais-Michaud (2012), the use of the integration seminar for social work students in field practicums is a mechanism to advance the development of critical thinking skills in students through the collaborative, team-based learning that it captures. Carey and McCardle (2011) report that key facets of critical thinking involve incorporating self-awareness, tolerance of ambiguity, and application of knowledge

obtained from numerous sources, particularly when addressing ethical dilemmas in practice. Preparing students for these facets aids them in developing critical thinking skills that can be applied in the field.

Consistent with literature across disciplines, instructional strategies operationalized in a number of social work studies examining the concept of critical thinking incorporate problem-based/problem-solving learning approaches. This approach to teaching and learning has been used to integrate real life experiences in supporting critical, independent thinking as it relates to decision-making, discretion, and the development of professional judgement skills in social work students (Carvalho-Grevious, 2013; Dyson, Smith Brice, 2016; Rowan, Mathis, Ellers & Thompson, 2013; Williams-Gray, 2014). According to Hofer and Sinatra (2010), the epistemological beliefs of students have been identified as extremely important to experiences involving reasoning and judgement, with implications for resultant teaching practices. This is also supported by Anderson-Meger (2014), who notes that knowledge is an important component to decision-making in social work practice and identifies a link between the epistemological development of social work students and their ability to think critically. In a qualitative study examining social work students' epistemological beliefs about how knowledge is created, and implications for social work education, findings reveal that teachers need to challenge students' perspectives in meaningful contexts for them, rather than what is important for the teacher (Anderson-Meger, 2014). As well, teachers can support students in developing epistemological beliefs through scaffolded learning (Anderson-Meger, 2014).

To help students further develop critical thinking skills, Miller and Skinner (2013) propose a “theory-mindedness approach” to teaching and learning that encourages critical thinking and critical reflection about course concepts in the classroom; it links to Schon’s (1987) concept of reflection-in-action. Reflection-in-action refers to a process of examining decisions made in the moment as an event unfolds (Schon, 1983). Similarly, this *theory-mindedness approach* means students must be willing to adapt their thinking depending upon a given situation and apply or consider new knowledge in response to a variety of changing contexts (Miller & Skinner, 2013).

The social work research literature related to critical thinking illustrates that while there is limited scholarship on the topic, effective teaching strategies do exist to further the development of critical thinking skills in social work students. Critical thinking appears to play a large role in professional judgement/decision-making in practice, and experiential learning opportunities support the overall development of such skills. The next section will examine the role of critical thinking skills and capacities within faculty members and how this influences pedagogy related to critical thinking.

2.3 Studies Involving Faculty and Critical Thinking

Of the multitude of studies related to critical thinking across disciplines, only a small number involve an analysis of faculty perspectives. Of these studies, the majority involve qualitative research designs with small sample sizes ranging from 8 to 97 faculty participants. It is worth noting that, of the twelve studies identified, nearly half are in the field of nursing. Generally, findings from the nursing studies are consistent with those of other fields. However, a consistent definition of critical thinking in nursing is lacking (Scheffer & Rubenfeld, 2000; Twibell, Ryan & Hermiz, 2005). Findings that view faculty

members as essential to fostering critical thinking in a student-centred approach are also consistent with findings from across multiple disciplines (Chan, 2013; Zygmunt & Schaefer, 2006).

The majority of these studies involve an examination of issues related to faculty definitions, perceptions and influences on students' development of critical thinking skills. Critical thinking has been described as a skill that is learned and directly influenced by the attitudes of faculty members (Halx & Reybold, 2006). Studies suggest that faculty members may report that students are "resistant" to engaging in critical thinking (Halx & Reybold, 2006; Jones, 2007). Since they differ on whether critical thinking is a thought process or a way of acting, educators' views of their role in helping students to develop critical thinking are likely to vary (Krupat et al., 2012).

Tsui (2002) conducted a study to examine faculty members' perceptions on numerous factors related to critical thinking and how they influence learning in the classroom. Findings indicate that faculty confidence and enthusiasm, and a view of learning as a joint process with students all foster critical thinking (Tsui, 2002).

Overall, findings from these studies demonstrate that faculty attitudes appear to influence critical thinking skills in students. The premise that critical thinking is developed and enhanced through explicit instruction and teacher-student collaboration is supported (Burbach et al., 2012; Hoover & Lyon, 2011; Tsui, 2002).

Interesting concepts related to faculty members and critical thinking surface from the field of nursing, particularly as it pertains to measuring the critical thinking levels of faculty themselves. Studies by Blondy (2011) and Zygmunt and Schaefer (2006) show quite a variation in the critical thinking abilities of the faculty who responded. Fear of a

lack of critical thinking ability in the faculty member is identified as a barrier to assessing critical thinking and raises questions about their ability to teach and foster the development of critical thinking skills in their students (Blondy, 2011; Zygmunt & Schaefer, 2006). Findings from these studies suggest that critical thinking may develop and improve over time for faculty as they gain teaching experience; they also suggest that students could be at a disadvantage in learning critical thinking skills if their teachers are not proficient (Blondy, 2011; Zygmunt & Schaefer, 2006).

2.4 Summary

This Chapter has examined the research literature related to critical thinking generally and then more specifically in relation to social work education and faculty perspectives. The following table (Table 2.1) highlights key findings from the literature review across academic disciplines, areas not yet examined from a social work perspective, and gaps:

Table 2.1 Gaps and Opportunities for Research

| Key Findings | What Has Not Yet Been Done in Social Work | Key Gaps |
|---|---|---|
| Explicit and concentrated instruction in critical thinking and incorporation of diverse learning activities foster critical thinking (Abrami et al., 2008; Biggs, 2003) | Determining what critical thinking looks like in social work education | Multiple and varying definitions of critical thinking |
| Teaching critical thinking as an independent topic in a content-specific course in a specific discipline improves critical thinking skill development (Abrami et al., 2008; Ennis, 1989; 1996; McPeck, 1981) | How social work faculty incorporate critical thinking into the curriculum and how it is taught in the classroom; has not been mapped out thus far | How to incorporate critical thinking into the social work curriculum |
| Making critical thinking objectives explicit in courses and integrating these objectives into both student and faculty development improves critical thinking (Abrami et al., 2008; Crenshaw, Hale, & Harper, 2011; | Identifying the key components to critical thinking in social work education and practice | Variation and lack of consensus on effective teaching pedagogies poses challenges to developing a framework to support critical thinking across the social work curriculum. Also, a |

| | | |
|---|---|--|
| <p>Friedel, et al., 2008; Hofreiter, Monroe, & Stein, 2007; Johnson, 2011)</p> | | <p>lack of clarity about a definition makes the identification of objectives/outcomes specific to social work difficult</p> |
| <p>Formative assessments promote critical thinking; on-line, case-based methods; seminars and PBL foster critical thinking skills (Altshuler & Bosch, 2003; Burgess, 2009; Carmichael & Farrell, 2012; Jonassen, 1994; Loyens & Gijbels, 2008; Pepper, 2010; Schneller & Brocato, 2011; Snodgrass, 2011; Sweller, Kirscher & Clark, 2007; Yeh, 2012)</p> | <p>Mapping out the factors that support engaging students in critical thinking, what the barriers are and what strategies are effective to develop critical thinking in classroom settings</p> | <p>Lack of agreement about whether critical thinking involves a set of generic skills that apply across fields or whether it is dependent upon the context within which it is taught</p> |
| <p>There is a disconnect with faculty's understanding of what critical thinking is and the variation and multiple definitions (Behar-Horenstein & Lian, 2011; Krupat et al., 2012; Scheffer & Rubenfeld, 2000; Twibell, Ryan & Hermiz, 2005)</p> | <p>A description of and dialogue about how social work faculty know when students are developing critical thinking skills</p> | <p>A consistent definition of what critical thinking is in discipline-specific fields is lacking</p> |
| <p>Faculty attitudes toward learning and critical thinking appear to influence critical thinking skills in students (Behar-Horenstein & Lian, 2011; Blondy, 2011; Zygmunt & Schaefer, 2006)</p> | <p>Examining if critical thinking skills taught in the classroom are transferrable to the practice field and if so, examining how they are operationalized at the micro, mezzo and macro levels</p> | <p>Only a small number of studies have been conducted that examines faculty perspectives of critical thinking in education, largely in the field of nursing; none are noted from a social work perspective</p> |
| <p>Critical thinking is developed and enhanced through explicit instruction and teacher-student collaboration (Chan, 2013; Chang & Wang, 2011; Chiang & Fung, 2004; Crenshaw, Hale, & Harper, 2011; Friedel, et al., 2008; Hofreiter, Monroe, & Stein, 2007; Johnson, 2011; Jonassen, 1994; Keppell, 2014; Loyens & Gijbels, 2008; Schell & Kaufman, 2009; Sendag & Odabasi, 2009 Tsui, 2002; Zygmunt & Schaefer, 2006)</p> | <p>Identifying ways to support faculty in incorporating/integrating critical thinking into courses via constructive course alignment in terms of learning outcomes, course design, and assessment tasks</p> | <p>University or program/department support for scholarly teaching is inconsistent across social work programs, and the value of teaching vs research continues to be an issue of debate. No studies have been conducted specifically within social work education about access to/effectiveness of professional development opportunities for faculty members via Teaching and Learning Centres and this may influence how critical thinking gets incorporated into the curriculum (or not)</p> |
| <p>Critical thinking may develop in faculty over time as they gain experience and students may be disadvantaged in learning critical thinking skills if their faculty are</p> | <p>An examination of whether or not social work faculty view critical thinking as important; how social work fits in the broader debates surrounding</p> | <p>No social work studies have been conducted that analyze faculty understanding or perspectives of what critical</p> |

| | | |
|---|---|--------------------------------------|
| deficient in this area (Blondy, 2011; Zygmunt & Schaefer, 2006) | critical thinking in higher education; and examining what critical thinking looks like in social work education | thinking is in social work education |
|---|---|--------------------------------------|

Awareness of the gaps and opportunities for further research helps inform next steps for this research project. The following Chapter will specifically discuss the methodology utilized for this study.

Chapter 3 – Methodology

3.1 Overview

This Chapter provides a discussion of the methodology used in this qualitative Delphi study. It includes a description of the research questions that have framed this study, a detailed description of the sample, measures, data collection and analysis that was undertaken, and an examination of trustworthiness and rigor.

As discussed in the previous Chapter, the specific gaps identified in the literature review include: a consensus on a specific definition of critical thinking in social work education; methods to incorporate critical thinking into the curriculum; effective teaching pedagogies to support the development of critical thinking skills in students; identification of social work faculty perspectives on the definition of critical thinking; methods to operationalize critical thinking in the classroom; and identification of the ways in which critical thinking is demonstrated by social work students in the classroom and ultimately in practice. This research study specifically addresses the following gaps in the literature: determining how critical thinking looks in social work education; understanding how social work faculty members incorporate critical thinking into the curriculum (or not); how critical thinking is taught; and identifying the key components to critical thinking in social work education.

A qualitative research design is utilized, operationalizing a Delphi methodology involving three iterative rounds with the participants. The researcher engaged in thematic analysis of the data collected from each Delphi round. Given this methodology, simultaneous data collection and analysis occurred; Ezzy (2002) describes this process as

an inductive method of analysis that includes an iterative process of interpretation from the perspective of the participants involved in the study.

The focus of this study is on developing a framework to:

- explain faculty members' understanding of critical thinking in social work education, and
- explore how it is experienced and operationalized in social work students from a faculty members' perspective.

As suggested by Creswell (2013), the research questions in a qualitative study should be open-ended, capture the aim of the topic under investigation, and focus on exploring the central issue being examined. In line with this, the current research project focuses on:

- understanding how faculty members identify the steps involved in thinking critically within social work,
- the processes utilized in teaching students to think critically, and
- how participants describe their students' application of critical thinking.

As such, the research questions are framed around these key points.

The Delphi method is a research technique utilizing an interview questionnaire approach with a sample of experts in a given field or on a specific topic (Hsu & Sandford, 2007; Keeney, Hasson, & McKenna, 2011; Linstone & Turoff, 1975; Powell, 2002). The methodology is described as a process for group communication that involves multiple iterations among the participants (experts), with an aim to achieve *consensus* on an issue or topic in order to make future predictions/forecasts, engage in decision-making, or gain new knowledge and understanding about an issue or phenomenon not previously known (Keeney et al., 2011; Linstone & Turoff, 1975).

The Delphi method is a research technique that dates back to the 1950s, when the Rand Corporation developed this methodology in an effort to achieve agreement or

consensus from those individuals identified as experts with regard to a particular topic under investigation (Habibi, Sarafrazi, & Izadyar, 2014; Hsu & Sanford, 2007; Linstone & Turoff, 1975). According to Skulmoski, Hartman, and Krahn (2007), this methodology is effective when the research aim is to enhance our understanding of issues, challenges, discoveries, or to forecast what could happen in relation to issues in the future. This research methodology is “flexible” and effective for examining issues that can be better understood through rich, descriptive detail via an anonymous group communication process, where feedback informs and enhances knowledge of a phenomenon (Skulmoski et al., 2007).

Most Delphi studies utilize a quantitative or mixed methods research design; fewer purely qualitative Delphi studies have been conducted (Brady, 2015). As such, there is limited direction provided in the literature on how best to modify the Delphi for a purely qualitative design (Brady, 2015; Fletcher & Marchildon, 2014; Skulmoski et al., 2007). Skulmoski et al. (2007) describe four essential components to what is referred to as the “classical Delphi” based on its original conception, including: anonymity of participants; multiple rounds (iterations) that allow participants to refine feedback/responses based on opinions of others; controlled feedback that provides the opportunity for participants to change their perspective; and quantitative analysis of the data obtained (p. 3). The Delphi method for conducting research can be modified to accommodate a variety of research questions; when not conducted in the classical form, it is referred to as a “modified” Delphi (Skulmoski et al., 2007, p. 5). Habibi, Sarafrazi and Izadyar (2014) describe the Delphi method as an effective tool in conducting exploratory qualitative research; the use of Likert-scales is common with this type of research as well.

Utilizing a qualitative Delphi method allows for an iterative process of member checking via this process of group communication, enhancing both rigor and trustworthiness of the findings.

The criteria that need to be incorporated into qualitative Delphi studies incorporate: purposive sampling, emergent design, structured communication between participants that is anonymous, and engagement in thematic analysis (Brady, 2015; Keeney et al., 2011; Linstone & Turoff, 1975). This current research project meets all of these criteria. Table 3.0 (see Appendix K) highlights those Delphi studies conducted between 1993-2016 that have used a qualitative methodology, showing the year of completion and the area/topic under investigation. As can be seen in this table (Appendix K), only a small number of purely qualitative Delphi studies have been completed within the past 15 years across a variety of disciplines. Rather than looking to quantify relationships between variables as in the case of quantitative research, a qualitative methodology allows one to obtain a depth and breadth of thick description to help understand a phenomenon. As such, a qualitative Delphi methodology has been chosen for this investigation.

As a consensus-building mechanism, the Delphi method typically involves participants who are deemed experts in a given field responding to a series of questionnaires circulated over successive rounds or iterations, and responses are analyzed, summarized and refined by the actual respondents with the goal of achieving consensus (Habibi, Sarafrazi, & Izadyar, 2014; Hsu & Sanford, 2007; Keeney et al., 2011; Linstone & Turoff, 1975; Skulmoski et al., 2007). Most Delphi studies include at

least three or more rounds (Hsu & Sandford, 2007; Keeney et al., 2011; Skulmoski et al., 2007).

Consensus has been defined as achieving a participant response rate in agreement of 70% or greater (Keeney et al., 2011). If there is a lack of consensus after three rounds, a fourth iteration would be considered (Keeney et al., 2011). For the purpose of this study, consensus is defined as answers that are consistent over successive rounds, where all participants are in agreement with a specific concept or theme.

The research process using this method typically involves completing a review of the literature, devising the research question(s), defining the criteria to determine expert status for participants/panelists, recruiting the sample via purposive and snowball sampling, and engaging in the iterative rounds (Hsu & Sandford, 2007; Skulmoski et al., 2007). Many Delphi studies commence with a qualitative or open-ended questionnaire for round 1 and questionnaires (sent electronically or via mail) that include Likert-type scales for successive rounds (Hsu & Sandford, 2007; Skulmoski et al., 2007).

The practice of using experts has been debated in relation to this methodology (Keeney et al., 2011; Linstone & Turoff, 1975). According to Pickard (2007), the purpose of the expert panel is to “inform discussion” on the issues under investigation, making use of “expert opinion.” Powell (2002) notes that the experts should be able to “reflect current knowledge and perceptions” and Pickard (2007) emphasizes that the integrity of the expert panel is very important, hence it is essential to have those participants who are in the best position to provide considered opinions on the topic and not only individuals who might have limited knowledge or experience in the area under examination. Hallowell and Gambatese (2010) outline specific criteria to be used to

identify possible experts in the relevant field under investigation such as: professional registration; conference presentation; peer-reviewed journal article; faculty member at an accredited university; member of a committee; chair of a committee; and advanced degrees (p.128). Based on these factors, a minimum set of criteria to determine expert status on critical thinking in social work education was established for this investigation and are described in the sample details. This Delphi approach is well suited for the area under investigation in this study because all participants are social work faculty members who have expertise on or related to the topic and engaged collaboratively to gain an understanding of critical thinking in social work education.

3.2 Cultural Review

Prior to commencing qualitative research, it is important for the researcher to identify their positioning prior to and during the course of the investigation. Therefore, I will outline my position on this topic in relation to starting assumptions I hold, as a practicing social worker, social work educator, and PhD student.

Clearly identifying the starting assumptions of the researcher is important when conducting qualitative research, since such assumptions and biases could influence the process of data collection and analysis (Braun & Clarke, 2006). Based on both practice and teaching experiences, the first assumption I hold is that critical thinking is an important component of higher education, particularly in the field of social work. Social workers work with people in complex, multifaceted environments so it is essential to think critically. Social workers must have both depth and breadth in their repertoire and skills in working with people, which include the ability to think critically in high pressure, fast-paced environments. As a social work practitioner, both front line and

management, I have at times questioned whether we are teaching our students how to think critically. I have seen practitioners lack skill, awareness and insight in navigating the challenges of working with individuals, which can have significant repercussions for service users as well as for the practitioners. As a result, I believe critical thinking is an essential skill for practicing social workers.

I also assume that critical thinking is important to social work faculty. I am assuming that students do not currently receive explicit instruction on how to think critically in many courses, and that there is great variation on how different faculty even define critical thinking. I have come to this perception after several years of teaching experience as a Sessional Instructor, during which time, neither an understanding of nor ways to teach students how to think critically has been revealed to me. I note the terms *critical analysis* and *critique* in multiple syllabi, across multiple social work courses that I have taught, but no specific definition or criteria are provided by faculty members who have taught these courses before me. This leads me to believe that while concepts such as *critique* and *critical analysis* are important factors that faculty members want in student assignments, I am left wondering how these concepts are defined.

Based on my teaching and learning experiences as a Sessional Instructor and PhD student, I hold the assumption that there is a connection between the learning process and the ability to think critically, and that learning is fostered through student engagement. For me, fostering student engagement involves an active process of learning that taps into students' motivation to learn. I also assume that the behaviour of teachers can influence student motivation to learn, which in turn can impact a student's willingness to work at developing critical thinking skills.

My positioning from the start of this study is also captured within the conceptual model highlighted in Figure 1.0. I embarked upon my PhD studies being passionate about social work education and wanted to learn everything possible about the topic and how to become an effective teacher, in order to support the next generation of social workers. I reviewed the literature related to educational outcomes in social work education, where I repeatedly saw the term *critical thinking*. It was then that I became interested in studying critical thinking, which eventually led to this current research study. From my perspective, I understand critical thinking as a process informed by the meta-theories of learning and a critical perspective, brought to life through the practice theory of experiential learning. I am interested in understanding this concept from social work educators; hence, I decided to conduct a qualitative study in order grasp a deep understanding of critical thinking from the viewpoint of social work faculty members. My interest was to conduct this study with international participation, with the aim of extending our view of this concept beyond the confines of a western world view.

Beyond seeing critical thinking as a process, I had no specific expectations of what I would discover in the course of conducting this research study. I intentionally tried to keep options open as I framed the research questions, and especially the semi-structured interview guide for Round 1 of the Delphi process.

3.3 Research Questions

The purpose of this study is to obtain a deep and rich understanding of critical thinking in social work education and to identify how social work educators will know when students are thinking critically. This knowledge will assist in both pedagogical and curriculum development for social work within institutions of higher education. The key

research questions for this study, as asked from the perspective the identified experts, for the purpose of this investigation are:

1. How do expert social work faculty understand critical thinking?
2. How is critical thinking currently operationalized in the classroom?
3. How do social work educators know when students have achieved the ability to think critically?

3.4 Sample

A purposeful sample of participants was recruited from Schools or Faculties of Social Work internationally. The inclusion criteria captured those Social Work faculty members from accredited Schools of Social Work internationally who met the criteria that define expert in the area of critical thinking in social work education. Accreditation status and faculty members who met the eligibility criteria were ascertained through an internet search and review of university websites. For the purpose of this study, criteria used to determine expert status in the area of critical thinking in social work education included satisfaction of criterion (a) and at least one of criteria (b) through (d):

- a) Two or more publication(s) or presentation(s) (primary or secondary), or a combination thereof, related to critical thinking in social work education (peer reviewed)
- b) Member or chair of a committee or group conducting work related to critical thinking in education and/or practice
- c) Coordinator or liaison of an undergraduate or graduate Social Work education program
- d) Member or chair of a committee or group (local, provincial or national) responsible for Social Work education, e.g. CASWE

These criteria were intended to capture those faculty who had in-depth knowledge and experience related to both critical thinking and social work education.

A review of the literature on Delphi studies indicates that adequate sample sizes can range from 10 to over 60 (Hasson, Keeney & McKenna, 2000; Okoli & Pawlowski, 2004; Skulmoski et al., 2007). The target sample for this study was 20 to 30 Social Work faculty considered experts in the area of critical thinking in social work education. Participants were identified by a review of the literature on social work studies on critical thinking. Additionally, a Google search of *social work faculty* and *critical thinking* was conducted to further identify those who met the inclusion criteria for this study. A final method to recruit sample participants was engagement in snowball sampling with the identified experts, to include those not otherwise identified. Creswell (2013) defines snowball sampling as a method to identify “cases of interest” by those who might know potential participants. It is a mechanism to augment the current participant panel based on the informed opinion of the experts identified in this Delphi study. This is a common technique utilized with this research methodology (Habibi et al., 2014; Keeney et al., 2011).

3.4.1. setting and procedures.

A total of three rounds were conducted in this Delphi process. Video conferencing through the Centre for Teaching and Learning at the University of Windsor was utilized when possible, to facilitate face-to-face interviews. Black Board Collaborate was used for the video conferencing and worked effectively through the first few interviews. Some faculty members were reluctant to use this venue due to inexperience and/or comfort level with the technology, so telephone back-up proved very useful. It is worth noting that technology glitches posed some significant barriers by the seventh interview, so a decision was made to complete the remaining interviews by telephone. In order to capture

all of the relevant data, audio taping of the interviews was done to ensure accuracy in the data collection process for the purposes of analysis. These audio files were subsequently transcribed into Microsoft word documents.

Upon completion of the first round of interviews, data analysis was conducted utilizing thematic analysis, as detailed by Braun and Clarke (2006). Microsoft Word was used to collect, analyze and store the data obtained from the participants. Round Two consisted of a summary of the results of Round One that incorporated highlights of differences in responses, and this document was forwarded to the participants via email for further comments and feedback. As per the Delphi methodology, results from the analysis of each round were forwarded to the participants involved in each round of the study. Participants could change, modify or maintain their opinions from each round, based on the feedback from other expert participants. This process was conducted for a third round upon completion of data analysis from the second iteration, in order to seek consensus on faculty members' understanding of critical thinking in social work education. It was proposed that consensus would be achieved when all participants were in agreement on the major themes identified (70% or greater consensus).

3.4.2. recruitment.

I initially identified potential participants for this study through a review of peer-reviewed articles on critical thinking in social work education; 30 were originally highlighted. Expanding the potential number to include individuals whose scholarship *related to* critical thinking in social work education dramatically increased the potential pool of participants to 122 possible faculty members. I engaged in an extensive review of the literature, both research and conceptual articles related to critical thinking in social

work education, to develop a fulsome list of potential participants. First, second, third and fourth authors were considered and invited to participate.

I meticulously reviewed university websites to examine the identified faculty profiles and research interests of social work faculty internationally, cross-referencing literature reviews and reading listed publications to see which faculty members met the inclusion criteria. I also searched the gamut of social work journals and used the key word search parameters of *critical thinking* to identify potential participants internationally. As potential candidates were identified, I emailed an invitation to participate in the research study to them, along with the *Consent to Participate in Research* (Appendix E) and *Demographic Profile Sheet* (Appendix C), which clearly outlined the inclusion criteria and protocol for this study. Several participants were also identified via snowball sampling once the interviews were underway.

Altogether, a total of 122 faculty members appeared to meet the inclusion criteria that defined expert status for the purpose of this study. Slowly, over a period of five months, I was able to recruit a total sample of 28 participants who authored studies from four distinct bodies of literature, where each intersected in a small area of overlap related to critical thinking. For Round One of the Delphi study, the sample included those with scholarship related directly to critical thinking and areas of overlap with critical reflection, evidence-based practice, and competency-based practice and education. Interviews commenced in May of 2014 and concluded by mid-September 2014.

Those faculty members interested in participating in this study contacted the principal investigator via email or telephone. The *Consent to Participate in Research* (see

Appendix E) was included as an attachment to the recruitment email message, which contained pertinent information about the study for participants.

I was the interviewer for each one-on-one session with the expert panelists participating in the study. A semi-structured, open-ended interview guide was developed to facilitate the interview discussion and ensure the primary research questions were targeted (see Appendix D). Participants were engaged in an iterative process through three rounds that included one individual interview and two subsequent rounds of written feedback.

As a measure of compensation to support involvement in the study for participants, there was a draw for a \$50.00 gas gift card upon completion of each round of the Delphi process. In addition to the opportunity to engage in interactive dialogue with a panel of experts in the field and contribute to the development of increased understanding of critical thinking in social work, the gift card served as additional incentive for continued involvement in the study.

3.4.3. demographic profile of the sample.

A pre-interview profile was completed for study participants in order to obtain a demographic picture of the panel of experts (see Appendix C). This profile highlighted the knowledge and experience of the participants, supporting their expert status and highlighting the important characteristics of those responding to the research questions. A total of 28 participants were involved, representing eight different countries. Figure 3.0 highlights the *Participants by Country* for this study. A total of 14 of the participants were from the United States of America; 7 were from Canada; 2 were from England; and 1 each were from Australia, Finland, Hong Kong, Norway, and South Africa.

Figure 3.0 Participants by Country

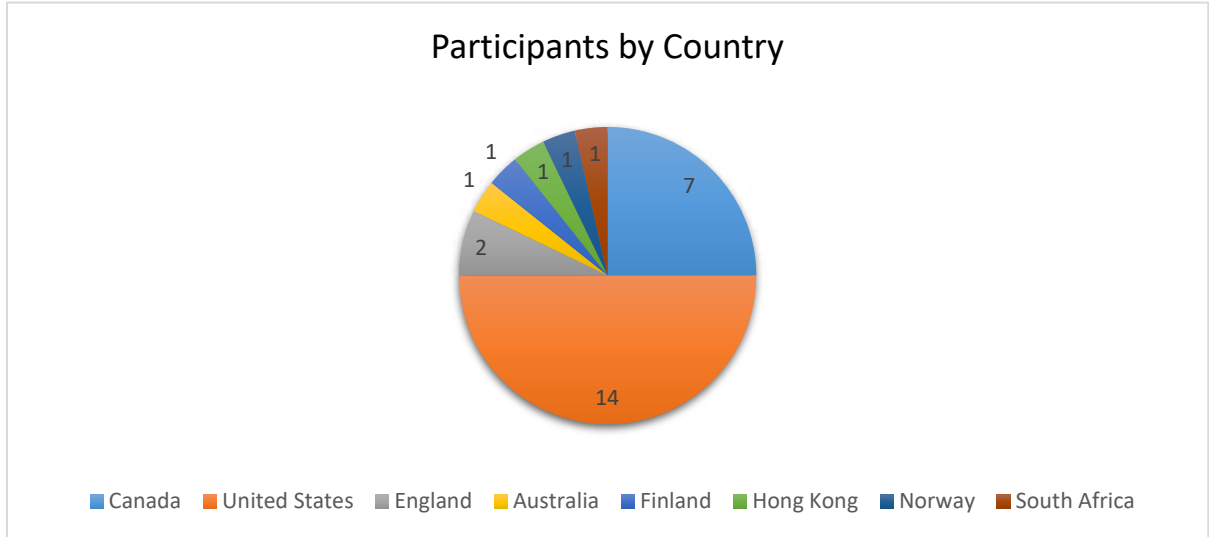


Figure 3.1 shows a visual representation of the sample by *Academic Rank*. With regard to academic rank, 14 of the sample identified as *Professors*, 11 were *Associate Professors*, 2 *Assistant Professors*, and 1 was a *Lecturer*.

Figure 3.1 Academic Rank of Sample

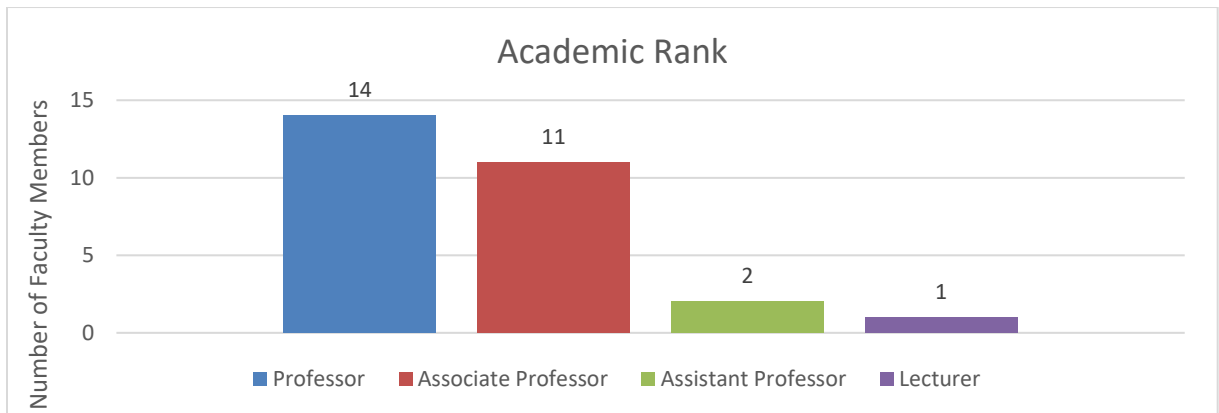
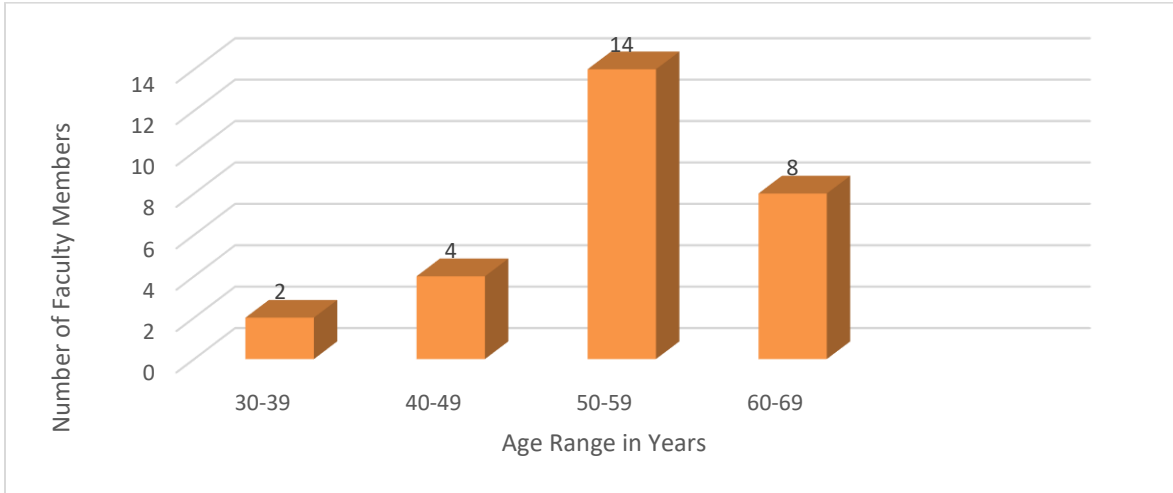


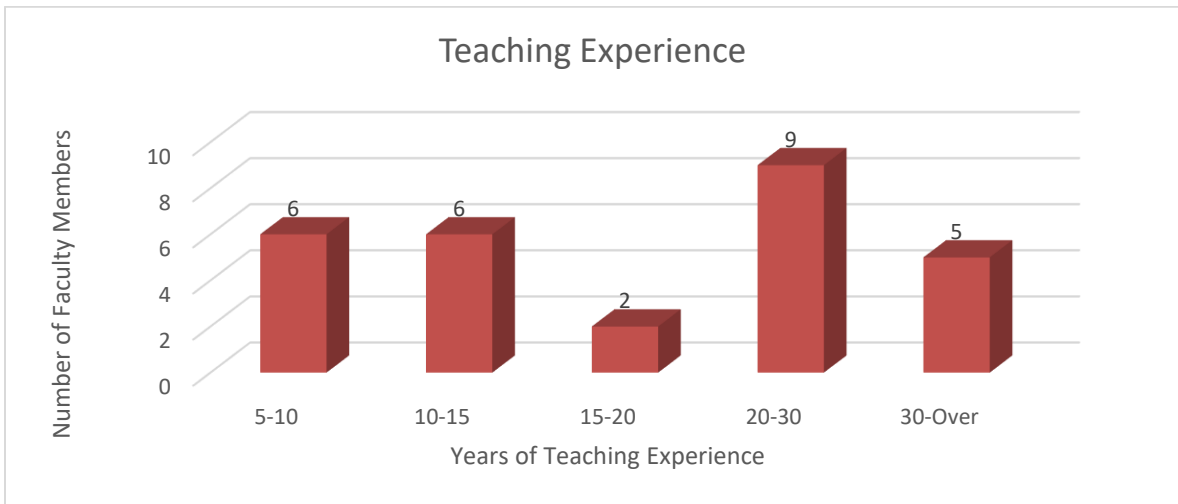
Figure 3.2 shows the age range of the sample, with half (14) of participants being between the ages of 50-59, while the second largest group consisted of those between the ages of 60-69 (8).

Figure 3.2 Age Range of the Sample



The faculty who participated in this study reflected a wide range in number of years of teaching and direct practice experience in social work. Figure 3.3 highlights the number of years of teaching experience of the sample.

Figure 3.3 Faculty Teaching Experience Profile



Overall, participants presented an average of 19.7 years of teaching experience in social work education; 13 participants reported involvement on a council or committee related to social work education; and 10 participants reported having had formal training on critical thinking.

Figure 3.4 Faculty Practice Experience Profile



Figure 3.4 shows the range in numbers of years of experience participants have had in direct social work practice, with 4 reporting between 0-5 years; 10 reporting between 5-10 years; 4 reporting between 10-15 years; 7 reporting between 15-20 years; and 2 reporting 20 years or more of experience. In relation to gender, 23 participants in this sample identified as female and 5 identified as male.

3.5 Measures

A semi structured, open-ended interview guide was developed to structure the first round of the Delphi process (see Appendix D). The questions in this guide were informed by the identified gaps in the literature, in order to map out what critical thinking looks like in social work education from a faculty perspective, particularly as it relates to its definition and an understanding of how it is operationalized in the classroom and in practice. The grand tour questions were:

1. In your view, is critical thinking important?
2. What are you hearing people say about critical thinking in higher education?
3. From your perspective, what does critical thinking look like in social work education?
4. How do you operationalize critical thinking in your classroom?

5. How do you know students are developing critical thinking skills?
6. How do you think critical thinking skills taught in the classroom are operationalized in practice?

The questions in this interview guide were piloted through the first five participants in the sample to allow for modification as needed, to ensure they were capturing information that would accurately address the research questions. During the first few interviews, I debated about adding an interview question concerning power relations within this trial framework, as the first few participants raised this issue during the interviews. I had concerns about adding a question that might influence the direction of responses for all participants in this vein. The interview guide as originally developed was generating good dialogue and contributions by each participant, and allowing such a topic to surface on its own would ensure that I did not have any undue influence in introducing it. After discussion with my advisor, I decided not to alter the interview guide to avoid any hint of skewing the discussion toward a particular theme. My rationale was that this topic could well emerge from the remaining participants and iterative feedback from this Delphi process, and I wanted to allow it to emerge naturally from participants. I planned to draw out any dialogue related to power issues with participants if they surfaced during each specific interview. The data gathered during this pilot period was used in the overall data analysis.

3.6 Data Collection and Analysis

The data for the individual interviews in the first Delphi round was collected by using audiotaping procedures. Written feedback was obtained from Rounds Two and Three. The interviewer also took notes as required in a journal which captured an audit trail. The data from each interview was transcribed via an external transcriber and I

engaged in thematic analysis of the data. Following Braun and Clarke's (2006) guidelines, I used an inductive approach to the thematic analysis, where codes were developed based on the data. The themes captured what was important in the data in relation to the research questions being asked. The emerging themes represented some level of patterned response or meaning within the data set that spanned all the transcriptions.

3.6.1. codes and categories.

Within the coding process, transcriptions are transformed into meaning units for analysis. Graneheim and Lundman (2004) define meaning units as a "constellation of words or statements that relate to the same central meaning" (p. 106). These meaning units (phrases/paragraphs) were subjected to a process of open coding, to capture the essence of what the participants were expressing. Open coding, as described by Buchbinder (2010), involves reviewing the transcription one line at a time in order to obtain a snapshot of initial meaning units that "emerge from the data." According to Charmaz (2014), coding is a "pivotal link" between the process of data collection and development of an "emerging theory" to explain the data (p. 113). The coding process, in essence, helps one explain and define what is actually happening within the data in ways that shape and provide meaning (Charmaz, 2014).

The data from my participant interviews and subsequent questionnaires were coded and categorized in the process of analysis, so that emergent themes could be revealed. As I worked on each transcription and individual meaning unit, I engaged in a process of data reduction to capture the essence of each meaning unit. With this process in place consistently across transcriptions, patterns in the data could then be identified

and grouped together to highlight the meaning of what was being communicated. As the codes informed the category development, the story began to be told which revealed emerging themes consistent across participants.

In the process of developing the initial codes for the analysis, I went through each individual transcription and used coloured highlighters and pens to underline key words and phrases that stood out. As this process evolved, I eventually decided to highlight statements that included one or more sentences as meaning units in order to best capture the essence of what each participant was communicating. I circled meaning units within each transcription, going through each line by line. The phrases/paragraphs highlighted maintained the content and context of what participants were communicating.

After I went through each transcription and highlighted by hand the meaning units to extract from the data, I drafted analysis charts into which I could copy and paste each meaning unit by participant. The analysis charts helped me organize and frame the data. Table 3.1 shows the headings used in the analysis charts and the process/parameters I applied in using each column.

Table 3.1 Data Analysis Process

| Heading | My Process/Definition |
|----------------|--|
| Meaning Unit | Phrases (paragraphs in many cases) were circled and highlighted from the transcriptions. These paragraphs were then copied into the analysis chart as a <i>meaning unit</i> , capturing exact phrases of participants in order to stay true to what they were saying |
| Code | Coding involved intentioned reduction of the data in order to identify and extract patterns. The codes were flexible and inductive, not rigid or pre-determined, in order to capture the essence of what each meaning unit was saying (Braun & Clark, 2006). Key words were pulled out to capture the essence of the statements from participants; codes were developed based on the data <i>Example:</i> The meaning unit of “ <i>it is vitally important that students who graduate from social work programs can make ethical, independent decisions and they cannot do that</i> ” |

| | |
|----------------|--|
| | <i>without critical thinking” was initially coded to ethical, independent decisions are important for students</i> |
| Category | Categories were developed by grouping codes together that seemed to share commonalities (Graneheim & Lundman, 2006); a layer of analysis was woven in to support and clarify connections to undergird the eventual themes that emerged Example: The initial category for the above-noted example was <i>Ethics and Decision-making</i> |
| Interpretation | Within this column I linked with information from the literature, as well as my understanding of what participants were saying as I wove codes into categories to organize and make intelligible the large amount of data obtained from Round One |
| Sub-Theme | This column involved revising and combining the categories that shared commonalities and helped inform the overarching themes that emerged from the data, through an inductive approach. Example: The sub-theme of <i>Dimensions of Critical Thinking</i> was informed by several categories that captured those key ingredients such as questioning, decision-making, ethics. |
| Themes | Through prolonged engagement with the data and a process of connecting the revised categories to common themes across participants, I searched for levels of patterned response or meaning within the categories that spanned all of the transcriptions and combined similar categories to generate the themes and related sub-themes. According to Braun & Clarke (2006), themes fit the data after an ongoing process of refinement; they identify the “essence of what each theme is about...not to be too complex or diverse” (p. 80) In this study, the themes capture the essence of the sub-themes that are contained within each theme. Example: The sub-themes of complexity, integration, and dimensions of critical thinking were synthesized into one theme: Critical Thinking as a Multidimensional Process |

The analysis charts were organized according to the questions used in the interview guide (see Appendix D). Each analysis chart contained six sections, one for each question. Once the meaning units were extracted from each transcription, they were copied and pasted into a Microsoft Word document table. I then engaged in a process of initial open coding. In this process of open coding, the meaning units were explored to

see where linkages could be made (Ezzy, 2002). Table 3.2 provides an example from the Round 1 interviews of the analysis chart template used in this analysis process.

Table 3.2 Initial Analysis Chart for Round 1

| Meaning Unit | Code | Category | Interpretation | Sub-Theme | Theme |
|--|---|--|--|--|----------------------------|
| Section A: In your view, is critical thinking important? <i>Probe: Why or why not?</i> <i>Probe: In social work?</i> <i>Probe: Can you expand on this?</i> | | | | | |
| the critical thinking process requires that we consider as many possibilities as possible, that we look at the pros and cons of any possible actions or interventions, that we consult, for example, our code of ethics, legislation, you know, policy, agency... have discussions around what we think are ethically or morally right | -CT process considers many possibilities -consult with code of ethics, legislation, policy -discussion around ethical and moral rightness | CT as process Consideration of multiple possibilities in analysis | <i>CT as a process</i> <i>Multiple perspectives are involved with process of thinking critically</i> <i>Ethics & morality (seeing right & wrong)</i> | Process (considering many possibilities) | Multiplicity Ethics |
| | | | | Ethics and morality are factors in CT | |

It is important to note that these codes, categories and themes went through a number of revisions as I progressed through each transcription and became more familiar with the data, and my confidence in working with the data increased over time. The initial codes were “provisional,” in that they were reworded as I navigated each transcription, to improve their fit with the data across participants. Charmaz (2014) describes how the process of provisional codes helps “capture and condense meaning and actions,” and the reworking and revisions I engaged in refined the coding and categorization process over time. I used codes that condensed the phrases of each

participant, using in vivo codes as described by Corbin and Strauss (2008), in order to stay true to what each person was saying.

Even though I stayed true to the words of my participants, it is important to note here that I was the filter; I had chosen the words for the codes and what I saw as significant in the data, and what I thought was happening here. Charmaz (2014) describes the coding process as an “interactive analytic space” and it is in this space that I was able to blend together the dialogue from the interviews that I listened to in great detail and ensure alignment with each transcription so I could have confidence that the written words captured each interview context. Through the coding process and subsequent revisions, I gained experience with the process as I became more familiar with the data across transcriptions; I was able to discern patterns and move forward in generating informed categories. The time frame for the Round 1 analysis was from November 2014 to September 2015 and involved almost 1000 pages of rich, narrative data from 28 Social Work faculty members, spanning eight different countries.

As a novice researcher, it took time to work through the data in a way that was consistent and thorough. I worked and re-worked the analysis charts for each of the 28 transcriptions three times as I returned to refine and condense the number of categories. It became apparent that similar categories could be combined to be more parsimonious and efficient in the reduction process. After going through each individual transcription by research question three times, I was confident that the codes and categories were consistent throughout. I then copied all of the responses across the sample by interview question into one new analysis chart. Table 3.3 highlights how the analysis shifted from

each individual transcription to an across-participant approach, organized by interview question.

Table 3.3 Sample of Across-Participant Analysis Chart

Critical Thinking in Social Work Education: Round One Data Analysis Revised

Interview Question #1: In your view, is critical thinking important?

- Why or why not?
- In social work?

| Summary of Responses | Revised Categories | Emerging Theme |
|---|--|--|
| <ul style="list-style-type: none"> • It is vitally important that students who graduate from social work programs can make ethical, independent decisions and they cannot do that without critical thinking • the critical thinking process requires that we consider as many possibilities as possible, that we look at the pros and cons of any possible actions or interventions, that we consult, for example, our code of ethics, legislation, you know, policy, agency... have discussions around what we think are ethically or morally right • What is efficient? What meets human need? What is best for humanity? All of those kinds of questions can only be answered by using kind of a critical thinking frame • And then when a person goes through that, the results are they are more likely to make better decisions. They are more likely not to put people at risk, and they are more likely to be able to cover their ass if something rotten happens. Like if they have a documented process that they can defend. • It is something that faculty have continually brought up in conversation and the research that I have done they choose critical thinking skills and skills that are under the large umbrella of critical thinking...um... you know, feel that they are interested in seeing our students improve over time and skills that they think are critical in the field • Yes, I think it is important. I think that, well, I think, more than is commonly recognized, the profession of social work requires judgement and critical thinking is a good foundation for professional judgement. Let me start with that • Faculty are sometimes put off by people asking challenging questions, questioning assumptions and taking alternative perspectives. CT undergirds those fundamental processes of thinking through issues, | <p>Important & Decision-making</p> <p>Multiplicity & Ethics Questioning</p> <p>Argumentation & Decision-making</p> <p>Evolution (improvement over time)</p> <p>Important & Decision-making (judgement)</p> <p>Questioning & Decision-making</p> | <p>CT as a Multidimensional Process</p> |

| | | |
|--|------------------------|--|
| considering consequences, and pros and cons, that are important to professional practice judgment <ul style="list-style-type: none"> • Social workers make important, life-changing decisions that impact clients' lives and without being able to critically analyze information about the client's life, intervention and assessment strategies, we will be | Decision-making | |
|--|------------------------|--|

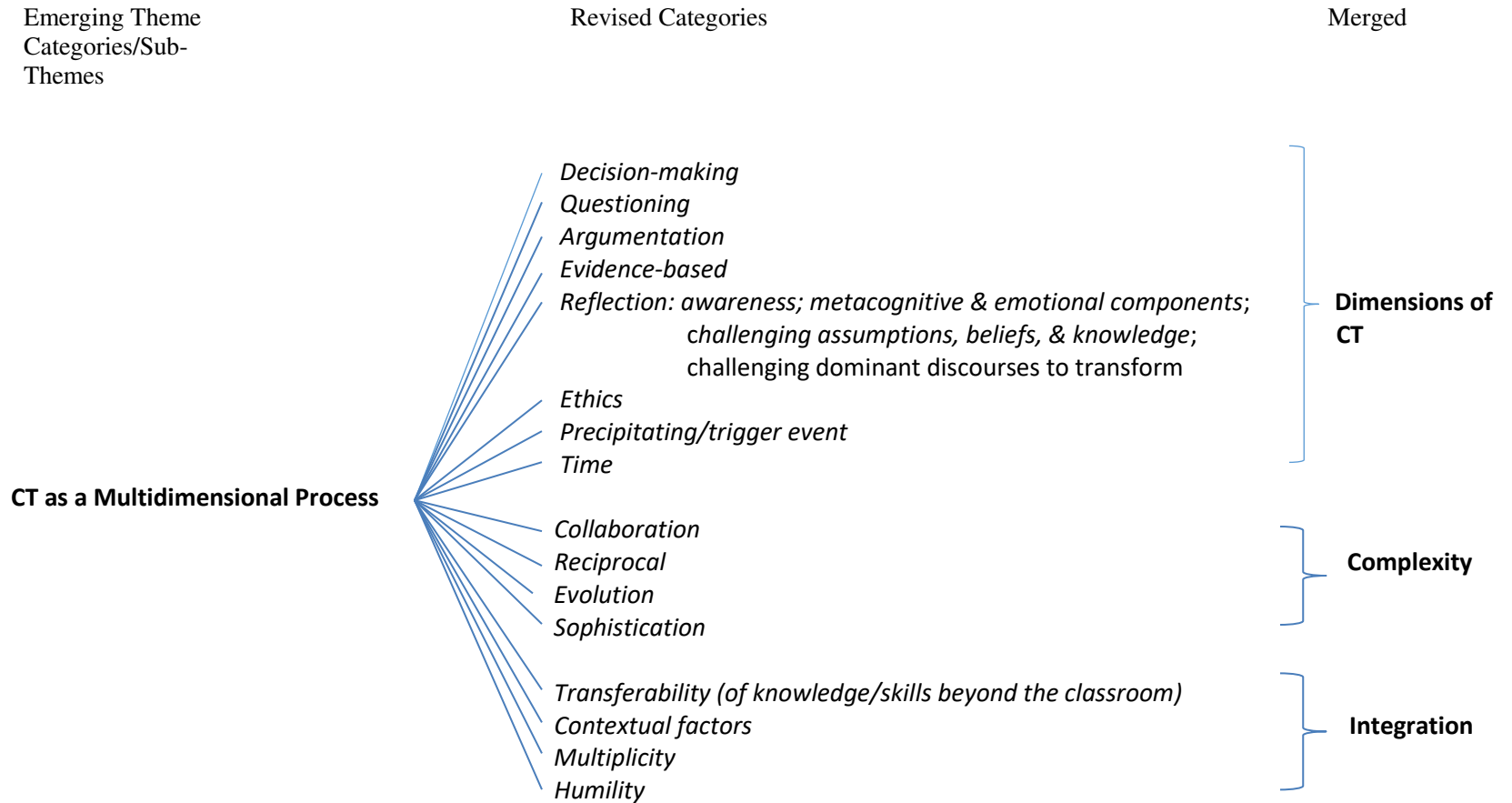
Through this process I moved toward outlining more central categories, referred to as *axial coding* (Ezzy, 2002; Strauss & Corbin, 1990), and the eventual integration of these codes and categories led to the identification of major themes that emerged from the data (Braun & Clarke, 2006; Ezzy, 2002). Prolonged and repeated engagement with the data allowed me to refresh my views of the data over an extended period of time. This also allowed me to engage in a process of refinement of the categories, which then merged into sub-themes through this iterative study and process of data analysis.

In re-working the data and revising the categories several times, as I condensed the findings into a manageable summary to send back to participants for Round Two of this Delphi study, I was able to capture more clearly the essence of what participants were communicating in the data. The prolonged engagement with the data ensured a tightness of fit between code, category, and emerging theme (Charmaz, 2014). I studied both the audiotapes and transcriptions of each interview several times throughout this analysis. As I progressed through each revision process, I could almost hear the voices of each participant, the key standout points for each of them and how they intricately connected to each other. The thoughts, feelings, and perspectives of each participant resonated throughout this analysis.

In revising the categories, I laid out visual representations to highlight linkages and see connections in new ways. Figure 3.5 is a visual example of emerging themes and

categories which contains 16 categories that were merged into 3 sub-themes to inform the over-arching theme of *Critical Thinking as a Multidimensional Process*. In total, 6 themes emerged from the data, supported by a total of 18 sub-themes. The Round 1 summary that was sent back to the participants consisted of a summary of the emergent themes and sub-themes, with a summary of participants' comments that helped define them (see Appendix G). Participants were asked follow-up questions and to rank the themes and sub-themes in order of importance.

Figure 3.5 Revised Themes and Categories Diagram



3.7 Delphi Round Two

Round 2 of this Delphi study consisted of a summary of the six emergent themes and the eighteen sub-themes from the data analysis that occurred following Round 1 (see Appendix G). Round 2 served as a member-check mechanism with the study participants, as well as the next step in an effort to obtain some consensus on the important factors involved with critical thinking in social work education by expert faculty members. According to Keeney et al. (2011), subsequent rounds in a Delphi process are beneficial in allowing the researcher to frame structured questions that integrate participant feedback and permit participants to reconsider opinions based on the responses of others.

In this phase of the study, participants were asked to rank the themes and sub-themes in order of importance using a Likert scale that ranged from 1 (most important) to 6 (least important). Table 3.4 is an example of how participants were asked to rank the themes emerging from the data. The same process was followed in ranking the sub-themes contained within each theme.

Table 3.4 Ranking Themes in Order of Importance

Please rank in order of importance the following themes (1 being most important to 6 being least important):

| Theme | Rank in Order of Importance |
|---|------------------------------------|
| Critical Thinking as a Multidimensional Process | |
| Critical Perspective and Anti-Oppressive Lens | |
| Pedagogy | |
| Shared Understanding (Lack of) | |
| Epistemological Influences and Understanding | |
| Assessment | |

Comments on Themes:

•

In addition to this ranking process, participants were asked to respond to two qualitative follow-up questions:

1. Which themes and sub-themes do you agree with? Why?
2. When considering our dialogue during the interview [Round 1] and upon review of this summary, are there any areas where you learned or changed your mind? If so, please explain.

Round 2 of this study included a total of 15 participants (of the original sample of 28), representing seven countries. Figure 3.6 highlights the *Participants by Country* for the second iteration. A total of 7 participants were from the United States; 3 from Canada; and 1 each from England, Finland, Hong Kong, Norway, and South Africa respectively.

Figure 3.6 Round 2 Sample: Participants by Country

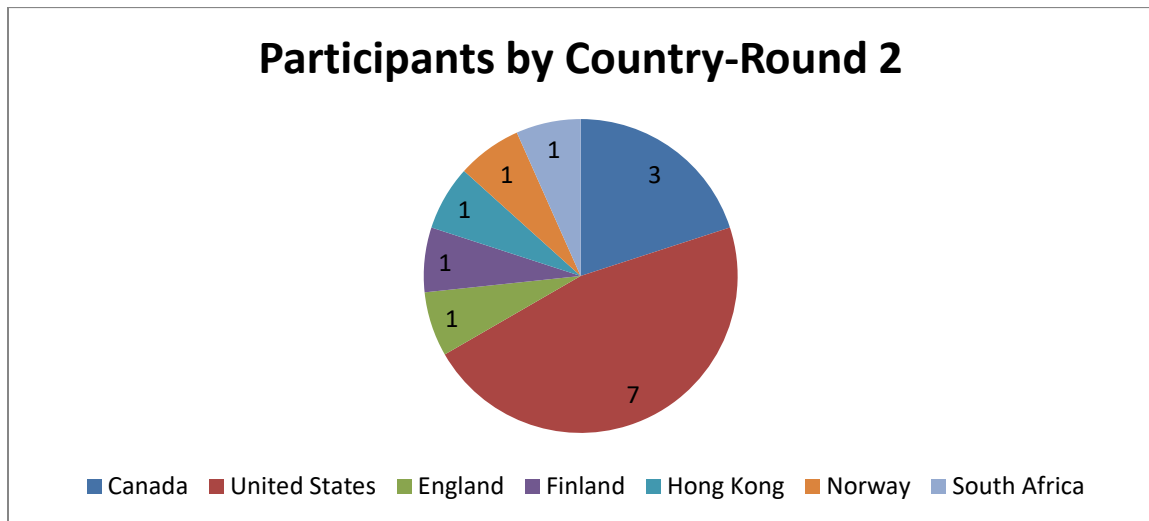


Figure 3.7 is a visual representation of the Round 2 sample by *Academic Rank*. With regard to academic rank, 8 participants in this sample were identified as *Professors*, 6 were *Associate Professors*, and 1 was an *Assistant Professor*.

Figure 3.7 Round 2 Sample: Academic Rank

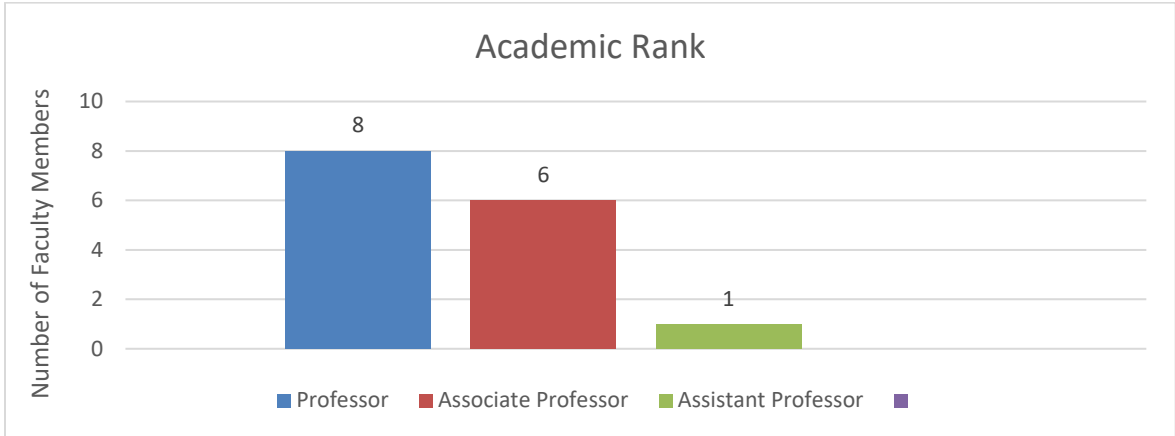
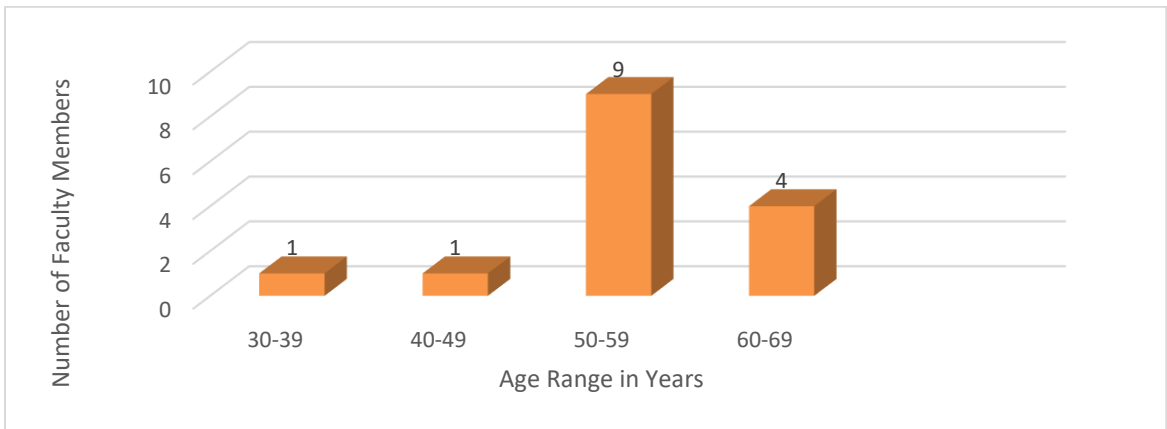


Figure 3.8 shows the age range of sample participants for round two of this study, where 9 participants in this sample were between the ages of 50-59, 4 between the ages of 60-69 years, 1 was between the ages of 40-49, and 1 was between the ages of 30-39.

Figure 3.8 Round 2 Sample: Age Range



The analysis of the Round 2 responses was a summary of answers to the two qualitative follow-up questions, a numerical ranking of the emergent themes and sub-themes by percent (%) of ranking (1 through 6) in order of importance, and a summary of narrative comments for each ranked theme/sub-theme provided by participants. These findings will be discussed in the next Chapter in detail. A summary of the Round 2 responses and rankings formed the basis for Round 3. To maintain consistency with the

Delphi methodology (Keeney et al., 2011), the statements captured in the summaries of successive rounds were kept as true as possible to the wording of respondents and statements that were similar were grouped together, which abbreviated and shaped them into readable, manageable formats for participants.

Overall, Round 2 lasted 5 months in order to obtain as large a response rate as possible. Keeney et al., (2011) note that low response rates are characteristic of subsequent Delphi Rounds, and this study has been no exception. In analyzing the narrative statements to questions asked, I used highlighters with different colours to indicate key summative statements within the responses of each participant. I then copied and pasted all of the highlighted sentences/phrases together, in order to have a good visual representation of commonalities. Table 3.5 provides an example of an analysis chart for the Round 2 analysis of participant comments and feedback. The highlighted comments/sentences were then collated into a workable document that captured the essence of participants' comments and framed the final Round 3 summary and follow-up questions (see Appendix H).

Table 3.5 Example of Round 2 Analysis/Summary Chart

| |
|---|
| 1. CT as a Multidimensional Process |
| <ul style="list-style-type: none"> • Sub-themes of complexity and integration seem especially important |
| <ul style="list-style-type: none"> • Agree to most the theme "Critical Thinking as a Multidimensional Process" |
| <ul style="list-style-type: none"> • Critical thinking as a multidimensional process...this one really resonates with me. |
| <ul style="list-style-type: none"> • Critical thinking as a multidimensional process: Dimensions of critical thinking and complexity - an important feature of critical thinking is the importance of understanding that there are different ways of looking at things |
| <ul style="list-style-type: none"> • Critical Thinking as Multidimensional Process-because this is very important for social work practice |
| <ul style="list-style-type: none"> • I particularly connect with the idea that this is a multidimensional process which requires understanding of complexity. The transfer of learning from classroom to field remains a significant challenge (maybe a growing challenge in fact) ...the lack of clarity around it suggests that it is not consistently operationalized across programs |

The ordering of how the themes are presented was refined based on the feedback from participants in Round 2 and how they ranked both themes and sub-themes in order of importance. Table 3.6 provides an example of the themes and sub-themes based on participant ranking.

Table 3.6 Summary of Revised Themes/Sub-Themes Based on Participant Feedback

| Themes | Sub-Themes |
|--|--|
| Critical Thinking as a Multidimensional Process | -Complexity -Integration -Dimensions of Critical Thinking Include Skills, Values, Principles and Assumptions |
| Epistemology Influences Education and Practice | Evaluation of Knowledge Claims Awareness of Assumptions and Self-Reflectiveness Humility in Recognizing and Accepting Limits Social Workers Have as Human Beings |
| Pedagogy Encompasses Teaching Strategies, Philosophies, Learning Spaces, and Integration with Field and Curriculum | -Pedagogical Approaches and Influence: How Individual Faculty View this Concept of Critical Thinking -Integration with Field and Curriculum -Culture of Space |
| Critical Perspective and Anti-Oppressive Lens | -Power and Multiplicity (tied as most important sub-themes) -Social Justice and -Attending to Contextual Factors and Influences (tied for 2 nd in order of importance) Neoliberalism |
| Lack of a Shared Understanding | -Constant Undercurrent Across Disciplines -Rhetoric -Tension, Controversy and Context |
| Assessment | -Standards and Competencies -Measures and Outcomes |

3.8 Delphi Round Three

The third round of this Delphi study was a summary of the theme/sub-theme rankings, a summary of participant comments, and specific follow-up questions based on *Yes-No* responses to five questions related to the key findings as identified by the participants, with an aim to achieve consensus on points identified (see Appendix H:

Round 2 Summary and Round 3 Follow-up Questions). These follow-up questions emerged from the respondents' feedback and were enhanced with input from my Advisor in this dissertation process.

In this phase of the study, participants were asked to answer the following 5 questions with a *Yes* or *No* response:

1. Would you agree with the statement that all of the themes identified in this study are equally important?
2. Would you agree that critical thinking is a 'multidimensional process'?
3. Would you agree that if social work educators had a shared understanding of critical thinking, a more realistic and effective means of assessment may be achievable?
4. Would you agree with the statement that all of the emerging themes identified in this study are interrelated and reciprocal, rather than being linear or hierarchical?
5. Would you agree that the richness in the diversity of thought and pedagogy that informs Social Work education is an asset in promoting the understanding and development of critical thinking in students?

Participants were also asked to provide comments if there was disagreement with any of these questions and were provided a venue for overall comments. These responses were then analyzed and summarized for inclusion in the over-arching *Summary of Findings* (see Appendix J: Summary of Findings) that was sent to all 28 original study participants at the conclusion of the data analysis for all Delphi Rounds in December of 2016.

Round 3 included a total of 10 participants (of the 15 Round 2 respondents who consented to be contacted for the final iteration; see Appendix F: Revised Consent to Participate), representing five different countries. This round spanned a period of two and half months. Figure 3.9 highlights the *Participants by Country* for the final iteration. Half

of the participants (5) of were from the United States; 2 from Canada; and 1 each from England, Norway and Hong Kong respectively.

Figure 3.9 Round 3 Sample: Participants by Country

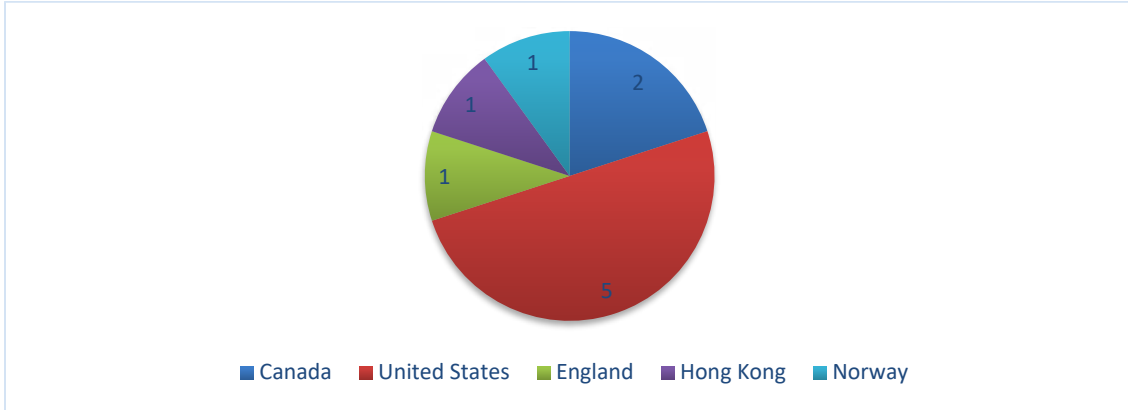


Figure 3.10 shows a visual representation of the Round 3 sample by *Academic Rank*. With regard to academic rank, 4 participants in this sample were identified as *Professors*, 5 were *Associate Professors*, and 1 was an *Assistant Professor*.

Figure 3.10 Round 3 Sample: Academic Rank

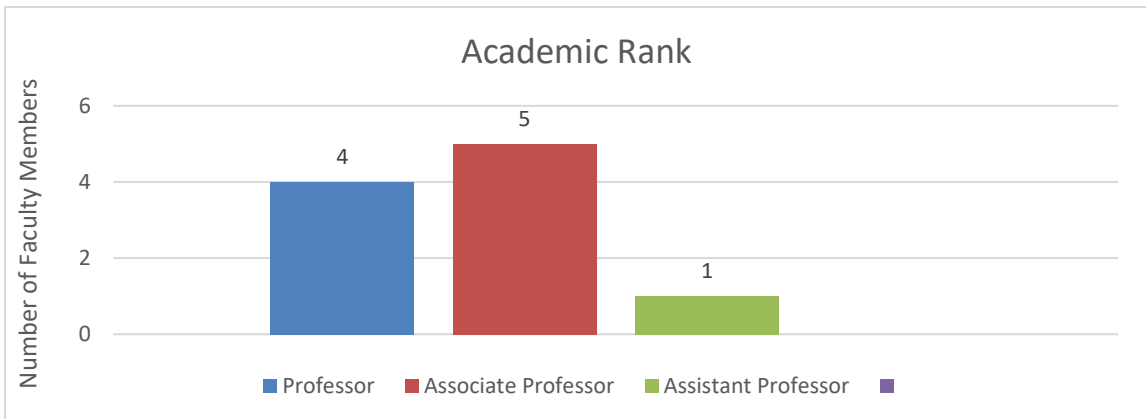
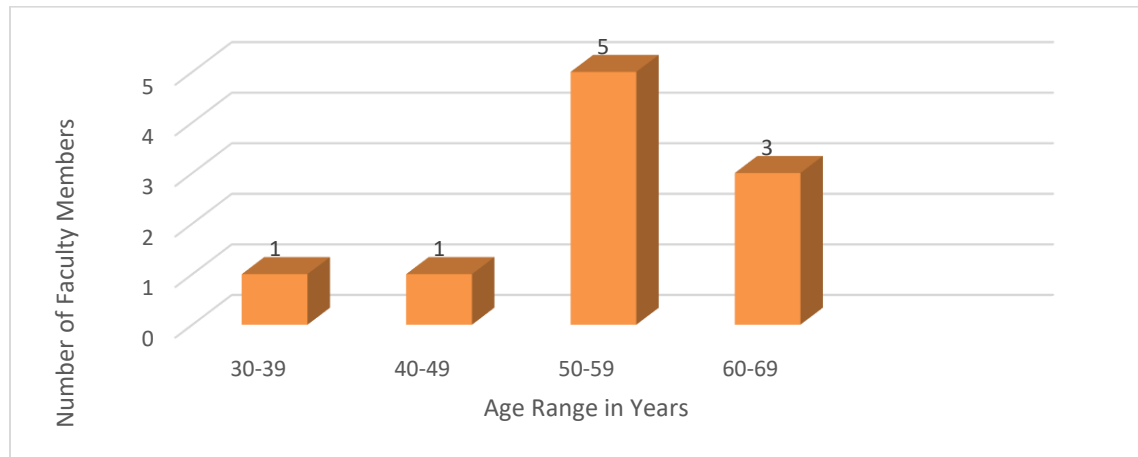


Figure 3.11 shows the age range for the round 3 sample, with half (5) being between the ages of 50-59, while 3 were between the ages of 60-69 years, 1 was between 40-49 years of age, and 1 was between the ages of 30-39 years.

Figure 3.11 Round 3 Sample: Age Range



This Delphi methodology was used because it involves a process of group communication over multiple iterations among expert participants with an aim to achieve consensus or gain new knowledge and understanding about an issue that was not previously known (Keeney et al., 2011), in this case what critical thinking looks like in social work education. To find consistent answers over multiple rounds, for the Round 3 analysis, I took the findings from Round 2 and focused on the top three themes that emerged and had the highest ranking in order of importance: *critical thinking as a multidimensional process, epistemology, and pedagogy*, then framed the final five questions for Round 3 to see if consensus on these themes could be gained. Clarity on key concepts that emerged from all of the findings was also sought through these final questions, given that the rankings and related percentages from Round 2 were very spread out in some areas. The final questions then served as a mechanism to hone in on some consensus and identify next steps from a research standpoint.

This has been a modified Delphi study, so that the focus has been on obtaining rich, narrative data in order to inform and enhance our understanding of this topic. It is hoped that the findings from this research can inform next steps given the wealth of

information and perspectives provided by the expert panelists who participated in this process.

3.9 Ethical Considerations

This study conformed to the ethical practices and standards established by the Research Ethics Boards at the University of Windsor and each Research Ethics Board that faculty participants are affiliated with, if required by that institution. The participants in this study were competent adults, consisting of international social work faculty members. The *Consent to Participate in Research* for this study has been attached (see Appendix E). The *Revised Consent to Participate*, for those participants who engaged in the Final Round of this study, is included as well (see Appendix F). While data from individual respondents was kept confidential, participants, as experts in their field, were not totally anonymous due to the methodology being utilized.

3.10 Rigor and Trustworthiness

Mechanisms used to build in rigor and support trustworthiness of the findings of this study included prolonged engagement with the audio recordings, transcripts and analysis from each Delphi round conducted. According to Lietz, Langer, and Furman (2006), trustworthiness of findings in qualitative research occurs when findings reflect meanings described by the participants as much as possible. The benefits of the Delphi methodology are the repeated iterations, feedback and consensus achieved directly by the study participants who have been deemed experts in the field.

Keeney et al. (2011) report that rigor in a Delphi study can be strengthened through the use of a number of guidelines that can frame the quality of the research being conducted: “applicability of the method to a specific problem; selection of participants

and their level of expertise; design and administration of the questionnaire; feedback; and consensus” (p. 99). Given that this study has focused on obtaining social work faculty members’ perspectives of critical thinking in social work education, this methodology was well-suited to addressing this issue.

Trustworthiness of a study can be enhanced through such mechanisms as the dependability or stability of the data; credibility which refers to the extent that the data can be believed; confirmability; and transferability in terms of how findings can be applied to other settings (Cornick, 2006; Keeney et al., 2011). The feedback iterations, inherent in the Delphi process, build in member-checking for each round of the Delphi, which ensures credibility and trustworthiness of the findings (Clayton, 1997; Jackson & Flowers, 2003; Keeney et al., 2011; Solmonson, Roaten & Sawyer, 2010; Webb & Kevern, 2000). This current study implemented three iterative rounds that allowed participants to provide feedback on the data analysis, and shape and inform follow-up questions for successive rounds so that consensus could be achieved on some key concepts. The participants ensured trustworthiness given their iterative and ongoing feedback in this group process, which was inherent with the methodology. All study findings were informed, shaped, and confirmed by the expert participants.

Important mechanisms used in this study to enhance rigor and trustworthiness included the ongoing iterations and feedback between Delphi rounds, verification of the data analysis and findings directly from the study participants who have been deemed experts in their field, maintenance of a detailed description of the data collection and analysis process throughout each iteration, and inclusion of an audit trail of all significant decisions made to substantiate the trustworthiness and credibility of the study findings.

Consultation with my supervisor augmented this process, including specific suggestions to reduce, amalgamate and refine the themes with each round, a process that further enhanced the rigor and trustworthiness of findings.

3.11 Summary

This Chapter provides an overview of the methodology operationalized for this qualitative Delphi study examining critical thinking in social work education. It highlights the procedures used for all three iterations that lead to the resultant findings. The specific findings from each round will be discussed in detail in the next Chapter.

Chapter 4 – Findings

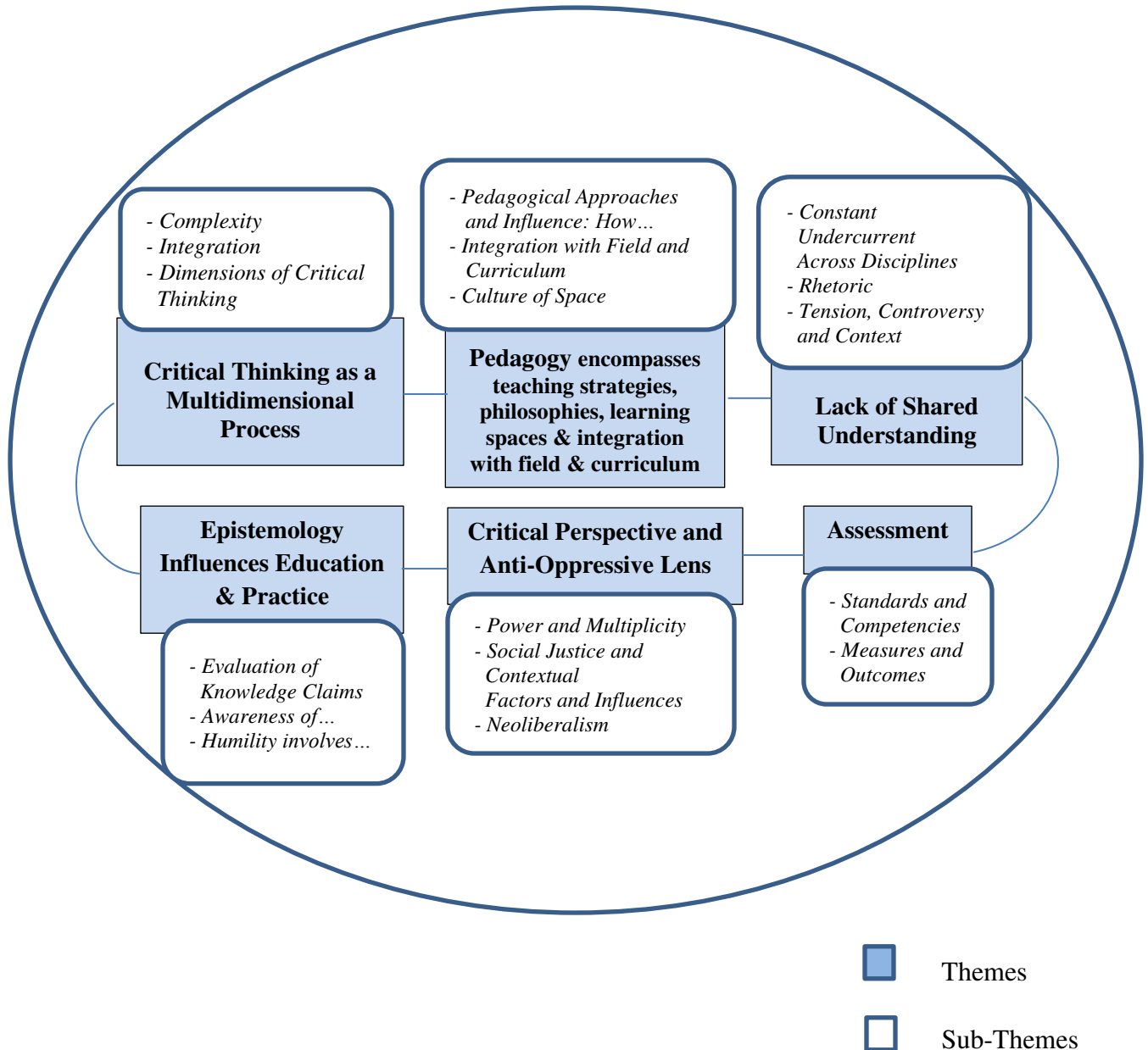
In this Chapter, I present the findings from this Delphi study examining faculty perspectives of critical thinking in social work education. Figure 4.0 represents the Thematic Analysis Framework for this presentation, in which I describe the six themes and eighteen corresponding sub-themes that have emerged from the data analysis for this iterative study: 1) *critical thinking as a multidimensional process*; 2) *epistemology influences education and practice*; 3) *pedagogy encompasses teaching strategies, philosophies, learning spaces, and integration with field and curriculum*; 4) *critical perspective and anti-oppressive lens*; 5) *lack of a shared understanding*; and 6) *assessment*. These themes capture the participants' experiences of critical thinking within social work education. The ways these themes and sub-themes are then viewed by participants in subsequent rounds will be examined, including how they shape and inform the final key findings where consensus is achieved on five specific points.

4.1 Thematic Analysis Framework

Figure 4.0 illustrates how participants describe their understanding of critical thinking in social work education, how it is operationalized in the classroom, and how they know their students have achieved the ability to think critically. The lines connecting each theme represent the interrelated and reciprocal nature of all of the themes identified. Figure 4.0 captures the essence of the experiences of 28 social work faculty who are deemed experts on matters relating to critical thinking in social work education. Through the stories and examples shared by the expert faculty members who participated in this study, I describe how critical thinking is conceptualized and operationalized within social

work education. I describe each of the six themes and eighteen sub-themes, supported by participant quotes, allowing for an authentic depiction of their experiences.

Figure 4.0 Thematic Analysis Framework



Round 2 of this multistage study includes a sample of 15 participants, and provides the order of importance of each theme and sub-theme via a ranking process consistent with this Delphi methodology (see Appendix G: Round 1 Summary). Round 3, the final iteration, includes 10 participants, where consensus is achieved on five specific points, namely: 1) all of the themes identified in this study are equally important; 2) critical thinking is a multidimensional process; 3) if social work educators had a shared understanding of critical thinking, a more realistic and effective means of assessment may be achievable; 4) all of the emerging themes identified in this study are interrelated and reciprocal, rather than being linear or hierarchical; and 5) the richness in the diversity of thought and pedagogy that informs social work education is an asset in promoting the understanding and development of critical thinking in students (see Appendix J: Final Summary of Findings).

4.2 Themes

The six themes that emerge from this study include a total of eighteen sub-themes. I will first describe the specific theme and then I will discuss the sub-themes that inform it. The themes are presented in order of importance, as determined by the participants from Round 2 of this study, starting with the most important to the least important (noting that many participants indicated that they struggled with ranking many of the themes and sub-themes, viewing them all as “equally important”). Direct quotations from participants will be used to demonstrate the meaning of each theme/sub-theme.

4.2.1 theme 1: critical thinking as a multidimensional process.

This theme addresses why critical thinking is important to social work practice and why social work students need it. Participants describe critical thinking as being

“important” and “essential” for students who graduate from Social Work Programs.

Critical thinking is described as a non-linear process that is multifaceted and holistic, designed to help people better understand issues by looking at the intricacies involved in them. Critical thinking is described as a process that encompasses *complexity* in terms of thinking at a complex level; *integration* of theory, research and practice; and *dimensions of critical thinking* which is informed by a number of skills, principles, values, assumptions, personal and affective factors that interact and intersect in this process of critical thinking.

In describing what critical thinking is, one participant notes,

[Critical thinking] looks like training in argument and logic... [having an] openness to difference...searching for things that contradict our belief or hypothesis. Very systematic deconstruction of ideas or decisions or strategies with the notion that we construct something that's stronger. (P001)

In support of a view of critical thinking as a *multidimensional process*, Participant 006 states,

...critical thinking to me, first off, is a process. It is not a one-step, momentary decision. It is a process of collecting and analyzing data and making decisions grounded on observable data while managing the bias of the interpreter of the data and then, in our situation, that's typically a social worker, while also considering the bias and problems with the data that one is looking at.

Many participants note that the profession of social work requires judgement, and understanding critical thinking as a multidimensional process provides a foundation for this concept of professional judgement and how it influences social work practice.

Ok, so, because social workers are making decisions non-stop every day...um and very important life changing decisions too, you know, decisions that can impact their clients' lives and without being able to critically analyze information about the client's life as well as critically analyze information about interventions and assessment strategies...we are going to be poorly servicing people that we are committed to serving (P004).

It is important to note that the ways in which critical thinking is understood and defined in social work education varies across participants. While many participants use the term *critical thinking*, some preferred to use the terms *reflection*, *critical reflection*, or *critical reflective analysis* to describe the embodiment of the concept of critical thinking in social work education. One participant shares this different perspective and terminology by sharing,

Well critical reflective analysis to me is, it is a thinking process um, so it's a cognitive process, but it's also an affective process. So, it involves emotions...it's also an intuitive process. So, I guess again that's why I separate it from critical thinking because it's not just cognitive...It's cognitive, it's um, affective, it's intuitive and sometimes even perhaps for lack of a better word, spiritual. (P020)

Participants suggest that critical thinking is a process of asking questions that encourage students to look deeper to bring to the surface fundamental assumptions that underlie their beliefs, actions and principles that strengthen over time. It is a process that integrates knowledge, experience and reflection. This is supported by Participant 011 who states, "as students' critical thinking skills evolve, they show sophistication in their

theoretical choices in building an analytic model to examine an issue with. Reflection on preconceptions shows students are thinking critically.” Participant 008 adds,

...it is sort of a commitment to ah the pursuit of understanding things; ...the ability also to understand and locate things in context. Um, I think the, ah, a leaning toward asking questions, being inquisitive and a strong ability to reflect.

Critical thinking is also described as a concept that requires a “range of components from being grounded in the attitudes of science (determinism, empiricism and parsimony) to a basic grounding in the liberal arts, with a familiarity with literature, history, anthropology and applied mathematics.” (P011).

According to Participant 016, context is deemed to be important:

As one develops experience and expertise of which critical thinking is, one develops expertise through critical thinking...what happens is they [students] develop a reservoir of experience that then allows them to see the nuances and differences in situations which requires...requires them to contextualize the situation and say ‘well rules need to be adjusted a little bit here for culture...I have to be flexible and adaptable...’

A key sub-theme of critical thinking as a multidimensional process is *complexity*.

This sub-theme will now be examined and supported by participant quotes.

complexity.

Participants note that critical thinking involves thinking at a complex level, recognizing there are different ways of looking at things; a complexity of situations and challenges in deciding on courses of action. It conceptualizes thinking as a skill involving both depth and breadth to navigate the contexts within which social work practice occurs.

Um, social workers work in incredibly sophisticated and complex contexts. If you take a family services intervention and you've got 6, 8, 10 different perspectives coming in from people, um, you've got to be able to weigh the information you get, to come to some kind of logically putting it together and making it sense making and um, which means you need to be extremely critical or you know, a very wary consumer of what people are sharing with you. (P010)

As such, being able to question, use evidence and evaluate knowledge for practice, and then engage in reflection, were identified as key components to social work practice and this process of critical thinking. The context is complex within social work practice, so it is important for social work students to appreciate that there are multiple perspectives and conceptions related to this concept of complexity. Social workers not able to deal with the multiple complexities of practice will face challenges.

...social workers are put in positions where they have to deal with a wide variety of populations ah, who deal with an extraordinary diversity of problems, ah, and challenges and if they are unable to examine ah, the complexity that's implicit in that, then I think they are seriously handicapped. (P011)

Some participants suggest that maturity influences the learning cycle and process of critical thinking for social work students; as students gain more experience and knowledge, they can relate in different ways and think at more complex levels.

... what we hope to see at the end of undergraduate school is, is some beginning development of a sense of who they are as a social work professional which values many different perspectives and many different forms of evidence and

understands that people come to their own understanding from so many different places...(P023)

Critical thinking is described as a service you give to your clients by being able to think at a complex level. Participant 025 supports this notion stating that,

I think social work um is very complex...if you don't have the capacity to be able to filter out the relevant from the irrelevant to be able to pick what might be...the ideological or philosophical underpinnings of a particular policy or...practice that has developed then you don't, you won't have the capacity to give your um, the people that you are working with or the community or the group um, a logical, balanced um, evidence based um, response.

Participants suggest that critical thinking develops over time for students, and allows their thinking to become more complex, as Participant 0011 highlights: "as students' critical thinking skills evolve, they show sophistication in their theoretical choices in building an analytic model to examine an issue with."

Some participants discuss a *novice-to-expert* concept in their description of the evolution of critical thinking skills in students: "as one develops more and more expertise, they rely less on external rules and more on their internally driven apparatuses...based on experience" (P016). As a student's skills and thinking abilities grow, so too does their capacity to independently recognize the complexity of the issues they face.

integration.

Participants describe critical thinking as a process that involves the integration of theory, research and practice; cognitive and emotional components are also intertwined

with this process. In this vein of blending the emotional and cognitive components of critical thinking, the process of reflection moves to the forefront. Participant 027 highlights this,

...I tend to see... [critical thinking] ...as more being cognitive, sort of intellectual whereas reflection also involves at least emotional elements and, you know, working out the sense of meaning the ability to think critically in relation to an understanding of experience that incorporates emotional elements to understand meaning” (P027).

integration of theory and practice.

Critical thinking is described as an integration of metacognitive and affective components. This integrative process is described as a final step in thinking critically.

So, we suspend judgement, collect data from multiple sources and multiple types...we reflect on thinking, as well as our conversation with others. Then the next step is we will be deliberate about understanding what the bias is in the data, in ourselves, and even in the other people that we are talking with and then ultimately, we pull that together through an analytical process to land somewhere. (P006)

These analytical and emotional factors influence the process of critical thinking. Drawing on knowledge and evidence can be challenging for students who are new to the field and have limited practice experience. In teaching students to think critically, participants suggest that it is important to incorporate the context (practice or research), as contextual factors influence the process of thinking critically.

Participants in this study identify that integrating theory, research and practice supports critical thinking. For example, Participant 005 says it is a process to,

...to take the kinds of knowledge that is being generated by researchers in social work and lots of other fields, and then use those critical thinking skills to integrate and apply it to the incredibly diverse kinds of practice situations that social workers find themselves in.

The transferability of skills from the classroom to the field is described as supporting the integration of critical thinking across all practice levels (micro, mezzo, and macro).

integration of cognition and emotion.

The process of reflection is seen as a mechanism that supports the integration of critical thinking skills. A number of participants suggest that critical reflection and critical thinking combine in an iterative process, where each supports the other.

Participant 006 notes that "...critical thinking for me involves um, reflection. So, reflection is both thinking of our own thoughts about what we observed or heard or listened to or thoughts or read."

Participant 027 focuses on the integration of thought, action and feeling in describing this iterative relationship between critical thinking and reflection,

...so, whereas critical thinking is mostly about intellect, critical reflection is also understanding how the emotion fits, what it means, how it all fits together into some kind of interpretation that has meaning for the person and then how they [students] would reinterpret that experience. So, they have to critically think to do that, but they also need to be able to um meld together aspects of emotion and action and beliefs, etc., in reinterpreting the meaning of experience.

In this way, the skill of reflection can be seen as a way to support this concept of integration in the process of thinking critically; an integration of knowledge, experience and emotions.

dimensions of critical thinking include skills, principles, values and assumptions.

Participants describe numerous key components or pieces that combine to inform the process of critical thinking. These dimensions include the interaction of a number of skills, principles, values, assumptions, and personal and affective factors. These dimensions are summarized in Table 4.0:

Table 4.0 Dimensions of Critical Thinking

| | |
|------------------------------|--|
| Skills | Evaluation; analysis; synthesis; assessment; being open; logic; use of evidence; ethical decision-making; application; reflection; judgement; scholarship; ability to critique others & monitor your own thinking while following logical steps; questioning; integration; argumentation |
| Principles | Attitudes of science (determinism, parsimony, empiricism); ethics; time; empirical evidence; solid theoretical foundation; emancipatory education |
| Values, Assumptions, Beliefs | Knowledge; theory; wisdom of others; self-esteem; awareness; digging deeper, below the surface; self-awareness |
| Personal & Affective Factors | Integrating emotion & cognition; self, habits of the mind (open-mindedness; perseverance; flexibility; creativity & intellectual integrity); personal attributes (patience, persistence); willingness; humility; perplexity; inquisitiveness in consuming knowledge; ability to be vulnerable; ambiguity; emotional, intellectual & experiential factors; skepticism; personal/political linkages; patience; sophistication; clear communication |

Participants suggest that these *dimensions* (key components) of critical thinking are interrelated and intersect with one another to inform and operationalize this process of critical thinking. I have chosen to keep the participants words in Table 4.0 to show the variety of perspectives revealed on this topic. In operationalizing many of these dimensions of critical thinking, Participant 008 states that,

There needs to be a, a solid skill set there and it is not a set of right or wrong answers; it's an orientation to thinking that enables social work students and social work practitioners to kind of cull through the set of, ah, information and skills and values they've got in order to make determinations about the best way to proceed in practice.

An example of some of the *skills* involved in the process of critical thinking via these *dimensions*, Participant 001 describes,

I don't care if you agree with me or the author, but you better be able to articulate and defend your point of view with evidence and if you can do that, then you are going to be a stronger thinker in your social work career.

In operationalizing multiple dimensions of critical thinking, students are able to understand the complexity of factors that influence professional judgement. Participant 015 provides an example of some of the *principles* (attitudes of science) involved in the *dimensions of critical thinking*:

...it's [Critical thinking] a disciplined way of thinking that involves doing more than uncritically accepting the conclusions of any given author that you are reading...they would be...understanding...the logic of science; understanding the reliability of validity of measures, of designs, of possible threats to bias; being aware of possible threats to bias, being kind of a meta-thinker in other words...thinking about thinking of your own thinking.

Participant 003 adds that "...much of professional practice requires judgement and that means being able to kind of think through issues, to consider consequences and pros and cons, and critical thinking undergirds some of those fundamental processes."

The dimensions of critical thinking extend beyond the purely cognitive functions involved in thinking and incorporate *personal and affective factors*:

When we say critical thinking in social work, we mean more than just that; again, that standard definition or that set of definitions that have been applied to critical thinking. We mean more how it is somebody does what they do with stuff, via how they think about it and there seems to be some suggestion that some of that may intersect with some, um, traits or personal orientations that then have bearing on if and how that critical thinking gets developed and applied. (P008)

In operationalizing some of these *dimensions*, Participant 022 provides an example of how *values, beliefs and assumptions* intersect in the process of critical thinking:

... we're engaging in the kind of critical thinking that you can't resolve problems with any kind of certainty and so you sort of have to pick and choose among what's relevant; what information do I have that's important, what do I compare...what different...stakeholders have to say, different perspectives on this issue...how do I come up with...with a solution that I can live with, even if I don't feel 100% confident that this is the absolute right answer?

4.2.2 theme 2: epistemology influences education and practice

Epistemology emerges as an important theme in relation to understanding knowledge and the factors that influence that process with regard to critical thinking. Key sub-themes within this theme include *evaluation of knowledge, awareness of assumptions and self-reflectiveness*, and *humility in recognizing and accepting limits social workers have as human beings*.

Participants suggest that being able to support students in accessing knowledge via critical thinking is important. According to a number of participants, what social workers do in practice and education is influenced by knowledge, values and assumptions about what is thought to be known from different perspectives. For example,

...the more mainstream the understanding of social work is, the more likely it is thought of as more positivist, competency, and evidence-based skill...if you are operating from a social constructivist epistemology, which is what underlies critical social work, then it makes sense you will have an analytic methodology congruent with that. (P020)

Hence, participants tell us that epistemology influences how critical thinking is understood and operationalized.

evaluation of knowledge claims.

A number of participants describe critical thinking as a process that requires the evaluation of knowledge claims, based on one's epistemology "...research-based or evidence-based knowledge is one part of knowledge, but we speak about multiple bases of knowledge...so it's...multiple perspectives..."

Participant 024 describes accessing the multiple bases of knowledge through interdisciplinary collaboration,

...some practitioners would say that that they teach too much this critical thinking instead of some methods and tools of social work practice...we work quite deeply together...with the philosophers of our department and this means that there are new opportunities for discussion about a critical and ethical base of social work...

Participants describe critical thinking as a very broad concept that examines how knowledge is constructed and for what purposes it is used.

[Critical thinking] looks at who benefits from a certain piece of knowledge...it looks at who owns the knowledge. It looks at how we use the knowledge. It looks at power structures within the Gemini of knowledge construction and ownership. Like it's really complex in many ways. (P026)

Participant 018 discusses teaching students to question taken for granted "knowledge"

[In a course about critical thinking], the building block would be to look at what is knowledge, um, and who generates it, and then to think about we are questioning. The other piece is knowledge, but also our own assumptions to that knowledge...I think the ah, critical thinking begs the whole question about how students see knowledge really and how they see themselves in relation to knowledge. (P018)

In a similar vein, Participant 027 adds,

...So, the principle would be that we all are involved in constructing our knowledge. The practice would be um, a democratic environment where people are open and able to listen to each other. Where they are able to accept different viewpoints....um, where they are able to understand their own perspective in creating whatever knowledge they come out with...

The ways in which students see and interpret knowledge, and their positioning in relation to that knowledge, influences critical thinking.

awareness of assumptions and self-reflectiveness.

Awareness of assumptions and self-reflectiveness seems to be part of critical thinking, as is that process of imagining the way someone else sees a situation: “it has to do with self-awareness of one’s privilege, when you are in the broader cultural environment, but skewed to a concern about what they ‘should be thinking and learning’” (P014).

Some participants suggest that critical thinking incorporates a critical perspective that fosters a sense of self-awareness, rooted in understanding the discourses and hegemony that strongly influence our views of the world.

...there are...far deeper and broader, you know, epistemological issues related to this...you know, in terms of understanding um, the power of socialization, the power of understanding dominant discourses, the power of understanding hegemony and how it controls consciousness... so the exercise of engaging in critical thinking, the kind of praxis Freire talked about, a conscious awareness of our thinking, is important. (P014)

Participant 015 adds,

I think that critical thinking is understanding what are our assumptions and what has been demonstrated; understanding that...most thinking in social work is going to be probabilistic and being able to sort through shades of grey as opposed to seeing things as all true or all false.

Awareness of assumptions and reflection on these are important for critical thinking. It allows students to see multiple perspectives and tolerate ambiguity.

Um, for me I think critical thinking involves...one...a lot of self-reflection...I think it involves being able to tolerate ambiguity which is so much a part of being

able to really think about things from multiple perspectives and being able to tolerate, you know, not knowing and not being right um, all the time; and being able to evaluate, but also use information from multiple sources and even competing sources. (P023)

In relation to having an awareness of the complexity of social work practice and the influence of epistemology on this awareness, Participant 028 states that,

...the more you know the more you realize you don't know...I mean and the more you know you realize about, you know, like this kind of intricate puzzle of an issue the more you think critically about it, the more you can go into depth with it and see the complex facets and see the complexity in each piece, not just the complexity of the whole, but then you look at that one piece and that becomes more complex.

humility in recognizing and accepting limits social workers have as human beings.

According to some participants, there is humility in the process of thinking critically; recognition of the limits social workers have as human beings and acceptance of that.

...another critical part of that [critical thinking] I think is accepting when you don't know something and understanding...there's a lot that you don't know and the more you learn the more you'll discover that you don't know...So they [students] learn a lot from mistakes...(P015)

Participant 003 describes how humility with critical thinking is demonstrated in the classroom,

An indicator if [critical thinking] is working is when students are able to listen to each other well and become better listeners, more respectful and curious of others' perspectives, drawing their classmates out. When they can disagree well and learn in class how to fight a little better and disagree in a civil way that helps them refine their perspectives and understand before arguing against it, are important indicators of critical thinking... [showing humility] where students are demonstrating critical thinking in their actions and dialogue with each other that shows a reverence for this process in a respectful interchange.

Humility is captured within an acceptance of not knowing and being open to the knowledge of others.

4.2.3 theme 3: pedagogy encompasses teaching strategies, philosophies, learning spaces, and integration with curriculum and field

This theme is described by participants as encompassing over-arching teaching methods, strategies and philosophies of faculty, the concept of the culture of space in the learning environment, and integration issues with both the curriculum and the field. This theme speaks directly to how critical thinking is taught. The sub-themes that will be discussed and highlighted with participant quotes to support them include *pedagogical approaches and influences involves how individual faculty view this concept of critical thinking, integration with field and curriculum, and culture of space.*

pedagogical approaches and influence: how individual faculty view this concept of critical thinking.

Participants in this study have identified multiple venues and methods for teaching and learning critical thinking. Participants suggest that how individual faculty

members view this concept of critical thinking influences how they teach it (or not); there is a direct connection from the theme of epistemology to this theme of pedagogy.

...I'd say by etiology, perspectives, theories, so the way faculty members talk about critical thinking seems to me um, is very much affected by...you know, the way in which they see the world and the way in which they see social work.

(P012)

Similarly,

...individual faculty members' comfort with critical thinking...I have certainly known people either they were teachers of mine or people who have been colleagues of mine...who are pretty comfortable with the fact that their political and social view of the world is the right view of the world...and are pretty comfortable telling students how to be right, so to speak... And not necessarily having a lot of tolerance for divergence in their thinking and I think that happens... (P016)

Participants suggest that it is important for faculty to have a framework for teaching students to critically challenge and evaluate assumptions and knowledge, and then evaluate how that is done. Some participants report that they incorporate a critical thinking approach and infuse it within the context of another topic such as research methods. Others note that there are not many explicit courses on critical thinking in social work education; it is infused in other courses, as indicated by Participant 018, who states that critical thinking "...would probably be more integrated into the teaching of other material just because it would be very difficult to actually allocate a lot of time to learning and teaching critical thinking."

Teaching critical thinking is impacted by multiple factors, and it can be challenging for both faculty and students, as described by Participant 020.

It's a hard way to think. It is a difficult way to think because it is so um, holistic, you know, students come to us having been taught to distance themselves, to be objective, to not use I statements um and so on. So, the minute we say to them "no you don't, you do use I statements, you do this, you do that" then they flip completely the other way and interact with it as if they are on Facebook, right?

Additionally, critical thinking is impacted by the life experiences students bring with them to the classroom.

We now offer it part time students so it means that they are already working in the field and...many of them are already in social work, but as unqualified workers in um, aiming at to have a degree to get a permanent position so they are actually what I think has been very good for this developing critical thinking that they are challenged between practice, and the week when they work and then ah the weekend courses when they come to the University or they meet individual meetings in intermit, and discuss with their peer...(P024)

Similarly, Participant 020 adds, "...a lot of times it depends on the background that the students bring with them."

Participants relate that there is a lack of concrete evidence of what colleagues are doing in terms of teaching and promoting critical thinking in the classroom, "...I think...because, we are different people, the teachers and we, are not doing it in the same way..." (P017)

Participants acknowledge that there are challenges with both engagement and the application of critical thinking skills among faculty, programs, and students.

You hear a lot of educators complaining about the lack of critical thinking among students and how difficult it is to get students to really engage and demonstrate they are getting it. Students have to understand critical theory and apply it. Some programs do put emphasis on how to think critically in some courses, but it is not known how widespread that is across other courses and programs. Everybody should be taught the skills of critical thinking, but it is sometimes seen in academia, a phenomenon of people going with the flavour of the week and what is taught in the classroom; there is some perception that we are falling short.

(P015)

Participants identify a wealth of different teaching strategies and methods to foster and develop critical thinking skills. Participant 006 talks about infusing teaching critical thinking into course material stating that,

So, I think whether I am talking about critical thinking as a concept, I often refer to what I call a mini lecture which is to define my terms, to clarify and orient students to a process such a process of critical thinking, so I probably have a power point slide where I have these steps labeled out and I describe both why it's important and the process of critical thinking...I think the first step of critical thinking is to foster knowledge. Um, but I don't think critical thinking stops there and so then typically I move to various pedagogical strategies that would allow them [students] to then engage with the material.

A number of participants speak of their teaching as a way of encouraging student inquiry and many acknowledge that they incorporate a problem-based approach to learning and teaching.

...my teaching has always been one of supporting or facilitating student inquiry. I very much believe in students must be involved in a process, an active process for learning...a Problem-Based Learning approach to social work that had been adopted by [location deleted] based on McMaster's University...the problem-based approach to learning and teaching...(P018)

Many participants state that the principles of transformative education underlie what they do in the classroom.

You know, we go back to Kolb's...experiential learning cycle right, where you have new experience...where something happens right in front of you and you grab a hold of it and go and work with it, but the experiential learning is generally when you have an experience, you do a debrief on the very specifics of that experience...then you try to generalize that to another situation and...do it again, and you keep going in that circle right? ...the experience needs to be transformative...to prompt the participant to think about and to unsettle the fundamental assumptions, beliefs and values that they are bringing into the experience. (P020)

Participant 017 adds that the transformative experience can be captured within "a trigger event that pushes them [students] to the edge for critical reflection to happen." A fear expressed in this approach was that "unless you are a good teacher, sound in your

own pedagogical assumptions which give rise to good skills in the classroom, you can really get in a mess if you do not know what you are doing.” (P020)

It is noted that there is some consistency across the curriculum in assignments that focus on critical thinking. Some faculty members report teaching critical thinking by introducing the *Intellectual Standards for Critical Thinking* (Paul & Elder, 2013) and promoting reflection on thinking, while others suggest other models such as the *Reflective Judgement Model* approach by King and Kitchener (1994).

...I am a big fan of those, of Paul and Elder’s standards so, we talk a lot about evaluating student work, evaluating our own work, with...things like clarity and precision, so that you are articulating and using the language of the profession correctly; accuracy, not making unsupported claims... (P005)

Many participants suggest that sequential learning/scaffolding can support students developing sophistication in their analyses in course work to support critical thinking development. Participant 025 speaks of this, “...I mean we would expect that students’ critical thinking capacity would increase from 1st year to 4th year. Um, you know, gradually building that so we would set suitable sort of scaffolding challenges for them.” Participant 022 states, “...I try to provide students with scaffolding...I really um like the King and Kitchener’s reflective judgement model which is a developmental model...and so I try to assess where students are along that developmental model.”

Participants describe a veritable wealth of different teaching methods and strategies they use to support the development of critical thinking skills in students, including discussing and planning assignments with students to develop sophistication and reduce anxiety, using the code of ethics as a tool to discuss values embedded in

decision-making and engage with ethical dilemmas, use of discussion forums, and the use of debates as effective ways to promote critical thinking in the classroom; all are framed around experiential learning activities.

So...in our school...we've been pushed to make sure that we are not just having students just write papers for example; that they are having to do oral presentations and they have to do, you know, arguments and debates, so we incorporate many different examples of their being able to really write about, talk about, think about...social work in a complex way. (P023)

In another example,

[Discussion forums offer] very professional knowledge and experience-based knowledge of social work, and the knowledge of social service users, and then we then bring the research-based knowledge or scientific knowledge to this forum... (P024)

The use of controversial current events is described as another way to support critical thinking in the classroom.

...I would make use of some current event so...So, students are quite aware of various controversial issues in society, so just taking the example of homosexuality (*deleted identifying info*) something like hate crime or um, discrimination against people having different sexual orientation...So on the one hand they are supposed to...identify the social work values of acceptance and anti-discrimination, equality and something like that. So, by definition or by logic, they should be accepting the other sexual people, but on the other hand if they are supposed to be Catholic or Christian sometimes, I would say, these

religious people may not be so willing to accept the given sexuality as they might think that this is part of religion...So, I ask them to critically think about whether this topic lessens their principle or acceptance and antidiscrimination, equality, etc.... (P009)

Another experiential teaching method is the use of simulations.

Teaching with simulation, where students work with trained actors followed by deconstructing the situation through the lens of various dimensions, so students can see how all of the parts are integrated. These types of activities aid students in integrating and linking in theory to practice... (P012)

Other strategies used to support critical thinking are described as student biographies/learning diaries.

An assignment where students begin to position themselves in relation to the global world they live in, with a particular focus on intersectionality on how issues with regard to their class, race, gender, sexual orientation, geographic location and so on, intersect with issues of power and privilege. Activities that look at major issues in our lives in relation to culture, religion, media and politics and how these influence our thinking were described as important mechanisms to foster critical thinking and reflection... (P014)

An effective way to promote critical thinking identified by multiple participants is case method teaching, where students deal with complex and challenging situations in the classroom.

...using actual practice situations, detailed accounts as the focus for in-depth class discussions; in these class discussions...students have great opportunities to make

assumptions or challenge assumptions and to draw conclusions, to hear other peoples' perspectives, to agree or disagree with their classmates and to kind of struggle together to make sense of a situation that is often contestable, and that process is slower, but probably also more profound in the kind of change that it creates in students and in that class...students at least report significant changes in their thinking and in the way they process information; in the way they take account of peoples' perspectives, in the ways they consider consequences and evidence; that sort of thing. (P003)

The learning process in case method teaching is described as one of the best experiences in developing critical thinking.

...with um, the case method teaching...students will say at the end... "you know I, I started saying to myself in this case, how would so and so answer this? Because I really like the way that they think about things so I imagine if I were Alison, what would Alison say?" ...So, it's a pretty clear, pretty direct expression of people sort of incorporating other view points and trying to broaden their perspective...so with the case method, people will think that fairly directly. (P016)

A number of participants suggest that writing assignments and the incorporation of class discussions promote the development of critical thinking skills in students. In terms of written work, Participant 012 states, "push writing as a venue for demonstrating critical thinking...and that takes a lot of time for faculty members and students to engage in those kinds of assignments and activities" (P021). With regard to class discussions,

...I think you need teaching methods that inherently, um, kind of require that core class discussion, so cases, videos...the kinds of methods that um, that are going to be, that there is going to be enough complexity to a situation so that students are going to have to um, think...they are going to have to be able to, ah, you know, analyze a situation and make discriminations between what one way of looking at something and another way of looking at something or even be able to, um, tease out and synthesize what actually is going on or what are the critical points of whatever the situation is. (P007)

challenges and barriers to teaching critical thinking.

Participants identify challenges and barriers to promoting critical thinking in the classroom. One participant notes, “subtle dynamics in a class can obstruct efforts to promote critical thinking” (P003). An example of classroom dynamics that can hinder critical thinking is a lack of *safe space*, where students can feel free to speak out. This will be discussed within the sub-theme of *Culture of Space*. Critical thinking is described as “the ability to take other peoples’ perspectives, but sometimes some of those perspectives do not get articulated...students can feel silenced” (P003). Another barrier to teaching critical thinking is described as student readiness, with one participant noting,

We are in the ‘Sesame Street Generation’ and used to getting answers quick with the internet. The Sesame time lag is seven seconds, so to have students be comfortable with pondering the ambiguities of practice is hard for them; developing patience and persistence are the biggest barriers in this age of information and technology. (P004)

Other participants note that there is a sense of the commodification of education, where “we are marketing our community and the fun you are going to have at College. The message we give students sometimes is that they are not here to learn, they are here to have a good time” (P004).

Additionally, some students do not have the sophistication to understand the complexity involved in thinking critically. Participant 001 notes that “students sometimes when you challenge their ideas, they hear *you are stupid* or *you are wrong* instead of hearing *lets debate about the idea right?*” A number of participants note that many students just want to *learn what to do*, so there is always tension between helping them learn how to think critically so students’ actions are intentional, knowledge and evidence-based, and professional.

Faculty members’ resistance to teaching critical thinking is also identified as a barrier. Participant 007 states, “...um, I think it’s really difficult to do something, ask your students to do something that you’re not...you don’t feel proficient in or comfortable with yourself.”

Other factors described as impacting one’s ability to teach critical thinking include class size, budgetary resources, and the rise of neoliberalism. Participant 020 describes some of these barriers.

Class size...for example, we just changed the course objectives of this particular course, and we’ve changed it because when the course was designed just 5 years ago...it was designed for a maximum of 24 people, students, I’ll probably have 34 this year. It was designed to be co-taught...I have to teach it alone now. It was designed with significant um, TA support which we no longer have and it was

designed with um a school institutional based activity group happening outside of the context of the course that all students could take part in as a resource to learn how to do critical reflection...none of those conditions are in place anymore because of budgetary resource issues.

Another challenge to critical thinking is identified by participants as students' anxiety over their grades: "Um, there is a lot at stake for students in this class so when they come in the first couple weeks of class, all they really want to talk to me about is the grading rubric, what do I expect, how do they get an A in the class, what is the right answer?" (P006).

Student fatigue was identified as a barrier to both the teaching and learning of critical thinking.

I think it is really, really hard on students to do that [concurrent courses and field placements] and you know, we have students that have families and that have other things going on in their lives and juggling everything. Um, their capacity to engage is, it really varies on their... on their energy level. (P013).

Another participant states that "I think there are always barriers. I mean there are time constraints, there are um, you know, the issue of this is, it's challenging." (P023)

Participants were asked how we will know when we are teaching our students to think critically and when this is carried out into the practice world. In response, one participant states,

So...when I notice that there is an aha, and it gets quiet for a moment, and I allow that silence to sit for a moment and then somebody raises their hand and then at

that point gives a more thoughtful thorough response, um, that's when I notice critical thinking happening compared to when we first start. (P006)

Participant 013 adds,

We will know we are “there” [teaching our students to think critically] when we see a bit more representation of social workers in leadership positions that are contributing to quality services and questioning is more evident. It is one thing for a government to say they're going to decrease the waitlist for long term care, so what can social workers do to contribute to that dialogue about the feasibility of accomplishing these kinds of objectives? Social workers on the ground carry these complex issues on their shoulders and the knowledge of the system inadequacies.

Participant 013 goes on to acknowledge challenge with this stating that,

My frustration is that they don't always do enough with it [students engaging in critical thinking once in practice] because they are on this treadmill of just meeting the needs of the agency and their ability to use this tacit knowledge in an effective way from a policy perspective is limited... Things come to resistance; making sure all of the work is done well, working within the legislation parameters and yet challenging them.

integration with field and curriculum.

Critical thinking/reflection/analysis in one form or another are captured within accreditation standards and competency frameworks that guide social work education. In discussing the pedagogy related to critical thinking, participants highlight issues related to the need for the integration of critical thinking both across the curriculum and within

the field environment. As such, findings within this sub-theme will be organized within these two categories: *curriculum* and *field*.

integration with the curriculum.

Inconsistent integration of critical thinking across the curriculum is acknowledged by a number of participants. Participants describe that Accreditation Standards and related Competency Frameworks guide curriculum, and critical thinking is generally incorporated in some form in those standards or frameworks, though perhaps not as explicitly as it needs to be. Participant 026 notes, "...we throw it [the term critical thinking] around in the curriculum and the accreditation standards, but how do you really measure it?"

Participant 019 adds that,

...there are items or sections covering critical thinking, so I would say these three different bodies, the practice sector which is CSW, the educators which is CSWE and then the Regulators having their professional regulating bodies...all the provincial Regulatory bodies. They also encompass other requirements of critical thinking or expectations for social workers to demonstrate this kind of competency...and critical thinking is one of those.

Some participants identify a strong acceptance and expectation of critical thinking within their social work programs and universities in general, where it is incorporated as part of the curriculum and included in shared courses; an interdisciplinary collaboration in curriculum design. Some universities are reported to have shared courses among philosophy, political science, sociology and social work; "...learning together with the

social sciences and philosophies is one concrete solution on how to put critical thinking into the curriculum” (P024).

Some participants report meeting as faculty at annual retreats to focus on curriculum issues where they look at how to integrate and infuse the various dimensions of anti-oppressive practice, diversity, and critical thinking into their curriculum.

Participant 017 notes that as a faculty, their department meets regularly, “...we discuss it [critical thinking] ...in different meetings and um, I, think it’s ah, a component in many of the ah, subjects and in different ways and maybe that, I think that’s good to have it presented in different ways.”

It is reported by a number of participants that it is challenging to incorporate critical thinking consistently across the curriculum because of academic freedom.

...to give an example, we had indigenous scholars come and we wanted to look at all the course outlines from our undergraduate program and be able to look at how indigenous content is being integrated. Some people participated and some people didn’t. Um, and, you know, others have said, “well it’s the way in which I teach my course and that’s really, you know, my domain.” So...it’s a delicate balance I think, in I mean I don’t feel I could look at someone’s course outline and say, or even sit in the class and, you know, say you’re not...teaching this in a way that promotes critical thinking...I’d like to think that everyone is. Um, but I know... people have different perspectives... (P028)

integration with field education.

Participants suggest that critical thinking is incorporated frequently in the classroom, but wonder about its application in field placements.

Certainly, in the classroom, especially in graduate programs, there's a lot of critical thinking, but the classroom is really removed from practice. So, to me the issue is do we in field education, um, train...prepare our field instructors to build reflection and critical thinking into their field instruction with students? That's the biggest question and concern for me. (P012)

Some important questions are raised in relation to field education, including questioning if social work programs effectively link what is learned in the classroom to the field for students.

We teach a lot in the classroom and then place students right in the middle of complex agencies where they learn quickly what they need to do to survive and do not have an opportunity to sit back and process much. (P020)

Participants suggest that there has not been as much emphasis for practitioners to have training in critical thinking, which can impact a number of things including field supervision. Participant 007 states that "...we have a lot of practitioners who...are not really, they weren't really given training themselves in critical thinking or really educated that way particularly."

Another participant notes,

Where students have been asked [what was the most important part of your education] that they say 'I learned way more in my internship than I did in all of my two years or year and a half or whatever of, of classes'...I think one way of explaining that is that when we teach people in a classroom, which is one context and one environment, and we ask them to employ those skills and those concepts

in a completely different environment, in the practice environment, um, it's really difficult for them to generalize those. (P016)

Most participants report that the skills of critical thinking are transferable from the classroom to field settings. It is suggested that critical thinking skills need to be supported at the agency level.

You know, I, I can't remember, you know, my algebra any more. I can still do stats because I work with them but...so it's like anything else; I think it has to be practiced and I think it has to be used and if agency supervisors are not requiring it of their workers, it's not going to continue to develop in the worker. (P021)

A number of participants also suggest that novice students in the field require some kind of process through supervision to think critically and integrate what is learned in the classroom to the field.

So, it seems like in the field we really need a better process for helping novices become experienced practitioners and I think also with our relativistic thinking...most novices feel that they are just as equipped to make decisions as their supervisors are. So, so I think that's a challenge. (P022)

In providing more effective supports to integrate learning from the classroom and the field, Participant 006 suggests:

...I found field instructors to be very interested and eager to know more about this [critical thinking]. So, I think there is, there is a great opportunity for Schools of Social Work to provide this kind of, um, basically continuing education, or um, training modules...that are going to help field instructors, um, really become better critical thinkers themselves...(P006)

It is suggested that effort is needed to collaborate and improve field integration at multiple levels. Both Faculty members and Field Instructors can create an environment that supports the development of critical thinking skills and abilities in students.

So, field instructors who are also into this idea that, you know, practice needs to be thought about, and you need to have purposeful interchanges um, about practice, those students probably do better because they are in the environment that supports critical thinking (P004).

In trying to better support field instructors, another participant states, We try to [support field instructors] ...we have them in and offer professional development around that, you know, so every um, new cohort or, you know, each time we're about to launch students out in the field, we have a field supervisor day. (P025)

Challenges with recruiting and maintaining experienced Field Instructors is identified by a number of participants.

...we ask field instructors to evaluate the critical thinking of their students, but we very well may not define that for them or talk to them how to foster it but they are instructed by the way it is one primary, I should say 10 areas that students are evaluated on and critical thinking is one of them. (P022)

Similarly, Participant 020 adds "we probably don't [support field instructors]. Um and I think that comes back to a number of things. It comes back to resources as well."

There are barriers in integrating critical thinking with field education. Participants suggest that there is a disconnection between expectations within human service organizations and social work accreditation standards/competency frameworks. There are

also challenges with regard to agency supports for supervisors to take on student supervision, which presents barriers to Schools of Social Work in finding enough suitable practicum settings for their students.

...I think that part of it is that there has to be a closer connection with the field and that field instructors need to understand why critical thinking is important. Even when it was, when critical thinking was featured prominently in the Council on Social Work Education um, accreditation guidelines, I'm not sure that field instructors bought into it because field instructors...first of all, were begging for them because they were in competition with other programs, um, they are giving us a free service typically in terms of supervising our students... And they don't really have time to sit down and think about the way they think about stuff.

(P015)

In a similar vein, Participant 012 adds,

...It's a huge problem all across North America because the field model is based on voluntary contributions of social workers. So, in the good old days, we used to have wonderful training for new field instructors and wonderful support for ongoing field instructors. So, they really learned how to be educators in the field...Over the years, the agencies don't let them go. If they go, their work is not...you know, changed in any way; they still have to deal with their heavy workload.

The field is viewed as the place where students integrate theory learned in the classroom environment to the practice setting with human service organizations, so Field Instructors are positioned to support students in developing critical thinking skills.

...in practicum...if you have a good supervisor, and that is one of the things I think is missing, we have good supervisors, but we are not necessarily on the same page around what we are each thinking around critical thinking. But if you should have someone who is kind of repeating those messages through supervision, I would say that there would be more of an impact. (P001)

The next sub-theme that has emerged from the data relates to the concept of space, both within and beyond the classroom.

culture of space.

A key sub-theme that emerges within this theme of pedagogy is the *Culture of Space*. Creating space and room in the curriculum to teach critical thinking is described as important by participants; a safe classroom environment or learning space is a key to developing critical thinking skills within social work students.

...if you can keep the classroom safe...so that people are not shamed by their ideas and these differences, I think most students find it pretty stimulating, pretty engaging and they are often surprised and pleased with the way they start to think differently. (P003)

A safe learning environment allows students to work at figuring things out; it supports the process of learning how to think critically.

I think...educators have to also model humility in their classroom. Ah, and I think that that modeling creates some of the safety that is needed over time for students to be able to challenge and question both themselves as well as the instructor.

(P006)

Some participants suggest that it is important to teach students not to take things personally in the classroom.

I think students have to trust that you are not attacking personhood, that you are attacking idea. So sometimes with a let's say more wounded or more immature student, if I say something like, what is that about? What is your argument for that...they look like they are going to break down in tears because they have never had anyone invite them to do that type of process right. And then as they gain trust, and realize I am not attacking them. (P001)

Participants describe that the classroom environment influences how learning occurs within that space.

[The classroom is] ...for a short while, a contained small culture because there are expectations in there. There are normative expectations. There are ways in which values are wielded in the classroom and there are certain aspects of identity that people need to live inside of in that space and if I think of it in that way and then make use of sort of my group work skills and thinking. (P008)

Similarly, another participant relates that the cultural environment for doing critical reflection/thinking is as important as the techniques and strategies for teaching it.

So what I try to do when I teach it [critical thinking] is set up a different culture and model it...now that will involve the teaching of some theory about it, but it also involves teaching and acceptance of certain principles of learning...normally I will discuss these with um, the group that I'm working with and we'll come to some agreement of signing up to those principles of learning so it seems like, you

know, um, a democratic learning environment for instance in trust and confidentiality and respect and those kinds of things... (P027)

A number of participants discuss working to facilitate the culture of the classroom that values independence, self-determination, intellectual integrity, thought, commitment, and acceptance. Participant 003 captures what this looks like in the classroom setting,

They [students] are often subdued where people are disagreeing and really caring about something, but in a respectful way and seriously considering somebody else's perspective and really struggling with it, wanting to understand and you get the sense that this is some dialogue...there is something that is intimate about it; that feels so engaged and intimate, I would almost use the word sacred...sometimes there are these moments that seem so special that we walk away from that discussion feeling like we had really been heard or we heard someone else...I take that as a sign that people are doing some good engaged critical thinking.

A challenge in creating a space that fosters the development of critical thinking skills is the structure of the university itself, "...Um, so it is extraordinarily difficult I think to carve out a different learning culture within our broader learning environment and the university culture... (P027)

4.2.4 theme 4: critical perspective and anti-oppressive lens

A number of participants describe the process of critical thinking as being captured within a critical and anti-oppressive lens. This theme is informed by five sub-themes that include *power, multiplicity, social justice, contextual factors and influences,* and *neoliberalism*. Each will be described and supported via participant quotes.

Critical thinking in social work has been equated with an anti-oppressive language or thought in practice in some circles, "...in social work, critical thinking has been very much associated with an anti-oppressive practice framework." (P012) Another participant describes critical thinking from this perspective as, "an affirmation about diversity with respect to women and minorities..." (P011)

A number of participants suggest that social work's inclination toward an anti-oppressive practice framework is a significant contribution to the helping professions and aids in informing the process of critical thinking.

I think social work is unique in that, in that respect...the fact that we are ah, inclined to think about those who are more marginalized and oppressed more so in any other discipline, I would say...is part of what's unique...(P013)

power

Power is identified as a sub-theme of having a critical perspective and using an anti-oppressive lens. Awareness of power dimensions, dominant discourses and hegemony are described by participants as a key element within this sub-theme.

Participants describe social workers as having a responsibility towards clients who are marginalized, where one needs to be aware of one's power in relation to decisions made in practice.

...social workers have a very true responsibility towards clients...who are often marginalized or um, for a decision and...if you are not aware of your...power relation or your power in...social work in public and ah, social welfare, child welfare and then you have, um, statutory power and you really have to be critical about that. (P017)

Participants relate that it is important to understand how assumptions impact practice and decision-making; a sense of how the personal impacts the professional. Understanding power and how that can influence knowledge is also viewed as being important in relation to being able to think critically, "...the ability to um understand the power structures that go into knowledge development; um, the ability to understand the politic behind the use of knowledge...the ability to um, deconstruct all of that knowledge...based on power and who it serves." (P026)

Critical thinking is further described as having "...to do with critical theory, critical social theory...understanding how we maintain or perpetuate even thinking about power and power differences, and using that analysis to think underneath a policy or a statement or a practice or something like that." (P014) Hence, an awareness and understanding of the influence of power is central to critical thinking for social work students.

multiplicity of perspective.

Participants suggest that the issues social workers address are complex and influenced by many different stakeholders and forces within society, so the ability to assess and understand issues from multiple perspectives, systematically and from multiple system levels is important in order to provide logical, balanced, and evidence-based responses. In support of this perspective,

Participant 023 states,

I think we are charged with addressing these problems and often being the mediator then the liaison um, among many different groups in order to address

certain problems in society and so to do that you really have to be able to understand very different perspectives, even if it's the same issue.

Another participant states that “to think critically means to be poly-ocular, using multiple lenses; having an awareness of our own and other’s lenses is important, as is having openness to difference.” (P001) Participant 002 discusses a different type of thinking that goes beyond being able to give the “right answers” and involves seeing multiple options and perspectives.

I think in critical thinking, it is really important to be intellectually creative...It consists of discretionary and divergent thinking that sees beyond one factor; a creative intellect where one can think on a wider perspective.

Similarly, Participant 003 adds,

So, I think of critical thinking as the ability to consider situations, to think through information from multiple perspectives...not just different vantage points, but to think in terms of the psychological dynamics, maybe sociological, organizational, so that kind of system thinking that seems like part of it.

Some participants identify concerns with the Accreditation Standards of the Council on Social Work Education (CSWE), noting that they lack a critical perspective.

It has been suggested that,

Limited critical thinking occurs because the curriculum is dictated by the CSWE and there is limited diversity of thought. There is some faculty agreement on texts to be used, but the texts are supportive of the status quo and a liberal understanding of issues that have to do with social justice, economic opportunity

and a liberal understanding of the human condition. Limiting diversity of thought marginalizes social work from many opportunities. (P011)

social justice.

Critical thinking is associated with an anti-oppressive practice framework by a number of participants, and is seen as being vital to the social justice goal of social work practice. A number of participants describe critical thinking as a process that involves a broader focus on making good decisions based on logical reasoning and contributing to the improvement of society by working towards a social justice agenda. Participant 001 notes that,

...social justice...so that notion that critical has to do with looking at more of a macro focus where we need to make good decisions as individuals and part of society to be able to contribute to bettering that society and to understand, you know, and logically reason through that and be able to focus on...social justice topics.

In support of the importance of critical thinking for social justice, Participant 027 adds that,

So, it's vital to the social justice part of social work...because we are working with lots of people and we need to be able to get a sense of understanding that's outside and beyond ourselves...what we take for granted about ourselves.

Participants also suggest that a macro perspective that looks at the structural roots of problems supports the process of thinking critically. It is acknowledged that there can be different interpretations of events depending on the theoretical lens being used.

I think we do pretty well in policy because I think that policy analysis is basically um, tearing apart a policy and understanding um, what the impact may be on, you know, what's the, what's the intended impact? What's the unintended impact? Um, how is it going to get implemented? Is it going to be implemented consistently? Do we have the resources to implement it consistently? (P015)

Participants suggest social workers address complex issues facing marginalized populations.

...this kind of um, ah, critical analysis ability to...reflect on their issues and analyze their issues so that they can ah, see...both a micro and mezzo and macro way to see where their issues are coming from or the root cause of those issues and then to identify um, appropriate or responsive interventions...(P019)

Hence, participants suggest that operationalizing a critical perspective and anti-oppressive lens highlights that critical thinking is important to fostering and supporting a social justice agenda.

attending to changing contextual factors and influences.

Critical thinking is seen as being influenced by contextual factors; critical thinking allows social workers to navigate contextual factors in diverse situations.

I think social work um is very complex. Most of the areas that we work in have multiple views of...client circumstances are incredibly diverse...we have to have an understanding of um, social, political, economic and cultural issues when we um, examine anything (P025)

The contextual environment within which social work operates is often in a state of flux. This is highlighted by Participant 018 who states,

...we in social work operate in in a wider size of context which is subject to massive change so we might feel we are there and that raises a particular kind of set of issues that we've become quite experienced in dealing with and then have to deal with a whole new set of demands as a result of a changing external environment.

Participants suggest that having an awareness of one's own social location is important to the context within which critical thinking occurs.

...there are multiple facets of an issue and it it's, in order to really understand what's going on...it's important to be able to look at ourselves and look at the ways in which our own cultural context interact with those of our clients and, you know, as I said, not to take anything at face value. (P028)

In line with the concept of context and self, another participant states,

Critical thinking addresses the complete array of perspectives that the human condition brings with regard to social problems...so the context and theoretical orientation of the social worker influences how someone understands critical thinking. (P012)

Similarly, "...to be, be able to appreciate the social, historical and economic context from which those, those ah, that particular idea ah, or practice arises" is important. (P013)

Participants relate some challenges and tensions in understanding and operationalizing critical thinking in relation to the context, as Participant 019 describes,

Our world is becoming more individualistic and less collective, so the idea that we are asking them [students] to think in the context of social identity, group

membership, and link how individuals think and feel to political conditions is becoming harder or more worn out...

Participants suggest that faculty perspectives and contextual factors influence how they talk about, understand, and teach critical thinking, "...so the way faculty members talk about critical thinking seems to me um, is very much affected by...you know, the way in which they see the world and the way in which they see social work." (P012) Hence, epistemology is also influenced by contextual factors.

neoliberalism.

Neoliberalism is a sub-theme identified by some participants. Critical thinking is described as a way to contribute to the workplace in a way that supports a critical perspective to practice.

Social work students as they graduate are hired into positions that are...quite bureaucratized, where the focus is...predefined by Colleges as well as by...work place policies and practices, and ah, the capacity to both contribute to the workplace and question some of the taken-for-granted assumptions go on...um...is really important; question them in a way from the inside out, um, that engages the various interdisciplinary teams that they operate...they work with. (P013)

Hence, this participant suggests that the ability to think critically can off-set some of the negative impacts of neoliberalism in the workplace. In line with the recognition of the impact of neoliberalism on students' abilities to think critically, Participant 014 adds,

...we've moved so much into, you know, neo-liberal, neo-managerialist agendas that it feels like more or less, you know, education is becoming more and more

commodified...More and more the language is towards efficiency and doing more for less and targets and numbers and enrollments and world rankings...you know, none of which deal with the realities of the day to day work experiences of our students or the communities that we work in.

Some participants link understanding critical theory with being able to think critically.

...we articulate critical thought in the ideology and assumptions of theory for students in courses and then examine the impact of this neoliberalist idea on politics to help students use a critical social work perspective. Students have to understand critical theory and apply it. (P025)

It is suggested that neoliberalism negatively impacts the abilities of both students and practitioners in effectively engaging in critical thinking. This is evidenced by the statement that,

...I think that this is [a] new kind of neoliberal paradigm in services... it is really difficult to combine with ethics of social work, so the critical thinking is needed...in order to maintain...the ethical code of social work. (P024)

With shrinking fiscal resources that can be attributed to this neoliberal era, gaps in services for consumers grow while organizations push for more effective, efficient, and less costly ways to provide services. In this light, critical thinking can be seen as a bridge to challenging gaps left in the wake of a neoliberal era for human service organizations by incorporating ethical practice and advocating for those marginalized.

4.2.5 theme 5: lack of a shared understanding

A consistent theme across participants is that there is no real shared understanding of critical thinking within social work generally, including specifically within social work

education. While participants in this study consistently acknowledge critical thinking as both *important* and *essential*, it is noted that it is not discussed often or consistently within and across social work programs. This theme of lack of a shared understanding is informed by three sub-themes: *constant undercurrent across disciplines, rhetoric, and tension, controversy and context*. Each of these will be discussed, with participant quotes supporting an understanding of them.

Critical thinking is described as something that develops over time as students move through social work programs, and participants agree that, though there are expectations that social work programs will contribute to the growth and development of critical thinking in students, there are challenges in coming up with a definition of critical thinking.

...I am not sure people always understand it and actually, when you look at the practice behaviours associated with critical thinking, I am not sure that there is consensus on what that really means...which is a problem with critical thinking. Everybody wants it. Everybody thinks it is a good thing, but not everybody knows, or certainly everybody agrees on what it is. (P005)

The absence of a clear definition of critical thinking poses challenges for social work education.

I don't think that we as a profession...there's different ways of looking at it...people like Gambrill and Gibbs...have written about it extensively, but tend to focus a lot just on using logic and scientific reasoning and don't necessarily fully account for the kind of thinking that um, that doesn't have a clear solution that you can...I don't think that they... don't account for that...and then you have the

other camp who is mostly focused on experiential learning...so doesn't really deal with the benefits of logic or heuristics or anything like that. And then you have the fact that social workers by and large...don't really use rational decision-making models...they basically use intuition when they are making decisions in the field. So...I don't think that, that we are providing enough support or developing critical thinking skills. (P022)

Participant 020 adds, "...social work in of itself is not, as you well know, not homogeneous." This statement is supported by Participant 012, who relates,

...there are such different paradigms and ways of viewing the world and the profession, that there is uncertainty if we can come together...you will find these different ideological positions about social work, social work practice and hence critical thinking...

Critical thinking is described as hard to achieve, because it is considered to be abstract and multifaceted; it is a concept that needs to be reconsidered.

I think that the people are starting to question critical thinking; are starting to deconstruct it even more and are starting to recognize that maybe it's not this one discrete measurable thing that people have been, kind of chasing for a while and that maybe it's something, um, differential and more ambiguous and needing to be understood a little bit more expansively. (P008)

constant undercurrent across disciplines.

Participants suggest that critical thinking is important across a range of academic disciplines and is an undercurrent present within higher education more generally. This aids in providing some grounding for a shared understanding in relation to agreement that

critical thinking is considered both *important* and *essential* across the broad academic spectrum.

Across disciplines I think that people have a pretty good idea about what critical thinking means and...they think it's a, you know, a developmental skill, that is, it underlies everything and this includes people in the humanities as well as people in social sciences, and people in natural sciences don't seem to talk about it as much. I think it is just assumed. (P015)

Similarly, Participant 016 notes,

I would say it is [important] across faculties...I wouldn't say it is necessarily university wide. Um, but certainly those people who gravitate towards those colleagues in other departments who we find kinship with...gravitate toward them in part because of their belief that critical thinking is...it's an essential part of adult learning.

It is also suggested that,

The term *critical thinking* has not taken off in all countries in a way it has in North America; the terms critical appraisal, analytic thinking; different terms are heard that quite loosely and may or may not end up meaning the same thing.

(P027)

In support of a concern and commitment to being able to think critically,

Participant 018 states,

I would say in social education in this country [identifying information deleted], in higher education, in universities, that there is...certainly an increased...concern and commitment to being able to think critically about research for practice...[it]

also comes up in national discussions, which...involves stakeholders...government agencies, employers...

Several faculty members report having had a number of conversations about critical thinking pedagogy with faculty from multiple disciplines, not just within social work.

It's [critical thinking] deeply embedded into it [multiple courses] and the study abroad...we have some study abroad courses that are cross disciplinary...the reflective piece that goes along with studying abroad involves critical thinking...(P016)

A number of participants report that there is no annual assessment of critical thinking in many universities because the term critical thinking may be subject to different interpretations. Participant 010 suggests that "...critical thinking is something...that people take pretty well for granted in a University experience. Ah, and I think the reason behind that is ah, everything you do, as a student, is critically analyzed from some perspective."

Some participants report that some universities do academic testing and critical thinking is sometimes considered as one component amidst a multitude of other factors being assessed, "we use some critical thinking...I think the very first time we tested, it was like 30% of graduates demonstrated proficiency and that's pretty comparable to other schools...but...it's dismal." (P022)

Hence, while critical thinking is considered to be important across a range of academic disciplines, there are inconsistencies in a common understanding or definition.

rhetoric.

Participants suggest that there is rhetoric and misunderstanding about how critical thinking is defined. It is a concept frequently talked about, but inconsistently promoted with no elaborate means of discussing or defining what it is in many schools of social work. It is subject to faculty members' interpretations, as each person's own lens impacts how critical thinking is understood and defined. One participant notes that,

So, while it's one of those catch phrases and I can't imagine an educator in social work or higher education saying they didn't want to foster critical thinking in their students, I do think there are some folks who aren't, um, necessarily doing it. (P006)

Another participant notes, "I think the profession routinely gets lip service to the importance of critical thinking, but I am not sure that we always mean much more than thinking like I do." (P003)

In a similar vein,

With students, and sometimes with colleagues, critical thinking is defined as just tearing down everyone else's ideas as opposed to that process of looking at your own views and opinions and world views critically as well. So, it is rhetoric, but I am not quite sure what happens when it hits the ground. (P007)

tension, controversy and context.

A number of factors that contribute to both tension and controversy surrounding the concept of critical thinking are identified by participants in this study. The measurement of critical thinking is controversial, as is the definition. Faculty expectations of critical thinking vary and it is operationalized differently in various

disciplines. Lack of clarity on a definition creates tension; the context is identified as an influence on how critical thinking is understood, defined and operationalized.

...we looked at the critical thinking literature outside of social work and recognized that...there are some presumably gold standard measures that are theoretically designed to assess this thing and we had a suspicion that, you know, these measures might be assessing something, but were they assessing what it was we were hoping to see among our students...there was a certain amount of ambiguity there... it was becoming clearer and clearer to us that there really is not one definition of critical thinking, at least if we understand it, but that there may be area specific, discipline specific, application specific definitions or ways to understand it. (P008)

Though acknowledging that critical thinking is important, some participants indicate that it is absent in much of the curriculum and there is not necessarily an appreciation for it among all social work faculty members. Some participants suggest that critical thinking has layers of complexity that need to be more clearly understood and reconsidered.

I think that the people are starting to question critical thinking, are starting to deconstruct it even more and are starting to recognize that maybe it's not this one discrete measurable thing that people have been, kind of chasing for a while and that maybe it's something, um, differential and more ambiguous and needing to be understood a little bit more expansively. (P008)

Participants suggest that the measurement of critical thinking is controversial.

In social work, and this may be true of much of higher education in general but, in social work, we...often mention critical thinking; we think it is important, we endorse it, we include it in our syllabi, but I don't see us doing very much, making much deliberate effort to promote critical thinking. In fact, I am not sure that we know what it is. (P002)

Another participant notes,

Ah, you know, most recently...I have been hearing is that critical thinking is important, but critical thinking isn't enough and that, if...it's the definition of old...you know, the Watson Glaser kind of definition it known so it's not actually enough and it's not enough because um, according to some of those definitions some of them are sort of, um, creative and applied aspects of critical thinking can get lost in that space and some of the...sort of trait based mechanisms that are starting to be associated with thinking get lost when looking at the standard um, sort of older definitions of critical thinking. (P008)

A number of participants report that there is a lack of clarity and tension surrounding critical thinking across social work education programs and universities.

I mean everybody says that everyone needs it [critical thinking] ok? That's universal. That's agreed on, particularly in [location noted] I find...what is less clear is that people don't really have a definition of it, ah, and they often say that students need to think critically, but when you ask them what they've asked students to do, there is no instructions and there's not even an assessment. Um, so people, I would say no one would disagree that um critical thinking is not needed,

but when it comes to looking at what they do, that's another matter entirely.

(P027)

Another participant notes that,

...in our program, we think that students learn some critical thinking in our policy analysis class but, as best I can tell, what the faculty mean there is that students learn to analyze social welfare policies using a framework or a rubric, so they learn to look at several different issues, but sometimes I am afraid that we want our students to analyze policies the way we analyze, to draw conclusions that we draw, to think about it in a certain kind of way, I mean in terms of content, and not as a set of skills so much. (P003)

Participants also suggest that an understanding of critical thinking is shaped by individual perspectives, the context within which it occurs, and how people see the world, all of which impact how it is operationalized on the ground. Participant 021 supports this with the statement,

...it's tricky with critical thinking because you are doing abstract concept, but at the same time it's very important to define it, so other people know what it is and they know when it's there and when it's not there.

Participant 019 supports this notion saying, "...different faculty might have a different interpretation or definitions of critical thinking, slightly different or very different."

Overall, the context is identified as an important component to the assessment and evaluation of critical thinking by multiple participants.

...I think the new competency approach in the CSWE...it's interesting...the nuances around competency and a new focus on the context and the implicit

curriculum and part of which I understand as being, you know...the small private religious university in the south... is going to have a very different take on things and, you know and the main stream university in Chicago say. (P018)

Thus, with so many different ways of viewing both social work and the world, there is uncertainty that the profession can come together on a common definition of critical thinking.

4.2.6 theme 6: assessment.

The final theme that has emerged from the data in this analysis relates to how critical thinking is assessed in social work education. There are two sub-themes within this theme: *standards and competencies* and *measures and outcomes*, which will be described here and supported with participant quotes.

Critical thinking is identified as a general outcome of the core curriculum in a number of social work programs across participants, but no general consensus on how best to measure it is revealed.

So, there is an overall move here in terms of social work education in the US to reconsider where critical thinking sits and what it looks like and how we even dare to think we are going to assess it. (P008)

Another participant notes that “education... policy and accreditation standards...really does guide...I mean it is supposed to guide, it does guide curriculum; and one of those standards is critical thinking.” (P005) Multiple participants acknowledge that criteria must be established so social work educators can understand how students are reaching the established capabilities/competencies, including a set of criteria with which to evaluate the assignments,

...how do we use the...assignments the students do and how shall we comment on their assignments and we also had um, the critical assignments in critical reflection and that was very useful to discuss. How should we comment on this? What...what's the criteria? How shall we evaluate? (P017)

standards and competencies.

A number of participants suggest that we will know when we are there, in terms of teaching our students to think critically, when we see critical thinking infused in the curriculum and in the accrediting bodies and competency requirements/frameworks that guide social work education. In terms of accrediting bodies, Participant 011 notes,

I do hear a lot of um rhetoric around critical thinking. Ah, it's, it's certainly been, ah, inscribed in the various institutions where I've taught, which have been several at this point. Ah, and it's embedded in social work curricula as well. Ah, particularly the Council on Social Work Education an American accrediting authority.

Another participant adds,

I do think it is the responsibility of the accrediting bodies and other professional organizations in social work to make this just an infused part of everything that we do and require that it be identified...it should be its own category in essence and there should be specific operational definitions um for how, in general, we might be able to identify it and what it is we are looking for in our students. I think that's a step...and then faculty and programs are going to be required to demonstrate that they are making efforts and that they are not just talking about it,

but that they're finding...techniques and methods to actually help students develop this. (P023)

Participants acknowledge that accrediting bodies have standards that include evaluation expectations for social work programs.

There has been a curious evolution...at first EPAS [Educational Policies and Accreditation Standards] did not have competencies; it had outcomes and sort of measuring outcomes. The second version is um, more geared to competencies and the question becomes how do we measure it? ...But...there is frequently, you know, a chatter...of how do I measure this? ...Most of it ties around um, essentially several areas: critical thinking is one; cultural competence comes up every now and then. An outcome is a specific measure, um, you know did a student master material...did the student grasp theory; did they get the concept right um, that sort of thing. The competency is more can they generalize that skill beyond simply, you know, regurgitating, the fact, or that they learned it and apply it into actual practice. (P010)

Participants suggest that critical thinking is a type of meta-competency that is woven throughout competent practice and education. Some participants express concern over recent changes to the CSWE standards, as evidenced by the statement that, "I'm a little dismayed that...the new CSWE accreditation standards have um, sort of watered down...the critical thinking component." (P015) Using an example of the shift toward a competency framework in the United Kingdom, one participant describes social work education as:

Very driven by government, and social work educators do not like the concepts or terms *competence* when they are based on fragmentation, functionalism and a perceived emphasis on measurement. We lose sight of some of the more holistic and important issues like a student's ability to operate within an ethical framework in such a framework. In this new approach to assessing social work education, the term capability came out in an attempt to look at capability and competence and how do we assess that? What are we talking about, how do we understand it and how do we assess it? (P018)

Within Canada, three related documents are highlighted that refer to these concepts of regulation, competencies, and practice standards: the Canadian Council of Social Work Regulators, CASWE and CASW, where all have core aspects or components related to both reflection and critical thinking. Participant 019 highlights this,

I can't remember ah, there are items or sections covering critical thinking so I was say these three different bodies...practice sector which is CSW, the educators which is CSWE and then the Regulators having their professional regulating bodies um, they included, um, all the provincial Regulatory bodies...encompasses other requirements of critical thinking or expectations for social workers to demonstrate this kind of competency...and critical thinking is one of those.

Participants suggest that the CSWE educational programs and accreditation standards in the United States have moved social work education from objectives to a competency-based education framework. Within Canada, it is noted that competency frameworks and practice behaviours have not yet been addressed.

There are challenges agreeing on a National competence framework, including critical thinking, with no agreed upon way of assessing it; how do we know when our graduates and practitioners are competent? It has to do with the challenge we are having in coming up with some agreed-upon components of competence; there is quite a spread internationally on these issues. (P012)

Overall, critical thinking is described as something that goes beyond being an itemized competency; viewing it in this way can be limiting.

measures and outcomes.

In terms of the measures of critical thinking, participants note that there is a multitude of tests and scales that can be used to assess critical thinking. Challenges in assessing critical thinking are identified within social work because social work practice, in representing such diversity in theoretical orientations, methods, and populations served, means that there is more than one way to understand, operationalize, and hence assess it.

You know, it's not just a matter of deciding, 'ok I look at this information and I kinda like to decide, I evaluate this, I evaluate that...and then I make a decision.' I think those become extremely complicated in the social work profession because we're dealing with so many variables and many things that, I am thinking just like ethical decision-making, which really, yes you have to use critical thinking, but it's ah, clearly you do and you do have to an analysis but there is also some other elements that come into that which leads to those kinds of decisions which I am not sure that like, um, California Critical Thinking Skills Test necessarily is going to pick up. (P007)

Participants acknowledge that critical thinking is an important educational outcome, but agree that it is not adequately or consistently measured.

So, they [field of nursing] have a lot of research that they've done on whether or not they are actually increasing their students' critical thinking over the course of their nursing education and quite honestly, they have mixed results and there are very few social work studies that have looked at it...a handful...and our results are very mixed as well. (P007)

As suggested by participants, critical thinking has a mixed research picture, where results of tests to measure it often show no improvement. Participants suggest that critical thinking is intimately connected to decision-making and professional judgement, which can be very nuanced and difficult to measure. Participants suggest that standardized measures of critical thinking do not capture all of the influencing components in social work practice and there is some resistance to measuring outcomes in education generally; "the interesting thing about measuring critical thinking is, you know, as much as the definition is controversial, the measurement of it is controversial..." (P002)

Another participant speaks of an experience conducting repeated measures of critical thinking to students over the course of a semester:

So, I would walk in [to the classroom] there with this measure by, you know, a couple of, some of the students I measured, I think three times and by the third time, I came walking in with these measures, they were like, no, they groaned about it...I encouraged them to focus on these critical thinking measures because they really had to focus on the questions to answer them and so, as you can imagine, students who aren't engaged in an activity like that, the results were

really messy...so because the results are quite tricky, because they look like, you know, for a lot of students, that there is no improvement. (P002)

Many participants note that critical thinking, reflection and critical reflective analysis are difficult to assess; "...how do you measure it? Like, it's an idea that um, is tossed around a lot but it's not really understood well." (P026)

It is suggested by some participants that with accreditation standards mandating practice behaviours, there will be improved integration with the field and an ability to better measure the identified practice behaviours.

If we're doing it, ah, as a profession...I think that...with the...EPAS [Educational Policy Accreditation Standards] kind of mandating, a lot of changes in curriculum, um, and the fact that these practice behaviours have to be measured both in the field and in the classroom, hopefully that they are going to be more collaboration there between field instructors...in terms of who's doing what and how these two things fit together. (P007)

Participants describe using different types of assignments to observe and assess whether students have developed critical thinking, including papers, examinations, seminars, tutorials, presentations, etc. One participant provides an example, "How you are graded, ah, you get feedback...it's, fairly integral to the, the canon [of education] and so I think, you know like, it's kind of like an undercurrent that is continually there. It's a large undercurrent." (P010) Another participant reports, "we have often not standardized the tools [to assess critical thinking]. They are often not consistent across units. The implementation of how they are delivered is quite different." (P006)

Integration of critical thinking skills is demonstrated by assessing the application of concepts and theories through assignments.

...I have them, ah, kinda do a brief five pager on, on that, so it is really nice to see them pulling on all of these pieces to see how...every moment in practice can be so very loaded...what it does then...it introduces them to the, to the tremendous breadth as well as depth that goes in behind decision-making in practice; they wonder how they'll ever be able to replicate that once they are out in practice.

(P013)

Most participants indicate that they use grading rubrics in a variety of contexts to measure critical thinking.

...often as educator, you know, we want to see that knowledge growth and we always have a hard time, you know a rubric for a paper could be more challenging for us to use than a Scantron and, you know, grading a multiple-choice exam.

(P002)

A number of participants suggest being familiar with and interested in the discussion of student outcomes of learning in relation to practice, but the language of outcomes is not consistent across all countries.

...the outcome terminology hasn't quite, ah, in social work, um, hasn't quite developed. Not in the same way. Interestingly, it has in medical education, um, but not really in social work education. Um, which I think is um a gap in social work education... (P018)

Similarly, Participant 020 notes,

To look at critical thinking in that positivist sense [standardized testing], I am not aware of any standardized testing at the university level. In learning management software systems used by many universities, they are binary and have set up right and wrong answers, but you cannot really do that with a case study and label the parts of it and label the assumptions embedded in it, so assessment is difficult in the social work education context.

Some faculty members indicate that their universities are trying to assess critical thinking at the general education level, and then within classes and within different disciplines. Most participants identify that they are working on individual course outcomes, “we’re...what we are doing [assessing] is in individual course outcomes, and then it’s kinda up to the faculty to determine if they are going to measure it out as a, as a course outcome or not.” (P021) It is acknowledged that critical thinking is not being measured across the board.

4.3 Summary

Participants in this study have provided a rich narrative about how they understand critical thinking in social work education. In summarizing the emerging themes from the Round 1 data analysis, participants share that critical thinking is a multidimensional process comprised of complexity, integration and dimensions of critical thinking. Critical thinking is shaped and influenced by epistemology, which in turn impacts pedagogy. Pedagogy brings to life how critical thinking is taught, as well as highlighting challenges and opportunities for integration with curriculum and the field. Participants also identify a lack of a shared understanding about critical thinking. Finally, assessment is highlighted as an important theme, capturing both standards/competencies

and measures/outcomes. These findings have gone through a member-check process with participants in Round 2, and analysis of the data from this second iteration will now be discussed.

4.4 Round 2 Findings

Consistent with the Delphi methodology, subsequent rounds of this study take the form of structured questionnaires that include feedback for study participants to comment on and recirculate for further comments and revisions, with the aim of achieving consensus on specific areas or points (Keeney et al, 2011). Round 2 of this multi-stage study on critical thinking in social work education involves receipt of participant feedback on the emerging themes and sub-themes from Round 1. The participants, deemed experts on matters related to critical thinking in social work education, have provided feedback to further refine and inform the findings presented thus far. Participants have also ranked each theme and sub-theme in order of importance, and results will be discussed (see Appendix H: Round 2 Summary and Round 3 Follow-up Questions). Responses to two additional follow-up questions will be highlighted as well:

1. Which themes and sub-themes do you agree with? Why?
2. When considering our dialogue during the interview and upon review of this summary, are there any areas where you learned or changed your mind? If so, please explain.

In this section, I will summarize participant feedback for each theme, using direct quotes to support the points being made. I will also provide the results of the ranking of the themes and sub-themes, as they have informed the identified order of importance for these findings.

4.4.1 round 2 participant feedback by theme.

Participants were asked to rank the themes and sub-themes in order of importance. Table 4.1 highlights the results of the rankings participants made during the second iteration of this study. It is important to note that some participants experienced challenges and some reluctance in ranking the themes and sub-themes, while others indicated that the themes provide a solid framework for understanding critical thinking. This challenge is captured by Participant 020 who said “all of the sub-themes are so intertwined and integrated that any attempt to rank importance seemed counter-intuitive and reductionistic.” Participant 019 echoed this challenge, adding that “all of the themes are equally important.” That being noted, most participants did engage in a ranking process, with results being shown in the following table. Table 4.1 shows the number of participants who ranked each theme and sub-theme as most important (#1 and #2 on a 6-point ranking scale, with 1 being most important to 6 being least important).

Table 4.1: Ranked Order of Themes/Sub-Themes

| Ranking | Theme/Sub-Theme | # of Participants Ranking (most important to least) |
|----------------|---|---|
| 1 | Critical Thinking as a Multidimensional Process <ul style="list-style-type: none"> • Complexity • Integration • Dimensions of Critical Thinking | 10 11 9 5 |
| 2 | Epistemology Influences Education & Practice <ul style="list-style-type: none"> • Evaluation of Knowledge Claims • Awareness of Assumptions & Self-Reflectiveness • Humility in Recognizing & Accepting Limits | 8 9 11 9 |
| 3 | Pedagogy Encompasses Teaching, Philosophies, Spaces, & Integration with Field & Curriculum <ul style="list-style-type: none"> • Pedagogical Approaches and Influence • Integration with Field and Curriculum • Culture of Space | 7 12 8 8 |

| | | |
|---|--|--------------------------|
| | • | |
| 4 | Critical Perspective and Anti-Oppressive Lens <ul style="list-style-type: none"> • Power and Multiplicity (tied as most important) • Social Justice and Attending to Contextual Factors and Influences (tied as second most important) • Neoliberalism | 5 8 7 7 |
| 5 | Lack of a Shared Understanding <ul style="list-style-type: none"> • Constant Undercurrent Across Disciplines • Rhetoric • Tension, Controversy and Context | 8 9 9 10 |
| 6 | Assessment <ul style="list-style-type: none"> • Standards and Competencies • Measures and Outcomes | 9 11 9 |

Follow-up questions in the Round 1 summary sent to participants asked if participants experienced new learning or changed their minds based on the responses of all participants. In response, seven Round 2 participants identified “no change” in their thinking or positioning from the initial round. Additionally, four participants reported not being able to remember the original interview, while four participants did acknowledge some learning and new perspectives based on the feedback of others. One participant provided an example of reconsidering critical thinking in relation to metacognition, stating that “reading through these findings, it occurs to me that I consider critical thinking related to metacognition. It seems to me that the ability to attend to and manage one’s own thinking processes is an important part of critical thinking” (P003).

Participant 023 relates,

I cannot say that I have changed my mind; however, I do believe that I have learned a bit more about some of the emerging assessment opportunities available to us. I think Bogo’s work in looking at assessment laboratories/simulations as a way to assess is very promising, but remains an issue for the smaller schools of

social work with smaller budgets. Regardless, this seems to be the type of measurement that should be added to the more traditional assessment measures which often fail to capture the depth and complexity of true critical thinking.

Participant 024 reports that “perhaps the diffuse picture about critical thinking emerging here is rooted in the fact that the theory on what critical thinking should always be based, [critical theory], is missing/not arisen as an issue by the interviewed persons.”

critical thinking as a multidimensional process.

Critical thinking as a multidimensional process was ranked as being “most important” by study participants. It is a theme that is “more important to defining critical thinking.” (P003) and is at a “higher level of abstraction than the other themes.” (P007) Participants suggest that the concept of a multidimensional process links with the issue of pedagogy and the challenges facing social work educators in operationalizing and developing students’ critical thinking. This is evidenced by Participant 009’s statement that, “while critical thinking is a multidimensional thing, it is challenging as to how best social work educators can put into practice how to develop students’ critical thinking, which touches on the issue of pedagogy.” Participants suggest that critical thinking as a multidimensional process captures many of the processes involved in critical thinking, but “is almost too broad, which contributes to our lack of understanding of what it actually is” (P013).

Participants suggest that the sub-themes of *dimensions of critical thinking* and *complexity* are important features of critical thinking, as “it is important to understand that there are different ways of looking at things.” (P017) Integration is also thought to be an important sub-theme here.

Contextual factors and their relationship to critical thinking are interesting. E.g. student learning from observing practice colleagues engaging in critical thinking, or not pursuing critical thinking when it is called for in practice might potentially be a very powerful learning experience. (P018)

Participant 023 notes, “I really like the inclusion of creativity, ambiguity, skepticism, vulnerability, flexibility, and intellectual integrity as components of “dimensions.” It is worth noting that participants consistently report that it is difficult to rank/prioritize the sub-themes captured here, as all are viewed as equally important.

epistemology influences education and practice.

Participants suggest that this theme is very relevant for defining critical thinking as well. Participants identify the sub-themes of *knowledge*, *awareness* and *humility* as being important. Participant 003 supports this with the statement that “Epistemological Influences and Understanding” seems more relevant for defining critical thinking. It identifies sub-themes of knowledge, humility, and awareness that I consider important.”

It is worth noting that the sub-theme of humility in recognizing and accepting limits social workers have seems to present some divergence of opinion among participants on what it represents. On one hand, participants describe humility as a “standout” because it is important to be open to new knowledge and ideas. Participant 016 supports this by stating that,

Humility is the sub-theme that most stands out to me. In order to be flexible and expanding cognitive schemas, one needs to be open to new forms of knowledge, new ideas and new perspectives. I think being humble about what you know, or

maybe even suspicious of what you think you know, is a prerequisite for being open to developing stronger critical thinking heuristics.

On the other hand, humility is described as “having vaguely religious connotations” (P018), and *awareness* is suggested as a remediation. Participant 023 notes,

The concept of ‘humility’ as mentioned throughout is a very important emerging ‘meta-competency’ that our program is looking at in greater depth as we think about better ways to assess social work values among our students. This is a very important foundation for students (and faculty) to be able to experience the openness, vulnerability and ambiguity that is much a part of critical thinking.

Overall, participants highlight the overlap between the sub-themes of awareness of assumptions and self-reflectiveness and humility in recognizing and accepting limits of social workers. All of the sub-themes contained here are interrelated and reciprocal rather than linear or dogmatic. Participant 007 states that “this theme and sub-themes recognize the importance of personal characteristics of openness, curiosity, and self-awareness in promoting critical thinking.” In linking the sub-themes together, Participant 017 states that “it is important that students learn to inquire further and recognize the limits of one’s knowing-**humility** and have an **awareness** of different types of knowledge.” Finally, in relation to the importance of all of the sub-themes for epistemology, Participant 023 notes,

[They] are all very important and I do not believe that knowledge is really 3rd but struggle to order these. I think knowledge is key; however, humility and

awareness are essential in order to assure use of knowledge is one that demonstrates critical thinking.

pedagogy encompasses teaching strategies, philosophies, learning spaces, and integration with curriculum and field.

Participants suggest that defining features of the sub-themes of this theme reflect some of the best literature on how to conceptualize then integrate critical thinking into social work pedagogy. Participant 023 provides a supporting example noting that “pedagogical approaches and influence are important sub-themes and must be a key part of understanding the way we teach critical thinking in and outside of the classroom.” Participants also agree that it is important to create a culture of space for critical discussions and thinking. This is supported by Participant 009 who states,

It is most important for teachers to provide ‘space’ for students to develop their own views and that students also learn and agree to make good use of such space/latitude in developing their own views, rather than being deferential to ‘authority’ or look for ‘the answer’.”

Additionally, “the classroom and the field can be conceptualized as two equally important and linked learning spaces that inform each other.” (P018)

Participants acknowledge ongoing challenges with incorporating critical thinking into field pedagogy. Participant 016 provides an example by stating, “I almost put [ranked] integration with field and curriculum as number one because this is where the biggest problem lies, and where the structure of social work education, particularly BSW programs with block practicums, fall short.”

critical perspective and anti-oppressive lens.

Participants suggest that this theme is confusing because it seems to blend critical theory with the process of critical thinking, as noted by Participant 003: “this [critical perspective and anti-oppressive lens] conflates or confuses critical thinking with critical theory/perspectives.” Participant 007 adds that,

I find the theme-Critical Perspective and Anti-Oppression Lens-confusing because it seems to mix together critical theory (a sociological school of thought) with the process of critical thinking. I’m not questioning the importance of this theme’s content as seen in its sub-themes (power, social justice, etc.). However, this is the only theme that explicitly identifies theoretical/educational content that should be included in the critical thinking process. As such, it seems to belong to a different category than the other themes.

Additionally, uncertainty about neoliberalism as a sub-theme is identified, as one participant notes that,

While social justice is surely most important in social work, it is also subject to multifarious interpretations of what constitutes justice. The issue of ‘power’ has to be recognized as one of the main influences to achieving (or not) social justice. Contextual factors are important in letting the thinker put the thinking into context or analyze the problem in hand (be it related to social justice or not) against the contextual background of the dynamics behind. While understandably neoliberalism and managerialism are some of the key influences confronting social welfare and social work organizations and practices, it does not mean that other possible ideological influences may also be important e.g. extremist, fundamentalist, racist, sexist etc. tenets that need to be also aware of. (P009)

There was also difficulty understanding the rhetoric of neoliberalism, as evidenced by the statement, “I do not understand the rhetoric of neoliberalism and think that you are wading into another swamp of taken for granted assumptions here; here you are assuming that we have a common understanding of neoliberalism in social work.”

(P014) One participant indicates that engaging with the sub-themes of power and social justice could challenge neoliberalism: “Power and social justice are significant themes. Learning how to engage with these themes in the classroom and in practice, may indeed contribute to challenging the impact of neoliberalism-but this would be one outcome.”

(P018)

Participants also identify power, social justice and multiplicity as significant sub-themes informing this critical perspective and anti-oppressive lens. One participant notes,

It is particularly important that this anti-oppressive lens be included in the definition/understanding of critical thinking. I think this can be tricky...as when we look at the subtheme of neoliberalism, we want to be sure that we are careful to create the open environment to all types of thinking, otherwise we risk excluding some from the process/conversation which is not ‘modelling’ critical reflection well. Within this subtheme...the point...the goal is to ‘challenge taken-for granted assumptions’ is very key and this can be focused on all assumptions. “Multiplicity” seems to also really address this concern. (P023).

A number of participants support the sub-themes of power, multiplicity, social justice and contextual factors and influences as foundational to the social work curriculum and understanding how the social work profession defines social issues, challenges, justice, etc. It is important to note that participants continue to express

difficulty ranking the sub-themes in order of importance, as they are viewed as being “equally important” (P019) within this theme. Overall comments suggest that this theme presents the most challenge for a number of participants, as indicated by Participant 022: “I found this the most difficult to rank because the concepts are overlapping and in many ways loaded politically.”

lack of a shared understanding.

Participants suggest that lack of a shared understanding of critical thinking in social work education is connected to assessment: “you can’t effectively set standards or design assessments for an area that lacks consensus.” (P007) Participants suggest that this theme relates to the profession’s uncertainty in answering the first research question-- how do expert social workers understand critical thinking. One participant notes that it “supports the sub-theme of tension, controversy and context to our profession’s challenges in developing a shared identity.” (P007) This lack of a shared identity as a profession is related here to a lack of a shared understanding of what critical thinking is in both social work education and practice. Participant 023 states, “lack of shared understanding is a very important area...I think the sub-theme ‘tension, controversy and context’ is so important and the reference to our own professions challenges in developing a shared identity is an excellent example.” Consistent with the other themes, participants indicate that the sub-themes are difficult to rank given that they are viewed as equally important.

assessment.

Participants suggest that critical thinking could not be easily operationalized given its complexity; “attempts to pin it down to some ‘measurable’ or ‘quantifiable’ index or

scores might distort the real essence of critical thinking per se.” (P009) Most participants agree with both sub-themes, but it is again many noted that they were difficult to rank due to a perception that they are of equal importance. Participant 024 notes that “these sub-themes belong together and are conditioned by each other: without standards, no measures of outcomes possible; Standards are not meaningful without measuring them.” Another participant suggests that, “lack of shared understanding is also connected to the theme of Assessment, i.e., you can’t effectively set standards or design assessments for an area that lacks consensus.” (P007) Participant 003 supports this adding “‘Assessment’ simply clarifies that conceptual complexity and disagreements contribute to difficulty measuring critical thinking.”

Overall, based on the Round 2 responses from study participants deemed experts on critical thinking in social work education, the top three themes ranked in order of importance are: *critical thinking as a multidimensional process*, *epistemology influences education and practice*, and *pedagogy encompasses teaching strategies, philosophies, learning spaces, and integration with curriculum and field*. As a result, the final iteration of this study focused on obtaining participant feedback on these key findings, with the aim to achieve some consensus on the significant points identified after two iterations.

4.5 Round 3: Final Iteration Findings

Based on the Round 2 findings, the questions participants were asked for Round 3 include:

1. Would you agree with the statement that all themes identified in this study are equally important?
2. Would you agree that critical thinking is a multidimensional process?

3. Would you agree that if social work educators had a shared understanding of critical thinking, that a more realistic and effective means of assessment may be achievable?
4. Would you agree with the statement that all of the emerging themes identified in this study are interrelated and reciprocal, rather than being linear or hierarchical?
5. Would you agree that the richness in the diversity of thought and pedagogy that informs social work education is an asset in promoting the understanding and development of critical thinking in students?

In line with the Delphi methodology used for this study, responses in agreement of 70% or greater are considered representative of consensus (Keeney et al, 2011) among expert participants (see Appendix I: Round 3 Summary of Responses). Table 4.2 highlights these final questions with corresponding participant responses which indicate consensus is achieved on all five points, with ‘yes’ responses ranging from 8 to 10 participants being in agreement.

Table 4.2: Round 3 Questions and Responses

| Delphi Round 3 Questions | # out of 10 Participants Responding Yes |
|---|--|
| 1. Would you agree with the statement that all themes identified in this study are equally important? | 9 |
| 2. Would you agree that critical thinking is a multidimensional process? | 10 |
| 3. Would you agree that if social work educators had a shared understanding of critical thinking, that a more realistic and effective means of assessment may be achievable? | 8 |
| 4. Would you agree with the statement that all of the emerging themes identified in this study are interrelated and reciprocal, rather than being linear or hierarchical? | 9 |
| 5. Would you agree that the richness in the diversity of thought and pedagogy that informs social work education is an asset in promoting the understanding and development of critical thinking in students? | 9 |

Note: Responses in agreement of 7 (70%) or greater represent consensus among expert participants in this Delphi study

Participants had the opportunity to provide final comments during this final iteration and I will summarize the pertinent final comments. With regard to *critical thinking as a multidimensional process*, participants are in complete agreement that this theme accurately describes critical thinking in social work education. It is also the theme ranked as most important by the majority of study participants.

The theme of *epistemology influences education and practice* is ranked as second in importance by participants. In this final round, Participant 018 mentions some continued concern about the use of the term *humility*:

I continued to be ambivalent about the use of the term ‘humility’. Perhaps its’ religious connotations are less apparent in North America. Consistent with my view of professional knowledge (see Michael Eraut, 1994) as including personal, theoretical and process knowledge, I would prefer to use ‘self-knowledge.’

Participant 009 adds that,

Given the recent escalation of parochial, exclusionary, and even somewhat ethnocentric sentiments in anti-refugee/migrant movements in Europe in particular (and elsewhere too), there may be the need to address issues of avoidance of ‘centric’ attitudes/cognitive frameworks in the process of learning and developing critical thinking. It is worst if critical thinking results in critically rejecting the unfamiliar or developing ‘othering’ attitudes and/or cognition or ‘mind-set’. Of course, perhaps the issue of ‘humility’ may already have addressed this concern. The idea of ‘thinking’ apparently focuses on ‘cognition’. Perhaps it would also be good if something could be discussed about the ‘experiential’ and ‘affective’ dimension of learning.

In this vein, Participant 018 supports the notion that “learning occurs at an emotional as well as an affective level.”

In terms of *pedagogy encompasses teaching strategies, philosophies, learning spaces, and integration with field and curriculum*, the multiple approaches to teaching critical thinking are seen as an asset, but challenges are noted due to a lack of a shared understanding of what critical thinking is. Participant 004 supports this concern:

I think the diversity of thought and pedagogy can be an asset that informs SW education, but when there is disagreement of what critical thinking is especially within Faculty at a School (within the department) it can be difficult for students to grasp the concept if it is not universally/consistently defined by their faculty.

This can be especially difficult for students who lack the capacity to conceptualize and are rather strong at concrete observable information.

Participant 007 adds,

One of the primary abilities social work students need to develop is how to make professional judgements. To this end, social work students need critical thinking skills such as how to analyze, synthesize, draw inference, and evaluate problems and solutions from multiple perspectives. Agreement on critical thinking skills essential to the practice of social work could inform pedagogical choices, not dictate them.

Though there is some disagreement over some components of the theme *critical perspective and anti-oppressive lens*, particularly as it relates to the concept of neoliberalism, Participant 007 suggests that,

The inclusion of the theme Critical Perspective and Anti-Oppressive Lens when describing elements involved in critical thinking is a unique contribution that social work makes, which speaks to our profession's commitment to social justice and the importance of including power dynamics in any critical analysis.

Some participants also equate critical thinking directly with critical theory.

Participant 020 provides a cautionary note to this idea by indicating,

It is important to consider that many indigenous epistemologies/perspectives are not captured within critical/anti-oppressive lenses. I agree that it is very important not to conflate critical theory and critical thinking—one is a theoretical body of thought; the other is a holistic process. I would strongly disagree with the assertion that the “theory on which critical thinking should always be based” is critical theory.

Ongoing challenges in achieving a shared understanding of critical thinking in social work are identified. Participant 017 says that,

In my opinion, it is not possible to get a shared understanding. Social workers stand in different traditions and what you mean about critical thinking is connected to the tradition of critical theory you identify with. Therefore, it is important that all are explicit about how they define critical thinking and their theoretical standpoint.

4.6 Summary of the Data Analysis

This analysis provides a description of the six themes and corresponding sub-themes that emerge through the data analysis of this multi-stage Delphi study that includes twenty-eight Round 1, fifteen Round 2, and ten Round 3 participants. The

findings are informed by participants who have been deemed experts on this topic and who have had numerous opportunities to refine their understanding and feedback through multiple iterations in this study process.

Critical thinking is a multidimensional process involving complexity, integration and numerous dimensions that interact to inform this process. The complexity illustrates that social workers deal with a myriad of situations and challenges in the use of professional judgement in practice. Integration refers to the multiple influences on the process of thinking critically, integrating theory, research, and practice, as well as the cognitive and affective components of critical thinking. Participants describe critical thinking as a major dimension of social work practice that is informed by a number of skills, principles, values, assumptions, and personal and affective factors. This theme is thought more important to defining critical thinking, and at a higher level of abstraction, than the other emergent themes. The concept of a multidimensional process links to the issue of pedagogy and how social work educators can put into practice the development of students' critical thinking; it supports the assertion that a wide diversity of thought and teaching methods and strategies helps foster and promote critical thinking development.

There are epistemological influences and understandings that impact this process of critical thinking, which participants also think are extremely relevant for defining critical thinking. Knowledge is crucial, with awareness and humility being deemed essential to ensure the use of knowledge reflects critical thinking. Critical thinking is the capacity to evaluate knowledge claims and consider a wide range of contextual issues in analyzing courses of action. How students see and interpret knowledge, and their related positioning, influences critical thinking. Humility is the realization of not knowing and

being open to learning and re-examining what we think we know. Critical thinking requiring humility is a sub-theme that does present some divergence on what it represents, as some have identified concerns about the religious connotations of the term “humility” and suggest using the term self-knowledge which encompasses personal, theoretical and process knowledge that combine to inform professional knowledge, as an alternative.

Pedagogy is an integral part of critical thinking. There is a wealth of pedagogical approaches and influences in relation to this concept of critical thinking. Multiple venues exist for teaching and learning critical thinking that require time for faculty and students to engage in, ranging from case-based, experiential learning approaches to teaching research methods and scientific inquiry. Faculty expectations, student readiness to learn, and the way each converse about critical thinking are influenced by the way in which they see the world. For example, a faculty member’s comfort with critical thinking can impact expectations about critical thinking in students, and whether it is supported (or not) in the classroom. Critical thinking is but one element within the whole context of teaching; it is a lifelong process and does not have to be implemented in the same way by everyone.

Integration with the field and curriculum are important to the theme of pedagogy, but challenging. Accreditation Standards and Competency Frameworks guide curricula, and critical thinking/critical analysis/reflection is included in some form within these. The classroom and the field can be conceptualized as two equally important and linked learning spaces that inform each other.

Participants describe a culture of space as very relevant for pedagogy. Creating a safe classroom environment that supports and encourages students to take risks, challenge their thinking, and reconsider positions is important. Creating space and room in the curriculum to teach critical thinking is also important.

Having a critical perspective and anti-oppressive lens is described as part of critical thinking, but feedback through multiple rounds reveals that this theme is confusing because it seems to mix critical theory with critical thinking. There are also challenges identified in comprehending the rhetoric of neoliberalism; for example, one participant questions if social work has a shared understanding of this concept of neoliberalism. The sub-themes of power, social justice, multiplicity, and contextual factors and influences are considered significant sub-themes in terms of defining social issues, challenges, and justice, as a profession. Power dimensions and awareness of assumptions are also thought important. Based on such feedback, I will remove the anti-oppressive lens component of this theme in the revised conceptual model, given the reported lack of shared understanding of this concept, but retain the critical perspective element.

Issues social workers address are complex and influenced by many different stakeholders and societal forces, so the ability to assess and understand issues from multiple perspectives is important to provide balanced and informed responses. Consequently, multiplicity is described as an important sub-theme.

Critical thinking has been associated with an anti-oppressive practice framework by ten participants in this study, and is described as vital to the social justice goal of social work practice. There is a recommendation to recognize different epistemologies

more broadly in considering critical thinking, since an anti-oppressive framework can exclude some indigenous epistemologies. A macro perspective that examines the structural roots of problems contributes to bettering society through its focus on social justice topics. There is uncertainty about neoliberalism as a sub-theme by participants since ideological influences go well beyond neoliberalism and they must be acknowledged. Two participants did suggest that inclusion of the theme Critical Perspective and Anti-Oppressive Lens, when describing elements involved in critical thinking, is a unique contribution of social work.

Lack of a shared understanding is a theme that relates to the profession's uncertainty about how expert social workers understand critical thinking. It acknowledges the social work profession's challenges in developing a shared identity. Critical thinking is however, an issue of importance across disciplines and is an ever-present undercurrent in higher education generally.

Participants suggest that there is rhetoric and misunderstanding about the definition of critical thinking. It is a concept frequently mentioned, but inconsistently promoted with no sophisticated means of discussing or defining what it is in many schools of social work; it is subjective to individual interpretations. Participants also suggest that there is tension and controversy surrounding critical thinking in social work education. The measurement of critical thinking is controversial, as is the definition. Faculty expectations of critical thinking vary and it is operationalized differently in various academic disciplines. Lack of clarity about a definition creates ambiguity, and the context influences how critical thinking is understood and operationalized.

Assessment represents the final theme emerging from the data analysis. While most participants agree with the sub-themes of *standards and competencies* and *measures and outcomes*, it is acknowledged that they are difficult to rank due to the thought that they are of equal importance. Participants suggest that critical thinking is a meta-competency embedded in social work curricula, accreditation standards and competency frameworks globally. Such standards encourage the integration of critical thinking, analysis and reflection throughout the curriculum, but this is not occurring consistently.

Critical thinking is connected to making professional judgements and engaging in ethical decision-making in practice, but that linkage can be subtle and difficult to measure. Integration of critical thinking skills is demonstrated by assessing the application of concepts and theories through assignments, but more rigorous measures are lacking across social work education programs.

Overall, participants did achieve consensus on five key statements: critical thinking is a multidimensional process; all themes identified in this study are equally important; if social work educators had a shared understanding of critical thinking, a more realistic and effective means of assessment may be achievable; all of the emerging themes identified are interrelated and reciprocal, rather than being linear or hierarchical; and the richness in the diversity of thought and pedagogy that informs social work education is an asset in promoting the understanding and development of critical thinking in students. Participants suggest that all of the themes that have emerged from this analysis are interrelated, with each influencing the other.

The next Chapter will provide a critical discussion on how the findings discussed here answer the research questions posed for this study, and how they interface with the

literature review and conceptual model developed to understand critical thinking in social work education.

Chapter 5 – Discussion

In this Chapter, I will discuss the findings from the study in relation to the research literature. The discussion will address the research questions posed in this study, namely:

1. How do expert social work faculty understand critical thinking?
2. How is critical thinking currently operationalized in the classroom?
3. How do social work educators know when students have achieved the ability to think critically?

This discussion will also examine the conceptual model proposed in Chapter 1 as a way to understand critical thinking in social work education, and how it has shifted based on the findings from this iterative study. I will then make specific recommendations for social work education, policy and research.

The findings from this qualitative Delphi study examining expert social work faculty's understanding of critical thinking in social work education come from a thematic analysis (Braun & Clarke, 2006) of the data. After three iterative rounds, six themes emerge from this analysis: 1) *critical thinking as a multidimensional process*; 2) *epistemology influences education and practice*; 3) *pedagogy encompasses teaching strategies, philosophies, learning spaces, and integration with field and curriculum*; 4) *critical perspective and anti-oppressive lens*; 5) *lack of a shared understanding*; and 6) *assessment*. From this analysis, we can see how critical thinking is understood by social work faculty members, how they bring it to life in the classroom, and how faculty members see it demonstrated by social work students. We learn that critical thinking is multidimensional and shaped by one's epistemological positioning or understanding. Epistemology also influences pedagogy and the ways in which critical thinking is taught

(or not) to social work students. We also learn that all of the themes are interrelated and reciprocal; they are fluid and intersect at multiple levels and in multiple ways to influence how faculty members teach social work students to engage in the process of critical thinking. Another important finding is that critical thinking and reflection are viewed as being iterative, which participants express as being *reciprocal* in nature, where each informs the other in this multidimensional process. There is consensus among participants that the rich diversity of thought and pedagogy that informs social work education is an asset in promoting the development of critical thinking in social work students. Additionally, participants agree that a shared understanding of critical thinking would encourage the creation of more realistic and achievable means of assessing critical thinking. All of these components will be discussed in this Chapter, framed by the research questions posed in this study.

5.1 Social Work Faculty Members' Understanding of Critical Thinking

As discussed in Chapters 1 and 2, there is a veritable wealth of definitions of critical thinking. Key skills involved in critical thinking revealed by a review of the literature include analysis, evaluation, decision-making, and problem-solving (Almeida & Franco, 2011; Celuch et al., 2009; Deal & Pittman, 2009; Facione, 1990; Lim, 2011; Paul, 1993; Plath et al., 1999; Vandsburger et al., 2010). We can see that the findings of this study identify some of these same skills in critical thinking within social work education. After three rounds of this iterative Delphi study, participants unanimously agreed that critical thinking is a multidimensional process. This multidimensional process aids in understanding how social work faculty members view critical thinking in social work education as a holistic process integrating complexity and multiple dimensions that

intersect to inform the process of critical thinking. This view of critical thinking as a holistic process rather than a discrete skill or set of skills is a unique contribution of this current study.

As highlighted in Chapter 4, both *complexity* and *integration* inform the process of critical thinking. Social workers work within multiple and complex contexts, which links to Bandura's (2001) view of social learning theory that life involves a complex interchange among personal, biological and sociostructural factors of human functioning. In Chapter 4 we learn that critical thinking involves thought at a complex level and requires the integration of theory, research and practice, which is highlighted by Participant 010,

...social workers work in incredibly sophisticated and complex contexts. If you take a family services intervention and you've got 6, 8, 10 different perspectives coming in from people, um, you've got to be able to weigh the information you get, to come to some kind of logically putting it together and making it sense making and um, which means you need to be extremely critical or you know, a very wary consumer of what people are sharing with you.

In addition to seeing critical thinking as including complexity and integration, the *dimensions of critical thinking* described by participants in this study extend our comprehension of the key ingredients or components that intersect and interact in informing the process of critical thinking via the skills, values, assumptions, principles, personal and affective factors highlighted in Chapter 4. As stated by Participant 008,

There needs to be a solid skill set there and it is not a set of right or wrong answers; it's an orientation to thinking that enables social work students and

social work practitioners to kind of cull through the set of information and skills and values they've got, in order to make determinations about the best way to proceed in practice.

These *dimensions* project our view of critical thinking beyond a set of *cognitive skills* or *educational objectives* and allow us to incorporate a more holistic conceptualization of this process within social work education and how it informs decision-making and professional judgement. Through the rich descriptors participants provided, I grouped the *dimensions* (key ingredients) via skills, values, principles, assumptions, and personal and affective factors to better inform my understanding of what they are and how they relate to the process of critical thinking in social work. As a result, critical thinking can be seen as far more than an outcome or objective of social work education, but rather a holistic process that influences and impacts how social workers think and engage in professional practice through the interaction of these *dimensions*. Critical thinking is described by participants as cognitive and emotional, where reflection incorporates the emotional elements to assist in understanding meaning. This holistic view also extends the potential opportunities for measurement and assessment, which occur at multiple levels and in numerous ways throughout social work education. Table 5.0 depicts the traditional cognitive skills [behaviours] as described by Facione (1990; 2011) and Scheffer and Rubenfeld (2000), and attitudes [dispositions] that have been associated with critical thinking (Facione, 1990; 2011; Scheffer & Rubenfeld, 2000) through two prior Delphi studies aimed at attaining a consensus definition of this concept: Facione's (1990) seminal study that led to the development of the California Critical Skills Thinking Test (CCSTT); and Scheffer and Rubenfeld's (2000) Delphi study on achieving a consensus

definition of critical thinking in nursing. Both studies identify key skills (behaviours) and attitudes (dispositions) that inform critical thinking. I have highlighted them in Table 5.0, adding the responses of the participants in this social work study on critical thinking in relation to the key ingredients (dimensions) they view as relevant from the perspective of social work education. While the purpose of the current study is not to provide a consensus definition, an aim is to capture the key components that are relevant and meaningful within the disciplinary scope of social work.

Table 5.0 Comparison of Key Ingredients of Critical Thinking from 3 Delphi Studies

| Author/Delphi Study | Skills (Behaviours) | Dispositions (Attitudes) |
|--|---|--|
| Facione, P. (1990). Critical thinking: A statement of expert consensus for purposes of educational assessment and instruction. | <ul style="list-style-type: none"> • Interpretation • Inference • Self-regulation • Evaluation • Explanation • Analysis | <ul style="list-style-type: none"> • Inquisitive • Judicious • Truth-seeking • Confident in reasoning • Open-minded • Analytical • Systematic |
| Scheffer, B., & Rubenfeld, M. (2000). A consensus statement on critical thinking in nursing. | <ul style="list-style-type: none"> • Analyzing • Applying standards • Discriminating • Information seeking • Logical reasoning • Predicting and transforming knowledge | <ul style="list-style-type: none"> • Confidence • Contextual perspective • Creativity • Flexibility • Inquisitiveness • Intellectual integrity • Intuition • Open-mindedness • Perseverance • Reflection |
| Samson, P. (2018). Critical thinking in social work education: A Delphi study of faculty understanding (current study) | <ul style="list-style-type: none"> • Evaluation • Analysis • Synthesis* • Assessment* • Logical reasoning • Use of evidence • Ethical decision-making* • Application • Reflection • Judgement* • Ability to critique others & monitor own thinking | <ul style="list-style-type: none"> • Open-mindedness • Perseverance • Flexibility • Creativity • Intellectual integrity • Patience* • Persistence* • Humility* • Perplexity* • Inquisitiveness in consuming knowledge • Skepticism* |

| | | |
|--|--|--|
| | while following logical steps <ul style="list-style-type: none"> • Questioning • Integration • Argumentation* • Digging deeper, below the surface* • Ability to be vulnerable* • Sophistication* • Clear communication* • Scholarship* | <ul style="list-style-type: none"> • Attitudes of science* (determinism, parsimony, empiricism) |
|--|--|--|

*Elements identified by social work experts on critical thinking

In terms of the skills identified as important ingredients to critical thinking, it can be seen in Table 5.0, that social work faculty members add ethical decision-making, judgement, argumentation, sophistication, synthesis, digging deeper, clear communication, and the ability to be vulnerable to the skill set involved in the process of critical thinking. Both studies, by Facione (1990) and Scheffer and Rubenfeld (2000), focus on *cognitive skills* and *attitudes* in defining this concept, while social work faculty members extend this view to include values, principles and assumptions, as highlighted in Table 4.0. For the profession of social work, professional judgement and awareness of the positioning of one's self are essential components of practice, so the addition of these skills makes sense in terms of relevance to professional practice.

Augmenting the dialogue related to attitudes that support critical thinking, social work faculty members add humility, perplexity, skepticism, patience, persistence, and the attitudes of science (determinism, parsimony and empiricism) to this picture of key ingredients that inform the process of critical thinking. While not new concepts in the dialogue related to critical thinking, these factors are not highlighted as attitudinal components in the consensus definitions of the other two studies by Facione (1990) and Scheffer and Rubenfeld (2000), but clearly have relevance from the perspective of some

social work faculty members. These additional attitudes are reflective of participants who incorporate EBP in their view of critical thinking, particularly in relation to questioning and not taking things at face value. The concept of humility in recognizing the limits of what is known, supports social work's commitment to being open to the lived experience of those we work with; not being expert on all matters.

By re-envisioning critical thinking beyond skills and dispositions to encompass values, beliefs, assumptions, and personal and affective components, we enhance our understanding of how these processes intersect and interact to inform the process of thinking critically for social work students. The theme of *critical perspective and anti-oppressive lens* weaves in the influence of values, beliefs, and assumptions, and how these impact professional judgements in social work practice. This is important because it integrates the value base of social work with critical thinking and how this informs professional judgements in both social work education and practice.

Consistent across the Delphi studies on critical thinking is the significance of reflection. As discussed in Chapter 2, the process of critical thinking is connected to the process of reflection (Askeland & Bradley, 2007). Participants in this study identify the importance of factors such as awareness (including self-awareness), the ability to cope with ambiguity, the application of knowledge from multiple sources, and engagement in problem-solving the complexities of social work practice in thinking critically. This highlights the importance of both reflection and epistemology as influencing factors in critical thinking (Anderson-Meger, 2014; Carey & McCardle, 2011). Findings from this study also illustrate a reciprocal relationship between critical thinking and reflection, as Participant 027 succinctly states,

...whereas critical thinking is mostly about intellect, critical reflection is also understanding how the emotion fits, what it means, how it all fits together into some kind of interpretation that has meaning for the person and then how they [students] would reinterpret that experience. So, they have to critically think to do that, but they also need to be able to um meld together aspects of emotion and action and beliefs, etc., in reinterpreting the meaning of experience.

In addition to the above, other authors support the notion that the process of reflection promotes awareness of assumptions, contextual factors, questioning of power relations, and recognizing there are diverse arrays of perspectives to consider when deciding on courses of action in social work practice (Brookfield, 2009; Fook, 2016; Fook & Askeland, 2006; Karvinen-Niinikoski, 2009; Oterholm, 2009). This provides an effective link to the process of professional judgement and how critical thinking is such an essential component, which is very meaningful and relevant for social workers and social work students. Participants in this study capture these components in the theme *critical perspective and anti-oppressive lens*.

From this study, we learn that one's *epistemological influences and understanding* shape and inform how social work educators envision critical thinking. How knowledge is conceptualized influences how critical thinking is understood and implemented by both faculty members and students. In Chapter 4, Participant 026 highlights this by stating, "[Critical thinking] looks at who benefits from a certain piece of knowledge...it looks at who owns the knowledge. It looks at how we use the knowledge. It looks at power structures within the Gemini of knowledge construction and ownership..." Epistemological beliefs are also identified by participants in this study as

important to the concept of professional judgement in social work practice; therefore, the epistemological maturation of social work students can be viewed as an integral component to social work education. As discussed in Chapter 2, knowledge aids in reasoning, decision-making, and judgement (Anderson-Meger, 2014; Celuch et al., 2009; Hofer & Sinatra, 2010). In findings noted in Chapter 4, Participant 003 captures the link between professional judgement and critical thinking in stating, "...much of professional practice requires judgement and that means being able to kind of think through issues, to consider consequences and pros and cons, and critical thinking undergirds some of those fundamental processes."

Accreditation standards and competency frameworks influence how faculty members understand critical thinking in social work education. The next section is a discussion of the relevance of findings from this study in relation to these standards/competencies.

5.1.1 relevance of accreditation and competency frameworks.

As discussed in Chapter 1, curriculum standards guide social work education on an international scale through accrediting bodies and national competency frameworks, who set standards, requirements and/or expectations for Schools of Social Work in the provision of social work education (CASWE, 2008; Chin & May, 2015; CSWE, 2015; IASSW, 2016). Many of these standards and expectations concern explicit or implicit social work practice behaviours and involve an integration of knowledge, skills and values to inform intentioned action in service delivery. Identification of core competencies, which includes either direct or indirect reference to developing and applying critical thinking, critical analysis, and reflection, is included in these

frameworks (CASWE, 2008; Chin & May, 2015; CSWE, 2015; IASSW, 2016). Several participants in this study frame their understanding of critical thinking and ways in which it can be assessed in relation to the competency requirements/expectations set out by the regulating bodies. Since these standards and expectations are not consistent within and across countries, definitions and measurement of critical thinking remains varied and inconsistent, a point which the participants in this study echo. Measurement of critical thinking as an educational outcome related to accreditation standards or competency frameworks can be limiting (Campbell, 2011) and a lack of a shared understanding of critical thinking reinforces the ongoing challenges in assessing whether or not social work educators are teaching students to think critically. Participants in this study agree with what is already known about the challenges in measuring and assessing critical thinking, as Participant 020 states,

[critical thinking] is difficult to assess...those of us who are educated in doing that need to push ourselves more to developing methodologies for doing that... I think sometimes we've let ourselves off the hook by saying 'oh well it's too complex; you can't...you know, it's reflective and it's this and it's that, and you can't measure it'

The concept of Evidence-Based Practice (EBP) is integrated within the context of these accreditation standards/competency frameworks and is included in the conceptualization of critical thinking for some of the study participants since some faculty members equate EBP with critical thinking. A five-stage model for EBP is correlated to some of the processes identified as being involved in critical thinking: questioning, review of the research literature, critical appraisal of the evidence,

application, and evaluation (Gibbs & Gambrill, 2002; Oancea, 2010; Plath, 2014).

Several participants in this study equate EBP with some of the key dimensions of critical thinking in this study, using some of the same dimensions to describe EBP. These same dimensions are said to influence professional decision-making in practice (Ciliska, 2005; Profetto-McGrath, 2005). EBP is also linked with the concept of scientific reasoning, which Gambrill (2013) considers an important component of critical thinking, which is also supported by some participants in this study.

5.1.2 incorporating a critical perspective.

As discussed in Chapter 1, critical theory plays an influencing role in the understanding and development of critical thinking in social work education. We learn from participants in this study that issues of power, context and social justice are significant and essential to knowing how social workers define social issues and challenges in working with marginalized populations. For example, Participant 013 says

I think social work is unique...in teaching about reflexivity and...what our assumptions are, about ourselves and about others...whether we come from a visible or invisible minority background; whether others, and how that intersects with whomever we are in contact with...the fact that we are...inclined to think about those who are more marginalized and oppressed more so in any other discipline, I would say...is part of what's unique...

Fook (2016) advocates incorporating an anti-oppressive framework into both education and practice that acknowledges social work's commitment to an agenda of both social change and social justice, to be captured within a critical approach to practice. Social work students, in learning to think critically, then are positioned to have a critical

awareness and challenge the status quo (Brookfield, 1985), through resistance and structural approaches to practice.

According to Brookfield (1985), a critical pedagogy supports students in understanding that knowledge is open to change given that it is socially and culturally constructed. Having an awareness of assumptions about how social and cultural forces can influence knowledge and actions in the complexity of practice is considered important by participants in this study: being “poly-ocular at multiple system levels and critiquing what lies underneath” (P001) are important components in a critical perspective. In this study, we learn that the diversity of social work practice requires students to acquire the abilities necessary to navigate complex contextual factors. Awareness of the context is important to critical thinking (Anderson-Meger, 2014; Plath, 2014); hence, a critical perspective is an essential component of critical thinking. It is also important to recognize the other ways in which the world can be conceived and understood, as Participant 020 points out, “there are indigenous epistemologies that do not incorporate an anti-oppressive lens”; thus, a critical perspective is not the only theoretical lens incorporating critical thinking.

5.2 How Social Work Educators Teach Critical Thinking

As discussed in Chapter 2, educators incorporate the teaching of critical thinking skills in a variety of course activities then use assignments to assess components of critical thinking (Rowan et al., 2013). Numerous methods and strategies for teaching critical thinking involve problem-based learning approaches, where real life experiences are integrated into assignments and classroom activities in order to generate experiences supporting the use of a wide range of critical thinking skills related to the concept of

professional judgement for social work students (Carvalho-Grevious, 2013; Dyson & Smith Brice, 2016; Rowan et al., 2013; Williams-Gray, 2014). As discussed in Chapter 2, teaching approaches that are correlated to higher levels of critical thinking by students include: explicit teaching of critical thinking, diverse learning activities that focus on student-centred learning, case method seminars, and student learning through formative assessments (Deal & Pittman, 2009; Jones, 2005; Plath et al., 1999). Participants in this study clarify that these teaching approaches are relevant to the context of teaching and learning within social work education, specifically related to case-method teaching and learning, using activities that include controversial/current events, debates, class discussions, dilemmas, learning diaries, simulations, and activities that start with a critical incident that then prompts a response incorporating processes of critical thinking and critical reflection. This mirrors Schon's (1987) conceptions of reflection both in and on action to promote deep learning for students. Students engage with real life scenarios to stimulate critical thinking to address the issues presented in the learning activity or assignment(s), which supports reflection in and on practice scenarios. This ties in directly with central features of Mezirow's (1997) theory of Transformative Learning, where experiences (including values, beliefs and assumptions) are transformed via learning as these values, beliefs and assumptions (frames of reference) become amenable to change through a process of critical reflection. As well, learning experiences that occur through activities such as case-based learning, dealing with ethical dilemmas and similar types of problem-based learning strategies, promote change opportunities for students and foster critical thinking.

Teaching strategies and assignments that incorporate experientially-based activities further the development of critical thinking skills and abilities (Chang & Wang, 2011; Chiang & Fung, 2004; Mackinnon, 2006; Schell & Kaufman, 2009; Sendag & Odabasi, 2009). A review of the literature supports the notion that a student-centred approach to teaching and learning improves critical thinking skills which is consistent across multiple academic disciplines (Chan, 2013; Zygmunt & Schaefer, 2006). In Chapter 4, Participant 016 describes the experience of using *case method teaching* to teach critical thinking to social work students,

...with um, the case method teaching...students will say at the end... “you know I started saying to myself in this case, how would so and so answer this? Because I really like the way that they think about things so I imagine if I were Alison, what would Alison say?” ...So, it’s a pretty clear, direct expression of people sort of incorporating other view points and trying to broaden their perspective...so with the case method, people will think that fairly directly.

Participants also note using *critical incidents* is a useful way to teach both critical thinking and reflection (Brookfield, 1997; Fook & Askeland, 2006; Fook & Gardner, 2007; Oterholm, 2009). This links to Vygotsky’s view of development that occurs through periods of *crisis* then *transformation* in a constructivist view of learning (Blunden, 2011; Vygotsky, 1963; 1970), as discussed in Chapter 1. Table 5.1 details common teaching methods used to develop and promote critical thinking. The first column highlights effective teaching strategies and methods identified in the literature, and then specifically within social work education. The final column depicts other factors that influence the teaching of critical thinking. It is noteworthy to point out that

learning from experience (prior knowledge) supports deep learning for students because it helps students make connections with new information and promotes diversity in the ways in which the world can be viewed (Dochy et al., 2002; Vogel-Walcutt et al., 2011). Cognitive dissonance may occur with this process as students incorporate new information that could challenge previously held beliefs. According to Graesser, Baggett, and Williams (1996), generating cognitive dissonance can positively impact both student achievement and motivation to learn.

Table 5.1 Teaching Methods for Critical Thinking

| Teaching Strategies/Methods that Support Critical Thinking | | Other Factors Identified as Influencing the Teaching of Critical Thinking |
|--|---|--|
| <i>Teaching Methods Identified in Literature Across Disciplines to Support Critical Thinking</i> | <i>Teaching Methods & Strategies Utilized in Social Work to Develop Critical Thinking (from literature & experts in this study)</i> | Setting/Learning environment |
| Concept mapping | Trigger events/critical incidents | Class size |
| Scaffolding learning via course content and assessment tasks | Reflection/critical reflection | Educator training, skills, and level of experience |
| Problem-based learning; Inquiry-based learning | Sequential learning/scaffolded | Educator attitudes toward critical thinking |
| Use of real life experiences to support critical thinking | Discussing & planning assignments with students | Students' prior knowledge |
| Peer coaching | Ethical dilemmas | Interactions between students and teachers |
| Online, asynchronous activities and assignments | Use of controversial events | Emphasis on knowledge construction |
| Case study approaches | Discussion forums | Collaborative learning spaces |
| Experientially-based activities and assignments | Use of simulations | Safe spaces |
| Debates/controversies/argumentation activities | Learning diaries/biographies/portfolios | Educator confidence and enthusiasm |
| Open-ended & topic discussions | Case method teaching | Active & purposeful training of teachers in critical thinking |
| Portfolios | Capstone projects | Explicit course objectives on critical thinking (infusion) |
| Critical incidents | Integrative seminars and field practicums | Student-centred approach to teaching & learning |

| | | |
|---|--|--|
| Service learning | Writing assignments/activities | Assessing critical thinking development over successive assignments/longer intervention periods |
| Senior thesis/project | Class discussions | Use of formative assessments |
| Teaching explicit principles of critical thinking within courses | Blended learning environments: in-class; virtual (synchronous/asynchronous) | Intentional curriculum design to promote critical thinking |
| Promote transferring application of critical thinking to new contexts | Debates | Embedding critical thinking objectives within subject-specific courses (emersion) |
| Activities that incorporate key subject-area concepts to think deeply about | Multimodal learning, merging arts, writing and field experiences* | Use of questions/Socratic question as teaching tools |
| Creative problem solving | Role play scenarios; real life examples | Incorporating a variety of active learning activities, assignments, projects, etc., in the classroom and beyond across disciplines |
| Clinical experience debriefing exercises and assignments | Team-based learning via integration seminar experiences | |
| Reflective writing; written assignments | Use of real life experiences to support critical thinking in relation to decisions, discretion, and making professional judgements | |
| Simulations & role playing; Strategic Management Simulations (SMS) found in nursing | Challenge student perspectives in meaningful contexts; studying abroad | |
| Use of poems and literature | A “theory mindedness approach” to learning course concepts* | |
| Online & asynchronous learning environments | Teaching research skills | |
| Studying abroad | Logic modeling* | |
| Co-teaching; team teaching; IPE | Use of evidence and scientific principles in assignments | |
| | Collaborative/team teaching; Interprofessional education (IPE) | |

*Specific to the social work literature

Consistent with what has been discussed in Chapter 2 about the influence of faculty attitudes towards critical thinking by Halx and Reybold (2006), participants in this study confirm that faculty members’ attitudes toward critical thinking influence how it is taught within the context of social work education. According to Tsui (2002), faculty

perceptions of critical thinking, confidence in teaching it, and a view of learning as a collaborative process with students influences learning in the classroom and fosters critical thinking (or not). Consistent with what the literature identifies as effective ways to teach critical thinking through active learning strategies (as highlighted and discussed above), participants in this study concur that a student-centred approach to teaching and learning promotes student engagement and can enhance a student's motivation to learn. As consequence, based on what participants in this study have shared and consistent with what the literature reveals, faculty members who embrace critical thinking as something important for student learning, growth and development, will incorporate active teaching and learning strategies in the classroom environment to promote critical thinking development. Those who do not value critical thinking will not have as positive an impact on fostering critical thinking development in their students.

The findings from this study support much of what is known about best practices in teaching and learning, as captured in the National Survey of Student Engagement Report (2016) on High-Impact Practices (HIPs): learning communities or students taking two or more courses together; courses that integrate service-learning opportunities; working with faculty members on research; field/clinical internship experiences, studying abroad, and Capstone/senior year comprehensive projects all demonstrate positive outcomes in relation to student learning and maintaining students in university programs (p. 2). These HIPs are related to several of the components of experientially-based learning approaches participants in this study describe as effective mechanisms used to encourage critical thinking in students, particularly field practicums and case-method teaching and learning that culminate in senior-year capstone projects. Field practicums,

where students are placed within agency settings to integrate theory into practice by working in real life situations have been described as a “signature pedagogy” of social work education (Wayne, Bogo, & Raskin, 2010). Those HIPs related to service learning, field/clinical internship experiences, study abroad opportunities, and comprehensive projects such as capstone courses are identified by participants as effective mechanisms to develop critical thinking in social work students.

A review of the literature related to teaching critical thinking supports the idea that critical thinking skills can be developed in students through explicit instruction on critical thinking (Abrami et al., 2008; Burbach et al., 2012; Crenshaw et al., 2011; Friedel, et al., 2008; Hofreiter et al., 2007; Hoover & Lyon, 2011; Johnson, 2011; Tsui, 2002), but some participants in this study suggest that this in fact does not transfer into the practice setting very well. Teaching skills in isolation from the practice context poses challenges for students in transferring knowledge, as contextual factors influence the processes of critical thinking and professional judgement (Plath, 2014). Participants in this study suggest that integration from the classroom environment to the field setting is a more effective way to support critical thinking skill development for students, weaving the practice context with the classroom.

...when we teach people in a classroom, which is one context and one environment, and we ask them to employ those skills, and those concepts in a completely different environment, in the practice environment...it's really difficult for them to generalize those. (P016)

Integration from the classroom environment to the field setting is described by participants as an effective way to foster critical thinking skills for students, along with

adequate supports for Field Instructors to reinforce such links from theory to practice for students as emerging social work professionals. Kolb (1984) upholds the importance of experiential learning for the development of critical thinking, and the participants also suggest that.

In this study, we learn that participants believe that integration of the curriculum and field via experiential learning is essential to support the development of critical thinking skills in students, as suggested by Participant 001,

...in practicum...if you have a good supervisor...on the same page around what we are each thinking around critical thinking...someone who is kind of repeating those messages through supervision, I would say that there would be more of an impact [integrating curriculum with the field].

Transformative experiences, whether in the classroom or field, stimulate students to engage in the process of critical thinking which helps them address the complexity of situations and integrate knowledge from multiple sources to inform choices on how to proceed. Similar to Fook and Gardner (2007), Oterholm (2009) and Van Gyn and Ford (2006), participants in this study describe *critical incidents/trigger events* as effective mechanisms to promote critical thinking and critical reflection. For example, discussing ethical dilemmas that may arise in practicum settings then deconstructing them within the classroom environment to support and promote reflection on the experiences and critical thinking in resolving the issue(s).

5.2.1 barriers to teaching critical thinking.

Consistent with what is emphasized in the literature, participants in this study state that barriers to teaching critical thinking include class size, time, fiscal resources,

faculty and student attitudes towards critical thinking, student fatigue, anxiety and life circumstances, as well as resistance from both faculty and students. Jarvis (2006) mentions both institutional barriers and differences in student needs and learning styles as factors impacting how critical thinking is taught, while Abrami et al. (2008), Behar-Horenstein and Lian (2011) and Halx and Reybold (2006) note challenges with the amount of time it takes to examine and engage in new ways of thinking, teaching and learning.

Student readiness to learn is also identified as a barrier to teaching critical thinking, reflecting Thorndike's (1933) conception of student readiness from the behaviorist learning tradition where students need to be ready and willing to engage in the learning process. Participants describe critical thinking as something that is difficult to do for students, and presents time and workload constraints for faculty members to incorporate into courses and curriculum. This is consistent with what is reported in the literature, in that it takes a great amount of time to engage in teaching and learning activities that support critical thinking (Abrami et al., 2008; Halx & Reybold, 2006).

Another factor influencing the incorporation of teaching critical thinking into the curriculum at an institutional level is the value of teaching versus research in higher education. In Chapter 4, Participant 006 highlights this tension,

...particularly for research intensive Universities where it is all about your number of publications and number of citations impact factor in the journals you are publishing in; it is very heavy research pressures of Universities when you are on...the tenure tract. I think there is a lot of pressure to not...focus on practice [and teaching] too much.

According to Tsui (2002), this is an influencing factor for faculty members including components in courses that positively impact critical thinking skills for students and effects course designs, assignments, and overall workload, which some participants in this study echo. Some faculty members also note challenges in supporting teaching activities in research-intensive university settings.

We learn from participants that there is not one single way to teach critical thinking to social work students. Rather, the wide diversity of thought and pedagogy that supports social work education is identified as an asset that offers opportunities for creativity and innovation in teaching methods and strategies. This is supported by McLeod (2016), who suggests incorporating multimodal teaching and learning strategies within courses to engage students in critical thinking. A focus on student-centred teaching, where the goal is to produce learning, rather than merely providing instruction to students and hoping learning occurs (Barr & Tagg, 1995), is a more conducive environment for critical thinking via creativity and innovation in the classroom. With a shift in focus to student-centred teaching and learning, authentic learning spaces can be generated, where knowledge can be co-created between teachers and students (Tsui, 2002). As highlighted in Chapter 2, a collaborative learning environment supports a constructivist perspective of learning that embraces ambiguity, which in turn allows educational spaces to become collaborative and authentic environments (Bonk & Kim, 1998; DeVries, 2000; Harris & Harvey, 2000; Mezirow, 1991; Tseng, Gardner & Yeh, 2016). Participants in this study, through the theme of *pedagogy encompasses teaching strategies, philosophies, learning spaces, and integration with field and curriculum*, support this view of teaching and learning to encourage critical thinking skills in social

work students. Participants suggest that a safe learning environment is important for students in developing critical thinking skills, which relates to collaborative, authentic learning spaces. Authentic learning environments provide a forum for students to engage in solving real life problems (Keppell, 2014) in an atmosphere where students can feel safe to take risks in an ethical classroom environment (Preez, 2012). Both teachers and students play a role in creating and maintaining a safe classroom space in order to effectively engage in collaborative, authentic learning opportunities.

...if you can keep the classroom safe...so that people are not shamed by their ideas and...differences, I think most students find it pretty stimulating, pretty engaging and they are often surprised and pleased with the way they start to think differently. (P003)

Some participants in this study help us to reconsider our learning spaces, from re-envisioning the classroom to extend beyond the physical realm into virtual learning spaces and beyond. Participant 024 talks about student engagement in learning while traveling great distances to attend weekend classes, where students interact and work together in what can be described as *interspaces of learning*; those liminal spaces and places where students can be creative, thoughtful and imagine concepts in new ways, either collaboratively or individually.

These interspaces, suggested within the sub-theme of *culture of space*, is a unique contribution that this study makes to our understanding of the concept of critical thinking. Our attention is drawn to the spaces in between our more structured learning venues, such as classrooms. In these spaces, students imagine and create in their own time and space, then introduce this creativity back into the classroom environment, where it can be

further shaped and refined; a means of creating something new, meaningful and relevant. These interspaces could be those moments of engaging in hobbies, in nature, while silent; where one can imagine and re-imagine concepts in a setting that is more individually relevant or meaningful and allows for epiphany moments in how concepts may be reconceptualized, refined, or more clearly understood.

5.3 How Social Work Educators Know When Students are Thinking Critically

As discussed in Chapter 1, the practice theory of experiential learning (Kolb, 1984) is important in understanding a pedagogy to support critical thinking. According to Kolb (1984), learning that is viewed as a lifelong process and incorporates a holistic perspective, weaves together thinking, experiences, perceptions and actions. Participants in this study correlate this lifelong and holistic process with a view of critical thinking as a multidimensional process. We learn from participants that students demonstrate critical thinking when they engage with one another in meaningful, intentional ways through class discussions, interactions, and course assignments. This is consistent with those teaching strategies discussed in the literature and mentioned above, including problem-based learning, case method teaching, debates, dilemmas, discussions, and assignments that support the development of critical thinking skills for students (Behar-Horenstein & Lian, 2011; Halx & Reybold, 2006; Tsui, 2002).

In describing how critical thinking comes to life in the classroom, Participant 003 states,

I think that it [students demonstrating critical thinking] is working when students are able to listen to each other well and develop...become better listeners and more respectful and even interested and curious in other people's perspectives, and start to draw their classmates out; when they can disagree well...and so one

of the things that they learn to do in this [capstone] class, most students learn to do, is how to fight a little better, how to disagree in a civil way...in a thoughtful way...to disagree in a way that helps each other kind of refine our perspectives and ensure that we understand each other's perspective before we try to argue against it, and so on. Those are all kind of subtle, but important indicators for me that a student is becoming a better critical thinker.

What is perhaps new from a social work perspective is this holistic view of critical thinking, which extends beyond a purely cognitive understanding of the concept. Others have looked at it as a skill, but participants in this study describe it as a multidimensional process. Participants also describe critical thinking as a lifelong process; a commitment to a culture of learning that extends beyond the confines of academia into social work practice. As a holistic process, participants suggest that critical thinking skills continue to develop and evolve over time, including in social work practice. Consequently, teaching students how to engage in critical thinking establishes a foundation for professional judgement, upon which they can continue to grow and develop throughout their professional lives. Perhaps envisioning critical thinking as this holistic, iterative process, we can reconceptualize how to assess and measure progress over time rather than focus on single points in time or semester-limited terms, to determine our progress in teaching this to students. Participants describe critical thinking as something that evolves over time and is demonstrated through increased sophistication in student abilities to integrate a depth and breadth of understanding of what is being taught then apply it in interactions with teachers and peers within the classroom setting, and in making professional judgements in practice. Perhaps measuring the growth (or

not) of critical thinking over the course of a two or four-year program will be a better way to determine if these skills and abilities are materializing and being operationalized.

Connecting experiences to the concepts of thinking and knowledge (Dewey, 1916) creates venues for students to integrate their learning that can be transformative through the process of reflection. As revealed in the theme, *critical perspective and anti-oppressive lens*, Participants in this study suggest that, as students develop an awareness of their social location in relation to values, beliefs and assumptions and how these influence knowledge and decision-making processes, they are better able to integrate multiple factors and engage in deeper learning; this is also supported in the literature. According to Fook and Askeland (2006), reflection helps people channel what they are learning to create new knowledge and opportunities to change practice behaviours. This is supported by Savaya and Gardner (2012) who note that being aware of one's assumptions allows one to engage in alternative actions.

We learn from this study that social work experts believe that students who are thinking critically demonstrate many of those key *dimensions of critical thinking* displayed in Table 5.0, such as willingness, openness, curiosity, creativity, reflection, awareness, questioning, use of evidence and science to build arguments and defend positions, humility in acknowledging that knowledge is limited, engaging in respectful interactions with others, and respecting diversity (of person, position, and perspectives of others). Miller and Skinner (2013) make reference to a sense of willingness to think in different ways and consider new knowledge and information, so when students demonstrate these attitudes, critical thinking is supported and allowed to grow. Recalling from Chapter 4, Participant 008 captures this idea,

When we say critical thinking in social work, we mean more than just that; again, that standard definition or that set of definitions that have been applied to critical thinking. We mean more how it is somebody does what they do with stuff, via how they think about it and there seems to be some suggestion that some of that may intersect with some...traits or personal orientations that then have bearing on if and how that critical thinking gets developed and applied.

5.4 Evolution of a Conceptual Model for Understanding Critical Thinking

As discussed in Chapter 1, the over-arching lens through which this dissertation is framed is that of a constructivist paradigm, where knowledge is viewed as being socially constructed through a process of dialogic interaction (Vygotsky, 1963; 1978). A conceptual model is proposed in the introductory Chapter, to outline an understanding of critical thinking in social work education that blends tenets of the meta-theories of learning (behaviourist, cognitivist, social learning, humanist, and constructivist) with Bloom's taxonomy of educational objectives, critical theory, and experiential learning, which is the practice theory that operationalizes the interaction of these theories and objectives. All then intersect to inform a process of critical thinking, while critical reflection is identified as an essential component of this process of critical thinking.

From this study, we learn that critical thinking is viewed as a *multidimensional process* by participants. As a process, the central tenets of each of the meta-theories of learning are influencing factors in critical thinking, and more generally in teaching and learning by participants. Through the rich narrative stories shared by the participants in this study, these key tenets are brought to life in how critical thinking is understood and operationalized within social work education. A learner-centred approach to teaching that

fosters collaborative participation and interaction in the construction of knowledge and experience, both in the classroom and field, is supported by participants, consistent with what the literature describes as important for a pedagogical approach to support critical thinking and reflection (Barr & Tagg, 1995; Mezirow, 1997; Tseng, Gardner & Yeh, 2016; Tsui, 2002).

I will now highlight how components of the initial conceptual model proposed in Chapter 1 are brought to life by participants in this study. How participants' feedback has shifted this proposed model to assist in understanding the process of critical thinking will also be discussed.

- *From a behaviourist lens, learning occurs as a result of mechanized processes of association (Pittenger & Gooding, 1971) and Thorndike's law of readiness influences students' motivation to learn (Thorndike, 1933)*

From the behaviorist perspective, Thorndike (1933) theorized about the laws of *readiness to learn* and *law of exercise* in relation to the learning process. Essentially, students require a willingness to learn, and this learning is reported to strengthen over time. Participants in this current study talk about critical thinking in a way that requires a sense of *willingness*; willingness to be open-minded, intentional and aware (of self and others) as they engage in problem-solving, decision-making and professional judgement (identified as important *dimensions of critical thinking* by participants). Participants also suggest that critical thinking skills develop or “evolve” over time so that this *law of exercise* (learning becomes reinforced as stimuli are repeatedly reinforced over time) is strengthened over time as students' critical thinking skills improve and become more sophisticated. Sophistication is a term that participants in this study have used to describe

how they know when their students are starting to think more critically; “thinking becomes more nuanced...sophisticated” (P003)

- *From a cognitivist perspective, the focus is on how students use internal processes with regard to thinking, knowing and perceptions (Lewin, 1948; Marquardt & Waddill, 2004; Piaget, 1970; 1973)*

In the cognitivist tradition, the focus is on how people learn via recognition of experiences, insight, perception, and meaning attribution (Marquardt & Waddill, 2004). Cognitive learning theory examines processes of both thinking and knowing, where thinking involves processes of reflection and planning ahead regarding future actions based on learning (Jarvis, 2006), and forms of thinking include critical thinking. Participants in this study share their views on the process of critical thinking and demonstrate the importance of these central tenets of cognitivist learning theory. The sub-theme, *culture of space*, reflects some participants’ views of the importance of the learning space or environment in furthering student learning and engagement in critical thinking (or not). Participants suggest that the classroom environment needs to be a safe space where students can risk challenging ideas and asking questions; to engage in reflective self-awareness to support the perspectives of others is deemed as being “important” by a number of participants. Students bring with them a variety of life experiences and learning needs or styles that faculty members need to be cognizant of in the classroom setting.

- *With a humanist lens, key concepts include self-actualization and self-directed learning (Knowles, 1980; Marquardt & Waddill, 2004; Maslow, 1954; Rogers, 1951; 1983)*

From the Humanist tradition, learning is based on concepts of self-actualization (Maslow, 1954) and self-directed learning (Knowles, 1980) that focus on affective

components of human development. Knowles (1980) Theory of Andragogy is relevant here as it relates to understanding the *how* and *why* adults learn. Self-directed learning, readiness to learn, life and maturation factors, a problem-centred orientation to learning, and student motivation to learn are all components of principles of adult learning (Knowles, 1980). Participants describe critical thinking as “something that is hard to do,” but that does evolve and grow over time as it is influenced by life experiences and maturity. This is supported in the literature (Abrami et al., 2008; Behar-Horenstein & Lian, 2011).

- *From the social learning theory tradition, the focus is on the interaction of thoughts, behaviour and the social context within which learning occurs (Bandura, 1977; 2001; Dewey, 1916)*

Social learning theory integrates learning via interaction with the social context of learning. As discussed in Chapter 1, learning takes place within the social environment where knowledge, skills, attitudes and beliefs are learned by observing others (Bandura, 1977; 2001). Participants in this study speak of the importance of learning from experience (experientially-based teaching and learning methods and strategies) and incorporating reflection to support the process of critical thinking for students.

- *From a constructivist learning theory perspective, the focus is on the interaction that occurs in the social context of learning, where knowledge is created via dialogue and interaction and acknowledgement that there are multiple ways of knowing (Baviskar et al., 2009; Mezirow, 1991; 1997; 2003; Vygotsky, 1963; 1978)*

The Constructivist learning perspective emphasizes the social construction of knowledge through interaction and dialogue (Baviskar et al., 2009; Marquardt & Waddill, 2004; Vygotsky, 1963; 1978). Emphasis on the learning context is made in this perspective, which participants echo. Mezirow’s (1997) Theory of Transformative Learning is captured here, as it highlights the process through which peoples’ frames of

reference can be changed, allowing them to be more open, flexible, and adaptable to changing contexts.

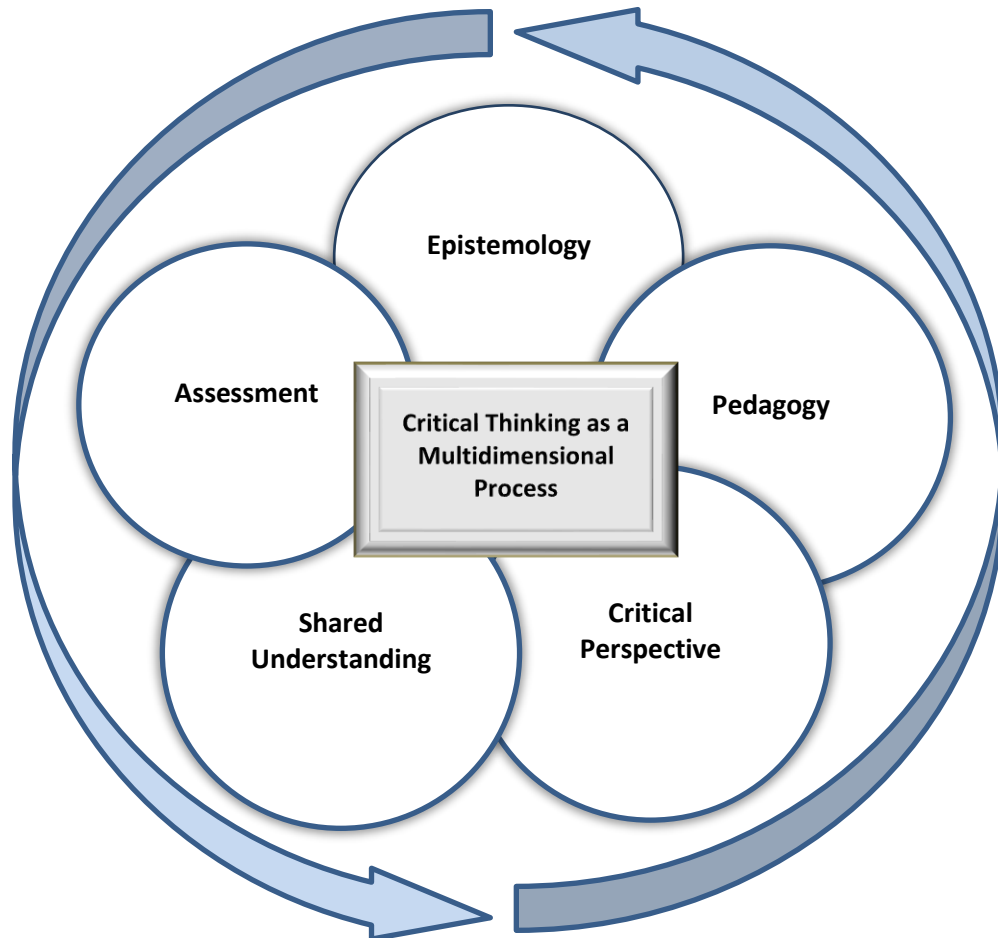
The initial conceptual model also incorporates the educational objectives captured within Bloom's taxonomy of learning: knowledge, comprehension, application, analysis, synthesis, and evaluation (Bloom et al., 1956). These educational objectives relate to some of the *dimensions* of critical thinking described by participants in this study required by social work students: evaluation; analysis; synthesis; assessment; being open; logical reasoning; use of evidence; ethical decision-making; application; reflection; judgement; scholarship; ability to critique others and monitor your own thinking while being logical; questioning; integration; and argumentation.

Critical theory is included in the initial conceptual model, representative of a critical approach to social work practice that recognizes issues of power, structural analyses of social problems, and anti-oppressive practices in support of a social justice agenda. Participants in this study identify the theme of *critical perspective and anti-oppressive lens* that captures these essential components, but also acknowledge that there is some confusion with this view, as it mixes critical theory with critical thinking, which can be limiting given the existence of epistemologic understandings apart from an anti-oppressive lens. Of the 28 original participants, only two describe critical theory as the basis upon which critical thinking is built; the others recognize the multiple influences and epistemological positions that inform this process of critical thinking. Therefore, I have shifted the conceptual model and removed critical theory as a stand-alone theory; it is captured within epistemology.

Some participants suggest that a *critical perspective* allows one to capture that lens of critique, critical reflection, and an understanding of power and social justice, without being locked into a theoretical perspective that is too limited in scope. It is important to note that participants in this study acknowledge that the inclusion of the theme *critical perspective and anti-oppressive lens* when describing elements involved in critical thinking is a unique contribution that social work makes to the dialogue on critical thinking, which speaks to our profession's commitment to social justice and the importance of including power dynamics in any critical analysis.

With this in mind, I have taken the six themes emerging from the analysis of the data in this study and re-envisioned the conceptual model to clarify critical thinking in social work education. Figure 5.0 is a visual representation of the revised conceptual model that has shifted from the original version described in Chapter 1, based on the findings from this study. *Critical thinking as a multidimensional process* is at the centre of this diagram, surrounded by intersecting circles representing the other emergent themes of *epistemology, pedagogy, critical perspective, shared understanding, and assessment*. The circular arrows encompassing the themes represent the interrelated and reciprocal relationship of all of the themes, as identified by 9 out of 10 participants who came to consensus on this point.

Figure 5.0 Revised Conceptual Model for Understanding Critical Thinking



This revised conceptual model provides a more fluid understanding of the critical thinking process and how it is understood and operationalized within social work education. It also provides a unique contribution to our understanding of this process, through the intersection of the themes identified by the experts related to critical thinking in social work education who participated in this study. It allows us to visualize this holistic, iterative process of critical thinking.

5.5 Summary

In this Chapter, I have discussed the findings from this study within the context of the research literature and in a manner that demonstrates how the findings are integrated

with the research questions posed for this study--how expert social work faculty understand critical thinking; how critical thinking is operationalized in the classroom; and how social work educators know when students have achieved the ability to think critically. The emergent themes from this study have informed a revision of the conceptual model proposed to aid in understanding critical thinking within social work education. The implications of these findings will be discussed in the next section, specifically in relation to social work education, research and policy. Additionally, the contributions of this study will be highlighted, as well as study limitations and conclusions.

5.6 Study Contributions

One of the most significant contributions of this study is the methodology that was utilized; it is unique in that it is a qualitative Delphi methodology conducted with an aim to achieve consensus on what critical thinking looks like in social work education. As a method, the Delphi is an iterative process that in essence provides group feedback through the sharing of individual responses over successive rounds where participants have the opportunity to shape their understanding of the findings based on the feedback of others involved in the process (Keeney et al, 2011). This is the first time a Delphi study has been used to examine faculty members' understanding of critical thinking in social work education. As an effective methodology to use in understanding a topic, participants in this study were able to refine their understanding of the emerging themes and ultimately achieve consensus on five key statements that capture the essence of the findings from this study:

1. Critical thinking is a multidimensional process

2. The richness in the diversity of thought and pedagogy that informs social work education is an asset in promoting the understanding and development of critical thinking in students
3. All of the emerging themes identified in this study are interrelated and reciprocal, rather than linear or hierarchical
4. All of the themes identified in this study are equally important
5. If social work educators had a shared understanding of critical thinking, a more realistic and effective means of assessment may be achievable

This research method is described as ideal for investigations that seek to build understanding that can then be further studied; it is described as a *pragmatic* approach to building theory on a topic (Brady, 2015). Given the emphasis of this current research project on the use of experts to inform our understanding of critical thinking in social work education from a faculty perspective, this Delphi methodology has been well-suited to elucidate a reconceptualization of this topic within a discipline-specific context. Points of agreement in this study have been highlighted, while issues of contention help identify the ongoing debates and tensions, particularly in relation to challenges with assessment of critical thinking and field integration that can inform future research initiatives. The member-check involved in this iterative study process also strengthens our understanding of the faculty experience of critical thinking within social work education. Member checking is an important mechanism used to support the rigor, credibility, and trustworthiness of findings in qualitative research, including the Delphi method (Brady, 2015; Creswell, 2013; Engels & Kennedy, 2007). Three rounds for this current investigation have provided a fulsome opportunity for participants to engage in member checking, to ensure both the accuracy and authenticity of the findings throughout this process.

As noted above, this current research project is the first Delphi study examining critical thinking from a faculty perspective in social work education internationally. The seminal Delphi study on critical thinking by Facione (1990) provided a consensus definition that led to the creation of a large-scale standardized test called the California Critical Skills Thinking Test (CCTST) in the early 1990s that still shapes and informs our understanding of critical thinking across academic disciplines. Scheffer and Rubenfeld (2000) then proceeded to conduct a Delphi study in the field of nursing with the intent of achieving a consensus definition of critical thinking within that discipline-specific context, as discussed in Chapter 2.

Within this current qualitative research project, social work faculty members have contributed to arriving at consensus on the five key points highlighted above, which can shape and inform an understanding of how critical thinking can be reconceptualized within a social work lens. Perhaps this reconceptualization will contribute to a *shared understanding* of critical thinking as a multidimensional process informed by epistemology, pedagogy, assessment, and a critical perspective. With a shared understanding and some common language captured within the themes and sub-themes of this study, perhaps more efficient and effective ways of measuring critical thinking within social work students will be achievable. Accreditation standards and competency frameworks can then incorporate the concept of critical thinking as a holistic, multidimensional process and the language of a shared understanding, to shape and inform a more consistent approach to the utilization of critical thinking by social work students. It can also help shape and inform assessment mechanisms via these standards/competency frameworks. This shared understanding can be implemented

within and across social work programs by recognizing the richness in diversity of thought and pedagogy that supports critical thinking development.

5.6.1 expert understanding of critical thinking in social work education.

As a second contribution, this study represents the first time social work faculty internationally have been asked about how they understand critical thinking within social work education, including how they operationalize it in their classrooms, and how they see it enliven their students. It provides a glimpse into the diverse array of experiences of social work faculty within their academic environment, but more importantly, it reveals the universality of the issues and challenges facing social work education. Participants tell us that there is rhetoric surrounding the importance of critical thinking and how it is operationalized in both Schools of Social Work and in particular, the social work curriculum. Participants share that there are challenges in integrating critical thinking into both the curriculum and the field settings, and there are gaps in field education that impact the profession in the countries where participants in this study work. Across participant responses, numerous strengths are identified in how faculty members bring critical thinking to life in the classroom setting and beyond via a rich variety of thought and pedagogy to support teaching students to think critically which, through this study, can be shared among social work faculty to encourage pedagogical approaches to further critical thinking skill development throughout the curriculum. Finally, some participants suggest that the inclusion of the theme *critical perspective and anti-oppressive lens* integrates issues of power and social justice, which is a unique viewpoint the social work profession contributes to this dialogue on critical thinking.

Previous studies on critical thinking have largely focused on efforts to define the concept of critical thinking (Almeida & Franco, 2011; Ennis, 1989; 1996; Facione, 1990; Scheffer & Rubenfeld, 2000), measuring student outcomes related to this concept (Arum & Roka, 2011; Blondy, 2011; Burbach et al., 2012; Buraphadeja & Dawson, 2008; Carter, 2008; Clark, 2002; Condon & Kelly-Riley, 2004; Deal & Pittman, 2009; de Leng et al., 2009; Friedel et al., 2008; Halpern, 2001; Hofreiter et al., 2007; Huff, 2000; Johnson, 2011; Kersting & Mumm, 2001; Ku, 2009; Martin et al., 2008; Miller et al., 2009; Plath et al., 1999; Richardson, & Ice, 2010; Rumpagaporn & Darmawan, 2007; Saiz & Rivas, 2011; Schell & Kaufman, 2009; Schellens et al., 2009; Schneller & Brocato, 2011; Snodgrass, 2011; Tucker, 2008; Valenzuela et al., 2011; Vandsburger et al., 2010; Williams et al., 2004; White et al., 2011) and/or how to effectively teach critical thinking (Abrami et al., 2008; Arend, 2009; Athanassiou et al., 2003; Behar-Horenstein & Lian, 2011; Burbach et al., 2012; Burgess, 2009; Carmichael & Farrell, 2012; Condon & Kelly-Riley, 2004; Crenshaw et al., 2011; Dyson & Smith Brice, 2016; Fitzgerald & Baird, 2011; Friedel et al., 2008; Gibbs et al., 1995; Halx, & Reybold, 2006; Hayes & Devitt, 2008; Heron, 2006; Hofreiter et al., 2007; Hoover & Lyon, 2011; Huff, 2000; Johnson, 2011; Jones, 2005; Kersting & Mumm, 2001; Krupat et al., 2011; Mackinnon, 2006; Mandernach, 2006; Martin et al., 2008; Miller et al., 2009; Miller et al., 2011; Plath et al., 1999; Profetto-McGrath, 2005; Richardson, & Ice, 2010; Robinson, 2011; Rowan et al., 2013; Schell & Kaufman, 2009; Schneller & Brocato, 2011; Sendag & Odabasi, 2009; Soffe et al., 2011; Stein & Haynes, 2011; Szabo & Schwartz, 2011; Tsui, 2002; Yang, 2008; Yang et al., 2005; Yeh, 2012). This current research project has focused on gaining a rich understanding of what critical thinking looks like in social work education

that transcends an analysis of only one or two concepts related to critical thinking and how they might intersect that many prior studies have emphasized. This study looks at how social work faculty members understand, teach and then recognize when their students are engaging in critical thinking in their classes. This study helps bring to life a discipline-specific understanding of this topic that can be further studied based on the reconceptualizations participants have provided. This approach augments our understanding of critical thinking in social work education as a holistic process.

5.6.2 understanding critical thinking as a process rather than a discrete skill.

Thirdly, this study identifies dimensions or components of critical thinking that interact and intersect to inform a multidimensional process that brings critical thinking to life. It reveals an understanding of critical thinking that views the emergent themes as interrelated and reciprocal, as illustrated by the revised conceptual model (Figure 5.2) that enhances our understanding of the process of critical thinking within social work education, which is a new contribution. Rather than narrowing the focus of critical thinking to an educational outcome, critical thinking can be seen as a broader conception that is influenced and informed by epistemology, pedagogy, a critical perspective, shared understanding, and assessment that extends beyond the classroom and evolves over time.

This broad view could be beneficial in supporting a conceptual understanding of critical thinking that will be relevant beyond social work education; a relational model for understanding critical thinking that involves a commitment to lifelong learning. Brownlee (2004) discusses a relational model for teaching that undergirds a transformative and constructivist approach to teaching and learning and enhances the sophistication of the epistemological beliefs of students. As discussed in Chapter 2, a focus on transformative

learning, rather than merely transmitting information, is claimed to enhance student learning and skill development (Bar & Tagg, 1995; Brownlee, 2004). Embracing a broader reconceptualization of critical thinking may empower faculty, field instructors, agencies in the human services sector, and students/emerging professionals to commit to lifelong learning that will assist in the continuing development of critical thinking throughout their lives.

5.7 Recommendations

The following recommendations, reflecting the findings from this study, are presented for social work education, policy and research in the hope that they will shape the next steps based on the findings and knowledge gained from this iterative study. The recommendations for social work education encompass faculty support for improved teaching skills and course/curriculum design for constructive alignment to support critical thinking learning outcomes. Expanded opportunities for collaborative and interprofessional education and teaching will be examined. Recommendations for policy include issues related to workload distribution and incentives for the scholarship of teaching and learning for faculty. Recommendations for research include studies that examine interprofessional education and its influence/relationship to promoting/developing critical thinking skills in students as well as studies that examine critical thinking in social work practice to see how it converts from what is taught within the academy.

5.7.1 recommendations for social work education.

recommendation #1.

That universities support teaching and learning activities to foster and improve faculty teaching skills and support ongoing professional development.

Participants in this study identify critical thinking as an essential component to both social work education and practice, but acknowledged that it is a topic subject to rhetoric and lack of understanding, within and across social work programs. Thus, critical thinking and the ways in which to teach it can pose challenges for faculty members. As previously discussed in Chapter 2, not all faculty are comfortable with the concept of critical thinking and can be resistant to incorporating pedagogical approaches that are known to further its development (Abrami et al., 2008; Halx & Reybold, 2006).

Participants in this study suggest that, although critical thinking is thought to be important in Schools of Social Work, not all faculty members teach in ways that promote these skills; some suggest it means “think like I do” (P003) rather than encouraging independent, critical thought by students. Additionally, not all faculty members are cognizant of the various teaching and learning supports available within many academic institutions through continuing professional development to become a more effective educator. As discussed in Chapter 4, participants in this study identify some challenges to incorporating teaching and learning activities that support the development of critical thinking skills such as class size, budgetary resources, lack of time given other research and service priorities of faculty that include research and service, lack of access to teaching assistants, and student resistance to activities and assignments that promote critical thinking.

Institutional support for faculty to engage in ongoing training and development (Tsui, 2002) could be an asset for social work faculty in incorporating the teaching

strategies and methods needed to support critical thinking within and beyond the classroom environment. As discussed in Chapter 2, engaging students in active learning involves incorporating exercises that weave in reading, writing and discussions that integrate experientially-based activities, such as problem-based learning, where students are immersed in problem-solving activities (Chickering & Gamson, 1987), and inquiry-based learning, where students learn via an inductive approach to inquiry (Spronken-Smith, 2007). Active learning strategies include what is referred to as *higher-order* thinking (discussed in Chapters 1 and 2) as well as processes of analysis, synthesis, and evaluation (Bloom et al., 1956; Bonwell & Eison, 1991). As discussed in Chapter 4, participants in this study describe activities such as case-based learning, PBL, simulations, dilemmas, debates, and discussions as effective mechanisms to motivate and engage students in the learning process. Participants also suggest that incorporating assignments into social work courses that integrate these components with exercises involving reading, writing, group activities, peer feedback, and formative assessments further support active learning and development of critical thinking. McMaster University's medical school serves as an example of an institution that has incorporated these types of active learning strategies into their curriculum. The essential components of their educational philosophy include seminal adult learning principles such as self-directed learning, PBL, and small group activities (Neville & Norman, 2007).

Teaching and Learning Centres that exist in many university settings today are designed to enhance the value of teaching innovation and have emerged as effective venues to support faculty in improving their teaching skills, as well as engaging in scholarly research on teaching and learning. Holt, Palmer and Challis (2011) highlight the

role of these centres as not only adding value to teaching and learning, but improving the overall student experience. Key factors identified to maximize the overall effectiveness of Teaching and Learning Centres (TLC) in supporting faculty development include: visions and plans for strategic positioning of universities in relation to teaching and learning; preparation for new academic staff; mandatory training for casual/sessional teachers; professional development initiatives; instituting Communities of Practice to support teachers and students; funding for the advancement of teaching and learning; supporting teaching excellence through awards and fellowships; recognition and use of teaching experts; and renewing the leadership of TLCs (Holt et al., 2011, p. 4). Challis, Holt and Palmer (2009) suggest that the value of TLCs in improving teaching and learning practices within institutions of higher education through capacity building of faculty, staff, and the curriculum is important. Building and supporting a culture of learning that engages faculty members in continuing professional development will enhance student learning and engagement as well (Wolf, 2007). Ongoing professional development opportunities for faculty members will allow them to remain abreast of current issues and respond more effectively to continuing changes and challenges within the educational milieu, such as shifts in technology and student populations, and decreasing resources (Boyden, 2000), as well as innovative and promising practices in teaching excellence. Supported could be obtained through university-level funding to TLCs, along with special funding for each faculty member through access to an annual lump sum for the singular purpose of participating in teaching and learning professional development opportunities. If faculty members have support for scholarly teaching at the university, as well as the department level, perhaps the value of teaching can be increased. Scholarship

on teaching and learning contributes to publications and new research, and a shift in the value of such an endeavor at the university level could go a long way in encouraging a commitment to lifelong learning at multiple levels.

Teaching and Learning Centres have demonstrated positive impacts on the development of both educators and students (Chalmers & Gardiner, 2015). Within the Australian educational milieu, much attention has been directed toward quality assurance within the higher education system (Chalmers & Gardiner, 2015), but there has been limited focus on the evaluation of program effectiveness of these professional development training programs (Chalmers & Gardiner, 2015). In one study that examined the effectiveness of a Teacher Development Program, Ginns, Kitay and Prosser (2008) found a positive effect on changing educators' views of teaching from a teacher-centred view to a student-centred focus, supporting the contention that these programs can successfully improve overall pedagogical effectiveness. Chalmers and Gardiner (2015) propose a model to evaluate the effectiveness of *Teacher Preparation Programs*, that are considered to be mandatory in a number of countries that measures teacher performance indicators as well as institutional markers that target policies, resources and overall institutional culture (Chalmers & Gardiner, 2015, p. 66). Such mechanisms can be implemented across universities to ensure effectiveness in the programs designed to support and enhance scholarly teaching and learning. As effective teaching techniques, strategies and theories expand, so does the need for ongoing professional development of educators (Hoessler, Britnell, & Stockley, 2010).

recommendation #2.

That Schools of Social Work develop curriculum that includes the creation of explicit learning outcomes with constructive course alignment that fosters and supports critical thinking development in students.

Participants in this study talk about the need for the social work curriculum to be integrated, not only within individual courses, but throughout the curriculum to better foster and develop curriculum that supports critical thinking development. Faculty-wide curriculum planning sessions may be effective mechanisms to engage in dialogue on how to promote and foster critical thinking, as an holistic and multidimensional process, across the curriculum.

Participants in this study indicate that there is a lack of constructive dialogue about how to incorporate teaching critical thinking consistently across courses, as well as across programs. As discussed in Chapter 1, Bloom's (1956) taxonomy of educational objectives is a tool to enhance communication among teachers to highlight specific educational objectives (Fallahi & LaMonaca, 2009). Dialogue about planning learning experiences and evaluation mechanisms aids in effective curriculum development (Bloom et al., 1956; Fallahi & LaMonaca, 2009) and can be leveraged to constructively align courses across the curriculum to promote teaching, learning and assessment activities that encourage critical thinking.

Constructive course alignment refers to learning outcomes, student activities, and assessment tasks aligning with one another to support student learning in courses (Biggs, 2003). Designing courses that are constructively aligned allows both teachers and students to engage in courses that are interconnected and make sense in terms of expectations and outcomes. Accreditation standards and competency frameworks can

also play a role, particularly integrating a shared understanding of the concept of critical thinking across programs. Constructive course alignment can also contribute to the development of assessment tools that more effectively capture this holistic, multidimensional process.

recommendation #3.

That Schools of Social Work incorporate participatory collaboration in course designs that include faculty, students and field instructors, making assessment criteria clear and fostering more inclusive environments that support student engagement.

Incorporating student, agency and field instructor input into the curriculum design process challenges the traditional view of education, where academics are often viewed as the experts, and supports both student engagement and enhanced learning (Bovill, Cook-Sather, & Felton, 2011). Allowing students a voice in teaching and course design has been largely absent in higher education, and Bovill, Cook-Sather and Felton (2011) suggest that inviting students to become partners in curriculum planning, recognizing and encouraging *difference*, sharing responsibility for teaching and learning through collaboration, and building new relationships between students and faculty members are important endeavors that can enhance student motivation and engagement in the learning process. Inclusion of participatory collaboration represents a move toward a *democratic* curriculum and pedagogical planning process (Bovill et al., 2011; Wood & Kompare, 2017) that could integrate this holistic concept of critical thinking as a multidimensional process into the social work curriculum. This might involve inviting students to a curriculum planning day, where they would have direct dialogue with faculty members about what they value or consider relevant and important to support their learning needs

and scholarly interests. Feedback on assignments, readings, learning outcomes, course sequencing, etc. may be valuable to support increased student engagement throughout the program. Given that most universities have deadlines for submission of course syllabi, a summer curriculum planning session would be most effective.

As discussed in Chapter 2, Abrami et al., (2008) note that the best way to maximize the impact of teaching critical thinking skills to students is to make critical thinking objectives explicit in courses and integrate them into student and faculty development. Integrating what has been discussed in Chapter 1 from a pedagogical perspective, constructivism supports processes of peer collaboration; hypothesis generation; cognitive structuring that organizes, evaluates and groups together perceptions, memories and actions; and provides a setting where students can be taught to be more self-regulated and self-directed in their learning (DeVries, 2000; Mezirow, 1991; Schunk, 1996). In terms of the impact of this constructivist view on curriculum development, the belief is that students should be active participants in their learning process and educators should provide experiences that challenge thinking, values and beliefs. An example of this approach is incorporating case-based activities that challenge students to engage in problem-solving processes to resolve scenarios or dilemmas. Case-based learning helps students collaborate with each other, promoting both critical and creative thinking (Chang & Wang, 2011; Chiang & Fung, 2004; Mackinnon, 2006; Schell & Kaufman, 2009; Sendag & Odabasi, 2009; Tsui, 2002).

Participants in this study talk about creating a learning environment or *culture of space* that gives students the freedom to take risks and challenge ideas and knowledge established. Some participants mention using critical incidents to stimulate and engage

students in problem-solving, reflection, and ultimately critical thinking to resolve issues and challenges. Engaging students as active participants in course planning and design allows them to have a voice and share ownership in their learning; it fosters collegial, peer collaboration and supports the concept of student-centred learning. Introducing participatory collaboration into course designs, with students as active participants, creates a more inclusive learning environment and supports increased student engagement (Tsui, 2002) and encourages student motivation to engage in deeper learning that supports the development of critical thinking. Perhaps Schools of Social Work can invite students and community agencies/partners to curriculum planning days or retreats to allow for input, feedback, and collaboration. Beane (1997), notes that curriculum planning that includes teacher and student collaboration redistributes power relations and engages students in both questioning and knowledge creation. Including other stakeholders within the educational milieu of social work education via a participatory, collaborative curriculum planning framework could enhance engagement on a broader scale, and further the integration of theory with practice for social work students. There is limited scholarship in this area, so it warrants further consideration.

In terms of field integration, participants across all eight countries represented in this investigation describe a gap between integrating that which is taught in the classroom into the field or practicum setting. Lack of support and disconnection among field instructors, agencies, and Schools of Social Work were also identified by faculty members involved in this study. Recalling from Chapter 4, Participant 022 captures this problem with the statement, "...we ask field instructors to evaluate the critical thinking of their students, but we very well may not define that for them or talk to them how to foster

it...” Including agencies and field instructors in course planning and curriculum design activities is another way of engaging in participatory collaboration to develop a curriculum that integrates the holistic nature of critical thinking.

While participatory collaboration in curriculum design presents benefits in terms of engagement with relevant stakeholders in the educational milieu, there are challenges of operationalization. Wood and Kompare (2017) note that when multiple stakeholders are involved in a project, challenges can arise in coming to consensus on priorities and decisions due to power imbalances, divergent perspectives, multiple and sometimes conflicting demands, and resistance to change. There is also tension within the academy with regard to academic freedom and independence for faculty members. Those who do not believe in the importance of critical thinking may resent being encouraged to include critical thinking in courses. Perhaps this could be addressed by working toward a cultural shift among faculty members in the valuing of teaching and engaging in teaching practices focused around student-centred learning. There is also an over-arching debate about the role of the university that influences the view of education: is the purpose of higher education to engage in the pursuit of knowledge or provide job training? By including employers in course planning, there is a risk of turning a university course into a job training endeavor.

Some strategies for success in implementing *participatory design* in the online environment include the development of shared goals; interviews with relevant stakeholders; agreement on the scope of the work; indicators of progressive success markers; outlining decision-making processes; and clear definition of roles and responsibilities of participants (Wood & Kompare, 2017). Perhaps these strategies could

be incorporated within Schools of Social Work when engaging in curriculum planning and development processes

5.7.2 recommendations for policy.

recommendation #1.

That Schools of Social Work support equitable workload distribution for faculty members, and value teaching as much as value for research in the academy.

Participants in this study identify workload issues as a barrier to incorporating the type of teaching strategies that foster and promote the development of critical thinking skills in students. Factors identified by participants in this study that impact workload include budgetary resources, class size, and pressures to have active research agendas. Providing equal reward or merit recognition for the value of teaching in the same manner as for research is one avenue to support faculty in taking the time to engage in student/learning-centred teaching, which is shown to improve critical thinking outcomes in a number of studies (Abrami et al., 2008; Behar-Horenstein & Lian, 2011; Tsui, 2002).

According to a report by the Higher Education Quality Council of Ontario (HEQCO) (2014), the *typical* workload allocation for faculty members is 40% of work time spent on teaching, 40% on research, and 20% to service activities. Different universities utilize different approaches to establishing workload thresholds via Collective Agreements, and many institutions are reported to establish guidelines for workload by Department (HEQCO, 2011). Research shows that, on an international scale, faculty members at institutions of higher education spend a greater amount of time teaching than engaging in research activities (Bentley & Kyvik, 2012; 2013; Link, Swann & Bozeman, 2008; MGT of America, 2002), which has implications for workload.

Faculty members face issues with time distribution and multiple, competing demands (Meyer & Evans, 2005), which in turn impacts their abilities to incorporate activities that support critical thinking development in their courses.

In a study assessing faculty workload issues in the context of Canadian research-intensive universities, Crespo and Bertrand (2013) found minimal differences in workload based on the variables of academic rank, gender, or discipline. The level of faculty members' workload is consistently reported to have increased in the previous ten years, reportedly due to the proliferation of technology-based communication mechanisms (email, online courses, etc.) (Crespo & Bertrand, 2013). Factors contributing to the perception of increased workload in relation to teaching include: increased course offerings (at both graduate and undergraduate levels), increasing numbers of students, innovative teaching approaches, more courses being offered in evenings/on weekends, and the creation of new courses (Crespo & Bertrand, 2013). Participants in this study note some of these developments as factors that impact their ability to support critical thinking development in their students. Participants talk of large class sizes, budgetary restrictions, lack of time and resources as several challenges that impact their ability to incorporate activities that promote critical thinking development within the classroom.

The university environment is shifting and expanding well beyond the confines of the physical plants they have historically represented and moved into the interspaces of learning, capturing online, remote/rural, and alternative conceptions of education in today's modern age. University campuses now include research and teaching partnerships with communities, agencies and industry, all of which increase demands for accountability to stakeholders, including students (Meyer & Evans, 2005). The adoption

of performance-based research funding formulas that financially reward research productivity for academics, appear to minimize the importance of teaching (Meyer & Evans, 2005). This impacts how instruction is provided within the constraints of the university system and the feasibility of labour-intensive teaching approaches required to implement student engagement and development of critical thinking. The debate between the value of teaching versus research has been longstanding in academia. Universities are driven by money and research brings in much needed funds to the university system, in addition to the prestige of research. In opposition is the need to foster and develop critical thinking in students that can generate a commitment to lifelong learning, which requires time, money and a commitment to teaching and learning.

Suggestions to counter the workload distribution issues facing faculty members include developing university policies and strategies to motivate, support and enhance the skills of the “developing professoriate” (Meyer & Evans, 2005, p. 243). The concept of a *flexible workload assignment* is gaining traction at many universities, where work assignments are made based on faculty members’ strengths, and transparency and clear expectations for evaluation are provided (Chipman-Johnson, 2008). The flexible workload approach builds in a balance between teaching and research activities, and supports the needs of Departments and university-based service commitments (Chipman-Johnson, 2008). Perhaps this is a promising avenue for balancing workload and recognizing the value of teaching for faculty members, but currently there is limited scholarship on this topic, so the feasibility of this type of approach requires further examination.

recommendation #2.

That Schools of Social Work provide incentives to social work faculty for the scholarship of teaching and learning in order to promote innovation in modes of teaching in Social Work education and beyond.

In a similar vein as equitable workload distribution to allow faculty the time and space to engage in effective teaching strategies to promote critical thinking in the curriculum and classroom, institutional support for the scholarship of teaching and learning can promote innovative and creative pedagogies in support of active learning and student engagement, both of which have been associated with the development of critical thinking in students (Behar-Horenstein & Lian, 2011; Chan, 2013; Deal & Pittman, 2009; Jones, 2005; Plath et al., 1999; Tsui, 2002; Zygmunt & Schaefer, 2006). This is an area where support in accessing Teaching and Learning Centres will be valuable for faculty members, in furthering a culture of learning (Wolf, 2007) and valuing the ongoing professional development of faculty members (Boyden, 2000). Innovation in teaching and learning can help social work educators critique traditional conceptions of higher education (McLeod, 2016), such as the “banking model” discussed by Freire (1970) and the view of academics as “experts” in a hierarchical educational structure (Meyer & Evans, 2005), while re-envisioning learning spaces to create and support a culture of learning.

The literature reveals that student-centred teaching and learning supports student engagement, motivation to learn, and improved critical thinking; hence, supporting a culture of learning is paramount. This culture of learning can be fostered by re-thinking the spaces and inter-spaces of learning for social work students, as reported by participants in the identification of the theme of *pedagogy* and the concept of the *culture*

of space. Learning occurs both within and beyond the classroom, as participants describe in this study, and assisting faculty with new teaching innovations can be of value in enhancing the organizational culture for faculty members and the overall educational experience of students.

One recommendation for an incentive to support value for teaching could be to provide faculty members with a workload reduction of one course, or a decrease in service or research expectations if a faculty member is engaged in curriculum development to incorporate critical thinking into courses. Provision of a financial reward or workload reduction would add a value to teaching development and innovation that will improve the student experience, and enhance the status of the faculty members who are passionately committed to teaching excellence. This could be achievable via a flexible workload model as suggested by Chipman-Johnson (2008), where faculty members interested in innovative curriculum design and an increased teaching load are rewarded the same as those faculty members who choose to pursue more research. A more flexible approach to work and compensation plays to faculty members' strengths and interests, and can surely inspire a more productive, satisfying work milieu that could be more conducive to the effort required to foster and develop critical thinking for students.

5.7.3 recommendations for research.

recommendation #1.

Engage in research examining critical thinking in social work practice. For example, how do social work practitioners understand critical thinking?

A review of the literature reveals limited scholarship on examining critical thinking in social work practice. Much of what has been investigated includes how the accreditation standards and competency frameworks measure the identified practice behaviours/expectations (CSWE, 2008; 2015; Bogo, Mishna, & Regehr, 2011; Taylor & Bogo, 2014). This current study has examined critical thinking in social work education, so it would now be beneficial to see how these results translate into social work practice. This would help gather knowledge that could support the alignment of social work curriculum, including field education, more closely with the reality of the practice environment by supporting students' development of critical thinking skills that are transferable to multiple contexts.

Perhaps a similar qualitative Delphi method could be used to study social work practitioners' understanding of what critical thinking looks like in practice. Some potential research questions could include: How do experienced practitioners understand critical thinking? Have the skills learned in school been effective in the practice realm? How do social workers operationalize critical thinking in their practice setting? Is critical thinking valued in a work environment mandated to provide services and achieve specified outcomes amidst limited and competing financial resources/demands? A thematic analysis, as suggested by Braun and Clarke (2006), could expose areas of similarity and contention with how this concept has been described by social work faculty members. Awareness of the value of what is taught in the classroom and how it connects (or not) to the realities of social work practice could positively augment the curriculum development process within Schools of Social Work. This awareness could

also serve as a venue to strengthen university-community partnerships and improve the integration between curriculum and field for social work education and practice.

recommendation #2.

Develop a measure that examines how critical thinking as a multidimensional process intersects with epistemology and pedagogy to develop and improve critical thinking in social work students.

Participants in this study describe critical thinking as a multidimensional process that is influenced by epistemology, pedagogy, a critical perspective and anti-oppressive lens, and shared understanding. It would be worth considering how to measure these constructs in a way that would determine if and how social work students are developing the ability to think critically. Given that participants view this multidimensional process as holistic and evolving over time, it would be interesting to conduct a mixed method longitudinal study, perhaps over a two or four-year degree program, to measure such constructs to see if they indeed provide a more comprehensive picture of how critical thinking is developed and operationalized in social work students. Given that epistemology and pedagogy are such important themes in this study, it would be vital to capture and assess both the views of students and faculty members. Pre-and post-test questionnaires could be utilized for factors such as critical thinking skills and dispositions, but it would also be important to examine potential course syllabi to determine if constructive alignment with learning outcomes, teaching strategies and assessments tasks positively impact critical thinking abilities in students.

As a multi-faceted and multi-dimensional construct, critical thinking is complex and extends well beyond a discretely measurable outcome. Designing a measure that can

adequately capture the crucial factors that both participants in this study and the leading scholarship on teaching and learning informs us supports critical thinking development certainly merits further consideration, as would examining its development over longer intervention periods such as a two to four-year program.

recommendation #3

Interview newer faculty members about critical thinking and compare responses to more senior academics from this study.

Participants in this study were largely at the Professor and Associate Professor ranks, indicating that they are more experienced and met the inclusion criteria of expert on matters related to critical thinking for the purpose of this study. This in essence may have overlooked newer faculty members at the Assistant Professor rank or Sessional Instructors who may be challenged with incorporating critical thinking into their courses. It would be worth interviewing these newer faculty members about their perceptions of this construct of critical thinking within social work education, to support enhancing our understanding of how it is brought to life and the barriers newer faculty may be experiencing in incorporating this into their teaching and learning repertoire.

recommendation #4.

Examine interprofessional education and its influence/relationship to promoting/developing critical thinking skills in social work students.

Some participants in this study identify interprofessional education (IPE) as an effective mechanism in creating critical thinking skills in students. IPE involves students from different disciplines learning with one another; IPE is based on principles of adult learning and entails learning grounded upon interaction, collaboration, project-based, and

practice-based educational spaces (McNair, Stone, Sims, & Curtis, 2005). Some participants in this study suggest that co-teaching and blended teaching and learning opportunities with other departments (such as law and philosophy) provide a depth and breadth of knowledge and experience to develop critical thinking, for both students and faculty. Research on the application of IPE to social work education would be of merit. As discussed in Chapter 2, a learner/student-centred approach to teaching and learning positively impacts students' motivation to learn and thinking critically (Tseng, Gardner & Yeh, 2016; Tsui, 2002). A collaborative approach to knowledge construction that generates meaningful connections between and among students and teachers creates a learning community that is further enhanced by co-teaching (Harris & Harvey, 2000). According to Letterman and Dugan (2004), collaborative teaching encourages both inquiry and learning within an interdisciplinary milieu, creating both enthusiasm and motivation within the classroom environment to further support engagement in critical thinking. Interprofessional education, in both teaching and learning, allows faculty to engage in pedagogical practices that contribute to critical thinking, within and beyond the classroom. Thus, further scholarship related to this concept of interprofessional education will inform and strengthen pedagogical approaches that foster critical thinking within social work education.

A study of models of interprofessional education and collaboration to support critical thinking development could utilize mixed methods that incorporate a pre-post-test format to measure critical thinking-related constructs at the beginning and end of a semester that involves a co-teaching format with social work, law and philosophy on the topic of ethics and professional judgement in practice. Qualitative components to such a

study could examine both faculty and student experiences with and perceptions of this co-teaching format. Research questions could include: Does a collaborative and interdisciplinary teaching team foster a sense of inquiry (for faculty members as well as students)? Does interprofessional education enhance student engagement and motivation to learn? Does it promote the development of critical thinking in students? A review of the literature shows there is a lack of scholarship related to interprofessional education and social work education, so such a study will serve as a starting point for inquiry.

5.8 Study Limitations

There are limitations to this study that are important to mention. Though there is international participation and perspectives that have contributed to the findings of this study, representation beyond countries deemed “western” is limited; the largest number of participants come from the United States, followed by Canada and the United Kingdom. The remaining countries represented have only one participant each. Clearly, while there is some diversity of gender, country of origin, academic rank, years of teaching experience, and years in direct social work practice, there are obvious limitations. It is possible that differences in race, culture and ethnicity have influenced responses to questions throughout this study process, but these factors were not analyzed since this information was not requested of participants as part of the demographic profile information. Participants did bring a depth and wealth of diverse experiences, that are assets and have contributed to the overall findings presented here.

Another limitation to consider is the fact that there are different expectations regarding post-secondary education globally, which include differences in the valuing of critical thinking in non-western countries. Cultural diversity and ethno-sensitivity are

important considerations (Freisen, 2014) in the western educational milieu given the multicultural richness in student populations in North American institutions of higher education. According to Freisen (2014), culture and traditions influence the processes of teaching and learning for both students and teachers. Learning is influenced by multiple factors, supporting the premise that there are multiple ways of knowing (Freisen, 2014; Mezirow 1991; 1997; 2003). The concept of critical thinking is often viewed as a western concept that can be seen as foreign in countries where students have not been taught nor encouraged to challenge and critique ideas and systems, or embrace diverse ways of knowing (Brayboy, 2005; Freisen, 2014; Monture, 2009). What is considered to be valuable from an educational standpoint is subject to great variability globally; in western countries, the focus on critical thinking and proficiency in writing is in stark contrast to other national education systems or traditions that value oral traditions, art, music, etc. (Freisen, 2014). Benavot and Resh (2003) note that national political, economic and ideological positioning impacts the educational systems and related curriculum within countries, which generates variation in approaches to education on an international scale. Given this contextual variation, it is worth noting that the results of this study largely reflect a North American view of education, which may have limited responses from potential participants from non-western countries. Structural and systemic inequalities can impact the teaching and learning of critical thinking (Freisen, 2014), which would merit further consideration in the analysis and understanding of this construct globally. Given the small scope of international participation for this current study, this has been a limitation.

There are limitations in terms of the sample for this study. The sample included experts, which means the findings are from their perspective and did not include faculty members who may not be deemed experts, but are struggling with teaching critical thinking. It would be interesting to compare responses from those deemed experts to those less experienced, at the Assistant Professor or Sessional Instructor ranks, to see if there are differences/similarities in terms of how critical thinking is perceived within social work education.

This study started from a position that critical thinking was important, but not everyone agrees with that. For example, not all employers and students would agree with this. Perhaps this is a symptom of managerialism in our neoliberal climate, that if employers were more aware of the complexities that front line workers face regularly, it may be a concept of more importance.

Finally, attrition rates for participants influenced the overall findings of this study. While Round 1 of this Delphi included 28 faculty members, the final Round included 10, representing an attrition rate of 64% from start to finish. High attrition rates have been identified with this Delphi method due to the multiple iterations and extended period of time required to complete them (Fletcher & Marchildon, 2014; Keeney et al., 2011; McKenna, 1994; Rotondi & Gustafson, 1995). This current research project is consistent with this finding regarding attrition rates in other Delphi studies.

The largest factor causing the attrition rate for this current study is likely researcher inexperience. As a novice researcher, each step of the study process took longer than anticipated. The round 1 data analysis took an extended period of time due to the large sample size ($n = 28$) and the fact that it was my first involvement with thematic

analysis, as described by Braun and Clarke (2006). Given that faculty members have extremely busy workload expectations, this had an impact on some participants' availability and ability to contribute over successive rounds. The fact that workloads for faculty vary over the academic term also impacted participant availability, so each Delphi round took longer than expected in order to obtain as many responses as possible. I tried to gather feedback in each round that spanned summer vacations, sabbaticals, as well as leaves of absence. All of these components influenced the overall attrition rate for participants in this study. Keeney et al., (2006) note that the Delphi method asks participants to engage in more than one survey process, so that lower response rates over successive rounds are to be expected. In future studies involving faculty members, it would be more fruitful to plan the timing of interviews/surveys around the academic calendar. For example, target times when faculty will not be launching courses or engaging in grading tasks; finding windows of opportunity in the academic calendar for faculty members to off-set attrition due to work load or time constraints.

5.9 Conclusion

This study explores how expert social work faculty members understand critical thinking in social work education. The findings contribute new knowledge to the field of social work education in terms of how critical thinking is understood and operationalized in the classroom, and how social work educators see critical thinking demonstrated in their students. The findings enhance our understanding of the processes involved in critical thinking and how they help students develop their capacity to make professional judgements in practice.

In reflecting on the Cultural Review I completed in Chapter 3, what surprised me most about the findings of this study is the holistic view of critical thinking, where participants identify the iterative and reciprocal nature of all of the themes highlighted, extending our understanding of this concept beyond a purely cognitive skill, to a more biopsychosocial vision of the process of critical thinking. Within this conception, the sub-themes of the *culture of space* and *humility* also surprised me, particularly in relation to the reverence participants expressed when describing their understanding of these concepts and how they come alive in their classrooms; emphasizing how essential they are to creating effective learning spaces. Overall, conducting this research study has helped me learn and grow exponentially as a social worker and social work educator. I have a deeper and broader understanding of this concept of critical thinking and how essential and intricately connected it is to the professional judgements and decision-making our students will engage in once they enter the practice world.

The findings from this study suggest that critical thinking, as a multidimensional process, is influenced by both epistemology and pedagogy. The themes that have emerged from this study have been identified as being interrelated and iterative. Participants have agreed that the richness in the diversity of thought and pedagogy that informs social work education is a strength that fosters both understanding and the development of critical thinking in social work students. These findings inform an understanding of critical thinking that transcends a view of this concept as only an educational outcome, presenting it as an iterative process shaped and developed over time that continues to develop via a commitment to lifelong learning. Creating an environment within Schools of Social Work to support a culture of learning, for both faculty and

students, is a vital starting point of embarking on a journey to bring to life a reconceptualized and shared vision of the process of critical thinking.

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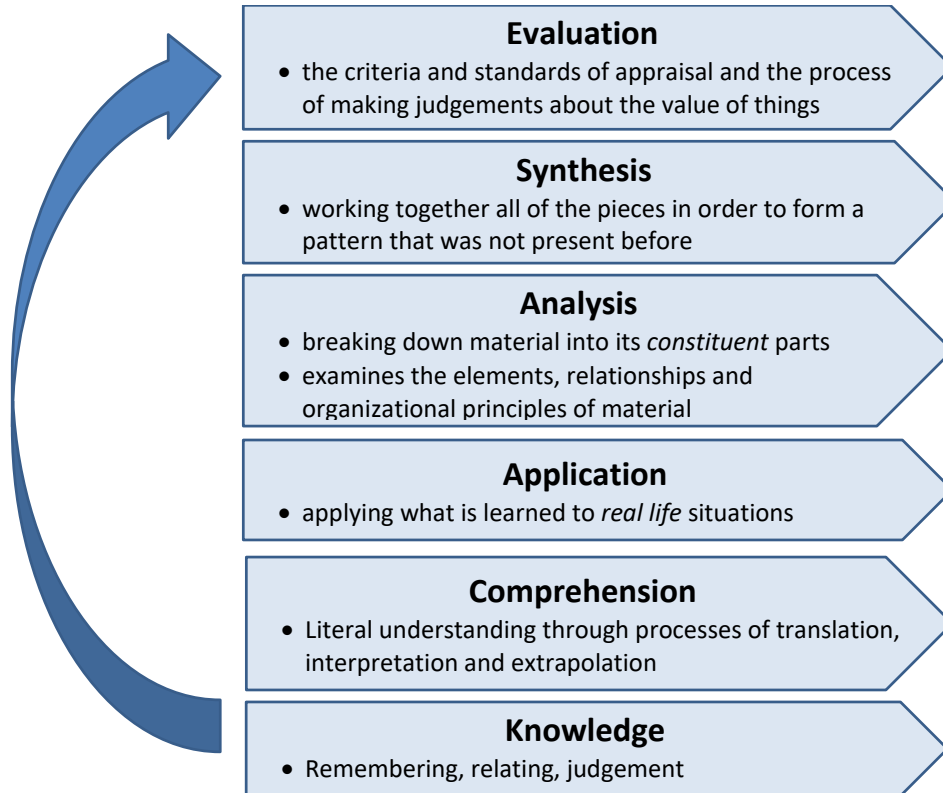
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Appendix A

Bloom's Taxonomy of Educational Objectives



Source: Bloom et al, 1954

Appendix B

Table 1.0 Measures of Critical Thinking

| Measure | Author (s) | Key Components | Reliability/Validity and/or Scoring Mechanism |
|---|---|---|---|
| Applied Critical Thinking Measure (ACTM) | Renaud, R. (2003), University of Manitoba | <ul style="list-style-type: none"> • Items use a question-and answer method in a written format, not multiple choice • Students respond to vague scenarios in a yes, no or no choice format • Grading rubric is used to mark responses | <ul style="list-style-type: none"> • Psychometric properties have not been extensively studied and no results were found |
| Assessment of Critical Thinking Ability (ACTA) | White, B., Stains, M., Escriu-Sune, M, Medaglia, E, Rostamjad, L, Sevian, H. & Chinn, C, (2011) | <ul style="list-style-type: none"> • Short, open-ended survey that evaluates three critical thinking abilities required to evaluate conflicting studies: integration, resolving ambiguities and generating other interpretations of conflicting studies; there is no “correct” answer • 4 level scoring rubric | <ul style="list-style-type: none"> • No results were found with regards to the psychometric properties of this instrument |
| Collegiate Assessment of Academic Proficiency Critical Thinking Test (ACT-CAAP) | Hayes, K.D. & Devitt, A.A. (2008) re: American College Testing (1989) | <ul style="list-style-type: none"> • Measures student’s ability to analyze, evaluate and extend an argument described in a brief written statement • 6 modules administered separately, including reading, writing, and responses to hypothetical audiences, math, science and critical thinking • Written and multiple-choice responses | <ul style="list-style-type: none"> • Nationally-normed standardized test designed to assess critical thinking skills of College students |
| Collegiate Learning Assessment (CLA) | 1) Ekman, R. & Pelletier, S. (2008) 2) Klein, S., Benjamin, R., Shavelson, R., & Bolous, R. (2007) | <ul style="list-style-type: none"> • Presents realistic problems that require students to analyze materials and determine relevance and credibility • Written responses are evaluated to assess ability to think | <ul style="list-style-type: none"> • Tool is electronic with on-line scoring • Answers are scored using a computer-generated natural language processing software • answers to performance tasks are scored by readers • Correlations of freshmen scores on the CLA to SAT scores = .88 |

| | | | |
|---|---|--|---|
| | Re: Council for Aid to Education (1952) | critically, reason, analyze, problem solve and communicate clearly <ul style="list-style-type: none"> • Measure focuses on the educational institution and the overall instructional program instead of individual students • used by many Colleges to examine learning outcomes | |
| Critical Thinking Assessment Test (CAT) | Stein, B & Haynes, A. (2007) | <ul style="list-style-type: none"> • Assesses evaluation of information, creative thinking, learning and problem-solving and communication • Uses short essay responses to assess critical thinking • Scoring is completed by trained faculty | <ul style="list-style-type: none"> • High face validity for faculty across disciplines and institutions: evaluated by 69 faculty from 6 institutions in the US • Measures rated valid by at least 90% of the faculty • Construct validity based in the theories of the cognitive learning sciences; experts in these fields assisted in evaluation of construct validity and instrument refinement • Performance on the CAT is compared to student performance on other measures of academic performance to enhance validity |
| Critical Thinking Motivational Scale (CTMS) | Valenzuela, J, Nieto, A.M, & Saiz, C (2011) | <ul style="list-style-type: none"> • Scale was developed to measure different components of motivation in relation to critical thinking • Scale includes 19 Likert-type items related to expectancy, task value, utility value, intrinsic/interest value, and cost | <ul style="list-style-type: none"> • Convergent validity measure used was the Critical Thinking subscale of the <i>Motivated Strategies for Learning Questionnaire</i> by Pintrich, Smith, Garcia & McKeachie (1993); this is a 5-item subscale with a reliability level of $p .77$ • Validity was evaluated by first administering the test to 4 Psychology PhD professionals • Psychometric properties: reliability measured with Cronbach alphas that ranged from .732 (expectancy) to .849 (value); all subscales have statistical differences ($p < .001$); factor analysis demonstrated a high degree of adaptation of the data with a Kaiser-Meyer-Olkin index of .868 and Bartlett's test ($x^2=4681.108$, $df=171$, $p < .001$) • Convergent validity was measured by analyzing the degree of correlation between the CTMS and CT subscale of the MSLQ; |

| | | | |
|--|------------------------------------|---|---|
| | | | results showed a significant correlation ($p < .001$) between motivation and critical thinking |
| California Critical Thinking Skills Test (CTTST) | Facione (1990) | <ul style="list-style-type: none"> • Discipline-neutral measure of reasoning skills • An objective measure of core reasoning skills needed for reflective decision-making • Assesses 6 scales: <i>Analysis, Evaluation, Inference, Deduction, Induction</i> and <i>Overall Reasoning Skills</i> | <ul style="list-style-type: none"> • Validity of instrument comes from the Delphi Research Study (1988-1990) and all constructs come from the main critical thinking skills developed from that study • Internal consistency (reliability) statistic for the CCTST is the KR-20 coefficient • Reliability coefficients range between .77-.83 |
| California Critical Thinking Disposition Inventory (CCTDI) | Facione (1992) | <ul style="list-style-type: none"> • Measure includes 75 items and 7 factors and uses a Likert-type grading scheme; later adapted to consist of 51 items and 6 factors • Subscales include analysis, open mindedness, curiosity, search for truth, and systematicity | <ul style="list-style-type: none"> • Reliability coefficients range from 0.75 to 0.63; reliability for the full scale is 0.88 |
| Cornell Critical Thinking Test | Ennis, Millman & Tomko (1985) | <ul style="list-style-type: none"> • Level X includes 71 multiple-choice questions that evaluate student skill in: <ul style="list-style-type: none"> - Induction - Deduction - Credibility - Identification of Assumptions • Level Z includes 52 multiple-choice questions covering: <ul style="list-style-type: none"> - Induction - Deduction - Credibility - Identification of Assumptions - Semantics - Definition - Prediction in Planning | <ul style="list-style-type: none"> • Compares scores on the assessment with grades, SAT scores and intelligence tests • CCTT found to be predictive of graduate school grades. • correlated with the <i>Graduate Record Exam (GRE)</i>, a measure of aptitude and the <i>Miller Analogies Test</i>, scores were between .2 and .4. • Reliability estimates for Form Z range from .49 to .87 across the 42 groups who have been tested for these purposes. • Correlations between Level Z and other measures of critical thinking range at about .50. |
| Critical and Integrative Thinking Rubric | Washington State University (2006) | <ul style="list-style-type: none"> • faculty at WSU developed a rubric to evaluate critical thinking • Encompasses 7 dimensions: Identifies, summarizes and reformulates the | <ul style="list-style-type: none"> • No psychometric properties found at this time |

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| | | <p>problem; Identifies and considers the influence of context and assumptions; develops, and communicates own perspective, hypothesis or position; Presents, assesses, and analyzes appropriate supporting data; Integrates issue using other perspectives and positions; Identifies and assesses conclusions, implications, and consequences; Communicates effectively</p> | |
| Ennis-Weir Test of Critical Thinking | Ennis & Weir (1985) | <ul style="list-style-type: none"> • Test involves writing critical argument to a given situation • Participants respond in writing to an 8-paragraph fictitious letter; respondents must present their logical and critical reasoning for each of the 8 points • Scoring is completed using a scoring rubric | <ul style="list-style-type: none"> • The Ennis-Weir test has a record of good inter-rater “reliabilities” for high school and college students • Cronbach’s alpha = .59 for the College level |
| Halpern Critical Thinking Assessment (HCTA) | Halpern, D. (2010) | <ul style="list-style-type: none"> • Assessment tool that uses recognition and recall in measuring critical thinking • assesses 5 dimensions of critical thinking: verbal reasoning, argument analysis, thinking as hypothesis testing, likelihood and uncertainty, and decision-making and problem-solving | <ul style="list-style-type: none"> • Test has been validated with multiple populations and measures of academic success • Reliability measured with a Cronbach $\alpha = .88$ and inter-rater reliability $r = .93$ • Construct validity has been evaluated in a series of studies with a wide range of methodologies • High face validity with everyday scenarios • Content validity • Criterion validity assessed using a number of comparisons including SAT and GRE scores • Externally validated against “real world” situations reflective of how adults think |
| PENCRISAL | Saiz & Rivas (2008) | <ul style="list-style-type: none"> • Measures the effect size of an intervention to determine any | <ul style="list-style-type: none"> • Reliability in terms of internal consistency achieved an |

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| | | <p>improvement in critical thinking skills</p> <ul style="list-style-type: none"> • Test includes 35 problem-solving items in an open-response format built around 5 factors: deductive reasoning, inductive and practical reasoning, decision-making and problem-solving | <p>acceptable level, Cronbach alpha = .632</p> <ul style="list-style-type: none"> • Reliability according to the test-retest method is high ($r = .786$) • reliability between judges has reached a high level of agreement (Kappa values between .600 - .900) |
| Situation-Based Critical Thinking Test | <p>Yeh, Yu-Chu (2005; 2009; 2012)</p> <p>Based on Paul & Elder (2001)</p> | <ul style="list-style-type: none"> • A paragraph is followed by seven open-ended questions that investigate 7 critical thinking abilities: identifying purposes and information; defining issues; recognizing assumptions; identifying points of view; making inferences; identifying implications; evaluating arguments | <ul style="list-style-type: none"> • Cronbach's coefficient was .80 • Validated by empirical studies |
| Tasks in Critical Thinking | Educational Testing Service (1989) | <ul style="list-style-type: none"> • Set of nine performance tasks using short answer, listing and essay responses • Students are rated on the conclusions drawn, reasoning, explanations of thinking and self-reflective behaviour • Tasks assess broad skills of analysis, inquiry and communication | <ul style="list-style-type: none"> • Scoring conducted by trained faculty raters using a core scoring scheme that compares responses of students to the ETS scoring manual responses • Questions about the psychometric properties exist • Inter-rater reliabilities for 14 of the tasks had 83% of the coefficients at .80, 15% had coefficients of .70-.79 and 3% with coefficients between .60 and .69 • No reliability coefficients are reported for individual tasks • Proficiency percentages have been used as alternate form of reliability for the inquiry, analysis and communication skills |
| WSU Guide to Rating Critical Thinking | <p>Washington State University (2004)</p> <p>* Condon, W. & Kelly-Riley, D. (2004)</p> | <ul style="list-style-type: none"> • Assessment instrument adaptable by faculty to their instructional and evaluative methodologies, to evaluate student critical thinking outcomes | <ul style="list-style-type: none"> • No psychometric testing was discovered regarding this tool |

| | | | |
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| | | <ul style="list-style-type: none"> • Guide identifies 7 key areas of critical thinking: problem identification; establishing a clear perspective on the issue; recognizing alternative perspectives; locating the issue in the appropriate context; identifying and evaluating the evidence; recognition of assumptions; assessment of implications and possible conclusions • Faculty rate writing samples according to these constructs and use a 6-point scale for each dimension • Mean critical thinking score is compared at entry-level to College to junior level | |
| Watson-Glaser Critical Thinking Appraisal (WGCTA) | <p>Watson & Glaser (1980)</p> <p>1) Sendag, S., & Odabasi, H. F. (2009).</p> <p>2) Hassan, K.E. & Madhum, G. (2007).</p> | <ul style="list-style-type: none"> • Designed to measure interrelated aspects of critical thinking by assessing inferences, recognition of assumptions, deduction, interpretation and evaluation of arguments • Questions look for a single answer; tasks are simple and well-defined, where responses are chosen from a number of choices • Normative scores from the test are used to compare study participants | <ul style="list-style-type: none"> • Construct validation done through identifying the test's factor structure and subscale total correlations using a series of ANOVA tests • Test-retest reliability and an estimate of internal consistency (split-half reliability) • Adequate face, content, criterion and construct related validity is evidenced • Internal consistency coefficient reliability was calculated at $\alpha=0.74$ with a 95% confidence interval of 0.689-0.791. • The test correlated highest with the critical thinking subtest of the CAAP • Used measures of academic achievement, cognitive ability and job performance • Scores are correlated with supervisory ratings on multiple dimensions of workplace performance, including analysis and problem-solving |

Appendix C

Figure 2.0 Demographic Profile

1. Participant #: _____
2. Age Range: 20-29 30-39 40-49 50-59 60-69 70-over
4. Gender: _____
5. Country: _____
6. Faculty Rank: _____ Years of Teaching experience: _____
7. Level of teaching: BSW MSW PhD (check all that apply)
8. Educational Coordinator or Liaison (BSW, MSW or PhD) Yes No
9. Dean or Director? Yes No
10. Have you had any formal training, education or instruction on critical thinking?
 Yes No
11. If yes, what was the context in which you were taught critical thinking?

12. Number of peer-reviewed publications and/or presentations on or related to critical thinking: _____
13. Number of publications/peer-reviewed and/or presentations related to Social Work education: _____
14. Member of a Council or Committee related to Social Work Education? Yes No
15. Years of experience as a social worker in direct practice:
0-5 5-10 10-15 15-20 20-30 30-over

Appendix D

Round 1 Delphi Interview Guide

Brief Introduction:

The purpose of this study is to gain a deep and rich understanding of critical thinking in social work education and to identify how social work educators will know when students are thinking critically. This knowledge will aid in both pedagogical and curriculum development for social work within institutions of higher education.

Critical Thinking In Social Work Education: Faculty Understanding

1. In your view, is critical thinking important?

Probe: Why or why not?

Probe: In social work?

Probe: Can you expand on this?

2. What are you hearing people say about critical thinking in higher education?

Probe: What outcomes or results of universities teaching students to think

Critically have you observed or heard about?

Probe: Can you expand on this?

3. From your perspective, what does critical thinking look like in social work education?

Probe: What is the definition of critical thinking from a social work perspective?

Probe: What are the key components or pieces that connect to generate this thing called critical thinking?

Probe: Can you provide some examples?

Probe: Do faculty expectations about critical thinking vary across curricular levels? How?

4. How do you operationalize critical thinking in your classroom?

Probe: How do you teach your students to think critically? (Pedagogy)

Probe: What are the important ingredients of CT in the classroom and how do you bring it to life?

Probe: What factors impact your ability to engage students in thinking critically?

Are there barriers to effectively implementing strategies to develop critical thinking in classroom settings?

Probe: Can you provide some examples?

Probe: How do you (or are you able to) incorporate these components into the curriculum?

5. How do you know students are developing critical thinking skills?

Probe: How/what are they asking, Doing and talking about?

Probe: Can you provide some examples?

6. How do you think critical thinking skills taught in the classroom are operationalized in practice?

Probe: Are these skills transferable? How?

Probe: What is the impact on practice: client systems and fields of practice at the micro, mezzo and macro levels?

Probe: How will you know when you are there? How will we, as a profession, know when we are there?

Probe: Can you provide some examples?

Appendix E



CONSENT TO PARTICIPATE IN RESEARCH

Title of Study: **Critical Thinking in Social Work Education: A Delphi Study of Faculty Understanding**

You are asked to participate in a research study conducted by Patricia Samson, PhD. Candidate in the School of Social Work the University of Windsor. Results will contribute to the completion of a dissertation for the degree requirements for a PhD in Social Work.

If you have any questions or concerns about the research, please contact Patricia Samson at psamson@uwindsor.ca or Dr. Jill Grant, Doctoral Committee Chair/Advisor at her office at the University of Windsor: 519-253-3000, ext. 3067.

PURPOSE OF THE STUDY

The purpose of this study is to gain a deep and rich understanding of critical thinking in social work education and to identify how social work educators will know when students are thinking critically. This knowledge will aid in both pedagogical and curriculum development for social work within institutions of higher education. The key research questions for this study are: 1) How do social work faculty understand critical thinking? 2) How is critical thinking currently operationalized in the classroom? and 3) How do social work educators know when students have achieved the ability to think critically (how will we know when we are there)?

PROCEDURES

If you volunteer to participate in this study, you will be asked to:

Participate in a Delphi study on critical thinking in social work education. Individual interviews will be conducted with each participant who has been deemed an *expert* in the area of critical thinking in social work education. Results will then be analysed from all participants, which will inform the second Delphi round. Each participant will receive the results and be asked their feedback, opinions and judgements on the findings of the previous round. Participants will have the opportunity to confirm, change or modify their responses from the previous round. The duration of each in-person interview is expected to be for one to one and a half hours. It is expected that there will be three rounds in this Delphi study, which will involve one individual interview session for each participant and two rounds of written responses in the form of feedback. The interviews will be conducted via video conferencing or telephone. The written results and feedback guides will be sent out electronically via email.

POTENTIAL RISKS AND DISCOMFORTS

I will be asking questions about your understanding of what critical thinking is and what it looks like in social work education and in social work students. I will ask your personal opinion in the interviews,

but I will not be asking for any sensitive personal information. Therefore, I do not expect your participation in this study to be risky or uncomfortable for you.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

You may enjoy participating in the interviews and Delphi process. It will provide an opportunity to contribute to the knowledge base on critical thinking in social work education and contribute to the identification of effective strategies to foster and promote critical thinking in social work students.

COMPENSATION FOR PARTICIPATION

You will be entered into a draw for a \$50.00 gift card for gas. A draw will be completed for each round conducted.

CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission.

Participants within and across each Delphi round will be anonymous to each other. All identifying information will be removed from the data. All of the data from the interviews in each iteration will be kept in a locked, secure filing cabinet in the home of the PI. Study participants will be anonymous to each other. The participants will be known to the researcher. The Delphi technique involves the use of an expert panel. This means that while confidentiality of all the information given by the participants will be protected by the researcher herself, the analysis and key themes developed from the information provided during the interviews will be made available to all the participants for the purposes of feedback, judgment, opinion and achievement of consensus and therefore will not be strictly confidential. There are no foreseeable limitations to protecting the confidentiality of participants.

Interviews will be audio taped. Each participant will have the right to review/edit the tapes. The principal investigator and research supervisor will have access to all of the data. The data will be used for the analysis and compilation of themes to inform further research on critical thinking in social work education. They will be erased upon completion of the dissertation process.

PARTICIPATION AND WITHDRAWAL

You can withdraw from the interview or study at any time by exiting the session; however, given the nature of the interactive and iterative process involved in the Delphi method, all of your data may not be able to be separated out from the group process. The investigator may withdraw you from this research if circumstances arise which warrant Doing so. The Delphi method, though conducted individually, is in a sense a group event. This means that while confidentiality of all the information given by the participants will be protected by the researcher herself, a thematic analysis of this information will be made available to all of the participants and therefore will not be strictly confidential. As such, while participants who withdraw can review/edit the recorded material, it may not be possible to withdraw all of the data submitted once analysis has been completed. All participants who engage in each Delphi round will be eligible for a draw for the \$50.00 gas gift card.

FEEDBACK OF THE RESULTS OF THIS STUDY TO THE PARTICIPANTS

A summary report outlining key findings from this study will be sent to each participant via email by December 31, 2014.

SUBSEQUENT USE OF DATA

These data may be used in subsequent studies, in publications and in presentations.

RIGHTS OF RESEARCH PARTICIPANTS

If you have questions regarding your rights as a research participant, contact: Research Ethics Coordinator, University of Windsor, Windsor, Ontario, N9B 3P4; Telephone: 519-253-3000, ext. 3948; e-mail: ethics@uwindsor.ca

SIGNATURE OF RESEARCH PARTICIPANT/LEGAL REPRESENTATIVE

I understand the information provided for the study *Critical Thinking in Social Work Education: A Qualitative Analysis of Faculty Understanding* as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

Name of Participant

Signature of Participant

Date

SIGNATURE OF INVESTIGATOR

These are the terms under which I will conduct research.

Signature of Investigator

Date

Appendix F



REVISED CONSENT TO PARTICIPATE IN RESEARCH

Title of Study: **Critical Thinking in Social Work Education: A Delphi Study of Faculty Understanding**

You are asked to participate in a research study conducted by Patricia Samson, PhD. Candidate in the School of Social Work the University of Windsor. Results will contribute to the completion of a dissertation for the degree requirements for a PhD in Social Work.

If you have any questions or concerns about the research, please contact Patricia Samson at samson7@uwindsor.ca or Dr. Jill Grant, Doctoral Committee Chair/Advisor at her office at the University of Windsor: 519-253-3000, ext. 3074 or by email at jgrant@uwindsor.ca.

PURPOSE OF THE STUDY

The purpose of this study is to gain a deep and rich understanding of critical thinking in social work education and to identify how social work educators will know when students are thinking critically. A Delphi methodology will be utilized in order to achieve a consensus on the key themes that emerge from the research questions posed in this study. This method provides a unique contribution from a social work perspective on the scholarship of this topic and provides participants with the opportunity to contribute to the development of a framework to explain faculty's understanding of critical thinking in social work education and how it is experienced and operationalized in social work students. This knowledge will aid in both pedagogical and curriculum development for social work within institutions of higher education. The key research questions for this study are: 1) How do expert social work faculty understand critical thinking? 2) How is critical thinking currently operationalized in the classroom? and 3) How do social work educators know when students have achieved the ability to think critically?

PROCEDURES

If you volunteer to participate in this study, you will be asked to:

Participate in a Delphi study on critical thinking in social work education. Individual interviews will be conducted with each participant who has been deemed an *expert* in the area of critical thinking in social work education. *Expert* faculty have been identified by a review of the literature on social work studies on critical thinking and a Google search of university websites on social work faculty who meet the inclusion criteria for this study. For the purpose of this study, criteria that has been used to

determine *expert* status in the area of critical thinking in social work education include satisfaction of criterion (a) and at least one of the following:

- a) Two or more publication(s) or presentation(s) (primary or secondary), or a combination thereof, related to critical thinking in social work education (peer reviewed)
- b) Member or chair of a committee or group conducting work related to critical thinking in education and/or practice
- c) Coordinator or liaison of an undergraduate or graduate Social Work education program
- d) Member or chair of a committee or group (local, provincial or national) responsible for Social Work education, e.g. CASWE

Results from round two will be analysed from all participants, which will inform the third Delphi round. Each participant will receive the results from round two via email and be asked their feedback, opinions and judgements on the findings of the previous round. Participants will have the opportunity to confirm, change or modify their responses from the previous round, with an aim to achieve consensus in the third and final round of this study. The written results and feedback from round two will be sent out electronically via email and round three of this Delphi study is expected to take approximately 45 minutes to one hour of your time to complete and email back to the Principal Investigator.

POTENTIAL RISKS AND DISCOMFORTS

I will be asking questions about your understanding of what critical thinking is and what it looks like in social work education and in social work students. I will ask your personal opinion in the interviews and follow-up, but I will not be asking for any sensitive personal information. Therefore, I do not expect your participation in this study to be risky or uncomfortable for you.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

You may enjoy participating in the interviews and Delphi process. It will provide an opportunity to contribute to the knowledge base on critical thinking in social work education and contribute to the identification of effective strategies to foster and promote critical thinking in social work students.

COMPENSATION FOR PARTICIPATION

You will be entered into a draw for a \$50.00 gas gift card. A draw will be completed for each round conducted.

CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission.

Participants within and across each Delphi round will be anonymous to each other. All identifying information will be removed from the data. All of the data from the interviews in each iteration will be kept in a locked, secure filing cabinet in the home of the PI. Study participants will be anonymous to each other. The participants will be known to the researcher. The Delphi technique involves the use of an expert panel. This means that while confidentiality of all the information given by you will be protected by the researcher herself, the analysis and key themes developed from the information provided during the interviews will be made available to all the participants for the purposes of feedback, judgment, opinion and achievement of consensus and therefore will not be strictly confidential. There are no foreseeable limitations to protecting the confidentiality of participants.

Interviews will be audio taped. You will have the right to review/edit the tapes. The principal investigator and research supervisor will have access to all of the data. The data will be used for the analysis and compilation of themes to inform further research on critical thinking in social work education. They will be erased upon completion of the transcription and verification process.

PARTICIPATION AND WITHDRAWAL

You can withdraw from the study at any time by not following up with the written feedback; however, given the nature of the interactive and iterative process involved in the Delphi method, all of your data may not be able to be separated out from the group process. If you choose to withdraw, please notify the Principal Investigator via telephone or email. The Principal Investigator may withdraw you from this research if circumstances arise which warrant doing so, such as failure to participate in the first round interview after multiple rescheduling attempts or if it is learned that the research is causing some harm to the you. The Delphi method, though conducted individually, is in a sense a group event. This means that while confidentiality of all the information given by the participants will be protected by the researcher herself, a thematic analysis of this information will be made available to all of the participants and therefore will not be strictly confidential. As such, while participants who withdraw can review/edit their recorded/written material, it may not be possible to withdraw all of the data submitted once analysis has been completed. All participants who engage in each Delphi round will be eligible for a draw for a \$50.00 gas gift card.

Please advise the Principal Investigator if your recruitment and participation in this study requires the researcher to go through the ethics review at your university prior to your participation in this study.

FEEDBACK OF THE RESULTS OF THIS STUDY TO THE PARTICIPANTS

A summary report outlining key findings from this study will be sent to each participant via email by December 31, 2016.

SUBSEQUENT USE OF DATA

These data may be used in subsequent studies, in publications and in presentations.

RIGHTS OF RESEARCH PARTICIPANTS

If you have questions regarding your rights as a research participant, contact: Research Ethics Coordinator, University of Windsor, Windsor, Ontario, N9B 3P4; Telephone: 519-253-3000, ext. 3948; e-mail: ethics@uwindsor.ca

SIGNATURE OF RESEARCH PARTICIPANT/LEGAL REPRESENTATIVE

I understand the information provided for the study *Critical Thinking in Social Work Education: A Qualitative Analysis of Faculty Understanding* as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I also grant permission for the researcher to contact me for Round Three of this Delphi study. I have been given a copy of this form and agree to sign, scan and email this signed Consent form to the Principal Investigator at samson7@uwindsor.ca.

Name of Participant

Signature of Participant

Date

SIGNATURE OF INVESTIGATOR

These are the terms under which I will conduct research.

Signature of Investigator

Date

Appendix G

Round 1 Summary

1. Critical Thinking as a Multidimensional Process: Critical thinking as a non-linear process that is multifaceted and holistic, designed to help people better understand issues by looking at the intricacies of patterns and unravelling them. It was described as a process that integrates theory, research and practice and is informed by categories that capture the *dimensions, complexity and integration of critical thinking*:

| Sub-Theme | Key Defining Features |
|---|---|
| <i>Dimensions of Critical Thinking</i> | <ul style="list-style-type: none"> • Critical thinking is a major dimension of social work practice that is informed by a number of skills, principles, values, assumptions, personal and affective factors. Key components or ingredients that inform this process include: evaluation; analysis; synthesis; knowledge; skepticism; reflection; integration; Socratic questioning; complexity; assessment; awareness; application; logical reasoning; sophistication; personal/political linkages; wisdom of others; self-esteem; emotional, intellectual and experiential factors; values, beliefs, ideas, assumptions and thoughts; flexibility; attitudes of science (determinism, parsimony, empiricism); judgement; time; perplexity; personal attributes (patience, persistence, perseverance); willingness; ethics; vulnerability; ambiguity; scholarship; evidence-based; emotional and cognitive; critique; habits of the mind (open mindedness, perseverance, flexibility, creativity and intellectual integrity); humility; ethical decision-making; professional judgement |
| <i>Complexity</i> | <ul style="list-style-type: none"> • Critical thinking involves thinking at a complex level; recognizing there are different ways of looking at things; a complexity of situations and challenges in deciding on a course of action • Critical thinking evolves over time; this shows a sophistication in thinking, theoretical choices made, and how students address issues/build arguments |
| <i>Integration</i> | <ul style="list-style-type: none"> • Transfer of learning and integration from classroom to field/practice is important. Contextual factors influence outcomes in practice • There are multiple influences on the process of thinking critically, involving the integration of theory, research and practice; also, integration of the cognitive and emotional components of critical thinking |

2. Critical Perspective and Anti-Oppressive Lens: This process of critical thinking is captured within a *critical perspective* and *anti-oppressive lens*. Five key sub-themes informing this theme include:

| Sub-Theme | Key Defining Features |
|------------------------------|---|
| <i>Power</i> | <ul style="list-style-type: none"> • Issues related to critical thinking involve understanding the power of socialization, dominant discourses, hegemony and how it controls consciousness • There is resistance to critical thinking that can come from students, agencies, field supervisors and faculty • Awareness of assumptions, biases and positioning, and how these can influence decisions made in practice is important |
| <i>Social Justice</i> | <ul style="list-style-type: none"> • Critical thinking has been associated with an anti-oppressive practice framework, and is seen as being vital to the social justice goal of social work practice. A macro perspective that looks at the |

| | |
|----------------------|--|
| | structural roots of problems contributes to bettering society through a focus on social justice topics |
| Neoliberalism | <ul style="list-style-type: none"> • Social work positions are bureaucratized with roles and expectations set out by Colleges and workplace policies and practices that support neoliberal and neo-managerialist agendas, which contribute to the perceived commodification of education • Critical thinking provides the capacity to contribute to the workplace and challenge taken-for-granted assumptions in a way that engages interdisciplinary teams, which is important to challenging the neo-liberal and neo-managerialist context |
| Context | <ul style="list-style-type: none"> • Contextual factors and the theoretical orientation of the social worker influences how critical thinking is understood and operationalized • Appreciation of the social, historical, political and economic context is important in decision-making in social work practice |
| Multiplicity | <ul style="list-style-type: none"> • Issues social workers address are complex and influenced by many different stakeholders and forces within society, so the ability to assess and understand issues from multiple perspectives, systematically and from multiple system levels, is important in order to provide logical, balanced, evidence-based responses |

3. Pedagogy: This encompasses over-arching teaching methods, strategies and philosophies of faculty, the concept of the culture of space in the learning environment, and integration issues with both the curriculum and field:

| Sub-Theme | Key Defining Features |
|--|---|
| Pedagogical Approaches and Influences | <ul style="list-style-type: none"> • There are multiple venues for teaching and learning critical thinking that require time for faculty and students to engage in and range from case-based, experiential learning approaches to teaching research methods and scientific inquiry • Faculty expectations, student readiness to learn, and the way each talks about critical thinking are influenced by the way in which they see the world; a faculty member's comfort with critical thinking can impact expectations about critical thinking in students, and whether it is supported (or not) in the classroom • It is important for teachers to be critically reflective in their own practice and pedagogy before they can support students in this process of learning to deconstruct, unlearn and challenge assumptions to support thinking differently • Critical thinking is just one element within the whole context of teaching; it is a lifelong process |
| Culture of Space | <ul style="list-style-type: none"> • Creating a safe classroom environment that supports and encourages students to take risks, challenge their thinking, and reconsider some positions. Creating space and room in the curriculum to teach critical thinking is important. Modeling humility fosters openness in the classroom and supports a rich learning environment that usurps the importance and fear of the grade to promote the process of critical thinking • The classroom is a contained, small culture with normative expectations that teachers are responsible for, to support active participation and an emancipatory learning environment that is a collaborative endeavor |

| | |
|---|--|
| | <ul style="list-style-type: none"> • Facilitating a culture of the classroom that values independence, self-determination, intellectual integrity, thought, commitment, and acceptance • The interspaces of learning for students include family, work and other life stressors that impact learning and engagement |
| <i>Integration with Field and Curriculum</i> | <ul style="list-style-type: none"> • Critical thinking is often talked about in terms of core curriculum and as a general educational outcome of programs, but integrating it across the courses and programs is not consistently operationalized • Accreditation Standards and Competency Frameworks guide curricula, and critical thinking/critical analysis/reflection is included in some form within these • Collaboration with the field is required in order to better integrate critical thinking from the classroom to practice. The classroom provides one context for teaching and students are asked to employ those skills and concepts in a different environment, so there is a disconnect that presents challenges in integrating field and practice settings |

4. Shared Understanding (Lack of): The fourth theme that has emerged involves a lack of a *shared understanding* of critical thinking. The key sub-themes informing this theme include:

| Sub-Theme | Key Defining Features |
|--|---|
| <i>Rhetoric</i> | <ul style="list-style-type: none"> • There is rhetoric and misunderstanding about how critical thinking is defined • It is a concept frequently talked about, but inconsistently promoted with no elaborate means of discussing or defining what it is in many schools of social work; it is subjective to faculty's interpretations, as each person's lens impacts how critical thinking is understood and defined |
| <i>Constant Undercurrent Across Disciplines</i> | <ul style="list-style-type: none"> • Critical thinking is an issue of importance across disciplines and is an ever-present undercurrent in higher education generally. It is important in social work, but is just one part of the larger context of thinking, learning and knowledge • The definition needs to move beyond standard conceptualizations of the mechanics of thinking to include the creative and applied aspects • There is a move in social work education to reconsider where critical thinking sits, what it looks like and how it will be assessed. Social work has a wide disciplinary space, so it's important not to get locked into a definition that is too narrowed; it needs to be defined in a way that enhances understanding as it relates to interprofessional education and practice; social work spans multiple disciplines in practice |
| <i>Tension, Controversy and Context</i> | <ul style="list-style-type: none"> • Measurement of critical thinking is controversial, as is the definition. Faculty expectations of critical thinking vary and it is operationalized differently in various disciplines • Lack of clarity on a definition creates tension; the context influences how critical thinking is understood, defined and operationalized. With so many different ways of viewing social work, the world and the profession, there is uncertainty that social work can come together on this • The profession of social work does not own a consistent relationship to a certain orientation to thought or thinking about thinking given our history of battling with our own professional cultural identities |

5. Epistemological Influences and Understanding: *Epistemological Influences and Understanding* is informed by the key sub-themes of *knowledge, humility and awareness* and how these influence the process of critical thinking:

| Sub-Theme | Key Defining Features |
|------------------|---|
| Knowledge | <ul style="list-style-type: none"> • Recognition that knowledge is not necessarily a given; students need to learn to inquire further and think critically to examine what the evidence is • What social workers do in practice is influenced by assumptions and tacit knowledge. Critical thinking is seen as having the capacity to evaluate knowledge claims and consider a wide range of contextual issues in analyzing courses of action. A constructivist view of knowledge sees critical thinking beyond one discrete measurable thing • Critical thinking looks at how we use knowledge and the power structures within the Gemini of Knowledge construction and ownership; who owns the knowledge and for what purpose is it being used? How students see and interpret knowledge, and their positioning in relation to that knowledge influences critical thinking |
| Humility | <ul style="list-style-type: none"> • Acceptance of not knowing; having an openness to learning and re-examining what we think we know. Recognizing the limits of one's own knowledge and the need to include the knowledge of others supports the process of critical thinking. Social work does not reach an end point where we can say "we are done"; social work continues to evolve |
| Awareness | <ul style="list-style-type: none"> • Awareness of different types of knowledge and ways of knowing combined with scientific evidence supports critical thinking • Recognition that the more you know and realize, the more you will think critically and see the multiple facets and complexity in each piece of the puzzle |

6. Assessment: Assessment is informed by sub-themes that capture critical thinking as an *admissions criterion and competency*, as well as the measures and outcomes of critical thinking (*standardized tests, outcome measures, grading rubrics, evaluation, assignments, and assessment processes*):

| Sub-Theme | Key Defining Features |
|-----------------------------------|---|
| Standards and Competencies | <ul style="list-style-type: none"> • Critical thinking is a meta-competency woven throughout competent social work practice and education. It is embedded in social work curricula, accreditation standards and competency frameworks globally. These standards push for the integration of critical thinking, analysis and reflection throughout the curriculum, but is not occurring consistently • It is argued that critical thinking is a necessary component of competency, but trying to itemize it and break it down is limiting • Accrediting bodies box things in and can become reductionist, but it is the responsibility of these bodies and other professional social work organizations to make this an infused part of everything we do in social work education |
| | <ul style="list-style-type: none"> • Critical thinking has a mixed research picture; results can be tricky and show no improvement. There are a number of standardized tests which may or may not capture exactly what is hoped students get. Critical thinking is intimately connected to making professional judgements and engaging in ethical decision-making, which can be |

| | |
|------------------------------|--|
| Measures and Outcomes | <p>very nuanced and difficult to measure; standardized measures of critical thinking do not capture all of the influencing components in social work</p> <ul style="list-style-type: none"> • Overall, there is resistance to measuring classroom outcomes • Measuring knowledge growth in students is dependent on types of assignments and grading rubrics used, and varies greatly across courses and programs. The integration of critical thinking skills is demonstrated by assessing the application of concepts and theories through assignments; more rigorous measures are lacking |
|------------------------------|--|

Delphi Round 2 Follow-up Questions

1. Which themes and sub-themes do you agree with? Why?

•

2. When considering our dialogue during the interview and upon review of this summary, are there

any areas where you learned or changed your mind? If so, please explain.

•

3. Please rank in order of importance the following themes (1 being most important to 6 being least important):

| Theme | Rank in Order of Importance |
|---|-----------------------------|
| Critical Thinking as a Multidimensional Process | |
| Critical Perspective and Anti-Oppressive Lens | |
| Pedagogy | |
| Shared Understanding (Lack of) | |
| Epistemological Influences and Understanding | |
| Assessment | |

Comments on Themes:

•

Please rank in order of importance the following sub-themes (1 being most important to 6 being least important):

1. Critical Thinking as a Multidimensional Process

| Sub-Theme | Rank in Order of Importance |
|---------------------------------|-----------------------------|
| Dimensions of Critical Thinking | |
| Complexity | |
| Integration | |

Comments:

•

2. Critical Perspective and Anti-Oppressive Lens

| Sub-Theme | Rank in Order of Importance |
|-----------|-----------------------------|
| Power | |

| | |
|-----------------------------------|--|
| Social Justice | |
| Neoliberalism | |
| Contextual Factors and Influences | |
| Multiplicity | |

Comments:

-

3. Pedagogy

| Sub-Theme | Rank in Order of Importance |
|---------------------------------------|-----------------------------|
| Pedagogical Approaches and Influences | |
| Culture of Space | |
| Integration with Field and Curriculum | |

Comments:

-

4. Shared Understanding (Lack of)

| Sub-Theme | Rank in Order of Importance |
|--|-----------------------------|
| Rhetoric | |
| Constant Undercurrent Across Disciplines | |
| Tension, Controversy and Context | |

Comments:

-

5. Epistemological Influences and Understanding

| Sub-Theme | Rank in Order of Importance |
|-----------|-----------------------------|
| Knowledge | |
| Humility | |
| Awareness | |

Comments:

-

6. Assessment

| Sub-Theme | Rank in Order of Importance |
|----------------------------|-----------------------------|
| Standards and Competencies | |
| Measures and Outcomes | |

Comments:

-

Appendix H

Round 2 Summary and Round 3 Follow-up Questions

Themes and sub-themes ranked in order of importance (1 being most important down to 6 being considered not as important) are listed below, with a brief summary of participant feedback on each:

| Theme and Sub-Themes | Summary of Comments |
|---|--|
| <p>1. Critical Thinking as a Multidimensional Process</p> <p><i>i) Complexity</i> <i>ii) Integration</i> <i>iii) Dimensions of Critical Thinking</i></p> | <ul style="list-style-type: none"> • Dimensions of critical thinking and complexity were described as important features of critical thinking; it is important to understand that there are different ways of looking at things • This theme is important to defining critical thinking • It was consistently reported that it was difficult to rank/prioritize the sub-themes, as all were viewed as being equally important • This theme was described as being at a higher level of abstraction than the others • The concept of a multidimensional process links in with the issue of pedagogy and how social work educators can put into practice how to develop students' critical thinking • Critical thinking as a multidimensional process captures many of the processes involved in critical thinking, but is almost too broad, which contributes to our lack of a shared understanding of what it actually is |
| <p>2. Epistemological Influences and Understanding</p> <p><i>i) Knowledge</i> <i>ii) Awareness</i> <i>iii) Humility</i></p> | <ul style="list-style-type: none"> • This theme seems more relevant for defining critical thinking. Sub-themes of knowledge, humility and awareness are considered to be important • Humility is a sub-theme that seems to present some divergence on what it represents. On one hand it was described as a standout because it is important that one is open to new forms of knowledge, ideas and perspectives; being humble about what you know and suspicious about what you think you know was described as a prerequisite for being open to developing stronger critical thinking heuristics. On the other hand, it was described as having vaguely religious connotations and awareness was suggested as an alternative • Concept of humility was described as an emerging 'metacompetency'; the ability to experience openness, vulnerability and ambiguity was also seen as being a part of critical thinking • There is an important overlap between humility and awareness • All of the sub-themes were described as being equally important • It is a theme that recognizes the importance of the personal characteristics of openness, curiosity and self-awareness in promoting critical thinking • All sub-themes were described as being interrelated and reciprocal rather than being linear or dogmatic • Knowledge is the key, and humility and awareness are essential to ensure the use of knowledge shows critical thinking |
| <p>3. Pedagogy</p> | <ul style="list-style-type: none"> • Pedagogical Approaches and Influence are important sub-themes and must be a key part of understanding the |

| | |
|---|---|
| <p><i>i) Pedagogical Approaches and Influence</i> <i>ii) Integration with Field and Curriculum</i> <i>iii) Culture of Space</i></p> | <p>way we teach critical thinking in and outside of the classroom</p> <ul style="list-style-type: none"> • It is important to create a culture of space for critical discussions and thinking. It is important for teachers to provide 'space' for students to develop their own views rather than being deferential to 'authority' or to just look for the 'answer' • The defining features of these sub-themes reflect some of the best literature on how to conceptualize and integrate the process of infusing critical thinking into social work pedagogy • Integration with field and curriculum is where the biggest problem lies and where the structure of social work education can fall short • The classroom and the field can be conceptualized as two equally important and linked learning spaces that inform each other |
| <p>4. Critical Perspective and Anti-Opressive Lens</p> <p><i>i) Power and Multiplicity (tied for 1st in being considered the most important sub-themes here)</i> <i>ii) Social Justice and Contextual Factors and Influences (Tied for second in order of importance)</i> <i>iii) Neoliberalism (Ranked as 5th[out of 5 sub-themes]in order of importance by almost half of all respondents)</i></p> | <ul style="list-style-type: none"> • This theme was described as confusing because it seems to mix together critical theory with the process of critical thinking. There was uncertainty about neoliberalism as a sub-theme. Ideological influences go well beyond neoliberalism and other influences are also important to be aware of. There was also difficulty understanding the rhetoric of neoliberalism that assumes we have a common understanding of what this is in social work • Power dimensions and awareness of assumptions were described as important. Challenging taken for granted assumptions was described as being a key goal that multiplicity seems to address • Difficult to rank sub-themes in order of importance, as all were often viewed as equally important • Power and Social Justice were described as significant themes • The sub-themes of power, multiplicity, social justice and contextual factors and influences were described as being keys to social work curriculum and understanding how we define social issues, challenges, justice, etc. |
| <p>5. Shared Understanding (Lack of)</p> <p><i>i) Constant Undercurrent across Disciplines</i> <i>ii) Rhetoric</i> <i>iii) Tension, Controversy and Context</i></p> <p>NOTE: This theme was consistently ranked 5th in order of importance by more than half of all respondents</p> | <ul style="list-style-type: none"> • This theme relates to the profession's uncertainty in answering the first research question, i.e. how do expert social workers understand critical thinking. It supports the sub-theme of tension, controversy and context to our profession's challenges in developing a shared identity • Lack of a shared understanding is connected to assessment: you can't effectively set standards or design assessments for an area that lacks consensus. It was noted, however, that we do not all need to be doing the same thing • Sub-themes were described as difficult to rank, as all were described as equally important by many |
| <p>6. Assessment</p> <p><i>i) Standards and Competencies</i> <i>ii) Measures and Outcomes</i></p> | <ul style="list-style-type: none"> • Most participants agreed with both of these sub-themes, but it was noted that they were difficult to rank due to a view that they were of equal importance • Critical thinking is not something that could be easily operationalized given its complexity; attempts to pin it |

| | |
|--|--|
| | <p>down to some 'measurable' or 'quantifiable' index might distort the real essence of critical thinking</p> <ul style="list-style-type: none"> • We need to be clear about the competencies and outcomes we are assessing and how critical thinking is evidenced. It was suggested the concept of professional judgement be incorporated within this theme • These sub-themes belong together and are conditioned by each other: without standards, no measures of outcomes are possible; standards are not meaningful without measuring them |
|--|--|

There was an identification of some learning and new considerations based on the interviews and summary of emerging themes from participants' responses to Round 2, and a summary of comments include:

- Now considering critical thinking as being related to metacognition; the ability to attend to and manage one's own thinking processes is an important part of critical thinking
- Learning a bit more about some of the emerging assessment opportunities available to us. Looking more at metacompetencies and the development of measures for these is important with regard to assessment; it will require creativity and thinking outside the box, beyond what we are currently seeing by many in the field
- Perhaps the diffuse picture about critical thinking emerging here is rooted in the fact that the theory on what critical thinking should always be based (critical theory) is missing or has not risen up as an issue by the participants

Note: It is worth noting that 46.6% of participants who responded to Round 2 reported "No Change" in their thinking or positioning from Round 1 of this study; 26.6% reported not being able to remember the original interview; and 26.6% of respondents did acknowledge some learning and new considerations based on the feedback of everyone's responses to Round 1. A total of 15 participants engaged in Round 2 of this study.

Summary of Overall Comments:

- Many participants reported difficulties prioritizing and ranking themes and sub-themes, as many were seen as being equally important to this complex topic
- All of the sub-themes are so intertwined and integrated that any attempt to rank importance seemed "counter-intuitive and reductionistic"
- It was noted that we do not all need to be doing the same thing in education

Round 3 Follow-up Questions

Please respond to the following questions with a **Yes** or **No** response by **circling the answer** that best meets your understanding from the perspective of a Social Work educator:

***Based on the responses and feedback of participants in Round 2 of this study, and in an effort to obtain some consensus on this complex topic, please answer the following:*

1. Would you agree with the statement that all of the themes identified in this study are equally important?

Yes No

Comments if you disagree:

2. Would you agree that critical thinking is a 'multidimensional process'?

Yes No

Comments if you disagree:

3. Would you agree that if social work educators had a shared understanding of critical thinking, that a more realistic and effective means of assessment may be achievable?

Yes No

Comments if you disagree:

4. Would you agree with the statement that all of the emerging themes identified in this study are interrelated and reciprocal, rather than being linear or hierarchical?

Yes No

Comments if you disagree:

5. Would you agree that the richness in the diversity of thought and pedagogy that informs Social Work education is an asset in promoting the understanding and development of critical thinking in students?

Yes No

Comments if you disagree:

Final Remarks and/or Comments:

Appendix I

Round 3 Summary of Responses

| Delphi Round 3 Questions | % Responding Yes |
|---|------------------|
| 4. Would you agree with the statement that all themes identified in this study are equally important? | 90% |
| 5. Would you agree that critical thinking is a multidimensional process? | 100% |
| 6. Would you agree that if social work educators had a shared understanding of critical thinking, that a more realistic and effective means of assessment may be achievable? | 80% |
| 7. Would you agree with the statement that all of the emerging themes identified in this study are interrelated and reciprocal, rather than being linear or hierarchical? | 90% |
| 8. Would you agree that the richness in the diversity of thought and pedagogy that informs social work education is an asset in promoting the understanding and development of critical thinking in students? | 90% |

Note: Responses in agreement of 70% or greater represent consensus among expert participants in this Delphi study

Summary of Comments

- Inclusion of the theme *Critical Perspective and Anti-Oppressive Lens* when describing elements involved in critical thinking is a unique contribution that social work makes, which speaks to our profession's commitment to social justice and the importance of including power dynamics in any critical analysis
- The richness in the diversity of thought and pedagogy informing social work education is an asset that captures the range and depth of what critical thinking means for social work educators and students
- Achieving agreement on critical thinking skills deemed essential for social work practice could inform pedagogical choices in social work education and help students develop their abilities to make professional judgements via thinking critically
- There is a need to avoid *centric* attitudes/cognitive frameworks in the process of learning and developing critical thinking that the concept of humility may address. This is important given the recent escalation of parochial, exclusionary, and ethnocentric sentiments in anti-refugee/migrant movements in Europe and beyond
- Recognition that learning occurs at experiential, emotional, and affective levels

- Some continued concern about the *religious* connotations of the term “humility” and a suggestion to use the term *self-knowledge* that encompasses personal, theoretical and process knowledge that combine to inform *professional knowledge*
- It is important to consider multiple theoretical lenses when considering critical thinking, as many indigenous epistemologies/perspectives are not captured within a critical/anti-oppressive lens

Appendix J

Summary of Findings for: *Critical Thinking in Social Work Education: A Delphi Study of Faculty Understanding*

This qualitative Delphi study has examined critical thinking in social work education, and involved three iterations over a 2-year period with *expert* social work faculty from eight different countries. Round 1 achieved a sample size of 28 participants, Round 2 included 15 participants, and the third and final iteration consisted of 10 participants. This document contains a summary of findings for this study that includes a summary of the emergent themes ranked in order of importance by participants from Rounds 1 and 2, and final responses that inform a sense of consensus with regard to five key questions informed by participant feedback from Rounds 2 and 3.

Table 1.0 Summary of Themes and Sub-Themes

Themes and sub-themes ranked in order of importance by participants in Round 2

| Themes | Sub-Themes |
|--|---|
| Critical Thinking as a Multidimensional Process | <p>* This theme is important to defining critical thinking and was described as being at a higher level of abstraction than the others. The concept of a multidimensional process links in with the issue of pedagogy and how social work educators can put into practice how to develop students' critical thinking</p> <p>Complexity: Critical thinking involves thinking at a complex level; recognizing there are different ways of looking at things; a complexity of situations and challenges in the use of professional judgement</p> <p>Integration: There are multiple influences on the process of thinking critically, involving the integration of theory, research and practice; integration of cognitive and emotional components of critical thinking</p> <p>Dimensions of Critical Thinking: Critical thinking is a major dimension of social work practice that is informed by a number of skills, principles, values, assumptions, personal, and affective factors</p> |
| Epistemological Influences and Understanding | <p>* This theme seems relevant for defining critical thinking. Knowledge is the key, and awareness and humility are essential to ensure the use of knowledge shows critical thinking.</p> <p>Knowledge: Recognition that knowledge is not necessarily a given. What social workers do in practice is influenced by assumptions and tacit knowledge. Critical thinking is seen as having the capacity to evaluate knowledge claims and consider a wide range of contextual issues in analyzing courses of action. How students see and interpret knowledge, and their positioning in relation to that knowledge, influences critical thinking</p> <p>Awareness: of different types of knowledge and ways of knowing combined with scientific evidence supports critical thinking. Recognition that the more you know and realize, the more you will think critically and see the multiple facets and complexity in each piece of the puzzle</p> <p>Humility: Acceptance of not knowing; having an openness to learning and re-examining what we think we know. Recognizing the limits of one's own knowledge and the need to include the knowledge of others supports the process of critical thinking. Humility is a sub-theme that seems to present some divergence on what it represents</p> |
| | <p>* The classroom and the field can be conceptualized as two equally important and linked learning spaces that inform each other. It is important to create a culture of space for critical discussions and thinking. Integration with field and curriculum is a challenge</p> |

| | |
|---|---|
| <p>Pedagogy</p> | <p><i>Pedagogical Approaches and Influence:</i> There are multiple venues for teaching and learning critical thinking that require time for faculty and students to engage in and range from case-based, experiential learning approaches to teaching research methods and scientific inquiry. Faculty expectations, student readiness to learn, and the way each talks about critical thinking are influenced by the way in which they see the world; a faculty member's comfort with critical thinking can impact expectations about critical thinking in students, and whether it is supported (or not) in the classroom. Critical thinking is just one element within the whole context of teaching; it is a lifelong process</p> <p><i>Integration with Field and Curriculum:</i> Accreditation Standards and Competency Frameworks guide curricula, and critical thinking/critical analysis/reflection is included in some form within these. The classroom provides one context for teaching and students are asked to employ those skills and concepts in a different environment, so there is a disconnect that presents challenges in integrating field and practice settings</p> <p><i>Culture of Space:</i> Creating a safe classroom environment that supports and encourages students to take risks, challenge their thinking, and reconsider some positions. Creating space and room in the curriculum to teach critical thinking is important. Facilitating a culture of the classroom that values independence, self-determination, intellectual integrity, thought, commitment, and acceptance</p> |
| <p>Critical Perspective and Anti-Oppressive Lens</p> | <p>* This theme was described as confusing because it seems to mix together critical theory with the process of critical thinking. There was difficulty understanding the rhetoric of neoliberalism that assumes we have a common understanding of what this is in social work. Power and Social Justice were described as significant themes. Sub-themes of <i>power</i>, <i>multiplicity</i>, <i>social justice</i> and <i>contextual factors and influences</i> were described as being keys to social work curriculum and understanding how we define social issues, challenges, justice, etc.</p> <p>-<i>Power</i> and <i>Multiplicity</i> (tied as most important sub-themes)</p> <p><i>Power:</i> Issues related to critical thinking involve understanding the power of socialization, dominant discourses, hegemony and how it controls consciousness. Power dimensions and awareness of assumptions were described as important</p> <p><i>Multiplicity:</i> Issues social workers address are complex and influenced by many different stakeholders and forces within society, so the ability to assess and understand issues from multiple perspectives, systematically and from multiple system levels, is important in order to provide logical, balanced, evidence-based responses. Challenging taken for granted assumptions was described as being a key goal that multiplicity seems to address</p> <p>-<i>Social Justice</i> and <i>Contextual Factors and Influences</i> (tied for 2nd in order of importance)</p> <p><i>Social Justice:</i> Critical thinking has been associated with an anti-oppressive practice framework, and is seen as being vital to the social justice goal of social work practice. A macro perspective that looks at the structural roots of problems contributes to bettering society through a focus on social justice topics.</p> <p><i>Contextual Factors and Influences:</i> Contextual factors and the theoretical orientation of the social worker influences how critical thinking is understood and operationalized. Appreciation of the social, historical, political and economic context is important in decision-making in social work practice</p> <p><i>Neoliberalism:</i> Social work positions are bureaucratized with roles and expectations set out by Colleges and workplace policies and practices that support neoliberal and neo-managerialist agendas, which contribute to the commodification of education. There was uncertainty about neoliberalism as a</p> |

| | |
|---------------------------------------|--|
| | sub-theme; ideological influences go well beyond neoliberalism and other influences are also important to be aware of |
| Shared Understanding (Lack of) | <p>*This theme relates to the profession's uncertainty in how <i>expert</i> social workers understand critical thinking. It supports the sub-theme of tension, controversy and context to our profession's challenges in developing a shared identity</p> <p>Constant Undercurrent Across Disciplines: Critical thinking is an issue of importance across disciplines and is an ever-present undercurrent in higher education generally. It is important in social work, but is just one part of the larger context of thinking, learning and knowledge. There is a move in social work education to reconsider where critical thinking sits, what it looks like and how it will be assessed.</p> <p>Rhetoric: There is rhetoric and misunderstanding about how critical thinking is defined. It is a concept frequently talked about, but inconsistently promoted with no elaborate means of discussing or defining what it is in many schools of social work; it is subjective to faculty's interpretations, as each person's lens impacts how critical thinking is understood and defined</p> <p>Tension, Controversy and Context: Measurement of critical thinking is controversial, as is the definition. Faculty expectations of critical thinking vary and it is operationalized differently in various disciplines. Lack of clarity on a definition creates tension; the context influences how critical thinking is understood, defined and operationalized. With so many different ways of viewing social work, the world and the profession, there is uncertainty that social work can come together on this</p> |
| Assessment | <p>* Most participants agreed with both of these sub-themes, but it was noted that they were difficult to rank due to a view that they were of equal importance</p> <p>Standards and Competencies: Critical thinking is a meta-competency that is embedded in social work curricula, accreditation standards and competency frameworks globally. These standards push for the integration of critical thinking, analysis and reflection throughout the curriculum, but is not occurring consistently. Accrediting bodies box things in and can become reductionist, but it is the responsibility of these bodies and other professional social work organizations to make this an infused part of everything we do in social work education</p> <p>Measures and Outcomes: Critical thinking is intimately connected to making professional judgements and engaging in ethical decision-making, which can be very nuanced and difficult to measure; standardized measures of critical thinking do not capture all of the influencing components in social work. Integration of critical thinking skills is demonstrated by assessing the application of concepts and theories through assignments; more rigorous measures are lacking</p> |

* Represents a brief summary from Round 2 participant feedback

Table 2.0 Summary of Responses for Final Delphi Iteration (Round 3)

| Delphi Round 3 Questions | % Responding Yes |
|---|-------------------------|
| 9. Would you agree with the statement that all themes identified in this study are equally important? | 90% |
| 10. Would you agree that critical thinking is a multidimensional process? | 100% |
| 11. Would you agree that if social work educators had a shared understanding of critical thinking, that a more realistic and effective means of assessment may be achievable? | 80% |

| | |
|--|-----|
| 12. Would you agree with the statement that all of the emerging themes identified in this study are interrelated and reciprocal, rather than being linear or hierarchical? | 90% |
| 13. Would you agree that the richness in the diversity of thought and pedagogy that informs social work education is an asset in promoting the understanding and development of critical thinking in students? | 90% |

Note: Responses in agreement of 70% or greater represent consensus among expert participants in this

Delphi study

Summary of Comments from Final Iteration

- Inclusion of the theme *Critical Perspective and Anti-Oppressive Lens* when describing elements involved in critical thinking is a unique contribution that social work makes, which speaks to our profession's commitment to social justice and the importance of including power dynamics in any critical analysis
- The richness in the diversity of thought and pedagogy informing social work education is an asset that captures the range and depth of what critical thinking means for social work educators and students
- Achieving agreement on critical thinking skills deemed essential for social work practice could inform pedagogical choices in social work education and help students develop their abilities to make professional judgements via thinking critically
- There is a need to avoid *centric* attitudes/cognitive frameworks in the process of learning and developing critical thinking. This is important given the recent escalation of parochial, exclusionary, and ethnocentric sentiments in anti-refugee/migrant movements in Europe and beyond. It is important to consider multiple theoretical lenses when considering critical thinking, as many indigenous epistemologies/perspectives are not captured within a critical/anti-oppressive lens
- Concern was noted about the *religious* connotations of the term "humility" and a suggestion was made to use the term *self-knowledge* that encompasses personal, theoretical and process knowledge that combine to inform *professional knowledge*

Thank you for your ongoing participation in this multi-stage study. Your perspectives and feedback have informed and shaped the findings of this international qualitative study. Detailed findings, along with implications for research, practice and policy will be disseminated via conferences and publications upon completion of this dissertation process. If you have any questions or require further information, please contact the Principal Investigator, Patricia Samson, at samson7@uwindsor.ca

Appendix K

Table 3.0 Qualitative Delphi Studies Completed Between 1993-2016

| Author(s) | Year | Title |
|--|------|---|
| Castro, D., Dahlin-Ivanoff, S., & Mårtensson, L. | 2016 | Development of a Cultural Awareness Scale for Occupational Therapy Students in Latin America: A Qualitative Delphi Study. |
| Froerer, A. S., & Connie, E. E. | 2016 | Solution-building, the foundation of solution-focused brief therapy: A qualitative Delphi study |
| Jamal, A. | 2016 | Why He Won't Send His Daughter to School—Barriers to Girls' Education in Northwest Pakistan: A Qualitative Delphi Study of Pashtun Men. |
| McGlotten, D. B. | 2016 | Intellectual capital retention from healthcare education consultants: A qualitative Delphi study |
| Sasere, D. O. | 2016 | A Qualitative Delphi Study of Domestic Terrorism in Nigeria and Perceptions of Subject Matter Experts |
| Stewart, M. B. | 2016 | Qualitative Delphi Study of Factors Influencing Data Center Investment in Eco-Innovations |
| Cuvar, K. M. | 2015 | Balanced and collaborative outsourcing of IT services: A qualitative Delphi study of enterprise partnerships |
| Geerse, O. P., Wynia, K., Kruijer, M. H., Schotsman, M. J., Hiltermann, T., & Berendsen, A. J. | 2015 | Long-term health problems in cancer survivors: a qualitative Delphi study. |
| Jamal, A. | 2015 | Men's Perception of Women's Role and Girls' Education among Pashtun Tribes of Pakistan: A Qualitative Delphi Study |
| Ribeiro, L. A., & Pereira da Silva, P. | 2015 | Qualitative Delphi approach of advanced algae biofuels. |
| Amber, J., Fletcher, G., & Marchildon, P. | 2014 | Using the Delphi Method for Qualitative Participatory Action Research in Health Leadership |
| Crowe, S. | 2013 | An exploration of incentivizing economically and academically challenged public high school students to get increased grades: A school leadership perspective through the qualitative Delphi method |
| Iromuanya, C. | 2013 | A qualitative study on construction project success factors in dynamic project environments: A Delphi approach |
| Graser, A. | 2011 | Canadian forces care provider acceptance of the electronic medical record: A qualitative Delphi study |
| Kaynak, E., & Cavlek, N. | 2007 | Measurement of tourism market potential of Croatia by use of Delphi qualitative research technique. |
| Kastein, M. R., Jacobs, M., Van Der Hell, R. H., Luttik, K., & Touw-Otten, F. W. | 1993 | Delphi, the issue of reliability: a qualitative Delphi study in primary health care in the Netherlands |

Vita Auctoris

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