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Social Constructivism: An Andragogical Praxis for Critical Thinking Instruction and Evaluation with Graduate Social Work Students

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Abstract

Critical thinking skills are requisite for graduate social work students to transition competently into professional practice. This mixed methods study was conducted to explore current instruction and evaluation methods for critical thinking skill development. The extent to which faculty perceived changes in student outcomes since the 2015 Educational Policy and Accreditation Standards change related to critical thinking skills, was also studied. This study was designed to link critical thinking and social work education in the context of social constructivism as an andragogical praxis for the development of critical thinking skills. The quantitative findings were interpreted to identify multiple approaches for the instruction and assessment of critical thinking skills in graduate social work programs across the country. The qualitative themes of social work instructors' perception of changes in student outcomes related to critical thinking skills were mixed.

Social Constructivism: An Andragogical Praxis for Critical Thinking Instruction and

Evaluation with Graduate Social Work Students

Social work education is intended to prepare competent, effective practitioners who can take appropriate professional action in multiple contexts and under myriad complex circumstances (Campbell & Ungar, 2003; Samson, 2016; Van Soest & Garcia, 2008). The Educational Policy and Accreditation Standards (EPAS) of the Council on Social Work Education (CSWE) (CSWE, 2015) are in place to guide social work educational programming (CSWE, 2015). At this time the EPAS guidelines related to critical thinking skills (CTS) in undergraduate and graduate social work programs are written such that students are expected to demonstrate the application of CTS in the context of course work and in varied areas of practice preparation (CSWE, 2015). To think critically is a requisite skill as social workers prepare to enter the profession in service to others (Gibbons & Gray, 2004). Social workers need to be prepared to act in the context of what Paul and Elder (2014) described as current global realities that represent threats to social, economic, and political structures. Paul and Elder (2014) noted the contemporary social climate necessitates thinking that is more informed, more radical, and more adaptive. Moreover, these realities require the need to think critically in personal and professional realms (Paul & Elder, 2014).

Many social work scholars suggested that the application of CTS is a primary objective of social work education given that critical thinking (CT) is a requisite skill in the pursuit of social justice, equity and competent professional practice (Van Soest & Garcia, 2008; Dudziak & Proffitt, 2012; Lahaie, Wiebe, & Swartz, 2017). Samson (2016) posited that to prepare graduate social work students to think critically in their professional roles requires students to develop the capacity for understanding individuals and the systems within which they will be engaged.

In 2015, the EPAS guidelines related to CTS in social work education changed. The

guidelines change resulted in a more streamlined definition of CTS and involved removing CTS

as a stand-alone student outcome, situating its placement in the guidelines as an applicable skill

(CSWE, 2015). The repositioning of CTS in the social work education guidelines is not without

implications for schools of social work and instructors and students. This research study was an

exploration of the current instructional and assessment methodologies of CTS in accredited

graduate social work programs and included instructor perceptions of student outcome changes

since the 2015 EPAS CTS guidelines change. This research will begin with an introduction.

 The introduction will include, the background of the problem, a statement of the

problem, a discussion of the purpose of the study, an introduction to social constructivism as a

theoretical framework for learning, the research questions, content related to definitions/ terms,

and a review of the importance of the research study. Given the value of CTS in social work

education, the research begins with the background of the problem.

Background of the Problem

The CSWE is the credentialing body for schools of social work in the United States

(CSWE, 2019a). The mission of the council is to set and maintain national accreditation

standards in undergraduate and graduate schools of social work. The Commission on

Accreditation (CSWE, 2019b) develops the educational standards that define competent

preparation for the profession and ensures that accredited social work education programs meet

these standards. The council guidelines are written to provide programmatic structure in the

development of quality social work education toward the professional goals of social and

economic justice for individuals' families and communities (National Association of Social

Workers, 2017).

The CSWE provides oversight for schools of social work that are committed to developing social work professionals who will move into multiple areas of practice, including, clinical work, education, policy development, and research. The expectation of core competencies in social work education programming includes critical thinking, problem solving, relationship and team building and cultural awareness (CSWE, 2018). In 2018, members of the Futures Task Force addressed the need for strategic planning for social work education. The task force members encouraged educational leaders to have clarity about the challenges facing social work professionals at a time with increased demand for social work services, changing demographic trends and increased economic disparity (CSWE, 2018). The challenges in contemporary social work practice require professionals to be more adaptive and flexible in confronting the existing gaps in equity and the implications for individuals, families, and communities.

The social inequities that professional social workers face inform the need for educational programming to develop competent practitioners. Ubiquitous and ongoing social justice issues such as structural racism and economic disparity, have become compounded and more complicated with the changing nature of the climate, migration, and technological advances (Van Soest & Garcia, 2008; CSWE, 2018). It is within these complex contexts that social workers' capacity to think critically is essential. The EPAS guidelines have historically included CTS as relevant to social work education programming.

In the 2008 EPAS guidelines, CTS was denoted as an independent student outcome in both undergraduate and graduate social work education. In 2015, the standards related to student outcomes changed to a competency-based model and CTS as a stand-alone student outcome was removed. At that time the expectation of the application of CTS remained throughout the

credentialing guidelines. For this research, the current placement of CTS as an expected, applicable skill in social work education programming is the identified problem.

Statement of the Problem

Despite the expectation of CTS in the context of the social work profession, the CSWE removed CTS as an independent educational outcome from the EPAS curriculum standards (CSWE, 2015). While the credentialing body removed CTS as an independent educational outcome, the application of CTS remained embedded in the guidelines for social work education and remained a requisite expectation. The CTS guidelines change, according to Robbins (2014), resulted in little direction or guidance for developing CTS or to assess its application. The modification of CTS from a core educational outcome to a discrete, applicable skill within the accreditation guidelines and standards for social work education informed this research.

In the three years since the changes in the accreditation standards related to CTS (CSWE, 2015), few, if any, studies have considered the implications for this change in the academic preparation of social work professionals. Furthermore, there has been limited research that clearly articulates how CTS is being developed or more importantly given the application standard, how the application of CTS is being assessed in social work education.

Purpose of the Study

The purpose of this mixed methods exploratory study was to identify the methodologies used to develop CTS, and the methodologies used to assess the application of CTS. Additionally, in an initial effort to assess the implications of the 2015 EPAS CTS outcome change, instructor perceptions of changes in student outcomes were explored. The application of social constructivism as a theory for learning was used throughout this research.

Theoretical Framework

Social constructivism (SC) is a theory of cognitive development pioneered by Vygotsky in the early 1900s (Cole, John-Steiner, Scribner, & Souberman, 1978). Theorists agreed that SC is relevant as a learning theory in the 21st century (Cole et al., 1978; Holland, Gallant, & Colosetti, 1994; Chandler & Teckchandani, 2015). In the context of this research, social constructivism will be applied as an andragogical approach to impart knowledge incrementally and through social context as a praxis to foster CTS in the social science professions (Brookfield, 1987; Sexton & Griffin, 1997; Cooper, 2001; Pritchard & Woollard, 2010).

As a contemporary epistemology for learning, SC is centered on the student as an individual who constructs new understanding from historical knowledge through current contextual social interaction (Pritchard & Woollard, 2010; Cole, 2012). Cole (2012) offered that inherent in social constructivism as an epistemological frame, is the discernment that constructivism cannot be "done," rather, instructors must be constructivists. Instructors must understand that education is not about how to teach, but about how students learn (Cole, 2012). Pritchard and Woollard (2010) interpreted Vygotsky's theory as applicable for anyone in the instructional role in an andragogical environment as the theory allows for student engagement and collaborative learning in the social context. From the lens of SC, three research questions were formulated to identify the instructional and evaluation methods for the development of CTS and instructor perceptions of student outcome changes since the 2015 EPAS guideline updates.

Research Questions

The following three research questions informed this study:

1. What instructional methodologies are you using to teach critical thinking skills?

2. What evaluation methodologies are you currently using to assess critical thinking skills?

3. Please describe in as much detail as you can the extent to which you have seen changes in

   student outcomes related to critical thinking skills since the 2015 CSWE changes?

These questions were core to this research. The research began with content on the

definition of terms used throughout.

Definition of Terms

Andragogy. Freire (1970) considered historic education practices a banking model of

instruction. The banking model is a didactic approach to instruction wherein educators act as

depositors of information and knowledge. Many scholars challenged this historical pedagogy

and offered an alternate model for education that is oriented in classroom flexibility and learning

for adults (Freire, 1970; Kurfiss, 1988; Headley, 1999; Brookfield & Holst, 2011). Freire (1970)

noted that from an andragogical approach to education, the experience of learning is an activity;

moreover, the student and teacher maintain a mutual responsibility for the process in which

everyone grows. Andragogy, as a theory of adult learning, is influenced by science, experience,

and differs from the pedagogical theory for instruction (Knowles, Holton & Swanson, 2015).

Knowles' et al. (2015) model for adult education has three dimensions of learning and

understanding that include: goals and purposes of learning, individual and contextual variations,

and basic adult learning principles. The andragogical theory for learning centers on the learner

and consists of the following tenets (Knowles et al., 2015):

- Adults need to know why they will need to learn something.

- Adults are independent and responsible for their own lives and decisions.

- Adult learners bring prior knowledge and experience to the educational experience.

- Adult learners come to the learning process ready to learn what they need to know to

  grow.

- Adults come to the learning experience with an orientation to life, to enhance what they

    are facing and to learn new knowledge, skills understandings and attitudes.

- Adult learners come to the experience of learning with external motivators such as family

    or career goals and internal motivators such as self-esteem or quality of life.

Several authors concurred that adult education is transactional (Brookfield, 1987; Kurfiss,

1988; Knowles et al., 2015). In this context, students are required to regularly engage their

intellect, professional and interpersonal understandings to gain insight and social awareness that

leads to freedom of thought and action (Freire, 1970; Sexton & Griffin, 1997). As such an

andragogical approach to learning allows for the development of CTS.

Critical thinking. The concept of critical thinking can be traced through thousands of

years of history and scholarly writings. Rooted in the work of the philosopher Socrates (Seelig,

1991; Celuch, Black, & Warthan, 2009), there continues to be ongoing scholarly discourse that

results in multiple definitions of critical thinking and conceptualizations of the skills that

constitute the capacity to think critically (Freire, 1970; Brookfield, 1987; Kurfiss, 1988; Gibbons

& Gray, 2004; Paul & Elder, 2007b; Celuch et al., 2009; hooks, 2010; Pignotti, 2010; Brookfield

& Holst, 2011; Beistle & Palmer, 2014; Paul & Elder, 2014; Mathias, 2015; Samson, 2016).

CT is sometimes referred to as cognitive behavior (Farley & Clegg, 1969), higher

psychological processes (Cole et al., 1978), purposeful/self-regulated judgment (Abrami et al.,

2008) or higher-ordered thinking (Young, 2014). Paul and Elder (2007b) posited that CT is the

art of using the best thinking in any situation. According to Brookfield, (2012), CT occurs as

part of the social exchange. Miller, Harnek-Hall, and Tice (2009) added that CT is as much

about the process as it is about the content. While there are differing opinions on the definitions

and conceptualizations of CT, there is consistent agreement that CT is contextual (Brookfield,

1987; Kurfiss, 1988). In keeping with the contextual understanding of CT and for the purposes of this research in social work education, the CSWE 2015 updated definition of CT will be used: "Critical thinking is an intellectual, disciplined process of conceptualizing, analyzing, evaluating, and synthesizing multiple sources of information generated by observation, reflection and reasoning" (EPAS, 2015 p. 20),

This definition of CT informs educational program planning and the use of curriculum that is specific to the context of the social work profession. Social work curriculum allows for student self-reflection to mitigate personal bias, facilitate classroom engagement, and encourage experiential processing in the development of CTS. Course objectives influence the assessment of CTS. According to the CSWE, the assessment must be multidimensional and cohesive to capture students' level of competence (CSWE, 2015). In addition to the definitional understanding of CTS, it is useful to consider taxonomy, as a construct for the development of learning objectives designed to foster CT.

Taxonomy. Marzano and Kendall (2007) articulated that the purpose of taxonomy is to standardize the development of hierarchal learning objectives. In the 1950s, Bloom's taxonomy for learning was conceived and characterized levels of cognitive development (Davis, 2009; Young, 2014). Marzano and Kendall (2007) argued that while Bloom's work strongly influenced outcome evaluations, it had little impact on curriculum development. Marzano and Kendall (2007) posited that Bloom's hierarchy was flawed in that it used levels of difficulty between the hierarchal levels.

Marzano and Kendall (2007) contributed to the body of taxonomy research by discerning that the hierarchy for learning to think critically is ordered not by the difficulty of content but by the development of familiarity with the process of learning. Marzano and Kendall (2007) argued

that the more familiar a person is with the process of learning, the more readily they can employ what they have learned in a given situation.

Allen and Friedman (2010) argued that in addition to the cognitive and behavioral development, existing in some taxonomies, social work instructors are tasked with teaching within the students' affective domain. Allen and Friedman further suggested that in as much as this complex area of student development is grounded in the private realm of the students' beliefs, attitudes, and values, affective learning involves change that impacts thinking and behavior. Allen and Friedman expanded on the affective taxonomy and allowed for the discernment between student attitudes about the learning experience and actual learning. The affective domain taxonomy utilized educational strategies to gain student attention and foster motivation (Allen & Friedman, 2010). While Paul (1985) suggested that the hierarchy of Bloom's taxonomy is one way, a taxonomy that involves the affective domain allows for a dual process for learning.

Furthermore, the taxonomy that is hierarchal and allows for educational objectives that are interactive is consistent with the social constructivism theory. The absence of any structured guidance for curriculum development related to CTS in the EPAS guidelines change was a concern for some scholars (Robbins, 2014). This concern emphasizes the importance of the current study.

Importance of the Study

It has been three years since the change in the EPAS standards related to CTS and social work education. This research was specific to the development and evaluation of CTS in graduate social work students preparing to enter the profession. Also, an early assessment of instructor perceptions of student CTS outcomes was conducted to ascertain implications of the

guideline change. In as much as CT is a professional expectation for social workers in a variety

of practice domains, social worker students prepare to enter practice fields in service to others in

the pursuit of the social justice goals of the profession. Thus, it is imperative that the discussion

and research related to the development of critical thinking skills are current and relevant to

educational leaders in the industry. This research was intended to add to the existing social work

educational research related to social work instruction, and evaluation in social work

programming and the development of CTS.

The literature review is as follows and will consist of content related to the concepts of

critical thinking, social constructivism, CT and instruction, social constructivism and instruction

for CT and the intersection of these content areas with social work education. Given that the

research was intended to identify the specific contemporary methods for instruction and

evaluation processes implemented by graduate social work instructors, the literature review will

include content related to existing instructional and evaluation methods.

Literature Review

The world has become increasingly, a more complex, knowledge-based society (Zumeta,

Breneman, Callan, & Finney 2012). The changing nature of society, demographically, socially,

politically and economically, necessitates the need for critical thinking professionals entering

into any field of practice (Van Soest & Garcia, 2008; Young, 2014). Undergraduate education is

considered a foundation in the contemporary paradigm of a knowledge-based economy while the

graduate degree goes beyond that foundation (Wendler et al., 2010). A graduate degree bridges

the academy to the global economy where organizational leaders require individuals to think

critically to solve problems effectively, communicate clearly, and to collaborate as socially

responsible employees and professionals (Brookfield, 2012; Zumeta et al., 2012; Paul & Elder

2014).

Multiple scholars agreed that the development of students' CTS has become a core

commitment of the academy (Paul & Elder, 2007a; Brookfield, 2012; Young 2014). Paul and

Elder (2014) opined, that learning to think critically requires thinking about thinking, which

allows the mind to become free from uncritically held beliefs by developing different ways of

thinking. According to Paul and Elder (2014), if thinking is left unchecked, it can be biased and

uninformed. Brookfield (2019) added that by fostering CTS, educators are teaching students to

face their biases by seeing social inequities as extant in society.

Critical Thinking

Bloom theorized that learning to think critically involves learning how to ask and answer

questions of analysis, synthesis, and evaluation (Paul, 1985). Gibbs and Gambrill (1999)

described the purpose of CT is to inform the best decision-making in service to others. Many

researchers agreed that the capacity for individuals to think critically leads to a more informed

and democratic constituency, (Kurfiss, 1988; Paul & Elder, 2007a; Brookfield, 2012).

To learn to think critically is an active cognitive process that can be seen as inextricably

tied to challenging the status quo (Jackson & Carafella, 1994; Brookfield & Holst, 2011).

Critical thought can result in freedom from attachment to fixed ideologies that perpetuate the

oppression of others (Brookfield & Holst, 2011). Bain (2004) asserted that students learn to

think critically with evidence. hooks (1994) stated that CT is an action fueled by a desire to

understand. Kurfiss (1988) noted that CT could be used to challenge assumptions, problem

solve, reason, gather knowledge, increase understanding, and organize. Young (2014) posited

that the most critical outcome of an educational process is to learn how to maximize thinking.

Paul and Elder (2007a) purported that CT in education offers students systems mastery, increased insight, and the ability to analyze, assess and define their learning, values, and lives. Young (2014) noted that higher order thinking involves, critical thought, creativity, and reflection. Mathias (2015) distinguished CT in social work as different from other educational frames, supporting the contextual argument for CTS. Mathias (2015) identified a two-pronged conceptual clarification for CT in social work: 1) CT is a process of practical reasoning that informs and influences and 2) appropriate action.

Many scholars agreed that the context of the social work profession is highly varied with multiple practice domains, areas of specialization and professional roles (Hartman, 1983; Van Soest & Garcia, 2008; Robbins, 2014). Thus, scholars have argued that CTS is crucial for social workers that practice in highly stressful and complex family, community, and policy-oriented settings (Gibbons & Gray, 2004; Paul & Elder, 2014; Machum & Clow, 2015; Bent-Goodley, 2017). Accordingly, instruction for the development of CTS in social work preparation has direct implications for preparing competent social work professionals in areas of clinical practice, community service, research, and in creating social policy (Holtz-Deal & Pittman, 2009; Robbins, 2014; Samson, 2016). Given that one of the purposes of social work education is to foster CTS, it is relevant as part of this discussion to consider instruction for the development of CTS.

Critical thinking and instruction. Gellin (2003) argued that teaching CT began with Socrates who required students to question their belief systems and learn to discern their beliefs and ideas based upon evidence. The application of CTS as a praxis for social change through education has gained significant scholarly attention. Thus, there is a growing body of research on CT as a

core educational expectancy across disciplines (Kurfiss, 1988; Paul & Elder, 2007b; Brookfield, 2012; Mathias, 2015).

Some scholars agreed that learning to think critically is the foremost practice that will lead to social change (hooks, 2010; Brookfield & Holst, 2011). Others purported that the entire reason to learn to think critically is to participate in social justice by taking action for change in places where existing injustice continues (Van Soest & Garcia, 2008; Brookfield & Holst, 2011; Brookfield, 2012). Machum and Clow (2015) suggested that political leaders invested in the status quo of agendas, policies, and practices potentiate ongoing social injustices and inequities. Cherrington (in Knowles et al., 2015) described CT as the best evidence of the democratic method and noted that CT is a profound departure from an authoritarian system.

Brookfield and Holst (2011) encouraged the academy to radicalize learning and reasoned that a colonial pedagogy had been intricately tied to political and economic perceptions of democracy. While education for CT, social justice, and change is possible, it may not always be an easy endeavor as some scholars discovered. Some scholars posited that instruction for social justice might result in resistance.

Kurfiss (1988) questioned institutional support of the faculty efforts teach CT. Headley (1999) recognized the imperative of articulating critical knowledge for social justice-minded professionals (to include social workers) as being perceived as radical and discovered that the practice of thinking as an open-minded, politically aware educator could generally be seen as an affront to the academy. Teaching to develop CTS always involved a level of fear for some educators, as doing so was often perceived as a challenge to the academy (hooks, 2010). In addition to institutional barriers to teaching to foster CT, students may also struggle with the awakening of their thoughts (Sexton & Griffin, 1997; Giampetro-Meyer 2004).

Kurfiss (1988) suggested that students resist learning to critically think because it is too challenging. Others contributed to this scholarship, by adding that when students begin to challenge their assumptions and consider realities that are different from what they have known, this could be emotionally painful and create resistance to learning (Lyddon, 1990; Sexton & Griffin, 1997; Giampetro-Meyer, 2004). While some scholars added that to encourage cognitive flexibility in social work students can be unsettling and challenging (Brookfield, 2012; Adams, 2016); Paul and Elder (2014) noted that it is possible to teach students to become critics of their own thinking.

Learning to think critically is an ongoing process that requires active participation and reflection in the contextual domain (Brookfield, 1987; Holland et al., 1994; Paul & Elder, 2014; Adams, 2016). Popkess and McDaniel (2011) reported evidence that active learning as a method of promoting student engagement among college students and has positive effects on student outcomes that include problem solving and CT. While efforts have been made to integrate CTS as part of overall academic outcomes, there are concerns about this academic expectancy.

Despite slow beginnings to situate CTS as a formal educational outcome in the 1980s, the United States Department of Education has included CT in its definition for higher education (Commission on the Humanities, 1980). Brookfield (2012) stated that one of the primary concerns with general CTS expectations is the variation in approaches to developing CTS from program to program. Several scholars suggested that CT would be best taught independent of any course content (Ennis, 1989; Samson 2016). Paul (1985) emphasized the importance of learning to teach CTS. Abrami et al., (2008) added that teachers should have training to teach CT.

Gellin (2003) noted that while the academy had made concerted efforts to integrate CT into the curriculum, there is evidence that indicates that those who teach to develop CTS may not fully understand the construct. Farley and Clegg's (1969) research supported the benefit of instructors having been trained to use Bloom's taxonomy in the classroom and reported that student teachers that had been trained in the use of the taxonomy realized an increase in their capacity to instruct to develop CT. The use of a hierarchical taxonomy allows for the development and evaluation of specific skills and provides a construct for students learning to transition from one level to another (Paul, 1985; Marzano & Kendall, 2007; Allen & Friedman, 2010). Several scholars utilized scaffolding as a process for teaching to accomplish educational objectives (Kurfiss, 1988; Pritchard & Woollard, 2010; Brookfield, 2012). Kurfiss (1988) stated that the real aim of teaching CTS is to facilitate the development of an epistemological skill set. It is this argument that requires consideration of the social constructivism theoretical framework as an instructional model to develop CTS will be discussed.

Social Constructivism

Pioneered in the early 1900s by Vygotsky, the tenets of social constructivism are applicable to the adult learning environment. The tenets of social constructivism include: learning occurs in social contexts, historical knowledge informs new knowledge, and learning is centered on the student (Cole et al., 1978; Pritchard & Woollard, 2010). Vygotsky suggested that, learning is generated by more than the presence of previous external influences, and that new external influences and experiences contribute to the expansion of what is known or understood (Karpov, 2014).

An essential element of social constructivism is the process through which learning occurs. Vygotsky emphasized the process of problem solving and the importance of social

interaction in age-related or contextual experiences (Cole et al., 1978). The crux of how learning

occurs within a social constructivism framework is consistent with an andragogical approach to

learning, given that it is considered transactional and centers on the individual (Knowles et al.,

2015). Apaydin and Hossary (2017) posited that instruction is designed to build upon natural

learning processes and added that classroom structures that encourage engagement contribute to

better understanding. In addition to the process of social learning inherent in social

constructivism in the incremental hierarchical experience of learning, is the space in which new

learning occurs.

The Zone of Proximal Development (ZPD) was conceptualized by Vygotsky and is a

core tenet of social constructivism (Cole et al., 1978). Vygotsky theorized that new learning is

built on historical knowledge thereby creating a zone of proximal development (ZPD).

According to Pritchard and Woollard (2010), the ZPD is the transitional space between what the

student knows and the new information to be learned.

Young (2014), described this space as learning gaps, where learning is plateaued until

new information is presented at higher levels of education, where reflective thinking occurs.

Karpov (2014) added that people construct their understanding through social interaction and

practical activities for learning and reflection. Knowles et al. (2015) suggested that as a learning

theory for adults, social constructivism is centered in two dimensions: the learner and the

learning transaction.

The application of social constructivism to learning and instruction situates the instructor

as a mediator of the interaction in contextual and age-related environments. SC can be used to

foster and develop increased motivation for learning, introduction to tools for thinking, problem

solving, and self-regulation thus, social constructivism has gained consideration as an approach

to andragogy (Jackson & Carafella, 1994; Karpov, 2014; Knowles et al., 2015). Social

constructivism as an andragogical theory frames learning as a nonlinear, dynamic process

(Jackson & Carafella, 1994; Sexton & Griffin, 1997; Karpagam & Ananthasayanam, 2011).

Social constructivism is a theoretical framework that supports student empowerment, self-

directed and enhanced learning through context (Jackson & Carafella, 1994; Karpagam &

Ananthasayanam, 2011). Karpagam and Ananthasayanam (2011) described the application of

social constructivism as a learning theory that fosters self-reliance and resourcefulness, health,

wellness, and peace-centered values, as well as the facilitation of acquiring knowledge that will

influence students' behavior and attitudes. Sexton and Griffin (1997) posited that social

constructivism is a viable postmodern theory that has applications for teaching, research, and

training.

Sexton & Griffin (1997) suggested that social constructivism as a theory for learning,

provides opportunity for professionals to develop an epistemological position, increase self-

awareness and professional skill development. Knowles et al. (2015) suggested that the parallels

between andragogy and social constructivism are clear and include the following theoretical

tenets of social constructivism as a teaching model:

- Enhance student motivation with issues in the area of interest,

- Knowledge of the content area,

- Offer or allow for students to problem solve interactively with instructor/within a
  community of other learners, and

- Regulate or evaluate learning or problem-solving responses.

There are multiple student engagement models for instruction and learning through a

social constructivism lens including but not limited to inquiry-based learning, problem-based

learning, project-based learning, and case studies (Sexton & Griffin, 1997; Cole, 2012). Cole (2012) stated that while student outcomes and classroom objectives drive curriculum, it is the process wherein students and instructors collaboratively engage that allows for the construction of knowledge. While some scholars considered social constructivism a fitting theoretical frame for adult learning and instruction, not all scholars agreed.

Some scholars described limitations with the use of SC as a learning theory. Richardson (2003) argued that social constructivism as an andragogical approach to instruction and learning has only been applied since the early 1990s and noted several challenges with the use of a theory of cognitive development and learning as a praxis for teaching or practice. According to Hickman, Neubert, and Reich (2009), social constructivism could be considered too subjective, arbitrary and not entirely scientific.

Some authors agreed that the conversion of this cognitive development theory to a theory for learning is highly demanding (Richardson, 2003; Van Bommel, Kwakman, & Boshuizen, 2012). Sexton and Griffin (1997) similarly noted that despite the growing literature on adult learning that is consistent with a social constructivism approach, there is a conspicuous gap in the methods for operationalizing the approach in the adult classroom. Other scholars critiqued the elements of teaching through a social constructivism approach for not offering specific methodological approaches to instruction, and suggested that as such the use of SC in the classroom would require specific training (Richardson, 2003; Cole, 2012). Despite the criticisms, social constructivism as a theory of cognitive development has evolved from its inception and has become a viable approach to education and instruction (Sexton & Griffin, 1997; Karpov, 2014; Knowles et al., 2015).

Social constructivism and instruction for critical thinking. Some scholars considered the application of SC in the classroom a challenge that involves more preparation and training (Sexton & Griffin, 1997; Richardson, 2003). Others countered that SC is a viable theoretical epistemology that could be used for the development of CTS (Cole, 2012; Knowles et al., 2015; Cooper, 2001). Sexton and Griffin (1997) asserted that social constructivism as a framework for learning involves challenging personal assumptions of objectivity, reality, and encourages learning to think critically. Sexton and Griffin (1997), added that SC is a process of interaction, requiring reflection of the learner's knowledge, understanding, transferability, and application of what is learned to practical situations. Cole (2012) added that critical thinking is inherent for students as they begin to challenge personal attitudes, values, and beliefs. Scholars agreed that one mechanism for teaching CTS is active engagement in educational contexts (Bain, 2004; hooks, 2010). Berlin (1996) suggested that to understand the influence of classroom environment from a social constructivism approach allows for the opportunity for students to learn from others' perspectives.

 In his research on first and second order emotional change in therapeutic work, Lyddon (1990) found that the social constructivism approach to learning was founded on the assumptions that people are self-organizing, developing systems that create their own realities. Lyddon (1990) added that social constructivism theorists see life challenges as developmental and that these points of learning are often accompanied by emotional disequilibrium. Lyddon (1990) suggested that this emotional movement, expression, and exploration is transformational to personal change.

This evolution of thought could create an inherent sense of ambiguity for students that could be unnerving as they begin to think critically (Brookfield, 2012). Adams (2016) stressed

the importance of framing learning to foster critical thinking as a lifelong skill for students as

they begin to move past their comfort zones. Despite the differing perspectives on the

application of social constructivism theory in an educational context, it is being used in other

countries and across disciplines to include social work (Sexton & Griffin, 1997; Celuch et al.,

2009; Gibbons & Gray, 2004; Holloway, Black, Hoffman, & Pierce, 2009; Johnston, 2009;

Karpagam & Ananthasayanam, 2011; Karpov, 2014; Chandler & Teckchandani, 2015).

Instruction that is organized to provide social work students the experiential opportunities

to think critically, reason, problem solve, apply theory, and to begin to use professional judgment

is core to social work education (CSWE, 2008). SC could inform an instructional approach that

involves problem solving in a social environment and by creating opportunities for students to

function beyond where they are in their learning. The graduate social work instructional

environment could provide the context where social constructivism theory for learning offers the

structure, process, and support to enhance the development of CT (Brookfield, 1987; Sexton &

Griffin, 1997).

Social Constructivism, Critical Thinking, and Social Work Education

According to several scholars, the application of social constructivism as a theory for

teaching social work students to think critically is a thoughtful, theoretical, epistemological fit

(Sexton & Griffin, 1997; Van Bommel et al., 2012; Cooper, 2001). Cooper (2001) argued that as

an epistemology, social constructivism is grounded in ethics and has applications for social work

research, policy, training, and educational programming. As a construct for social work

educational programming, social constructivism could be seen as a theory for learning that is

consistent with the relational nature of social work and the commitment of the profession to seek knowledge from others perspectives to foster CT.

Social Work scholars concurred that learning to think critically is necessary for social workers to be competent professionals (Seelig, 1991; Plath, English, Conners, & Beveridge, 1999; Kersting & Mumm, 2001; Vandsburger, 2004; Van Soest & Garcia, 2008; Mathias 2015). There is scholarly agreement that CT is vital in social work education programs (Plath et al., 1999; Vandsburger, 2004; Robbins, 2014; Machum & Clow, 2015). There are, however, differing opinions as to whether CT is one of a core set of skills or explicitly occurring based on the context and approach in which it is taught (Seelig, 1991; Abrami et al., 2008); thus, the need to consider how instruction to develop CTS occurs in the social work educational process.

Since the 1951 inception of the CSWE, there have been several iterations of the credentialing standards for schools of social work. The 2008 and 2015 changes in the CSWE credentialing standards were intended to accomplish several goals. These goals were intended to keep social work education relevant in the context of contemporary social influences, such as a more mobile constituency and rapid technological growth (Robbins, 2014; Mathias, 2015). Additionally the council intended to stay consistent with current social work theoretical practice approaches, especially the move towards an evidence-based practice agenda (Holloway et al., 2009; Jani, Pierce, Ortiz, & Sowbei, 2011; Robbins, 2014; Mathias, 2015). In the context of a large body of knowledge encompassed in social work education, the changes were also intended to move from content-based measurement outcomes to competency based outcomes, which would allow for more individual programmatic freedom and creativity (Robbins, 2014; Mathias, 2015). The social work body of knowledge is derived from disciplines such as psychology,

sociology, psychopathology, and philosophy and is considered a profession within the social

sciences (Sexton & Griffin, 1997).

As such, CTS in the context of the profession of social work involves discipline-specific

concepts, language, theories, principles and the core values that inform the profession. The core

values of the profession of social work are service, social justice, the dignity and worth of the

individual, the importance of human relationships, integrity, and competence (Bogo & Wayne,

2013; National Association of Social Workers, 2017). Van Soest and Garcia (2008) contributed

that social work education is grounded in content that is situated in the pursuit of distributive

social justice. Van Soest and Garcia, (2008) added that, in the context of social work instruction,

educators need to challenge students to engage in CT while being mindful of students value

assumptions in order to facilitate classroom dialogue that addresses social justice.

Graduate social work education is a time in which social work students enter the learning

opportunity grounded in knowledge of key frames for understanding human development, family

systems, and relationship dynamics. Graduate social work students are learning to think

critically about multiple social and political issues that perpetuate and create social injustice and

inequities with marginalized and oppressed populations (Van Soest & Garcia, 2008). In the

graduate social work setting, students are learning to challenge existing binary, right /wrong,

yes/no, all or nothing thinking and are motivated to learn to connect the abstract and the concrete

(Adams, 2016) and learning to consider all manner of possible outcomes or ideas in a situation.

At a time of increased political, social, and economic upheaval, social workers are

engaged in various discourses, conflicting stakeholder interests and complex institutional

structures (Paul & Elder, 2014; Robbins, 2014; CSWE, 2018). Holden, Barker, Rosenberg, and

Onghena (2008) claimed that social work education is multifaceted and can result in a myriad of

student outcomes in a variety of contexts, thus requiring an increased need to explore and

understand theory, evidence-based practices and the differences in meaning and contexts to take

action towards social change (Van Bommel et al., 2012; Robbins, 2014). Researchers agreed

that social work students need preparation to assess and intervene in complex client, family, and

community systems, and to be cognizant of current policy issues (Holtz-Deal & Pittman, 2009;

Robbins, 2014). Holloway et al., (2009) added that CT as a skill is considered one of many

competencies that constitute the domain of social work practice. Yet, Robbins (2014) argued

that the CTS guideline change in the social work program standards obscured CTS and cautioned

that this could put social work education at risk by contributing to the definitional ambiguity of

CT.

　　　According to Vandsburger (2004), CT is purposeful thinking, and as a tool for

challenging the status quo, it is essential for social workers in as much as CT requires a review of

personal assumptions, beliefs, and re-evaluation of individual decisions. Several scholars noted

that as it relates to the professional application of best practices in the field of social work, CTS

are fundamental (Pignotti, 2010; Samson, 2016).

　　　Gambrill (1994) emphasized the importance of teaching CTS at all levels of social work

education. The expectation for the preparation of critically thinking social workers places social

work educators in a unique and strategic position to foster CTS in current and future generations

of social work professionals (Seelig, 1991; Samson, 2016). Moreover, Lahaie et al. (2017)

contended schools of social work have a responsibility to prepare practitioners to address the

fundamental commitments of the profession, to honor individual dignity, eliminate oppressive

social and political conditions, and to promote social justice.

Van Soest and Garcia (2008) recognized the significant challenge that social work educators have in the preparation of social workers for professional practice that is centered on social and economic justice. Seelig (1991) cautioned educators not to assume that social work students already think critically. Gambrill (1994) warned the academy that failure to teach CT as a performance skill could result in more significant divisions in research and practice. Thielke-Huff (2000) noted that quality social work education includes teaching students to think critically. Social workers are expected to make sound, professional, evidence-based decisions related to ethical and social justice issues in the field, therefore, CT takes on more importance as social work students become prepared to take professional action in interdisciplinary, collaborative environments, and institutional settings (Holtz-Deal & Pittman, 2009; Robbins, 2014). Holloway et al. (2009) added that the CSWE guidelines changes offer an opportunity to improve social work education and practice by focusing on what social workers do rather than what they are taught. One theoretical approach to develop CTS in social work education is social constructivism.

The social constructivism theoretical approach to learning is consistent with social work education given that the theory is centered on the learner, the social process of collaboration and supposes that learning is done in measurable segments. The notion of instruction from this process-oriented, segmented approach, however, can seem counter-intuitive for those who prefer a standard more pedagogical approach to instruction (Sexton & Griffin, 1997).

Sexton and Griffin (1997) suggested that the lack of a standardized conception of social constructivism as a model for instruction is consistent with the nature of the theory itself. Social constructivism is inherently guided by how an individual learns and creates meaning in a social context. While having no formal guide for instruction is a concern for some (Sexton & Griffin,

1997; Richardson, 2003), the application of social constructivism as a construct for learning in social work educational contexts could offer educators more academic freedom (Robbins, 2014; Mathias, 2015). At the same time, SC supports an andragogical approach to instruction that may better meet the needs of the adult social work student (Popkewitz, 1998; Sexton & Griffin, 1997; Knowles et al., 2015).

Gibbs and Gambrill (1999) maintained that teaching social workers to think critically would result in students' ability to make sound practice decisions. Gibbs and Gambrill (1999) created a text of exercises to be used to engage social work students in CT through experiential exercises in a variety of contexts. The workbook includes a framework for learning to think critically with the use of assessment tools, videos, and case studies challenges students to engage in the application of CT in a variety of areas such as historical knowledge, the media, and human service advertisements. Kurfiss (1988) advised the integration of experiences that foster CT such as small working groups that clarify concepts, theories and debate issues. Any of these methods could be seen from a social constructivism view of learning that encourages engagement, requires an understanding of the complexity of practical situations, learning to cope with ambiguity, multiple outcome possibilities and personal perspectives (Van Bommel et al., 2012).

Van Bommel et al. (2012) asserted that while critics considered the social constructivism approach to self-directed learning as too demanding for students, social constructivism as an epistemological frame in the classroom would allow for the student of social work to begin to frame their individual learning experience. Students do this by finding meaning and learning to think critically by engaging with individuals from diverse backgrounds and with different points of view. In the discovery of meaning in their own lives, students then transfer that learning from the classroom with each other and ultimately into professional practice (Greene, Jensen & Jones,

1996). Van Soest and Garcia (2008) stated that to prepare competent social workers involves

supporting the development of CTS to gain a better understanding of local national and global

issues. Dumford, Cogswell, and Miller (2016) noted a lack of research in all disciplines as to the

actual use of learning strategies in higher education.

Wilson and Campbell (2013) suggested that there are gaps in the research about what is

working in social work education from an instructional perspective. The plethora of competing

definitions of CTS could contribute to its definitional and practical ambiguity in the social work

context and consequently impact instructional methodologies and evaluation processes of CTS

(Mathias, 2015). Despite these concerns, there are myriad ways that instruction and learning

take place in social work education. By whichever mechanism, in social work education, the

process of teaching CTS takes time and effort (Sexton & Griffin, 1997; Aviles, 2000). The

freedom to construct or use methodologies that foster and develop CTS can be inclusive of any

number to methods.

Critical Thinking Skills Instructional Methods

While Gibbs and Gambrill (1999) argued that social work education had lagged in

implementing such cooperative instructional approaches, multiple evidence-based practices are

being used to foster CT in social work education. Estanek and Love (2003) found that

incorporating in and out of class experiences could be a synthesis for fostering CTS. Abrami et

al. (2008) posited that improved CTS and dispositions are associated with how critical

instruction is provided, and added that the most effective approach to teaching CT is a mixed

approach; the researchers recommended an educational approach from which the educator

frames CT objectives explicitly and integrates the outcome objectives into the contextual process

of the course.

Van Bommel et al. (2012) explained that a social constructivism approach to education

considers that learning occurs in the context of performing whole authentic tasks in real-life

circumstances, including teamwork and cooperation with other professions. Brookfield (2012)

offered that there is no consistent approach to instructing to develop CTS. Kurfiss (1988) argued

that instructors are essential in the development of CTS and suggested that student thinking will

remain limited unless these skills are intentionally nurtured. In their text for instruction on skills

for direct social work practice, Cummins and Sevel (2017) recommended the creation of

opportunities for instruction and observation of graduate social work students through

engagement oriented work: group process and participation, theoretical application through case

studies, simulations, vignettes or case studies requiring CT. Davis (2009) recommended

planning techniques that are centered on the students' experience. Understanding how students

learn is an essential component of instruction. It is important to take into account differing

student learning styles, students from other racial or ethnic or cultural backgrounds, or students

for whom English is a second language (National Research Council (2000). According to Ribera

(2017), strategies are iterative and may vary from student to student; however, some strategies

that can be used to encode content are: identifying course-specific content from the readings,

reviewing notes and synthesizing course work. Specific approaches that were added to the

FSSE-M to capture instructional methodologies for evaluation are as follows.

Explicit instruction. Kurfiss (1988) suggested that CT might best be taught explicitly

and early in a student's educational process and at the outset of discipline-specific programming.

Paul (1985) described explicit instruction as raising conceptual components to a conscious level.

Explicit instruction is used to articulate course objectives clearly (Abrami et al., 2008; Samson, 2016). Explicit instruction is used to encourage active participation and risk-taking and allows for a diversity of thought and student development while providing opportunities to foster CT. Brookfield (2012) noted that when to introduce CT development can be a challenge, given the often painful process of moving students to question their assumptions and points of view. Brookfield (2102) emphasized the importance of instructors being grounded in the intrinsic value of the need for the capacity to think critically. Cummins and Sevel (2017) situated clearly designed questions to foster CTS throughout their assessment textbook. The questions that are utilized to provide practical opportunities to encourage students to think and frame responses critically in an incremental scaffolding manner.   Brookfield (2012) argued that it is unrealistic that each learning activity will involve CT and he suggested that to be able to think critically, a student would have to have learned something to inform judgments about it. Brookfield (2012) added that the practice of CT can be inherent at any level of learning and characterized the capacity to think critically by levels or degrees. Brookfield (2012) suggested that early classroom opportunities to think critically might be more implicit.

Implicit instruction. As part of the 2008 CSWE guidelines, implicit curriculum was included with explicit curriculum and the assessment of student outcomes (Bogo & Wayne, 2013). According to Bogo and Wayne (2013), implicit instruction refers to the institutional environment or structures such as intuitional policies and procedures, such as administrative structures, student services, student government, student and faculty engagement and field placement settings

Implicit education is intended to represent the relational experience of the educational journey (Bogo & Wayne, 2013). Incorporating CT into the curriculum can be a challenge.

Implicit instruction related to CTS, while seemingly more discrete, is intentional and can occur within the function of the curriculum as a way to engage student thought. Brookfield (2012) discussed the utility of instructor modeling CTS. Brookfield (2012) recommended an iterative approach to classroom processes given that each classroom dynamic is different. Brookfield (2012) added that a strategy or template that can be embedded into the scaffolding to help foster CTS and give students the freedom to respond within their process of development could be useful.

Implicit instruction involves some inherent elements of student assessment and is demonstrable through such concrete actions and observations of students learning styles, study skills, independent judgment, capacity to consider alternative points of view, making informed choices and decisions, and clarifying course expectations. It is possible to teach to and assess CTS in the classroom environment at any level (Brookfield, 2012) when the expectations, rules, and messages are understood though not stated.

Bogo and Wayne (2013) argued that implicit curriculum, while intended to facilitate the EPAS standard expectancy of the reciprocal exchange experience, could fall short of creating the human interaction across the stakeholders in the academy. Bogo and Wayne (2013) characterized implicit instruction as being the social nature of the classroom.

Implicit instruction is one approach that Bogo and Wayne (2013) suggested is not new and comes naturally to social work instructors who model professional practice in every way as they interact with students. Those interactions can include: responsiveness to student needs, creating a safe environment, and managing classroom dynamics in the context of students challenging their assumptions, attitudes, values, and beliefs, thus learning to think critically and beginning to problem solve (Bogo & Wayne (2013).

Problem solving. CT is decision making based on principles rather than procedures (Paul & Elder, 2014). Problem solving according to Paul and Elder occurs when a question about a problem is identified and articulated clearly and directly and results in the process in which solutions to a problem are identified. Problem solving is inherent in the social work profession. Thus, for students to participate and engage in practical experiences for problem solving is a primary function of graduate social work programming. Through vignettes and case studies, students are provided opportunities, individually and or in groups to thoughtfully consider all aspects of a situation, conduct a needs assessment, identify barriers, and work towards an informed, competent plan of service (Cummins & Sevel, 2017).

Problem solving is central to social constructivism as a way to facilitate student learning (Abdal-Haqq, 1998). According to Kurfiss (1988), CT is a form of problem solving. Problem solving may also be a frame for instruction in which students can identify limitations in their thinking as they think critically in case studies, vignettes, lectures, collaborative learning and in small and large groups and field education contexts (Davis 2009).

Case studies. Baker (2014) defined a case study as a way of evaluating a family, individual, group, or community over time through a systematic lens. Social work classrooms might use a case study to invite CT by identifying client issues, policy influences and social, economic issues and work to problem solve solutions. An example may be the use of a case study found in qualitative research to stimulate CT and discourse on multiple issues. Gambrill (2006) suggested that a study of case histories and personal narratives is one way that social work students can challenge their thinking through the experiences of others. Vignettes are one possible way to observe examples of problems of practice.

Vignettes. Vignettes can be used as a way of fostering CT from a social constructivism approach (Pritchard & Woollard, 2010) to instruction. The instructor presents some form of content and presents students with frames of inquiry related to the content, it allows students to a) recall prior knowledge on the subject, b) collaboration to learn, move across contexts, c) teamwork, d) appreciate the reciprocal nature of learning, and e) participate in informed decision making (MacIntyre et al., 2011). MacIntyre et al. (2011) used vignettes as a way of measuring change in student learning and skill development and assessing changes in student attitudes and perceptions as well as CT in graduate social work students. Each of these methodologies is in place as the scaffolding of the educational process for graduate social work students, preparing them for a variety of field settings wherein they can get the opportunity to practice the synthesis of theoretical understanding and CT in a practice setting.

Field education. Sometimes referred to as field placement, practicum or field instruction, field education is experiential and situates graduate social work students in the field of social work in a variety of settings. Several scholars considered field education to be core to social work education, (Hemy, Boddy, Chee, & Sauvage, 2016); Bogo and Wayne (2013) added that field placement education is of equal importance with course curriculum. In field placement settings it can be a challenge to structure learning and the responsibility for such; thus this instruction falls to the field instructor. Vital to field instruction and framing should be content in the ethics of clinical practice (Reamer, 2012). In field placement settings, students have the opportunity to apply what they are learning, CT, assessment, theory application, and problem solving.

According to Gentle-Genitty, Haiping, Karikari, and Barnett (2014), students are challenged with the application of theory unless they are taught how that application occurs.

Without theoretical application specific training, argued Gentle-Genitty et al. (2014),

there is some measure of disconnect, which leaves students with a question of relevancy of

theories that are transferrable to practice. Gentle-Genitty et al. (2014) recommended that

instructors teach to the application of theoretical frames that may be relevant to student

placement settings, or professional interests. In as much as there is no one way to instruct to

develop CTS, neither is there one way to evaluate a student's capacity to apply CTS in social

work education. The challenges to instruction do not preclude the expectation of evaluating the

application of CTS in graduate social work education (Aviles, 2000). The following are some of

the methods currently used to assess the social work students' application of CTS.

Critical Thinking Skills Assessment Methods

According to Brookfield (1987), CT is often considered an abstract skill, making it

challenging to evaluate. Sternberg (2016) stated that universities should establish what they wish

to measure before developing assessment processes. Paul and Elder (2007b) suggested that

educators consider understanding and reasoning within a discipline or context and encouraged

educators to consider the assessment of CTS key to promoting academic achievement. Pike

(2006) added that faculty members are more likely to take responsibility for student outcomes if

they believe assessment data represent their students.

 Kurfiss (1988) posited that the evaluation of CTS requires qualitative, subjective

judgment by the professor. Brookfield (2015) contributed that CTS assessment involves

judgment of students' work and should be done in the context of other nuances to instruction.

Critical thinking evaluations can be based upon rubrics, or matrices, portfolio development,

service learning, self-reflection assessments, and theoretical application. Evaluations are

expected through course or programmatic outcomes to evaluate students' CTS application and to

identify areas of strength and weakness (Kuriss, 1988). According to Gibbons and Gray (2004), evaluating CTS involves the observation of students' self-awareness of values and beliefs and the capacity to use reason and theory to develop a position on something and effectively articulate a point of view.

Brookfield (2012) suggested that action provides observability as a way to assess student capacity to challenge assumptions, contextually create meaning, and formulate reasonable alternatives in any situation. It is through observable moments that educators may assess and evaluate student outcomes. Through a social constructivism lens, Cole et al. (1978) argued that the analysis of teaching should not preclude the relationship between learning and developing. Contextually, the profession of social work is highly relational and process oriented (Pignotti, 2010); accordingly, the nature of andragogy for social work is equally oriented in process (Holtz-Deal & Pittman, 2009). Measuring educational outcomes is a primary goal of the CSWE and informs curriculum planning (Holden et al., 2008).

Paul and Elder (2007a) stated that learning to think critically transcends rote learning. Paul and Elder added that learning to think critically allows students to internalize content and evaluate that internalization to inform discipline specific reasoning, action and solutions. Scholars agreed that the use of multiple measures to evaluate student outcomes given the complexity of social work education is useful (Halpren, 2001; Holden et al., 2008). These assessment measures involve the evaluation of active student engagement and CT in various situations (Halpren, 2001). Halpern (2001) argued that CTS that are being measured should align with the course content and should be linked to the goals of the course and based on an operational definition of CTS.

Halpren (2001) also added that an assessment of students' capacity to think critically should be twofold: can they think critically? Moreover, can they do so volitionally? Evaluation and assessment tools that can pick up the subtlest of changes in student thinking are encouraged. Halpren (2001) argued that while most CTS education begins in the undergraduate experience, cognitive growth is an ongoing cumulative experience. One of the advantages of assessment practices in higher education is that they can be formative, which means they can be used to assess instructor best practices for the classroom or summative, meaning they are used as tools to provide feedback to students on their development and progress (National Research Council, 2000). Cole (2012) suggested that the assessment of student learning is both formative and summative and is intrinsic in instruction. Halpren (2001) offered that the goal for CT instruction is to prepare students for out of the classroom contexts. Using the CSWE definition of CT to assess students' capacity to demonstrate an intellectual, disciplined process of conceptualizing, analyzing, evaluating, synthesize, and evaluating contexts and situations could include a variety of tools. Assessment or evaluation tools that include: theory application, rubrics/matrices, written work, portfolios, student self-grading, class participation, group work, creative work, self-reflection, presentations, and the capstone. One of the most readily used methods of assessment of the students' CTS is the application of theory to practice and professional development.

Theoretical Application

There is significant overlap in applicable theoretical frames with the profession of social work and other fields of practice such as gerontology, sociology, and psychology (Gentle-Genitty et al., 2014). According to Gentle-Genitty et al. (2014), there is an ongoing debate about the necessity of theoretical foundation in social work practice. Gambrill (2006) cautioned that

decisions should be made to serve people that are well reasoned and grounded in theory and that

if social workers are unable to think critically regarding practice decisions, clients are likely to be

harmed. Gambrill (2006) advised that one of the primary functions of social work decision-

making is the efficacy assessment of existing theoretical frames, and added that social workers

should look at the broader context of the changing world. While the United States struggles with

the challenge the equanimity of human rights, human rights issues drive the profession of social

work (Lewis, Kusmaul, Elze, and Butler (2016). Furthermore, social work students learn to link

individual issues and problems to systemic inequities and injustices, as these are the issues that

impact and inform practice and policies.

Theories reflect scientific evidence of practice approaches, interventions, and strategies

for serving people in need, conducting research and the development of policy (Gambrill, 2006;

Cartwright & Hardie, 2012). Cartwright and Hardie (2012) claimed that theory backs up what

we say; theory also provides context for understanding phenomenon and learning about

individuals, families, and communities. Lewis et al. (2016) suggested that the field placement

component of the educational process could provide a link between theory and practice.

Many theoretical frames are relevant for understanding the interpersonal experience:

systems theory, cognitive and human development, social theory, strengths theory, group theory;

these include but are not limited to frames for understanding that can inform social workers

decision making on any issue.

The application of theory involves questioning opinions, speculation and even a student's

own experiences, which according to Gambrill (2006) creates a risk for bias. Gentle-Genitty et

al., (2014) cautioned, that the transferability of theory into practice, could put social work

educators are at risk of being dogmatic and mechanistic related to theoretical knowledge.

Gentle-Genitty et al. (2014) recommended that instruction related to theory could include exercises for practical application as opposed the rote memorization. Other ways of measuring students' progressive development of CTS can include, their written work.

Written work. McKitrick and Barnes (2012) indicated that the capacity to think critically in graduate students is essential for success. Written work is noted by several authors to be used as an assessment measure of students' ability to, apply theory, understanding of material and content, to clarify ideas and to articulate CTS in social work contexts (Davis, 2009; McKitrick & Barnes 2012). McKitrick and Barnes (2012) posited that as it relates to the evolution of a student's skill development, over time, improvement can be seen. These are outcomes that are consistent with Vygotsky's ZPD. McKitrick and Barnes (2012) maintained that an assessment of CTS should be evolutionary and should be conducted in a segmented manner. Such development can be captured cumulatively through progressive written work and portfolio development.

Portfolios. Davis (2009) described a portfolio as a selection of social work students' coursework that is created by the student to demonstrate growth and development over the timeline of the course or program. The portfolio is a tangible way for the students to demonstrate their capacity to integrate theoretical content and practical applications. Grading is at the discretion of the program or instructor. Some may assign a pass/not pass while others may assign letter grades. In either case, providing students with criteria for satisfactory completion and or grading criteria is essential (Davis, 2009). An alternative to instructor assessment of the

students' work as a way to measure cognitive development pathways is the notion of student self or peer grading.

Student self-grading. Holden et al. (2008) cautioned that student reported self-efficacy is not an exact measure of student skills but of what the student believes they can do in any given situation. Halpren (2001) added that while it is important to consider student self-perceptions, students may perceive improvement where there is none or may not perceive an improvement in CTS where they have advanced. Knowles et al. (2015) went further to add that while student assessments may be consistent, the student self-assessment might not be trusted as valid. Davis (2009) suggested that while student or peer grading decenters the instructor for assessment of students learning and performance; as an approach for evaluating students' capacity to assess themselves or each other, it could be useful.

As adult learners, argued the National Research Council (2000) self-assessment, sense-making or self-reflection in the classroom create the opportunity for students to measure what works and what does not and can foster CTS. According to Davis (2009), peer-to-peer grading is best used in small group work assignments as long as a detailed rationale that captures a list of criteria for scoring is provided. The tools for and the process of student assessment can vary, yet as one way to assess students, the self-assessment of learning through social constructivism can occur throughout the collaborative process as evidenced in class participation (Davis, 2009).

Class participation. Davis (2009) offered that class participation could increase overall student engagement in the process of learning. Using class participation to navigate student assumptions about social-cultural and policy issues can be a platform for CTS development and challenging student assumptions. According to Davis (2009), fear of being uninformed can keep students from engaging on a topic. The use of engagement and peer interaction through class

participation and discussion provides the opportunity for students to process their feelings and provide meaningful ways to develop CTS by becoming more informed by learning about others experiences. Gibbs and Gambril1 (1999) noted that critical discussion allows students to practice their reasoning, theory application and problem solving. Davis (2009) indicated that some instructors are reluctant to score participation because it can be subjective. Kurfiss (1988) agreed that evaluating for CTS is a subjective experience. In their work related to online learning from a social constructivist frame, Pritchard and Woollard (2010) offered that student dialogue is an appropriate opportunity to measure student capacity to articulate an understanding and justify their positions and conclusions. This further demonstrates participation as a useful way to assess the evolution of students' CTS development. Group work can be class participation from the reciprocal, collaborative, community-oriented construct found in Vygotsky's theory as it relates to learning in the context of the social work classroom.

Group work. Given that social context and experiential opportunities are important elements of the social constructivism model for instruction, it is in group context posited Cole (2012) that students come to realize they depend on one another for the answers. While students may resist collaborating on assignments, over time, they begin to value collaborative learning (Cole, 2012). According to Brookfield (2012), students reported that learning to think critically in a group is best. In collaborative processes student assumptions and alternative perspectives occur more readily when each student is presented with the same content in the same structure Brookfield (2012). Cole (2012) also reminded instructors that while large group collaboration is valuable, so too is small group or peer-to-peer collaboration.

It should be noted that while social/collaborative learning is core to social constructivism theory; students have different ways of learning; thus, it is important to assess student-learning

needs when planning instructional approaches, according to the National Research Council (2000). Some methods may result in more non-traditional, more creative student deliverables to meet classroom objects such as presentations.

Presentations. Halpren (2001) opined that CTS are best taught with direct, explicit instruction and the best instruction is broad and cross-disciplined. Witten and oral communication is one primary way to assess the student capacity to demonstrate CTS. Some researchers suggested that students who received explicit CTS instruction outperformed students who did not on standardized tests (Halpren, 2001); students also presented better oral arguments and responding to open-ended questions. Either class participation or student presentations can be assessed in the context of group work. While there may be a variety of ways to present work and creatively demonstrate CTS, one such argument suggested the creative strategy is situated in the classroom by the instructor and allows for ways to assess CTS without the of testing and assessment.

Creative work. Not all students learn traditionally, (Noakes and Gibson (2000), therefore some assessment practices may perpetuate the right/wrong answer phenomenon and leave little room for more CT application. There is a multitude of approaches that involve creative ways to engage students and evaluate their capacity for CTS. Scholars have developed a variety of creative course objectives in social work, social justice-centered education. While not exhaustive these objectives include: songs, plays, community projects, letters, artwork, games, ethnographic reporting, using fiction, memory making chests, or video or written self- reflections (Noakes & Gibson, 2000; Van Soest & Garcia, 2008; Cole, 2012).

Self-reflections. Brookfield (1987) posited that critical reflection is an essential component to the development of CTS. Critical reflection is an opportunity for students to

assess their biases, assess the trajectory of change in their thinking, to make judgments about and understand their thinking (National Research Council, 2000; Brookfield & Holst, 2011). Brookfield and Holst (2011) described critical reflection as a concept that can be contested, as a process that involves deep personal reflection of assumptions and is inherently personal. Critical reflection, according to Bay and Macfarlane (2011), requires social work students to reflect on many theoretical constructs and requires critical thought. Critical reflection is an opportunity for students to identify their thoughts and behaviors in an effort to develop insight into their own attitudes, values, beliefs, assumptions, and biases. Self-reflection could be one of the more challenging tasks for instructors in the facilitation of CTS; according to Brookfield (1987) students may not always value the usefulness of this exercise. Multiple theorists discussed the value of instructors allowing for their own vulnerability in the classroom by sharing personal narratives (hooks, 1994; Brookfield & Holst, 2011). hooks (1994) described role modeling self reflection as a) demonstrating risk-taking, and b) decentering the instructor as all knowing. This process could allow for the reciprocal nature of student-centered learning and could facilitate classroom dialogue and interactions (hooks, 1994; Brookfield & Holst, 2011).

Van Soest and Garcia (2008) reported the use of journals to explore a student's learning process and the identification of personal attitudes and values could provide a safe, anonymous place for a student to process their thoughts and feelings related to course content with specific, intentional prompts to invoke awareness, throughout the process. Brookfield and Holst (2011) suggested that self-reflection could create a transformative experience for the student. Self-reflections, creative work, writing, presentations all can be cumulative and demonstrative of student growth and development as critically thinking competent individuals that are ready to embark on the profession. As a way of having a tangible product in that regard, the final

culminating project is the capstone occurs typically at the end of educational programming (Apgar, 2018).

      Capstone. The capstone course is a structured part of the curriculum (Moorea, Darby and Blake, 2016). Capstone is cumulative and instruction is centered in evidenced-based practice and often inclusive of written work, projects or other assignments (Apgar, 2018). The capstone is often linked to seminar in conjunction with practicum or other kinds of instruction-oriented volunteer work. Through the course work, students demonstrate an ability to represent their cognitive devolvement and growth that has been scaffolded upon knowledge, theory application, assessment and evaluation, analysis, synthesis as an outcome evaluation technique to advanced generalist social work practice. In a seminar setting this could provide the opportunity for collaborative learning and instructor evaluation of social work students' competencies in multiple contexts (Moorea et al., 2016; Apgar, 2018).

      Apgar (2018) argued that despite the requirement across disciplines and the popularity of the capstone as a construct, there is no agreed upon conceptualization of the capstone experience or criteria to assess projects or course work. Apgar (2018) suggested however, that there is a consistent set of outcomes that are requisite for the capstone, which are: integration, assessment, application, scholarship, and identity development. Because the capstone requires integration of theory, skills, and practice, it requires refined CTS as a social work educational outcome.

      According to the CSWE (2015), the assessment of the students' capacity to think critically includes processes from knowing to comprehension, application, analysis, synthesis, and ultimately evaluation. Instructors could evaluate students' progress concretely with by assessment of course objectives such as: written work, portfolios, student self-grading, class

participation, group work, presentations, creative work, self-reflection, and the capstone and by

using variety of tools, such as rubrics, matrices.

      Rubrics and matrices. Wenzlaff, Fager & Coleman (1999) suggested that a rubric could

satisfy two purposes: a guide for assessment with scaled criteria and a guide for students in

preparation for an assessment. The use of rubrics is informed by curriculum and learning

objectives (Wenzlaff et al., 1999). Paul and Elder (2007a) recommended the use of rubrics in

two ways, 1) to assess student achievement or absence of for each course learning outcome, and

2) to provide an overall score for each performance indicator. Davis (2009) stated that rubrics in

general are scaled guides that can help save time and improve consistency in scoring.

      The intersection of research related to CTS, social constructivism, and social work

education, as well as contemporary methodologies for instruction and evaluation of developing

and assessing CTS in social work graduate education has been presented as a foundation for the

research. The research method is as follows and which will include the: study design, participant

demographic and professional characteristics, instrument description, research questions,

procedure, results, and analysis.

Methods

Design

      Creswell (2014) described mixed methods as a way to merge quantitative and qualitative

data. Creswell and Creswell (2017) stated that mixed methods serve to minimize the risk for

bias that might occur in each type of data. This was a mixed methods survey study designed to

explore faculty methods for the development and assessment of CTS in graduate social work

education. Instructor perceptions of changes in student outcomes since the 2015 CSWE removal

of CTS as an independent educational outcome were explored with one open-ended qualitative question.

This study was developed to explore the methodologies for instruction and evaluation of CTS at accredited graduate schools of social work across the country and to assess instructor perceptions of the differences in student outcomes since the changes in the CT standard. Social constructivism as a theoretical frame for understanding CTS development through qualitative inquiry allows the participant and the researcher to denote learning experiences through context (Sexton & Griffin, 1997). According to Martella, Nelson, Morgan, and Merchand-Martella (2013), purposeful sampling is intended to select those individuals, events or settings for the information that they have to offer and can also be used to for programmatic improvement. The research sample was purposeful and criterion based.

Participants

In as much as graduate social work education is the sphere of education wherein students are preparing for the profession, the educational process includes the experiential opportunities to apply theory, used evidence-based practice and to strengthen their CTS. Graduate social work instructors teaching in an accredited social work program were recruited of this research.

The initial sample population was graduate instructors at accredited graduate social work programs in Washington, Oregon, Montana, and Idaho. A modified version of the Faculty Survey of Student Engagement (FSSE) instrument was distributed to the participants for this research. The following is a discussion related to the FSSE for this study.

The Survey Instrument

Indiana University, the holder of the copyright, gave consent to use and modify the Faculty Survey of Student Engagement (FSSE) (see Appendix A). The FSSE was developed in

2003, as a companion instrument of the National Survey of Student Engagement (NSSE) (NSSE, 2016; Shaker & Plater, 2016). The FSSE was designed to measure faculty perception of student engagement in education and is linked to higher student outcomes (Faculty Survey, 2016). Dumford, Cogswell, and Miller (2016) noted a lack of research in all disciplines as to the actual use of learning strategies in higher education, yet, as self-reporting instruments, McCormick, Gonyea, and Kinzie (2013) suggested the engagement surveys were created based on the notion that the construction, transformation, and application of knowledge are lasting educational goals of higher education. Several modifications were made to the copyrighted survey.

The original FSSE instrument consisted of 46 questions that are intended to measure faculty perception of the student experience. Several of the questions were not relevant to the research and were therefore excluded from the survey. In addition to the exclusion of several questions, the word undergraduate was replaced graduate in the remaining questions. The following research questions were added at the end of the FSSE-M survey instrument.

Research Questions

1. What instructional methodologies are you using to teach critical thinking skills?

2. What evaluation methodologies are you currently using to assess critical thinking skills?

3. Please describe in as much detail as you   can the extent to which you have seen changes in student outcomes related to critical thinking skills since the 2015 CSWE changes?

The rationale for using the FSSE was based upon several criteria. First, the core of the survey is student engagement; thus, the instrument is a reasonable framework from a social constructivism theory of student learning and instruction. Second, the six FSSE subscales that were utilized, are consistent with the development of CTS and the tenets of the interactive nature of social constructivism (see Appendix F for survey questions that correlate with each of the

subscales). Finally, the variables of the subscales are in alignment with the definition of CT used by the CSWE.

The definitional components of the six subscales included intellectual development, disciplined processing, conceptualization, analysis, evaluation, and synthesis through observation and reflection, and are consistent with the six subscale questions. According to several researchers, the FSSE instrument is a valid tool for the assessment of social science education (BrckaLorenz & Nelson Laird, 2017, Ribera, 2017; Paulsen & BrckaLorenz, 2018; Strickland & BrckaLorenz 2018). Additionally, the subscales respectively capture components that are consistent with the definition of CT used by the CSWE, social constructivism, instructional and evaluation methods. Further discussion of the six subscales used for this research is as follows.

1. **Higher-order learning.** Scholars agreed that challenging the student creatively and intellectually is core to institutional quality (Davis, 2009; BrckaLorenz, 2017). The higher-order learning (HOL) scale is intended to capture the extent to which course content challenges students intellect and thought processes. BrckaLorenz (2017) suggested that with research using the instrument, HOL varies by faculty discipline and that social service professions tended to include HOL activities more than other disciplines. BrckaLorenz (2017) added that within the social service classroom there is more diversity in the integration of HOL activities. As it relates to the development of CTS, the higher order learning scale contributes with variables related to course rigor such as complex cognitive tasks and learning to include: fact and theory application, analysis, evaluating other perspectives and forming new ideas (BrckaLorenz, 2017).

2. **Reflective and integrative learning.** As it relates to social work education, BrckaLorenz and Nelson Laird (2017) suggested that social science faculty highly value

reflective and integrative learning in the classrooms. BrckaLorenz and Nelson Laird

(2017) emphasized the value of integrating students' understanding and experience with

course content to think critically by reflecting on their ideologies, assumptions, and

beliefs. Students begin to learn from the experience of others and in the context of social

issues (BrckaLorenz and Nelson Laird, 2017). The reflective and integrative learning

subscale includes content related to course synthesis, theory application, transfer of

knowledge and understanding others in multiple contexts (BrckaLorenz & Laird, 2017).

3. **Collaborative learning.** Learning is collaborative (Wong & BrckaLorenz, 2017), thus,

   collaboration inherently involves student inquiry, increased understanding and problem-

   solving for solutions. Collaboration allows for the reciprocal process of learning and the

   exchange of knowledge that is inherent in the social constructivism classroom.

   According to Wong and BrckaLorenz (2017), however, the encouragement of

   collaborative learning varies across disciplines, social sciences and social service

   professionals demonstrated the lowest levels of classroom collaboration. The

   collaborative learning subscale provides feedback on the process whereby students learn,

   such as collaboration and interaction with peers and reciprocal learning (Wong &

   BrckaLorenz, 2017).

4. **Learning strategies.** According to Ribera (2017), when students' are actively engaged,

   and involved in analyzing content, they are more likely to integrate what they are

   learning. These specific learning strategies may include, the identification of key

   concepts from the course material, reviewing notes, and synthesizing course material.

   Instructors facilitate student content retention by emphasizing these learning strategies.

   Health-related disciplines showed the greatest emphasis of these learning strategies

whereas social sciences, and social service professionals hold the next highest emphasis

on learning strategies. The learning strategies subscale is used to assess students'

capacity to integrate and synthesize what they are learning (Ribera, 2017).

5. **Effective teaching practices.** Instructional approaches that engage students and foster a

clear understanding of course work is vital to the educational experience (Strickland &

BrckaLorenz, 2018). This FSSE subscale looks at the extent to which instructors

evaluate student progress and provide relevant feedback. According to Strickland and

BrckaLorenz (2018), social service professionals significantly incorporated effective

teaching practices. The effective teaching practices subscale assesses faculty course

organization and feedback of learning (Strickland & BrckaLorenz, 2018).

6. **Student-faculty interaction.** Several scholars recommended modeling CTS (hooks,

1994; Brookfield & Holst, 2011). Yuhas and BrckaLorenz (2017) discussed the impact

that instructors can have on the cognitive growth and development of students through

their formal and informal roles. Social service professionals hold the highest level of

importance in student-faculty interaction to promote mastery of skill and knowledge and

facilitate cognitive growth (Yuhas & BrckaLorenz, 2017). The student/faculty

interaction subscale assesses faculty evaluation of student performance and skills

development. The modified version of the instrument was prepared for distribution.

Procedure

The modified FSSE (FSSE-M) consisted of 36 questions. The Qualtrics platform

approximated that it would take 35 minutes to complete the survey. Participants could use any

technology, laptop, personal computer or cellular device. The University of Washington consent

form was adapted for this research and situated at the beginning of the Qualtrics survey (see

Appendix C). In clear and transparent language, confidentiality and consent were explained in

the body of the consent form. Participants were advised that they could decline to participate or

withdraw at any time and that any data collected would be made anonymous, de-identified, and

held for up to 10 years for possible future research. If a participant declined to participate in the

survey, the survey closed and they were removed from the Qualtrics email list.

A list of email addresses was compiled from the public domain website of each

accredited program in Washington, Oregon, Idaho, and Montana. Initial email outreach to

sample participants included a recruitment letter (see Appendix D) and a Uniform Resource

Locator (URL) link to the modified version of the Faculty Survey of Student Engagement

(FSSE-M) (Faculty Survey, 2014), (see Appendix E). Initial sampling efforts began with the

distribution of the survey to the social work instructors at the accredited graduate programs in

Washington, Oregon, Montana, and Idaho.

The survey was sent via the Qualtrics platform email delivery system on August 30,

2018. The survey was sent with an email note inviting participation and a link to the survey.

Through the Qualtrics survey platform, 378 surveys were sent to instructors whose email was

available on their respective school's public domain websites. Three surveys were returned as

undeliverable. If a person continued with the survey, this constituted consent. At 30 days, 19

surveys had been returned. At that time, given the response rate, alternative options for

increasing the sample size were considered. Appeals made via email to the program directors of

each school asking for their assistance to encourage instructors to participate in the survey.

Three of the social work program directors asked for the institutional review board (IRB) letter

of approval. The IRB approval letter was forwarded per request. Approximately every six

weeks until the close of the survey a follow up email with the survey was resent via Qualtrics, to

those instructors in the original sample. At 60 days, 36 additional surveys were returned for a total of 52 surveys had been initiated.

In November 2018, the annual Council of Social Work Education conference for social work faculty from across the United States was held in Orlando, Florida. Throughout the four-day conference, an invitation to participate in the study was extended. The criterion for graduate social work instruction was clarified to maintain the rigor of the study. Any instructor who was interested in the research and was teaching or knew instructors at the graduate school level who might be interested in participating, provided an email address. The URL was sent along with permission to share the survey at will. Thus the random sampling was no longer specific to social work schools in the Northwest. The primary criterion, graduate social work instructors remained constant. While this secondary survey distribution provided a broader regional spectrum of graduate school program instructors, when these responses were returned to Qualtrics, they were returned as anonymous, therefore there was no way to track who returned the survey. Given that there was no way to determine from the secondary email distribution who had or had not returned the survey, no follow-up email was sent. At 90 days, 35 additional surveys were returned totaling 71 surveys had been initiated.

In a continued effort to increase sample size and as a result of a personal connection from a social media group for early social work educators, an invitation was extended to utilize social media platforms as a way to generate responses. The URL link was posted on the Facebook group for Early Career Social Work Educators closed group. At the time of the close of the survey, 11 additional surveys were returned resulting in 83 surveys. In early December 2018, a final follow up email was sent through Qualtrics to the original sample and an email to program directors indicating to both groups that while the survey would soon close, they still had

time to participate in the research. The survey closed on January 4, 2019. At the closing of the

survey, 83 surveys had been initiated in the Qualtrics platform.

Data collection. Eighty-three surveys were initiated. The 83 initiated surveys were

downloaded into an excel flow sheet. The data was de-identified, sorted, and assessed for

exclusion purposes. Two respondents declined to participate. Nine surveys were excluded

because participants either were in administrative or research only positions or did not teach

graduate students. Thirteen surveys were excluded because they completed at 3%. Three

surveys were excluded at 10% completion rate, and one survey was excluded at 18%. Thirty

survey items made up the subscale items. Surveys that had completed the 30 items were kept.

For missing non-scale categorical/nominal variables, an imputation process was conducted using

the mode. For missing continuous variables, imputation was completed using the mean. Fifty-

five surveys were transferred into SPSS for quantitative analysis. Twenty-nine participants

completed the open-ended third research question. The qualitative research question responses

were transferred into an excel spread-sheet and analyzed and coded for themes. The process of

analyses of the quantitative and qualitative data is as follows.

Analysis. Descriptive analyses and variable frequencies were completed for

demographic and professional characteristics of the participants. Descriptive analyses and

variable frequencies for two research questions, the methodologies for instruction and evaluation

of CTS were completed. The qualitative data were reviewed and the frequency of responses was

analyzed. Reports were generated, and tables for descriptive and frequency counts were created.

Descriptive and frequency counts were run for the six subscale responses. Spearman

correlations were run between the demographic and professional characteristics and the

subscales. While not specific to the research questions, this was completed as an extended

descriptive measure of the make- up of the participants. After review of these analyses and in

consideration of historical subscale inter-correlation research, Spearman correlations were run

between the subscales. The results of the data analyses are as follows.

Results

This was a mixed methods exploratory study to identify current methodologies used to

facilitate 1) CT skill development, 2) evaluation of the application of CTS in graduate social

work education, and 3) faculty perceptions of changes in student outcomes related to CT.

Demographics

Demographic data included: age, racial and ethnic identification, gender and sexual

identity. The data also included participant professional characteristics such as highest degree

earned, number of years teaching, the discipline of academic appointment, academic rank, title or

appointment, tenure status, full-time status, and adjunct status. Table 1 provides the frequency

counts for demographic characteristics. The average age of the participants was 46 years with a

range in ages between 29 and 75. Ethnic representation was predominately White (69.1%),

Black (7.3%), or Hispanic (7.3%). A majority of the participants identified as being female

(78.2%) and most (70.9%) considered themselves to be heterosexual.

Table 1

Frequency Counts for Demographic Characteristics

Variables	Response	*n*	%
Age Group [a]			
	29-39 years	18	32.7
	40-49 years	18	32.7
	50-59 years	13	23.6
	62-75 years	6	10.9
Racial/Ethnic Identification			

	American Indian	1	1.8
	Asian, please describe	2	3.6
	Black	4	7.3
	Hispanic	4	7.3
	Native Hawaiian	1	1.8
	Pacific Islander	1	1.8
	White	38	69.1
	Other, please describe	3	5.5
	I prefer not to respond	1	1.8
Gender Identity			
	Man	9	16.4
	Woman	43	78.2
	Another gender identity	2	3.6
	I prefer not to respond	1	1.8
Sexual Orientation			
	Heterosexual	39	70.9
	Gay	1	1.8
	Lesbian	5	9.1
	Bisexual	5	9.1
	Another sexual orientation, please specify:	2	3.6
	Questioning or unsure	1	1.8
	I prefer not to respond	2	3.6

Note: [a] Age: $M = 46.38$, $SD = 10.52$. *Note.* $N = 55$.

Table 2 provides frequency counts for the professional characteristics of the participants.

Most (52.7 %) of the participants held a doctorate (Ph.D., Ed.D. or JD) or master's degrees. The

average number of years of teaching experience was 8.54. Of those professionals who

participated in the survey, most identified themselves as assistant professors (30. 9%); lecturers

(20%) or instructors (18.2%). A majority of the participants (45.5%) reported that they were not

on tenure track in the programs where they were located, although the programs had tenure

system; 25.5% indicated they were on the tenure track and 18.2% reported being tenured. Most

(66.6%) of the participants reported being full-time, while 30.9% were considered adjunct.

Table 2

Frequency Counts for Professional Characteristics

Variables	Response	*n*	%
Highest degree			
	Master's	25	45.5
	Professional	1	1.8
	Doctorate	29	52.7
Years of Experience [b]			
	Less than 3 years	10	18.2
	3-5 years	13	23.6
	6-9 years	16	29.1
	10-19 years	9	16.4
	20-34 years	7	12.7
Academic rank, title, or current position			
	Professor	3	5.5
	Associate Professor	7	12.7
	Assistant Professor	17	30.9
	Instructor	10	18.2
	Lecturer	11	20.0
	Graduate Teaching Assistant	1	1.8
	Other	6	10.9
Tenure status			
	Tenured	10	18.2
	On tenure track but not tenured	14	25.5
	Not on tenure track, but this institution has a tenure system	25	45.5
	No tenure system at this institution	3	5.5
	If none of these please describe	3	5.5
Role			
	Full-time	35	63.6
	Part-time	20	36.4
Adjunct Faculty			
	Yes	17	30.9
	No	38	69.1

Note: [b] Experience: *M* = 8.54, *SD* = 7.71.

Findings from the Research Questions

For the first research question, the frequencies of instructional methods used to teach the development of CTS are shown in Table 3. Participants were able to make multiple picks and add any instructional method that might not be included as an option. Thirty participants or 54.4% indicated that they used all of the methodologies that were presented. Forty-nine percent used case studies, and 47.3% used theory application. In addition, 43.6% considered their instruction to be explicit; moreover, 27.3% used implicit instruction.

Table 3

Instructional Methodologies Used to Teach Critical Thinking Skills Sorted by Frequency

Instructional Methodology	*n*	%
30g. All of these	30	54.5
30c. Case studies	27	49.1
30f. Theory application	26	47.3
30e. Problem-solving	24	43.6
30a. Explicit	24	43.6
30d. Vignettes	21	38.2
30b. Implicit	15	27.3

Note. Participants were allowed to endorse multiple answers. This table supports Research Question 1. N = 55.

Table 4 provides the data for research question 2, the frequencies of the assessment/evaluation methods that social work instructors used to evaluate CT. Participants were able to make multiple picks and add any assessment method that might not be included as an option. The data showed that 90.9% reported they used students written work, 11% used other evaluation methods but did not indicate what those were, and 9.1 % used the portfolio to

evaluate student application of CT. Rubrics or matrices were used by 76.3% of the participants

as a tool for the assessment of students' work.

Table 4

Evaluation Methodologies Used Sorted by Frequency

Evaluation Methodology	*n*	%
31d. Written work	50	90.9
31a. Rubrics	40	72.7
31g. Other	6	10.9
31c. Portfolios	5	9.1
31b. Matrices	2	3.6
31e. All of these	1	1.8
31f. None of these	0	0.0

Note. Participants could endorse multiple answers. This table supports Research Question 2. N = 55.

For the third research question, Table 5 provides the frequency of themes for instructor

reflections on perceived changes in student CTS outcomes since the 2015 EPAS changes.

Twenty-nine participants provided qualitative responses to the open-ended question related to a

perceived change in student outcomes. The qualitative findings were mixed. While 6.9% noted

that they expected to see more CT skills, the majority of the participants 55.1% indicated that

they could not say, that they had not been teaching long enough to compare or that their program

had not started to work within the newest EPAS guidelines, some examples are indicated here:

- "…I don't think we really stopped expecting our students to have critical thinking skills,

  regardless of the CSWE changes so I am not sure if I can adequately answer this

  question…"

- "…I am unclear there has been a significant change in student performance related to critical thinking skills. I don't believe it is measured or as prominent in the core classes that students take..."

While other faculty, 27% reported no perceived changes as can be noted in the following responses:

- "…Students are better prepared to analyze, problem-solve, and anticipate ethical dilemmas..."

- "…I have not noted a significant change, as I still teach to increasing critical thinking…"

- "…I have not noticed any major changes in student outcomes. I am always encouraging my students to critically think and I include suggestions on how to do it in my feedback to them…"

- "…I haven't changed how I teach critical thinking skills. I continue to focus on these skills and provide opportunities for students to know what critical thinking entails and

There were some faculty however, 10.4% who reported changes in student outcomes related to the CT standards change as seen in the following comments:

- "… Critical thinking isn't valued in the national discourse very much. So it is hard to teach that logic, evidence, etc., matter because, in many important ways, they don't…"

- "…This transactional kind of education does not foster critical thinking…"

- "…There is a general reluctance to challenge students to think critically, especially about sensitive, identity-related issues. Some topics are viewed as being hot to handle…"

- " …It should be considered as one of the underlying key dimensions of learning along with knowledge, practice, skills, and values…".

Table 5

Frequency of Themes Pertaining to Differences in Student Outcomes

Theme	n	%
Can't say	11	37.9
Too soon to assess	5	17.2
No	8	27.5
Yes	3	10.3
Expect to see more	2	6.9

Note. This table supports Research Question 3. N = 29.

In addition to the descriptive statistics and frequencies of instructional and evaluation methodologies and instructor perceptions of change, correlations were run for a further more in-depth analysis.

Additional Findings

Spearman rank ordered correlations were used to assess for correlations between the participant demographics and the 6 subscales. Correlations were run between the 13 demographic and professional characteristics and the six subscales.

Of the initial 78 correlations, seven were significant at the $p < .05$ level. Men gave higher frequency ratings for the higher order learning scale ($rho_s = -.33, p = .01$). Instructors with lower levels of education gave higher frequency ratings for the collaborative learning scale ($rho_s = -.35, p = .009$). Instructors with higher academic ranks gave higher frequency ratings for the student/faculty interactions scale ($rho_s = -.29, p = .03$). Professors who were either tenured or on tenure-track gave lower frequency ratings for the higher order learning scale ($rho_s = .34, p = .01$); the collaborative learning scale ($rho_s = .34, p = .01$); and the learning strategies scale ($rho_s = .31, p = .01$). Additionally, adjunct instructors gave higher frequency ratings for the learning

strategies scale (rho_s = -.30, p = .03). In the context of the 6 subscales, descriptive and frequency

counts were run.

Subscales. The psychometric characteristics of the six subscale scores are displayed in

Table 6. These ratings were based on a four-point scale (1 = very little to 4 = very much). The

highest means for the subscales were reflective and integrating learning (M= 3.75) and higher

order learning (M= 3.31).

Table 6

Psychometric Characteristics for the Subscales

Scale Score	Number of Items	*M*	*SD*	Low	High	α
Higher Order Learning	4	3.31	0.54	2.00	4.00	.76
Reflective and Integrative Learning	7	3.75	0.27	3.14	4.00	.70
Collaborative Learning	4	2.78	0.86	1.00	4.00	.85
Learning Strategies	3	2.72	0.74	1.00	4.00	.73
Effective Teaching Practices	8	3.23	0.44	1.71	3.86	.69
Student Faculty Interaction	4	2.77	0.59	1.50	4.00	.75

Note. Ratings based on a 4-point scale: 1 = Very little to 4 = Very much. N = 55.

Given that this research was designed to assess CTS in graduate social work education, it

was relevant to consider higher order learning - the extent to which course work was structured

to develop specific academic objectives are shown in Table 7. Ratings were based on a 4-point

scale: 1 = very much to 4 = very little.

Table 7

Ratings for the Extent that the Course was Structured to Develop Specific Academic Objectives Sorted by Frequency

Objective	*M*	*SD*
18c. Thinking critically and analytically	1.33	0.47
18h. Understanding people of other backgrounds (economic, racial/ethnic, political, religious, nationality, etc.)	1.47	0.72
18e. Acquiring job-or work-related knowledge and skills	1.65	0.67
18a. Writing clearly and effectively	1.71	0.71
18f. Working effectively with others	1.78	0.88
18g. Developing or clarifying a personal code of values and ethics	1.78	0.96
18b. Speaking clearly and effectively	2.05	0.93
18d. Analyzing numerical and statistical information	2.76	0.88

Note. Ratings based on 4-point scale: 1 = Very much to 4 = Very little. N = 55.

Given that the most frequent course objectives were thinking critically and analytically ($M = 1.33$) and understanding people of other backgrounds (economic, racial/ethnic, political, religious, nationality, etc.) (M= 1.47). Analysis for any measure of interrelatedness was run with Spearman correlation.

Table 8 depicts the Spearman inter-correlations matrix among the six sub-scale scores. Within the multiple correlations, seven were significant positive correlations at the $p < .05$ level. Specifically, higher order learning was positively related to: (a) reflective and integrative learning ($rho_s = .37$, $p < .01$); (b) collaborative learning ($rho_s = .43$, $p < .001$); and (c) learning strategies ($hor_s = .33$, $p < .01$). Additionally, reflective and integrative learning was positively related to: (a) collaborative learning ($rho_s = .33$, $p < .01$); (b) learning strategies ($rho_s = .33$, $p < .01$); and (c) student faculty interaction ($rho_s = .43$, $p < .001$). There was also a significant positive correlation between collaborative learning and learning strategies ($rho_s = .66$, $p < .001$).

While there were multiple correlations between several subscales, there was however no correlation between effective teaching practices and any of the other subscales. These relationships will be further considered in the analysis of the results.

Table 8

Spearman Inter-correlation Matrix Among Sub-scale Scores

Scale	1		2		3		4	5	6
1. Higher Order Learning	1.00								
2. Reflective and Integrative Learning	.37	**	1.00						
3. Collaborative Learning	.43	**	.33	**	1.00				
4. Learning Strategies	.33	*	.33	*	.66	**	1.00		
5. Effective Teaching Practices	.06		.14		.10		.05	1.00	
6. Student Faculty Interaction	.15		.43	**	.17		.19	-.05	1.00

Note. * *p* < .05. ** *p* < .01. ** *p* < .005. *p* < .001. N = 55.

Analysis

The initial analysis of participant demographic and professional characteristics indicated that the majority of the participants were white, females who considered themselves to be heterosexual. The average time in the position of instructor role was 8 years. More than half of the participants held a terminal degree. Most of the participants were full time at the assistant professor level though not on a tenure track. The following will summarize responses as they related to the research questions.

The participants identified a variety of instructional methodologies that were used in the graduate social work educational environment. More than half of the participants used all of the instructional methods to develop CTS. Through explicit and implicit instruction, problem solving, case studies, theory application vignettes, and field instruction were all utilized as instructional methods. With an understanding of which methods are used most readily to instruct to develop CTS, participants also identified methods utilized to assess students' capacity to apply CTS.

Students' written work is the evaluation method used most by graduate social work instructors for the assessment of the application of CTS. Portfolios were also used as a way of assessing students CTS skill level, while some participants noted other as an option such as field reflections, the capstone or creative work. Most of the faculty reported that they relied on the use of rubrics or matrixes. As it related to the open-ended questions, the responses were mixed.

While a small number of faculty noted that they had expected to see more, most instructors reported no observed changes in student outcomes. Faculty reported that either they could not determine any change or indicated it was too soon to determine if there were changes in students' ability to apply CTS. In addition to the descriptive findings in response to the research questions, the following correlations provided additional characteristics.

There were several correlations between the participant personal demographic and professional characteristics and the six subscales. The correlations are as follows: men gave higher frequency ratings for the higher order learning scales items, instructors with lower levels of education gave higher frequency ratings for the collaborative learning scale items, instructors with higher academic ranks gave higher frequency ratings for the student/faculty interactions scale items, professors who were either tenured or on tenure-track gave lower frequency ratings

for higher order learning, collaborative learning and learning strategies scale items, and adjunct

instructors gave higher frequency ratings for the learning strategies scale items. The six

subscales relevant to CT skill instruction and evaluation, and the tenets of social constructivism

within the FSSE-M include: higher order thinking, reflective and integrative learning,

collaborative learning, learning strategies, effective teaching practices, and student-faculty

engagement. The following is the analysis of the inter-correlations of the subscales.

Within the subscale correlations, higher order learning was positively related to reflective

and integrative learning, collaborative learning and learning strategies. Reflective and

integrative learning was positively correlated to collaborative learning, learning strategies, and

student-faculty interaction. There was also a positive correlation between collaborative learning

and learning strategies. While there were multiple correlations between 5 of subscales, there was

no correlation between effective teaching practices and the 5other subscales.

According to Strickland and BrckaLorenz (2018), social service educators indicated

significant incorporation of effective teaching practices. In this research, instructors perceived a

high extent to which they integrated effective teaching practices such as: clearly explaining

course goals and requirements, teaching courses in an organized manner, use in examples,

unitize a variety of teaching approaches, review and summarize materials, provides rubrics an

outcome standards, feedback on drafts and print detailed feedback on final projects. There was

no correlation however between effective teaching practices and the five other subscales,

reflective and integrative learning, collaborative learning, learning strategies or student-faculty

interaction; there was no correlation with the higher order learning subscale.

This finding was inconsistent with FSSE inter-correlation research. The discussion of the

findings, implications for policy, further research, and the educational preparation of social

workers as a result of the research findings as well as the conclusion will conclude this work.

Discussion

The use of CTS facilitates thoughtful engagement in the current social/political times. While there is ongoing scholarly tension on the definition and conceptualization of CTS, scholars, agreed with the value of CTS and the need for individuals to be able to think critically as part of a democratic constituency. Such high value is placed on the capacity to think critically that the academy has made efforts to prioritize delivering critical thinkers across disciplines. The definitional tension can, however, create challenges for instructional approaches to develop CTS and to evaluation tools to assess their application. Any lack of a global operational definition or perceived definitional ambiguity related to CT does not preclude the importance of the development of CT in social work education.

As it relates to graduate social work education and preparation for professional practice, CTS are essential. Social workers use CTS to respond in situations and contexts related to multiple issues of health and safety, as well as social injustice and other inequities regularly. This research was an early effort to identify the current instructional and evaluation methodologies that graduate social work instructors used to foster the development of critically thinking social work practitioners and evaluation methods used to assess the application of CTS. Further, instructor perceptions of changes in student outcomes related to CTS since its' removal of CTS as a stand-alone outcome in the 2015 EPAS updated guidelines.

The update to social work curriculum standards is important; to create the opportunity for programmatic freedom and flexibility is equally so. The updated guidelines were intended to allow programs and instructors to develop independent approaches to develop CTS in the context of social work course curriculum and professional preparation. This programmatic flexibility is

consistent with the unique nature of the social work profession in that it allows for individuation

and allows instruction to include any number of teaching methods that are appropriate for the

ways in which students learn. There was however scholarly concern that the guideline changes

related to CT lacked direction for instruction and evaluation of CTS. While the current

expectation for the application of CTS may lack standardization, it allows for epistemological

freedom to facilitate instructional and evaluation measures.

Some scholars suggested that instructors who teach to develop CTS might not understand

the construct fully, while others recommended explicit instruction to teach to develop CTS.

Despite these concerns, in response to the research questions related to the identification of

instruction and evaluation methods, the participants in this study reported using a variety of and

multiple instructional approaches and evaluation measures. These approaches are being used

with or without a formal frame for instruction or specialized training to do so. To assess the

implications of the EPAS updated CTS placement, participant feedback on the perceived change

in student outcomes was mixed.

Most participants reported that it was too soon to tell if there were changes in student

outcomes since the EPAS changes. While some participants reported not seeing changes in

student outcomes, others did perceive changes in student outcomes. Additionally, some

instructors stated that they had expected to see more CT in their students. In addition to the

findings specific the research questions, there were notable relationships within some of the

subscales.

Social work instructors reported high importance on structuring courses to develop CT to

the development of CTS. Additionally, instructors reported relationships between the 5 of the

subscales that represent reflective and integrative learning, collaborative learning, learning

strategies, and student-faculty interactions. However, even with the expressed importance of

course structure to develop CTS, the effective teaching practices subscale did not correlate with

any of the five other subscales. This presents a gap in the findings and a departure from previous

research. This gap could be considered for future research and planning in social work

education.

Policy Recommendations

CSWE regularly reviews academic programming and student outcomes. The council

may find it useful to consider the development of a taxonomy that is specific to social work

education. Such taxonomy might offer formalized instruction and assessment tools and content

for the development of CTS in social work education.

While there was a limited voice in the research related to the need for formal processes to

teach for CT development, there were scholars and research that suggested better student

outcomes with specific instruction for teaching CT. Thus, the CSWE may consider creating

formal, structured approaches to instruction and evaluation to facilitate instructor skill

development through training in instructional methodologies that foster CT that is more

formalized. Such training could improve instruction and create opportunities to standardize the

evaluation of the application of CTS across the curriculum. These recommendations for change

could mitigate concerns related to limited guidelines for how to impart CTS in the process of

social work preparedness.

Practitioner Recommendations

As social work instructors begin to adjust to the new guidelines related to CTS, it might

be useful to consider the classroom environment. Given the findings related to students learning

strategies and the correlations with higher order learning and reflective and integrative learning,

the following are recommendations to consider for the instructional practitioner. In preparation

for the future of social work instruction:

- Know your students. Who are they? How do they learn? From an andragogical

  perspective, understanding how they learn is an important place to start.

- From an andragogical perspective what prior knowledge and experience do students

  bring to the classroom?

- Understand that learning to think critically, to confront personal, assumptions, values

  attitudes and beliefs can be painful.

- Create a learning environment that allows for the distress that can occur as students are

  learning to critically think which can disrupt existing values, beliefs and personal

  perceptions of the world.

- Be creative in curriculum and assessment design, as evidenced by the findings here, there

  are many ways to invite CTS in the classroom that fit with andragogy for social work.

  Scholars agreed that instruction to foster CTS in social work preparation that is framed in

a social constructivism approach to learning is a good fit for social work education. Social

constructivism is one epistemology from which students can learn to think critically in the

context of the social work classroom that allows for the transfer of knowledge and skills into

professional practice. The theory, however, is not without its limitations. The limitations of this

research will be addressed at this point.

Limitations of the Research

There are several limitations to this research. While there are theorists who advocated

the use of social constructivism as a theory for learning, some scholars cautioned against its'

appropriateness as a theory for learning, citing that the theory is subjective, unscientific and even

arbitrary. Thus an over-reliance on the use of social constructivism as a theory for adult graduate

social work education could be construed as a limitation of this study. A sample size of 55 may

limit the generalizability of the results. In addition to the sample size, the limitations of the

instrument should be considered. The exclusion of some of the questions from the FSSE and the

addition of the research questions could have also imposed limitations to this study. Predictive

analyses were considered outside the scope of the research and were not completed at this time.

Mitigating for any of these limitations could inform future research.

Future Research

Future research may not be limited to a further inquiry of the implications for the changes

in the CSWE/EPAS credentialing standards related to CTS. This study could be expanded to

include: a larger sample, bachelor's program instructors and instructor interviews or focus

groups. Given that not all accredited programs have begun to use the current EPAS guidelines,

related research in the future nationally and internationally may add to the research related to

instruction, evaluation, and student outcomes. With more research, a program for the

development of social work instructor training or continuing education content related to

fostering CTS is conceivable.

Conclusions

As a profession, social work is inherently transactional; therefore learning to think

critically is an active cognitive process that occurs in relationship to others. Thus, social

constructivism as an epistemological approach to learning is distinctly suited for social work

education. Graduate social work students enter the educational space positioned at a zone of

proximal, contextual development to prepare for professional practice. Built upon an

undergraduate foundation of social work theory, human behavior, and other general courses,

graduate social work students learn to address personal bias, assess social and policy issues that impact the people and communities that they serve, learn to apply theory and begin to learn to develop CTS.

The purpose of graduate social work education is to prepare competent professionals to transition into practice. Graduate social work students need to be prepared to think critically to appreciate and understand the current social, economic and political landscape. To think critically enables competent professionals to understand the implications of institutional policies and practices that impact individuals, families, and communities. Social workers will be called to participate in situations in which they need to make ethical decisions, set aside their biases and traverse often-ambiguous situations and plan for outcomes in the interest of social justice and equanimity.

With the high value that is placed on CTS in the workplace and professional social work orientation it is important that graduate students prepare to move into the ever-changing world and be part of change by learning to think critically to assess each circumstance, meet the social justice needs of the people that they serve and contribute meaningfully to the profession. To learn to think critically in the context of this profession is an essential skill for competent social work practitioners. There are many conceptualizations and definitions for CT. There are many views on what it is, what is its purpose, how it is introduced, developed and fostered. There are as many views on how instructors know, assess, and evaluate student development of this highly valued, and requisite skill.

As social work educational leaders look to the future of the profession and the educational pathways to prepare competent social work professions, programmatic flexibility

provides the opportunity for programs, faculty, and instructors to develop their own

epistemological approaches to instruction, assessment and the preparation of social workers for

practice.

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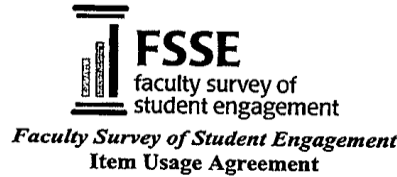Yuhas, B., & BrckaLorenz, A. (2017). Student-faculty interaction. *FSSE Psychometric Portfolio*.

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Appendix A

Consent to Use and Modify the FSSE

FSSE
faculty survey of
student engagement

Faculty Survey of Student Engagement
Item Usage Agreement

The Faculty Survey of Student Engagement (FSSE) survey instrument is copyrighted and the copyright is owned by The Trustees of Indiana University. Any use of survey items contained within *FSSE* is prohibited without prior written permission from Indiana University. When fully executed, this Agreement constitutes written permission from the University, on behalf of FSSE, for the party named below to use an item or items from *FSSE Survey* in accordance with the terms of this Agreement.

In consideration of the mutual promises below, the parties hereby agree as follows:

1) The University hereby grants **Luella Loudenback** ("Licensee") a nonexclusive, worldwide, irrevocable license to use, reproduce, distribute, publicly display and perform, and create derivatives from, in all media now known or hereafter developed, the item(s) listed in the proposal attached as Exhibit A, solely for the purpose of including such item(s) in the survey activity described in Exhibit A, which is incorporated by reference into this Agreement. This license does not include any right to sublicense others. This license only covers the survey instrument, time frame, population, and other terms described in Exhibit A. Any different or repeated use of the item(s) shall require an additional license.

2) "Faculty Survey of Student Engagement", "FSSE", and the FSSE logo are registered with the U.S. Patent and Trademark Office. Except as provided in part 3c below, these elements may not be incorporated without permission in materials developed under this agreement, including but not limited to surveys, Web sites, reports, and promotional materials.

3) In exchange for the license granted in section 1, Licensee agrees:

   a) there will be no licensing fee to use FSSE items for the purposes described in Exhibit A;

   b) to provide to FSSE frequency distributions and means on the licensed item(s);

   c) on the survey form itself, and in all publications or presentations of data obtained through the licensed item(s), to include the following citation: "Items *xx* and *xx* used with permission from Faculty Survey of Student Engagement, Copyright 2003-15 The Trustees of Indiana University";

   d) to provide to FSSE a copy of any derivatives of, or alterations to, the item(s) that Licensee makes for the purpose of Licensee's survey ("modified items"), for FSSE's own nonprofit, educational purposes, which shall include the use of the modified items in *Faculty Survey of Student Engagement* or any other survey instruments, reports, or other educational or professional materials that FSSE may develop or use in the future. Licensee hereby grants the University a nonexclusive, worldwide, irrevocable, royalty-

FSSE
faculty survey of
student engagement

free license to use, reproduce, distribute, create derivatives from, and publicly display and perform the modified items, in any media now known or hereafter developed; and

e) to provide to FSSE, for its own nonprofit, educational purposes, a copy of all reports, presentations, analyses, or other materials in which the item(s) licensed under this Agreement, or modified items, and any responses to licensed or modified items, are presented, discussed, or analyzed. FSSE shall not make public any data it obtains under this subsection in a manner that identifies specific institutions or individuals, except with the consent of the Licensee.

4) This Agreement expires on April 15, 2019.

The undersigned hereby consent to the terms of this Agreement and confirm that they have all necessary authority to enter into this Agreement.

For The Trustees of Indiana University:

_____   June 11, 2018
Thomas F. Nelson Laird   Date
Associate Professor& FSSE Principle Investigator
Faculty Survey of Student Engagement

For Licensee:
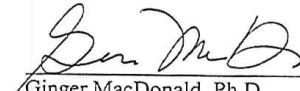
_____   June, 5, 2018
Luella Loudenback   Date
MSW, LICSW
University of Washington, Tacoma

For Advisor:

_____   6-5-18
Ginger MacDonald, Ph.D.   Date
University of Washington, Tacoma

Appendix B

The three research questions added to the modified FSSE instrument:

1. What instructional methodologies are you using to teach critical thinking skills?

    Response options: Explicit, Implicit, Case studies, Vignettes, Problem-solving, Other

    [Write in] Check all that apply

2. What evaluation methodologies are you currently using to assess critical thinking skills?

    Response options: Check all that apply. Rubrics, Matrices, Portfolios, Written work,

    None of these, All of these, Other please describe

3. Please describe in as much detail as you   can the extent to which you have seen changes

    in student outcomes related to critical thinking skills since the 2015 CSWE changes?

    [Write in].

Appendix C

UNIVERSITY OF WASHINGTON

CONSENT FORM

Social Constructivism: An Andragogical Praxis for Critical Thinking Instruction and Evaluation

with Graduate Social Work Students

Researcher: Luella Loudenback, Student,/Department of Education, 253-961-1393

Faculty Advisor: Ginger MacDonald, Ph.D., 253-692-5690

Researcher's Statement

I am asking you to be in a research study. The purpose of this consent form is to give you the

information you will need to help you decide whether to be in the study or not. Please read the

form carefully. You may ask questions about the purpose of the research, what I would ask you

to do, the possible risks and benefits, your rights as a volunteer, and anything else about the

research or this form that is not clear. When I have answered all your questions, you can decide

if you want to be in the study or not. This process is called "informed consent." I will give you

a copy of this form for your records.

Purpose of the Study

It is my intention to identify the current instructional and evaluation methodologies that social

work instructors are utilizing with graduate students. By participating in this research, you will

be you will have an opportunity to have your voice related to any perceived changes you may

observe in student outcomes since the EPAS 2015 removal of critical thinking skills as an

independent educational outcome and contribute to the body of research on critical thinking

skills and social work education.

Study Procedures

I will use email addresses in the public domain of your social work program. I will send the survey to 190 social work instructors at the 5 accredited social work programs across the state of Washington.

I will distribute a modified version on the Faculty Survey of Student Engagement. The survey should take approximately 25 minutes of your time. I will be gathering data until January 2019. I will send a reminder to take the survey at 30 days and 60 days.

I anticipate 50% response rate so that I might capture instructional and evaluation methods for teaching and measuring critical thinking skills and give you an opportunity to have your voice about any changes you as seeing in student outcomes related to the removal of critical thinking skills as an educational outcome in 2015.

The FSSE provides a wide range of data on Higher Oder Learning, Learning Strategies, Collaborative Learning, and Reflective and Integrative Learning; I am interested in any possible relationship between these and Student and Faculty Interaction and Effective Teaching Practices as a way to measure teaching critical thinking skills through a social constructivism approach to learning. I will also explore and describe the specific approaches that are currently being used to instruct to and evaluate critical thinking skills.

You may refuse to answer any question or item in the survey.

Risks, Stress, or Discomfort

If you chose to participate in my survey-based research, there is low -risk of injury to you. Your responses will be anonymous. I do intend to keep the raw data for up to 10 years for additional research. It is my responsibility to inform you that I am obliged to provide the raw data to Indiana State University as a condition of using the FSSE survey instrument.

Alternatives to Taking Part in this Study

The skip logic in Qualtrics allows you to decline to participate in the survey; this will also interrupt any reminder messages about the survey.

Benefits of the Study

This is a great opportunity for you to participate in research that is relevant to credentialing requirements, course content and student engagement.

Source of Funding

There is no funding associated with this research.

Financial Interest

I attest that there is no financial interest in this research.

Confidentiality of Research Information

All data gathered for this research will be confidential. Surveys will be made anonymous, and email addresses will be destroyed after the records retention period required by state and/or federal law. Data will be shared with Indiana State University; no identifiers will be shared. There are no other plans to share the data. All of the information you provide will be confidential. However, if we learn that you intend to harm yourself or others, we must report that to the authorities.

Genomic Data Sharing

There will be no genomic data as a part of this research study.

Other Information

You may refuse to participate, and you are free to withdraw from this study at any time without penalty or loss of benefits to which you are otherwise entitled. There are no incentives for this research study.

Research-related Injury

If you think you have been harmed from being in this research, contact: Luella Loudenback 253-961-1393 at any time. You can call and leave a message on this line, and I will return your call as soon as possible, seven days a week.

It is important that you promptly tell the researchers if you believe that you have been harmed because of taking part in this study. You can tell the researcher in person or call him/her at the number(s) listed at the top of this form. This number is monitored 24 hours a day.

Questions

If you have questions, complaints or concerns about this study, you can contact Luella Loudenback at luelll@uw.edu or 253-961-1393.

The UW does not normally provide compensation for harm except through its discretionary program for medical injury. However, the law may allow you to seek other compensation if the harm is the fault of the researchers. You do not waive any right to seek payment by signing this consent form.

Subject's Statement

This study has been explained to me. I volunteer to take part in this research. I have had a chance to ask questions. If I have questions later about the research, or if I have been harmed by participating in this study, I can contact one of the researchers listed on the first page of this consent form. If I have questions about my rights as a research subject, I can call the Human Subjects Division if I request it.

_____

Printed Name of Subject   Signature of Subject   Date

Copies to: Researcher; Subject; Subject's Medical Record (if applicable)

Appendix D

Recruitment Letter

Summer, 2018

Hello, my name is Luella Loudenback. I am a student in the Doctor of Educational Leadership program at the University of Washington Tacoma. I am asking you to contribute your voice to my research by completing the attached survey administered through Qualtrics. My area of interest and this research study is centered around critical thinking skills and how instructors teach and evaluate this essential skill to social work graduate students as they prepare or professional practice. I will also ask that you offer any feedback on your experience of the extent that you perceive changes in student outcomes related to critical thinking since the 2015 CSWE removal of this skill as a concrete educational outcome.

Please find the attached survey compete with a consent and privacy form. The survey is modified from the FSSE and will include some general demographic information, as well as questions related to student engagement and instructional and evaluation approaches to help me capture your work and commitment to social work education. I want to thank you for participating in this research. If you have questions at any time, please feel free to contact me.

Sincerely,

Luella Loudenback

Luella Loudenback

luelll@uw.edu

Appendix E

Faculty Survey of Student Engagement-Modified

 Q1. How important is it to you that graduate students at your institution do the following before they complete their degree? *Response options: Very important, Important, Somewhat important, Not important*

a. Participate in an internship, co-op, field experience, student teaching, or clinical placement

b. Hold a formal leadership role in a student organization or group

c. Participate in a learning community or some other formal program where groups of students take two or more classes together

d. Participate in a study abroad program

e. Work with a faculty member on a research project

f. Complete a culminating senior experience (capstone course, senior project or thesis, comprehensive exam, portfolio, etc.)

g. Participate in a community-based project (service-learning) as part of a course

Q2. In a typical 7-day week, about how many hours do you spend on each of the following?

Response options: 0, 1-4, 5-8, 9-12, 13-16, 17-20, 21-30, More than 30 hours

a. Teaching activities (preparing, teaching class sessions, grading, meeting with students outside of class, etc.)

b. Advising students

c. Research, creative, or scholarly activities

d. Service activities (committee work, administrative duties, etc.)

Q3. In a typical 7-day week, about how many hours do you spend on each of the following teaching-related activities? *Response options: 0, 1-4, 5-8, 9-12, 13-16, 17-20, More than 20 hours*

a. Preparing class sessions

b. Teaching class sessions

c. Grading assignments and exams

d. Meeting with students outside of class

e. Course administration (emailing students, maintaining course website, etc.)

f. Working to improve your teaching (self-reflection, meeting with teaching consultants, attending teaching workshops, conducting research on your own courses, etc.)

Q4. In a typical 7-day week, do you participate in the following activities? *Response options: Yes, No*

a. Working with graduate students on research

b. Supervising graduate internships or other field experiences

Q5. Within the last 12 months, about how often have you done each of the following with the graduate students you teach or advise? *Response options: Very often, Often, Sometimes, Never*

a. Talked about their career plans

b. Worked on activities other than coursework (committees, student groups, etc.)

c. Discussed course topics, ideas, or concepts outside of class

d. Discussed their academic performance

Q6. About how many of your graduate courses at this institution have included a community-based project (service-learning)? *Response options: All, Most, Some, None*

Q7. In your graduate courses, to what extent do you do the following? *Response options:*

Very much, Quite a bit, Some, Very little

a. Clearly explain course goals and requirements

b. Teach course sessions in an organized way

c. Use examples or illustrations to explain difficult points

d. Use a variety of teaching techniques to accommodate diversity in student learning styles

e. Review and summarize material for students

f. Provide standards for satisfactory completion of assignments (rubrics, detailed outlines, etc.)

g. Provide feedback to students on drafts or works in progress

h. Provide prompt and detailed feedback on tests or completed assignments

Q8. What is the general academic discipline of your appointment? *Response Options:*

[Write-in]

Please answer the following questions based on *one particular* graduate course section you are teaching or have taught during the current school year.

Q9a. Is your selected course section in the same academic discipline as your appointment?

Response options: Yes, No

Q9b. [If answered "No"] **What is the general academic discipline of your selected course section?** *[Write-in]*

Q10. Estimate the total number of students in your selected course section. *Response options: 20 or fewer, 21-30, 31-40, 41-50, More than 50*

Q11. In what format do you teach your selected course section? *Response options:*

Classroom instruction on-campus; Classroom instruction at an auxiliary location (satellite

campus, rented facility, etc.); Distance education (online, live or pre-recorded video or audio,

correspondence, etc.); Combination of classroom instruction and distance education

Q12. In your selected course section, to what extent do you think the typical student does

his or her best work? *Response options: Very much, Quite a bit, Some, Very little*

Q13. In your selected course section, how important is it to you that the typical student do

the following? *Response options: Very important, Important, Somewhat important, Not*

important

a. Ask questions or contribute to course discussions in other ways

b. Prepare two or more drafts of a paper or assignment before turning it in

c. Come to class having completed readings or assignments

d. Reach conclusions based on his or her own analysis of numerical information (numbers,

graphs, statistics, etc.)

e. Use numerical information to examine a real-world problem or issue (unemployment, climate

change, public health, etc.)

f. Evaluate what others have concluded from numerical information

Q14. In your selected course section, how important is it to you that the typical student do the following? *Response options: Very important, Important, Somewhat important, Not important*

a. Combine ideas from different courses when completing assignments

b. Connect his or her learning to societal problems or issues

c. Include diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments

d. Examine the strengths and weaknesses of his or her views on a topic or issue

e. Try to better understand someone else's views by imagining how an issue looks from his or her perspective

f. Learn something that changes the way he or she understands an issue or concept

g. Connect ideas from your course to his or her prior experiences and knowledge

Q15. In your selected course section, about what percent of class time is spent on the following? *Response options: 0%, 1-9%, 10-19%, 20-29%, 30-39%, 40-49%, 50-74%, 75% or more*

a. Lecture

b. Discussion

c. Small-group activities

d. Student presentations or performances

e. Independent student work (writing, painting, designing, etc.)

f. Movies, videos, music, or other performances not involving or produced by students

g. Assessing student learning (tests, evaluations, surveys, polls, etc.)

h. Experiential activities (labs, field work, clinical or field placements, etc.)

Q16. In your selected course section, how much do you encourage students to do the

following? *Response options: Very much, Quite a bit, Some, Very little*

a. Ask other students for help understanding course material

b. Explain course material to other students

c. Prepare for exams by discussing or working through course material with other students

d. Work with other students on course projects or assignments

e. Identify key information from reading assignments

f. Review notes after class

g. Summarize what has been learned from class or from course materials

Q17. In your selected course section, how much opportunity do students have to engage in

discussions with people from the following groups? *Response options: Very much, Quite a bit,*

Some, Very little

a. People of a race or ethnicity other than their own

b. People from an economic background other than their own

c. People with religious beliefs other than their own

d. People with political views other than their own

e. People with a sexual orientation other than their own

Q18. In your selected course section, how much does the coursework emphasize the following? *Response options: Very much, Quite a bit, Some, Very little*

a. Memorizing course material

b. Applying facts, theories, or methods to practical problems or new situations

c. Analyzing an idea, experience, or line of reasoning in depth by examining its parts

d. Evaluating a point of view, decision, or information source

e. Forming a new idea or understanding from various pieces of information

Q19a. Does your selected course section include assigned papers, reports, or other writing tasks? *Response options: Yes, No*

[If answered, "Yes"] **About how many papers, reports, or other writing tasks of the following lengths do you assign?**

Response options: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, More than 10 papers, etc.

Q20b. Up to 5 pages

Q20c. From 6 to 10 pages

Q20d. 11 pages or more

Q21. To what extent do you structure your selected course section so that graduate

students learn and develop in the following areas? *Response options: Very much, Quite a bit,*

Some, Very little

a. Writing clearly and effectively

b. Speaking clearly and effectively

c. Thinking critically and analytically

d. Analyzing numerical and statistical information

e. Acquiring job- or work-related knowledge and skills

f. Working effectively with others

g. Developing or clarifying a personal code of values and ethics

h. Understanding people of other backgrounds (economic, racial/ethnic, political, religious,

nationality, etc.)

i. Solving complex real-world problems

j. Being an informed and active citizen

Q22. Prior to the current school year, about how many times have you taught your selected

course? *Response options: 0, 1-2, 3-4, 5-9, 10 or more times*

Q23. Enter the total number of *graduate* courses you have taught or are scheduled to teach

during the current

Response options: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 or more courses

Q24. During this academic term, does your institution consider you to be employed full-

time or part-time? *Response options: Full-time, Part-time*

Q25. Does your institution consider you to be an adjunct faculty member? *Response*

options: Yes, No

Q26. Which of the following best describes your academic rank, title, or current position?

Response options: Professor; Associate Professor; Assistant Professor; Instructor; Lecturer;

Graduate Teaching Assistant; Other, please specify ____

Q27. What is your current tenure status? *Response options: Tenured; On tenure track but not*

tenured; Not on tenure track, but this institution has a tenure system; No tenure system at this

institution

Q28. Enter the year that you began teaching at *any* college or university (1995, etc.):

Response Options:[Write-in]

Q29. What is the highest degree you have earned?

Response options: Doctoral degree (Ph.D., Ed.D., etc.); Professional degree (J.D., M.D., D.D.S.,

D.V.M., etc.); Master's degree (M.A., M.S., M.F.A., M.B.A., M.S.W., etc.); Bachelor's degree;

Associate's degree; Other, please specify: ____

Q30. Enter your year of birth (1965, etc.): *[Write-in]*

Q31. What is your gender identity?

Response options: Man; Woman; Another gender identity, please specify ___*; I prefer not to*

respond

Q32. What is your racial or ethnic identification? (Select all that apply.) [Item does not

appear on Canadian instrument] *Response options: American Indian or Alaska Native, Asian,*

Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander,

White, Other, I prefer not to respond

Q33. Which of the following best describes your sexual orientation?

Response options: Heterosexual; Gay; Lesbian; Bisexual; Another sexual orientation, please

*specify:*___*; Questioning or unsure; I prefer not to respond*

Q34. What instructional methodologies are you currently using to teach critical thinking skills? *Response options: Explicit, Implicit, Case studies, Vignettes, Problem-solving, Other [Write in] Check all that apply*

Q35. What evaluation methodologies are you currently using to teach critical thinking skills? *Response options: Check all that apply. Rubrics, Matrices, Portfolios, Written work, None of these, All of these, Other please describe*

Q36. Please describe in as much detail as you can the extent to which you have seen changes in student outcomes related to critical thinking skills since the 2015 CSWE changes? *[Write* in].

Appendix F

Higher order learning (4 items), Q18, items b-e. In your selected course section, how much does the coursework emphasize the following? Response options: Very much, quite a bit, some, very little.

    b. Applying facts, theories, or methods to practical problems or new situations,

    c. Analyzing an idea, experience, or line of reasoning in depth by examining its parts,

    d. Evaluating a point of view, decision, or information source, or

    e. Forming a new idea or understanding from various pieces of information.

Reflective and integrative learning (7 items), Q14, items a-g. In your selected course section, how important is it to you that the typical student do the following? Response options: Very important, important, somewhat important, not important.

    a. Combine ideas from different courses when completing assignments,

    b. Connect his or her learning to societal problems or issues,

    c. Include diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments,

    d. Examine the strengths and weaknesses of his or her own views on a topic or issue,

    e. Try to better understand someone else's views by imagining how an issue looks from his or her perspective,

    f. Learn something that changes the way he or she understands an issue or concept, or

    g. Connect ideas from your course to his or her prior experiences and knowledge.

Collaborative learning (4 items), Q16, items a-d. In your selected course section, how much do you encourage students to do the following? Response options: Very much, quite a bit, some, very little.

a. Ask other students for help understanding course material,

b. Explain course material to other students,

c. Prepare for exams by discussing or working through course material with other students, or

d. Work with other students on course projects or assignments.

Learning Strategies (3 items), Q16, items e-g. In your selected course section, how much do you encourage students to do the following? Response options: Very much, quite a bit, some, very little.

e. Identify key information from reading assignments,

f. Review notes after class, or

g. Summarize what has been learned from class or course materials.

Effective teaching practices (8 items), Q7, items a-h. In your graduate courses, to what extent do you do the following? Response options: Very much, quite a bit, some, very little.

a. Clearly explain course goals and requirements,

b. Teach course sessions in an organized way,

c. Use examples or illustrations to explain difficult points,

d. Use a variety of teaching techniques to accommodate diversity in student learning styles,

e. Review and summarize material for students,

f. Provide standards for satisfactory completion of assignments (rubrics, detailed outlines, etc.),

g. Provide feedback to students on drafts or works in progress, or

h. Provide prompt and detailed feedback on tests or completed assignments.

Student-faculty interaction (4 items), Q5, items a-d. Within the last 12 months, about how often have you done each of the following with the graduate students you teach or advise? Response options: Very often, often, sometimes, never.

a. Talked about their career plans,

b. Worked on activities other than coursework (committees, student groups, etc.),

c. Discussed course topics, ideas, or concepts outside of class, or

d. Discussed their academic performance.