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Krikorian, M. (2016). *The development of the scale of contemplative practice in higher education* (Doctoral dissertation). <https://doi.org/10.36837/chapman.000014>

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The Development of the Scale of Contemplative Practice in Higher Education

A Dissertation by

Maryann Krikorian

Chapman University

Orange, California

College of Educational Studies

Submitted in partial fulfillment of the requirements for the degree of

Doctor of Philosophy in Education

May 2016

Committee in charge:

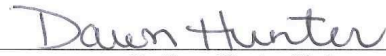
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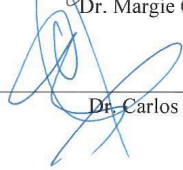
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April 2016

Contemplative Practices in Higher Education: The Development of a Rating Scale

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## ACKNOWLEDGEMENTS

Everything I am, and hope to become, I attribute to my family. They have given me strength in time of weakness, hope in time of despair, joy in time of sorrow, direction in time of loss, and an unquestionable sense of support that has healed every part of me that hurt. They have taught me that there is beauty in struggle and tomorrow will always be stronger than yesterday. Who I am and what I have accomplished would not be possible if it were not for them.

I am forever grateful to my dissertation committee members for their willingness to share their expertise and provide mentorship. Thank you to Dr. Dawn Hunter for her compassion and encouragement that led me in my pursuits to extend the work in the area of holistic education. Thank you to Dr. Randy Busse for his integral input regarding the methodology and future of this study. Thank you to Dr. Margie Curwen for her support related to the historical context and theoretical framework of this study. I would also like to extend my appreciation to Dr. Carlos López for kindly accepting my invitation to serve as my external reviewer. And, thank you to my Committee for always treating me as an equal colleague, granting me respect, engaging me with critical reflection, and offering professional guidance.

## ABSTRACT

### Contemplative Practices in Higher Education: The Development of a Rating Scale

by Maryann Krikorian

Some scholars have formed a more expansive view of knowledge that moves beyond the cognitive notion of intellect. For example, emotional intelligence (EI) theory posits that human intelligence encompasses both cognitive and emotional competencies, providing a framework for the concept of contemplative practices in an endeavor to support an eclectic understanding of cognition. Contemplative practices may benefit graduate student disposition and inform areas of educator preparation through the use of emotional adeptness in higher education. The purpose of this study was to: (a) develop a self-report measure: *Scale of Contemplative Practice in Higher Education* (SCOPE); (b) address the issues of validity and reliability related to the SCOPE; and (c) expand the understanding of contemplative practices in the literature. Data collected from an extensive review of the literature, reference to personal experiences, and consultation with an expert panel were used to generate scale items. Exploratory and confirmatory factor analyses were conducted to test the factor model. Analyses resulted in a 30-item factor model with strong reliabilities.

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## **Chapter One**

### **Introduction to the Study**

The following is an overview of the contents and elements of this study. Key theoretical terms are defined, then a brief history of institutions of higher education (IHEs) in the United States (U.S.) are described, and the historical context of contemplative practices (CP) from diverse belief systems are shared.

A brief introduction to emotional intelligence (EI) theory—an understanding of human intelligence with consideration of human emotions—is followed by the overall purpose and research questions of the study. Methodology is explained in relationship to the research questions and followed by consideration of the study’s potential significance. The chapter concludes with the overall organization of the study.

### **Definitions of Key Terms**

*Compassion:* A term referring to awareness of the pain of others, offering feelings of kindness toward others, and providing nonjudgmental understanding of those who are suffering, or have done wrong, so their behaviors are accepted in the context of shared human imperfection (Neff, 2004).

*Contemplative practices:* A term used to identify the meta-abilities that determine how well individuals focus their attention (e.g., mindfulness) on a sought-after goal (Barbezat & Bush, 2014). This is a working definition in the literature and has been associated with a number of subconstructs in the field. To date, there is no universal consensus on the definition. However, for purposes of this study, I have operationalized the term using three components of Barbezat and Bush’s understanding of the term: listening competency, mindfulness, and self-compassion.

*Emotional intelligence:* A term used to include self-awareness, impulse-control, persistence, zeal, motivation, empathy, and social deftness (Goleman, 2006).

*Graduate students in education.* A term used in this study to identify graduate students enrolled in a master's- or doctoral-level program in the following areas: administrator education, bilingual education, community counseling, counselor education, elementary education, higher education, leadership studies, secondary education, school counseling, school psychology, special education. The researcher generated the terms for operational purposes of the study.

*Listening competency:* A term used to define listening without biases, establishing support and an ethic of care, avoiding the insertion of personal experiences, listening for feelings, and asking questions only for clarification (Brady, 2009).

*Mindfulness:* A term used to focus attention on the task at hand and to pay nonjudgmental attention on the present moment—without past worries or future anxieties (Barbezat & Bush, 2014; Germer, 2004).

*Self-Compassion:* A term referring to having awareness of one's pain, offering feelings of kindness toward oneself, and providing nonjudgmental understanding of one's suffering, or failures, so one's experience is accepted in the context of the larger human experience (Neff, 2004).

*Well-being:* A term used to define the state of being happy, healthy, or successful (Merriam-Webster Dictionary, 2015). It is also a term that represents a reduction of cognitive vulnerability to stress and emotional distress (Bishop et al., 2004).

## **Historical Context of Higher Education**

In Western education, the value of knowledge has been influenced by historic events and trends. Epistemological movements in U.S. educational history to date contextualize contemplative practices (CP) and call attention to their relevance in today's institutions of higher education (IHEs). Christensen and Eyring (2011) explained how IHEs are a result of their historical context because many institutions have been known to model themselves upon founding institutions in U.S. history. Among the oldest and most renowned educational institutions in the U.S. are Harvard, Yale, Johns Hopkins, Cornell, and Massachusetts Institute of Technology (MIT). Harvard garnered national and even global prestige because of its successful institutional history in the U.S. and its historical association with the United Kingdom (Christensen & Eyring, 2011). Harvard is the first IHE in the U.S. and was founded by the early settlers of the Massachusetts Bay Colony in the 1630s (Harvard University Library, 2013). During the colonial period, young men from high socioeconomic backgrounds who wished to enter the clergy were targeted as prospective students by Harvard to promote the Christian religion (Rendón, 2009). Most Harvard instructors were graduates of Cambridge University in the United Kingdom and shaped the curriculum after their alma mater (Christensen & Eyring, 2011). Harvard was a Christian institution that promoted a colonial model of education, which meant reinforcing the role of the educator as the expert and the student as passive recipient of learning (Rendón, 2009).

Although no single event is responsible for the changing landscape of IHEs, the development and aftermath of the 1862 Morrill Land Grant Act greatly influenced the spirit of entrepreneurship and accountability in U.S. IHEs (Nemec, 2006). The land

grants offered by Morrill's legislation awarded funds for instruction in agriculture and technical education (Nemec, 2006). Curriculum progressively extended beyond the liberal arts and proceeded to offer professional disciplines technical in nature (e.g., medicine). In parallel, IHEs began to serve a demographically wider range of students and began to consult models outside the U.S. for innovative instructional methods that complemented diverse student bodies (Rendón, 2009). For example, German institutions inspired an emphasis on pedagogical strategies such as lectures, presentations, and laboratory experiments (Rendón, 2009).

By the 20th century, drastic curriculum and instructional changes took place in U.S. higher education. In the 1950s, the Vietnam War induced fear of nuclear warfare and, later that decade, Sputnik provoked anxiety related to the failures of public education (Pinar, 2012). The fear of international nuclear developments and the Sputnik satellite launching of the Soviet Union were referenced during the U.S. presidential campaign as an example of how U.S. education was on the decline, particularly in the areas of science and mathematics. In the 1960s, federal support for IHEs was bountiful, and discussions around standardizing practices began to gain popularity (Kleinman, Habinek, & Vallas, 2011). Moreover, cognitive intellect grounded in the scientific method became an influential trend, affecting the focus of U.S. education, and eventually launching the standardization movement in schools (Goleman, 2006). In the 1970s, IHEs began experiencing increasing financial pressure and initiated the promotion of business-like strategies over collegial models of governance (Kleinman et al., 2011; Rendón, 2009). In the 1980s, the financial pressures of the 1970s promoted competition for external sources of funding (i.e., grants) targeted toward enhancing cognitive theoretical

learning strategies in the areas of science, math, and technology (Kleinman et al., 2011; Rendón, 2009). By the 1990s, boundaries between IHEs and industry were muddled. Mainstream discussions around scientific evidence and objectivism (e.g., knowledge based primarily on facts, rationality, and observable outcomes) became the focal point, leaving the liberal arts behind (Kleinman et al., 2011; Palmer, 1983).

In the 21st century, U.S. IHEs have experienced an array of demographic and institutional changes resulting in a shift from an over-emphasis on objectivism to a multifaceted notion of intellect (Rockenbach & Mayhew, 2013). In support of a broader understanding of knowledge, Daniel Goleman (2006), among many other developmental theorists (e.g., Gardner, 1993; Salovey & Mayer, 1990), argued for a multidimensional concept of intelligence. A more expansive concept of knowledge reinforces the importance of affective aptitudes to support human understanding in Western culture. A broader notion of intelligence, wherein emotions interrelate with thought and rationality, grounds the construct of CP for a holistic way of knowing (Palmer, 1983).

### **Historical Context of Contemplative Practices**

Contemplative practices (CP) dates back to Ancient Greece and has maintained a long-standing traditional practice (Nodding, 2012). To better understand the notion of CP, it may be helpful to see it as a product of earlier philosophies—valuing process and depth over content and analysis (Rendón, 2009). Rendón described an array of historical belief systems in support of CP: (a) Christian practices in the Discernment of Spirits, (b) Buddhist exercises in Meditation, (c) Jewish Kabbalah strategies for deep pondering, (d) Hindu activities of Yoga, and (e) Plato’s concept of radical questioning. The concept of

CP and its alignment with the abovementioned historical belief systems are summarized in greater detail below.

### **Discernment of Spirits**

Traub (2008) described the Discernment of Spirits as a decision-making process in the context of Christianity. The process may include emphasis on consultation, reflection, and prayer, with honest attention to both rationality and the realm of feeling. Benefits of Discernment may lead to greater self-understanding, understanding of others, and life purpose (Traub, 2008).

### **Meditation**

Buddhism promotes Buddha's teaching of *Dharma*, a phenomenon in which harmony and stability may be accomplished experientially (Nhat Hanh, 1967). Buddhists believe in training the mind to develop qualities such as love, compassion, equanimity, forgiveness, appreciation, and kindness (Nhat Hanh, 1967). The process of meditation may include exercises that increase concentration, well-being, and connection to others (Barbezat & Bush, 2014).

### **Deep Pondering**

Abelson (2001) described Kabbalah as practices revealed and handed down from the Jewish tradition. The process might include the use of meditative techniques to ponder the meaning of the Hebrew Scriptures. Deep pondering might enhance intuition and creativity (Barbezat & Bush, 2014).

## **Yoga**

The Indian sage Patanjali organized the practices of yoga 2,000 years ago (Barbezat & Bush, 2014). The Yoga Sutra process includes approximately 195 statements that serve as a guide for Hatha Yoga. This exercise connects physical movement with the mind. Benefits of yoga may lead to a cultivation of balance, calming of the mind, and openness to new and innovative thinking (Barbezat & Bush, 2014).

## **Radical Questioning**

In *The Republic*, Plato detailed the tactics that Socrates used in dialogue (e.g., question posing) (Noddings, 2012). For example, when a student answered a question, Socrates would respond with further inquiries. This method proceeded until both the student and Socrates believed a thorough analysis had been conducted. Benefits of radical questioning may lead to strong critical thinking skills (Barbezat & Bush, 2014).

In sum, CP are rooted in certain spiritual and religious orders. For this reason, CP often are separated from public higher education (Barbezat & Bush, 2014). Barbezat and Bush also shared how no specific foundation is needed to engage in these practices. It is crucial to note that CP in IHEs may benefit a more diverse student population if they are designed as a stand-alone exercise independent of specific religious and/or spiritual orders and implemented in the spirit of discovery (Barbezat & Bush, 2014).

## **Statement of the Problem**

Some scholars have formed a more expansive understanding of knowledge that moves beyond cognitive intellect (Gardner, 1993; Goleman, 2006; Solvey & Mayer, 1990). Many developmental theorists support the notion of multifaceted human intelligence (e.g., Gardner, 1993; Goleman, 2006; Solvey & Mayer, 1990). EI theory

argues that human intelligence encompasses both cognitive capacities and emotional competencies. According to a few experts in the field of CP (e.g., Barbezat & Bush, 2014; Rendón, 2009), EI provides one type of theoretical framework for a deeper understanding of the concept of CP. Because it may benefit graduate student disposition and inform the preparation of future educators through the use of human emotion, it may be useful to measure the construct of CP (Barbezat & Bush, 2014; Council of Accreditation for Educator Preparation, 2016; Rendón, 2009). To date, there is no quantitative means to measure CP specific to scale construction. This study focuses on the development of a new scale: Scale of Contemplative Practices in Higher Education (SCOPE), which will include listening competency, mindfulness, and self-compassion.

### **Purpose of the Study**

There are many benefits to integrating CP in higher education. One major advantage is the cultivation of emotional balance and well-being (Palmer, 2009). CP may benefit graduate student disposition and inform all areas of educator preparation by accentuating the realm of feeling for a more holistic approach to education. The purpose of this study was to: (a) develop a self-report measure: Scale of Contemplative Practice in Higher Education (SCOPE); (b) address the issues of validity and reliability related to the SCOPE; and (c) expand the understanding of CP in the literature.

## **Research Questions**

By utilizing emotional intelligence (EI) theory as the conceptual framework, and reviewing the statement of the problem and the purpose of the research, this quantitative study investigated the following research questions:

1. To what extent does the SCOPE instrument demonstrate content and construct validity?
2. What is the factor structure of the SCOPE instrument?
3. To what extent does the SCOPE instrument demonstrate internal consistency and temporal stability?

## **Methods**

There were two phases to this exploratory quantitative study. Phase One of the scale development portion (discussed in Chapter 3) used an expert panel with administrators and faculty experienced in assessment and CP, as well as an extensive review of the literature to create and revise the items within the SCOPE to assess content validity. Phase Two of the statistical analysis portion (discussed in Chapter 3) used data collected from graduate students in education and applied exploratory (EFA) and confirmatory (CFA) factor analyses to evaluate the factor structure and other forms of reliability of the SCOPE.

## **Significance of the Study**

It may be important for IHEs to consider both content and affective skill-sets. For example, several recent higher education news articles reported on the current struggles students face during their higher education experience. For instance, findings from the Gallup-Purdue Index Report indicated that, of 30,000 college students, only 14% reported

having a professor whom they perceived cared about them and who made them excited about learning (Inside Higher Ed, 2014). This finding draws attention to the potential need for an ethic of care that may foster positive learning environments for optimal learning outcomes and well-being (hooks, 2001). Moreover, according to the American College Health Association, more than half of college students reported they had experienced “overwhelming anxiety” in the previous year, and 32% reported feeling so depressed “that it was difficult to function” (Inside Higher Ed, 2015). This report draws attention to the negative feelings students may experience from a lack of present focus defined as abstaining from past fears or future anxieties (Tolle, 2004). Lastly, a national survey led by the Association of American Colleges and Universities about business and nonprofit leaders and their views on current college graduates found that 95% of employers agreed to the statement “All college students should have experiences that teach them how to solve problems with people whose views are different from their own” (Association of American Colleges and Universities, 2015, p. 3). Such experiences call for a nonjudgmental and unbiased approach to listening that might also be useful for real world intervention (Barbezat & Bush, 2014).

Additionally, the new national Council of Accreditation for Educator Preparation (2016) for schools/colleges of education requires educator preparation programs to collect evidence in support of disposition and professional responsibility. From this perspective, to ensure that we are preparing future educators with the skills necessary to live in a world of complexity and dynamicity we must equally value affective sensibility and traditional cognitive intellect (Palmer, 2009). To date, no quantitative research has been conducted related to CP and scale development (Barbezat & Bush, 2014). Such an

instrument may prove useful for data collection related to disposition and professional responsibility in the field of education. The purpose of this study was to develop a measure to assess CP by addressing issues of reliability and validity.

### **Summary and Organization of the Study**

The purpose of this exploratory study was to develop a measure of CP for graduate student populations: Scale of Contemplative Practice in Higher Education (SCOPE). Chapter 1 has introduced key theoretical terms, a brief history of IHEs in the US, and the historical context of CP. Additionally, the conceptual framework, statement of the problem, and research questions were used to frame the quantitative study to guide the methodology. Chapter 2 is a review of the research literature pertaining to this study, specifically EI theory (Gardner, 1993; Goleman, 2006; Salovey & Mayer, 1990), CP (Barbezat & Bush, 2014; Brady, 2009; Palmer, 2009; Rendon, 2009; Tolle, 1999), and scale development and measurement (Brown & Ryan, 2003; Ford, Wolvin, & Chung, 2000; Neff, 2003). The third chapter provides an overview of the scale construction and methodological inquiry, and discusses the means by which the results were analyzed. Chapter 4 provides the data analysis and scale development results. The final chapter discusses the limitations of the study and future implications for research and practice.

## **Chapter Two**

### **Review of the Literature**

This chapter articulates the potential need for emotional competencies in Institutions of Higher Education (IHEs) through the use of contemplative practices (CP). The relevant literature related to emotional intelligence (EI) provides a theoretical viewpoint that frames the construct of CP for a thorough understanding of the concept. Specifically, the following areas are covered in this chapter: (a) Emotional intelligence, (b) Contemplative practices, and (c) Scale development and measurement.

### **Purpose of the Study**

The purpose of this quantitative study was to develop a self-report measure: Scale of Contemplative Practice in Higher Education (SCOPE). The goal of the study was to examine the reliability and validity of the newly created instrument. The instrument items were designed to represent the breadth of the construct supported in the literature. An additional purpose of the study was to contribute to the literature base of CP.

### **Literature Review Method**

The literature grounding the research on CP in higher education was found using the Educational Resources Information Center (ERIC), PsycARTICLES, ProQuest-Dissertations, and PsycINFO databases using a combination of the following descriptors: *mindfulness*, *listening competency*, *self-compassion*, *compassion*, *EI*, and *CP*. The reference sections of individual articles were searched to identify additional primary and secondary sources of relevance to this literature review. Additionally, many of the academic textbooks used to inform this literature review were obtained by a recommended reading list featured on the Center for Contemplative Mind in Higher

Education website (Center for Contemplative Mind in Society, 2015). The reference sections of individual textbooks were also searched to identify additional primary and secondary sources of importance to this literature review.

### **Emotional Intelligence**

The concept of EI dates back to Socrates (469–399 B.C.) and what we know from documentation provided by his student Plato. Noddings (2012) explained that Socrates explored social causes, political issues, and topics concerning self-awareness with his students through the Socratic method. This format consisted of probing his students with clarifying questions that prompted a critical thought process until both the teacher and student were confident that they had exhausted their investigation. Noddings (2012) stated, “Socrates insisted that self-knowledge is basic to all knowledge. It accompanies and informs our critical examination of the larger society” (p. 7). What was then seen as self-knowledge is now viewed as an element of EI (Goleman, 2006). It is important to note that Socrates made a case for emotional competencies between 469–399 B.C. The value of EI has been a point of discussion since the Greek period, illuminating the vitality of emotional life for the human capacity (Noddings, 2012).

To date, many developmental theories have supported emotional capabilities, such as Howard Gardner’s (1989) multiple/personal intelligence theories, Peter Salovey’s EI theory (Salovey & Mayer, 1990), and Daniel Goleman’s EI theory (2006). These theorists argued that objective views of human intelligence are narrow and may be strengthened by including human emotions. Goleman reasoned that our emotions play a critical role in everyday decision-making, rationality, and personal as well as professional success. However, critiques of EI theory identify potential gaps specific to its relative

nature (Conte, 2005). The next section will focus on the concept of emotions and brain structure, EI theories, and EI critiques.

### **Emotions and Brain Structure**

Goleman (2006) described human intelligence as consisting of two minds: rational and emotional. According to this theory, the interconnection between the realms of feeling and thought helps to facilitate working memory. The field of cognitive psychology uses the term *working memory* to define the focus of attention with the capacity to hold information necessary to complete a task or problem at-hand (Baddeley & Hitch, 1974). Working memory then aids in decision-making capabilities as well as learning and retention strategies. Cognitive theorists also suggest that strong emotions (e.g., anger, fear, or stress) may inhibit one's ability to maintain working memory for optimal learning opportunities and intellectual abilities (Goleman, 2006).

Goleman (2006) detailed how the human brain interplays with the limbic system, neocortex, amygdala, and prefrontal lobes to balance rationality with emotional life. He explained how the limbic system is associated with a number of functions including the sense of smell, behavior, learning, long-term memory, emotions, and drives. The neocortex is known as the area that registers and analyzes information for meaning (Goleman, 2006). The amygdala aids in a precautionary assessment, scanning for areas of concern. Finally, the prefrontal lobes manage our emotional reactions for planning and strategizing in order to obtain a sought after goal and/or respond to difficult problems.

The emotional mind dictates “when to placate, persuade, seek sympathy, stonewall, provoke guilt, whine, put on a façade of bravado, [and] be contemptuous” (Goleman, 2006, p. 25). The argument for the importance of EI relies on the workings of

the brain sustained through the interconnectedness of the limbic system, neocortex, amygdala, and prefrontal lobes (Goleman, 2006). When emotions and rationality complement one another, the human mind has the ability to read emotion in others for effective communication (i.e., listening competency), the capacity for impulse control (i.e., mindfulness), and kindness (i.e., self-compassion), and (Barbezat & Bush, 2014; Goleman, 2006).

### **Gardner's Multiple/Personal Intelligence Theories**

To maximize success, humans need both of the realms of thinking and feeling. Gardner (1993) redefined the traditional concept of intelligence by moving beyond the focus on cognitive aptitudes. His multiple intelligence theory is grounded in seven different ways of knowing. The seven intellectual abilities are as follows:

- Linguistic – This specialty area has to do with words, either spoken or written.
- Logical – This specialty area focuses on mathematics. The strong ability to apply logic, reason, and work with numbers.
- Spatial – This specialty area symbolizes visual judgments and exemplifies musical talent. The capability to show strong skill in rhythm and hearing.
- Bodily-Kinesthetic – This specialty area signifies bodily movement and physiology.
- Interpersonal – This specialty area denotes self-reflective techniques.
- Intrapersonal – This specialty area symbolizes relations to others.
- Naturalist – This specialty area represents the capacity in which one relates to his/her environment. (Gardner & Hatch, 1989, p. 6)

Moreover, Gardner (1993) developed personal intelligence theory to promote a socioemotional concept of intelligence and referred to interpersonal and intrapersonal intellect. Gardner (1993) described personal intelligences as “the ability to understand other people: what motivates them, how they work, and how to work cooperatively with them” (p. 9). As well as, [the ability to] “form an accurate, veridical model of oneself and to be able to use the model to operate effectively in life” (Gardner, 1993, p. 9). Gardner and Hatch (1989) further described interpersonal intellect as the ability to discern and respond appropriately to the temperaments of others, and intrapersonal intellect as the capacity to access one’s emotions to manage behavior.

Gardner’s theories of human intelligence are diverse in nature and extend beyond a unitary capacity. Barrington (2004) described Gardner’s multiple and personal intelligence theories as inclusive because they extend beyond cultural influence, account for temporal differences, and consider changing contexts. Gardner created a convincing argument in support of teaching and learning through varied faculties (i.e., intrapersonal aptitudes and interpersonal talents) to meet the needs of multicultural populations (Gardner & Hatch, 1989).

### **Salovey’s Emotional Intelligence Theory**

Elements of Gardner’s personal intelligence theory are included in Salovey’s understanding of emotional intelligence (EI). Salovey and Mayer (1990) defined EI as the capacity to monitor one’s own emotions and the feelings of others. This definition differentiates one’s feelings from the feelings of others to inform thinking and behavior. Salovey and Mayer’s understanding of EI is different from past research on the interaction of cognition and affect because it extends beyond memory to include the

overall benefits of mental health. For example, according to this theory those who more precisely identify their emotions more often respond appropriately to their feelings due to the accuracy with which they perceive them.

Salovey and Mayer (1990) emphasized interpersonal and intrapersonal skill-sets. These skills enable individuals to gauge accurate affective responses and socially adaptive behaviors in complex situations. Salovey and Mayer highlighted the benefits of a mental health state that may positively impact the identification of growth areas for personal and professional development and responses to challenging situations for greater resolve.

### **Goleman's Emotional Intelligence Theory**

Goleman (2006) described EI as a meta-ability consisting of mental processes and behaviors involving any level of reflection, learning-strategy selection, and intentionality that may result in an improved lifestyle. More specifically, Goleman defined EI as having the following five elements:

- Emotional Self-Awareness – Talented in identifying emotional cause, adept in accurately labeling emotions, and competent in differentiating emotions from actions.
- Managing Emotions – Ability to manage anger, reduce self-destructive behavior, and increase self-worth.
- Emotional Productivity – Capability to assume greater responsibility, decrease impulsive behavior, and heighten focus and attention related to projects at-hand.

- Empathy – Capacity to understand diverse perspectives and actively listen to others.
- Handling Relationships – Competently analyze and synthesize information, communicate effectively with others, and resolve group conflict. (Goleman, 2006, p. 43)

Boyatzis (1982) suggested that, for effective results, competencies need to be performed at appropriate times and in acceptable ways.

Goleman (2001) asserted that emotional readiness has the capacity to be taught and learned to improve one's quality of life. He emphasized the need for a holistic approach to development that may cultivate prosocial behavior and promote self-awareness. EI may enhance professional disposition by drawing attention to reflective strategies, critical thinking, and social skills (Goleman, 2001). He promoted the benefits of managing internal states to successfully adapt to ever-changing contexts in a resilient manner.

### **Emotional Intelligence Critique**

EI theories have been critiqued in the literature. Barrington (2004) argued that EI consisted of talents not sources of intellect. Gardner (1996) responded by suggesting that all types of intellect, including mathematics and language acquisition, would then be classified as talents because all sources of intellect are founded on the same rationale. Others have called out the many conflicting constructs of EI, noting that, given its multitude of views, it cannot be rationalized as a valid concept (Waterhouse, 2006). Cherniss, Extein, Goleman, and Weissberg (2006) responded by reporting that there was no consensus on the meaning of other constructs, such as intelligence quotient (IQ), or

the best way to measure it. Therefore, expecting the same consensus for EI theory is holding it to a different standard. Lastly, Conte (2005) argued that EI relies on a self-report approach that taints the reliability and validity of empirical findings. Cherniss et al. rebutted by explaining how EI is in its early stages of development compared to other developmental theories; hence, further hypothesis testing is warranted to explore the validating of EI theory.

The fundamental assumption of EI provides one type of theoretical framework for the concept of CP (Barbezat & Bush, 2014; Rendón, 2009). However, the following critiques reveal theoretical flaws in the framework: (a) lacking clarification on the developmental nature of intellect, (b) lacking consensus on a universal definition, and (c) lacking evidence-based support. Although researchers in the field have challenged these flaws with supporting evidence for the contrary belief, such gaps may carry over to the theoretical foundation related to the construct of CP. The next section will focus on CP and scale development and measurement.

### **Contemplative Practices**

According to experts in the field of CP (e.g., Barbezat & Bush; 2014, Rendón, 2009), EI may be used to frame the construct of CP in higher education. There are many potential benefits to CP. One major advantage may be mental balance and wellbeing (Palmer, 2009). To date, CP has not been widely supported by quantitative research related to scale development in higher education (Barbezat & Bush, 2014). The development of an instrument may inform future research and practice to enhance emotional aptitudes that may benefit graduate student disposition and educator preparation. The next section will focus on reviewing research developments specific to

CP in education; understanding the working definition of CP (i.e., listening competency, mindfulness, and self-compassion) used in the study to inform the methodology (See Chapter 3); and scale development and measurement related to the working definition.

### **Contemplative Practices in Education**

In 2011, the Center for Contemplative Mind in Society published a qualitative study to summarize the use of CP across varying sectors within the US. Specifically, the integration of CP, at both the K–12 and higher education levels, increased between 2007 and 2011. For example, leading institutions such as Naropa University in Boulder, Colorado, and the California Institute of Integral Studies in San Francisco, California integrated CP in their respective educational programs. To date, few quantitative research studies have documented the growth of CP in education. Duerr (2011) developed a report summarizing a few influential projects that launched CP in the field of education. The following section highlights Duerr’s findings related to (a) the landscape of educational programs reflecting aspects of CP, (b) the need for research in the area of CP, and (c) the role higher education plays in student development.

Duerr, Zajonc, and Dana (2003) conducted research to provide the Fetzer Institute with information specific to transformative learning and spirituality in higher education. The Survey of Transformative and Spiritual Dimensions of Higher Education documented academic programs in North American IHEs that incorporated CP. A mixed-methods approach was used to collect data from November 2002 to January 2003. A total of 152 questionnaires were completed from participating institutions in 33 states across the US, as well as Canada, Botswana, and Malaysia. Of the 152 participants, 117 reported using transformative and spiritual elements in their educational programs. Of the

responding institutions, 79% responded “very important” when rating the item on reflective learning and 90% of participants responded either “important or very important” when rating the item on contemplative and spiritual dimension of learning. The researchers interpreted their findings to indicate an interest in the field of CP in IHEs. However, the researchers cautioned that much of this movement appeared to exist among individual faculty rather than at the departmental or institutional level.

Between June 2004 and April 2005, the Garrison Institute investigated existing programs that employed CP in K–12 schools. The Garrison Institute (2005) contacted approximately 80 school programs leaders through email exchanges and telephone interviews. The majority of participants resided in the US, but the study also included select programs from Canada, England, and India. The researchers concluded that their findings showed similarities in learning outcomes between educator preparation programs in higher education and K–12 school programs in CP. Some common areas that emerged were (a) attention training, (b) academic success, (c) emotional balance, (d) prosocial behaviors, and (e) healthy school climate. The researchers also concluded that few K–12 school programs have empirical evidence to document program success.

Between 2003 and 2010, the University of California Los Angeles’s (UCLA) Spirituality in Higher Education Institute assessed the role IHEs may play in the development of student spirituality (Astin, Astin, & Lindholm, 2015). The study included interviews and focus groups with 14,527 students attending 136 colleges and universities nationwide. The researchers found that students showed growth in spirituality through the practice of self-reflection, contemplation, or meditation. Astin et al. also identified that

educational experiences promoting spiritual development were in the following domains: service learning, interdisciplinary courses, study abroad, self-reflection, and meditation.

Shapiro, Brown, and Astin (2008) linked neuroscientific findings to potential benefits of meditation to education. The researchers recruited 17 participants (mean age 35), who completed computerized attention-based tasks (i.e., Attention Network Test) before and after a three-month residential mindfulness retreat with a 10–12 hour per day practice schedule. The computerized test concentrated on three functionally different attention areas: “Alerting involves achieving and maintaining a state of preparedness, orienting directs and limits attention to a subsets of possible stimulus inputs, and conflict monitoring prioritizes among competing tasks and responses” (p. 10). In comparison to a control group (mean age 22), the researchers found that results showed improved ability to orient and alert attention. However, groups did not differ in conflict monitoring performance. The researchers concluded that the findings were of use in education to facilitate the achievement of academic success and to support student mental health.

CP is beginning to gain recognition in the field of education. Duerr et al.’s (2003) explained transformative and spiritual dimensions of higher education; the Garrison Institute (2005) identified educational institutions using CP; and Shapiro et al. (2008) linked neuroscientific findings on meditation to potential benefits in education. Duerr (2011) suggested that scholars and researchers focus on nurturing a deeper understanding of CP to impact a cultural shift in IHEs. To help move the field forward, researchers should consider emphasizing theory-driven investigation, methodologically rigorous research, an expansion of existing instruments, and best practices for teaching and

research. The next section presents research studies specific to CP conducted within the last five years.

### **Contemplative Practices in Research**

CP are semistructured techniques to focus attention toward a target or goal (Barbezat & Bush, 2014). For this literature review, research in the area of CP within the U.S. conducted in the last five years was searched. Limited studies were found, which may be attributed to the lack of valid scale development and measurement specific to CP. The following are investigation findings from the CP research that revealed: (a) stronger instructional strategies, (b) greater connection to course content, (c) enhanced critical thinking skills, (d) reduction in negative emotions, and (e) increased sense of calmness. Additionally, the research implications presented concluded a lack of empirically supported work and need for future investigation in this area.

Hammerle (2015), Vine (2012), and Im (2010) conducted research that yielded findings in support of instructional strategies and its implementation in classroom settings. Hammerle (2015) conducted a qualitative dissertation study to understand how CP might be integrated with instruction. A collective case study methodology was used to explore higher education faculty experiences using CP in liberal arts curriculum. The study addressed how CP are being explored in the classroom the means by which instructors implement CP in their instruction to promote a personalized learning environment for deeper learning. The researcher interpreted the findings to suggest that CP provide a deeper learning strategy selection through the process of embodied inquiry (i.e., where both student and teacher are actively engaged). Moreover, Vine conducted a self-ethnography dissertation to examine CP in her teaching methods. Vine committed to a

three-month process of daily reflections related to her teaching strategies. She completed 26 written documents describing memories, thoughts, feelings, insights, and epiphanies. Data collection strategies included narrative writing, dialogue with mentors, and CP tactics such as yoga, meditation, and mindfulness. The study addressed two main research questions: (a) How am I authentic in my teaching practice? and (b) How might engaging in self-study contribute to my authenticity as a teacher? The results revealed Vine to be authentic in her teaching due to the alignment and integration of CP in her instruction. Lastly, Im conducted a qualitative dissertation study on the significance of CP in teachers' practical knowledge (i.e., knowledge relevant to real life context). The researcher recruited four teachers who integrated CP into their instruction to investigate their experiences with CP through narrative inquiry. The researcher inferred the results indicated that those who reported engaging CP also reported an increase in "practical knowledge of self, students, environment, subject matter, curriculum, and making instruction relevant to the student's real lives from a holistic perspective" (p. ii). Practical knowledge may positively impact student rapport for a more holistic approach to education.

Findings from Bagshaw (2014) supported a relationship between CP and greater connection to course content. Bagshaw conducted a mixed-methods research study to examine the integration of CP in community college classrooms. The study involved two phases: (a) quantitative data collection and analysis, and (b) qualitative data collection and analysis. The researcher recruited 151 participants 70 participants were in the control group and 81 participants were in the intervention group. Participants self-reported on the Kentucky Inventory of Mindfulness Survey (KIMS) at two different points of time during

data collection. Additionally, the researchers collected the culminating semester GPA and compared averages between groups. A phenomenological approach was also used with semistructured interviews. Data analysis revealed that there were no significant differences in the KIMS scores. In addition, there were no significant differences in the culminating GPA scores. Despite no quantitative differences, Bagshaw indicated that data findings from the interviews revealed that participants in the experimental group (i.e., CP) felt more connected to the course content, classroom, instructor, and global community.

Kemeny et al. (2012) supported how CP reduced the rehearsal of negative emotions. Kemeny et al. conducted a research project with 82 female school teachers between the ages of 25 and 60. The contemplative program consisted of eight weeks of training for a total of 42 hours, including the following components: meditation practice, mindfulness training, promotion of empathy and compassion, movement practices, conceptual discussion, and recognizing and understanding emotions. Several self-report measures were completed (e.g., Micro-Expression Training Tool, Trier Social Stress Test) before and after the end of the training program. The Kemeny et al. findings showed that the intervention group reported decreases in depression from pretest to posttest during the contemplative program training,  $t(13) = 5.27, p = .001$ , and anxiety,  $t(12) = 3.64, p = .003$ . Additionally, the training reduced self-judgment compared with those in the control group,  $F(1, 70.4) = 6.44, p = .01$ . The researchers suggested that the evidence indicated that CP training programs might alter cognitive and emotional states and promote personal wellbeing and social interconnection.

Sable (2014) and Helber et al. (2012) suggested an increase in executive functioning through CP. Sable conducted a research study that investigated a specific set of CP-enhanced dispositions for critical thinking according to Facione's (1990) definition of reflective dispositions for critical thinking. CP were taught during an 11-week undergraduate course by assessing indicators of reflective dispositions. The training program components included mindfulness meditation, journal writing, listening and reflecting back, reflective inquiry, and dialogue. Sable conducted a 2-tailed, paired *t*-test to analyze the total indicators per week per student. An increase in the average total of indicators per week was found,  $t = 3.8$ ,  $df = 30$ ,  $p < .01$ . The quantitative results showed statistically significant gains in the average number of indicators for critical thinking disposition. These results supported that CP had a positive influence on reflective disposition for critical thinking. Additionally, Helber, Zook, and Immergut (2012) compared students enrolled in courses that included CP to a control group. The researchers recruited students enrolled in an upper-level sociology or a psychology course. Students were incentivized by an offer of extra credit for their participation in meditation training over the course of a semester. The meditation group consisted of 18 participants, eight male and 10 female (mean age 20.37), who spent time meditating each week compared to a control group that did not. Both groups were given the Trail Making Test and The Stroop Color and Word Test pre and post completion of the meditation practices. The experimental group results were significantly correlated with a positive change in executive function performance from pre- to post testing,  $r = .82$ ,  $p < .01$ .

Lastly, Miller and Nozawa (2012) as well as Beer (2010) noted an increase in positive emotions through the integration of CP. Miller and Nozawa conducted a

qualitative study to address the integration of CP specific to teacher education within IHEs. Students enrolled in the researchers' course practiced approximately 30 minutes of daily meditation (e.g., each course began with meditation). The researchers documented data for over 1,200 students, consisting of 80% female and 20% male participants between the ages of 30 and 40. The students journaled about their meditative experiences. Miller and Nozawa collected the journal entries and found themes that included: acceptance at being alone, enjoying their own company, having feelings of heightened energy, and experiencing overall greater sense of calmness. Also, Beer (2010) conducted a case study at Naropa University and its integration of CP in leadership. Beer pointed to findings showing that CP within administration strengthened faculty and staff professional identity (i.e., commitment to the university's mission). Naropa University is a private liberal arts institution in Boulder, Colorado. Interviews and document analysis was utilized in order to gain an understanding of CP. The researcher engaged participants in self-reflective activities (meditation, journaling, writing poetry) to prevent a narrow perspective when analyzing the raw data; member checking was also conducted. Participants' benefits of CP in the professional setting were as follows: consistency of expectations among departments, transparent communications, increased job satisfaction, improved planning, and greater feelings of wellbeing.

In sum, research in the area of CP highlighted the following findings: (a) possible improvement to instructional strategies, (b) probable connection to course content, (c) plausible enhancement to critical thinking skills, (d) likely reduction in negative emotions, and (e) plausible increase in calmness. Hammerle (2015), Vine (2012), and Im (2010) conducted research that yielded findings in support of instructional strategies and its

implementation in classroom settings. Findings from Bagshaw (2014) and Im supported a potential relationship between CP and a greater sense of connection to course content. Kemeny et al. (2012) supported how CP may reduce the rehearsal of negative emotions. Sable (2014) and Helber et al. (2012) suggested a possible increase in executive functioning through CP. Lastly, Miller and Nozawa (2012) as well as Beer (2010) noted a hypothetical increase in calmness through the integration of CP. Overall, there is a potential need for future research in the area of CP to develop the field of study. To examine how to move this field forward, instrument development should be considered with strong empirical findings (i.e., reliability and validity) to better understand the nature of the construct.

### **Critique of Contemplative Practices**

Barbezat and Bush (2014) provided a summary of critiques in the literature based on personal experience and conceptual theoretical viewpoints. The main challenge of CP is the lack of process for implementation. There are no rules or linear process to dictate whether CP are being successfully introduced. The relative nature of this notion invites a high degree of variation and fluidity within the process that may cause challenges for future research and practices. However, anecdotal case studies suggest that a strong background in CP increases the level of success in facilitating CP with others (Barbezat & Bush, 2014). The researchers also suggested that CP be adapted to the level of participant comfort at the current time of engagement. For example, if a participant (i.e., students in the classroom) self-report feeling tired, the facilitator must adjust CP to the context of the situation. If participants remain open and honest about their current state of being, proper adjustments might be made for optimal success. CP has also been critiqued

for alienating participants who may not identify with select traditions as it has a long-standing tradition with respect to varying belief systems and cultures (e.g., Buddhism). Researchers have recommended that facilitators do not ask participants to adopt a particular tradition or set of beliefs and advise facilitators to allow participants to use their own language to express their experiences. CP should be done in the spirit of discovery independent of religious views. Lastly, the multifaceted understanding of CP complicates protocols for assessment and evaluative measures. Rather than denying this critique, Barbezat and Bush suggested learning from the criticism to strengthen and improve assessment and research methods in potential support of CP.

Criticisms of CP reveal conceptual flaws that are consistent with EI theories: (a) lacking consensus on a universal definition, and (b) lacking evidence-based support. Gaps related to the operationalization of the construct remain despite attempts by researchers to challenge these flaws with anecdotal and descriptive evidence. However, as Barbezat and Bush (2014) expressed, the area of study still merits investigation in an effort to address such gaps in the literature. The next section focuses on the working definition of CP for purposes of this study.

### **Working Definition of Contemplative Practices**

Due to limited research on CP in higher education, a number of related constructs were searched for a more extensive understanding of the concept, as defined by elements of Barbezat and Bush (2014). Barbezat and Bush specified five constructs of CP: (a) EI, (b) reflection, (c) listening competency, (d) mindfulness, and (e) self-compassion. Three out of the five constructs were used to inform the working definition. First, listening competency is defined as allowing individuals to listen without bias, establish an ethic of

care, listen for feelings, ask questions for clarity purposes, and avoid personalization (Brady, 2009). Second, mindfulness is defined as attention focused on the task at hand as well as nonjudgmental attention on the present moment (Barbezat & Bush, 2014; Gremer, 2004). Lastly, self-compassion involves an awareness of one's pain, kindness toward oneself, and acceptance of failure as part of humanity (Neff, 2004). EI is the overarching theoretical framework that contextualizes the work. EI and reflection constructs were determined by the researcher to inter-relate with the selected constructs. Research on listening competency, mindfulness, and self-compassion may provide a baseline for where research related to CP should begin. The next section focuses on scale development and measurement specific to the working definition of CP for the study.

### **Scale Development and Measurement**

Much of the research in the CP literature is descriptive in nature and investigated by means of qualitative research. However, the three identified subconstructs (i.e., listening competency, mindfulness, and self-compassion) of the study's working definition were quantified through individual scale development and measurement research. This section examines a number of existing scales specific to the following constructs in the literature: listening competency, mindfulness, and self-compassion.

#### **Mindfulness Scales and Measures**

Six studies with experimental designs that examined the construct of mindfulness were used. Five of the studies found in these searches were conducted in the US, and one involved a population outside of the US. Areas of reliability and validity specific to instrument development were examined.

**Mindful Attention Awareness Scale (MAAS).** The Mindful Attention Awareness Scale (MAAS) instrument was designed to report on the construct of *mindfulness*. The state of mindfulness may help predict self-regulated behavior and positive emotional states (Brown & Ryan, 2003). The MAAS is a 15-item instrument designed along a Likert-type scale from (1) *almost always* to (6) *almost never*. The items on the instrument represent statements within cognitive, emotional, physical, and interpersonal domains (Brown & Ryan, 2003). Example items include: (a) I could be experiencing some emotion and not be conscious of it until some time later; (b) I forget a person's name almost as soon as I've been told it for the first time; (c) I get so focused on the goal I want to achieve that I lose touch with what I am doing right now to get there; (d) I snack without being aware that I'm eating; and (e) I tend not to notice feelings of physical tension or discomfort until they really grab my attention. Mindfulness items reflected in the scale were identified based on a review of the literature and the researchers' personal experiences. Using exploratory factor analysis, Brown and Ryan found that the inspection of the item-level statistics indicated that all but two items loaded at above .30. The researchers also found an internal consistency (alpha) level adequate for research purposes, explored temporal stability in an independent sample, and ensured clarity of items by means of an expert panel.

**Kentucky Inventory of Mindfulness Skills (KIMS).** KIMS is a 39-item self-report inventory used to assess four mindfulness skills: observing, describing, acting with awareness, and accepting without judgment. The instrument is designed along a 5-point Likert-type scale anchored by (1) *never or very rarely true* to (5) *almost always or always true*. Example items include: (a) I notice changes in my body, such as whether my

breathing slows down or speeds up; (b) I'm good at finding the words to describe my feelings; (c) When I do things, my mind wanders off and I'm easily distracted; and (d) I criticize myself for having irrational or inappropriate emotions. The KIMS was assessed for content validity, internal consistency, temporal stability, and construct validity. Content validity was assessed by using ratings from experts in the field of clinical psychology, five practicing psychologists, and six doctoral students. Participants included 205 undergraduate students enrolled in psychology courses at the University of Kentucky between ages 18 to 22 years; 60% were female and 40% were male. Additionally, participants included 26 outpatients with borderline personality disorder with an average age of 36 years. Baer, Smith, and Allen (2004) reported finding the following coefficients: Observing level .91, Describing level .84, Acting with awareness level .83, and Accepting without judgment level .87. Factor loadings were consistently high, ranging from .62 to .91. The researchers also reported finding that test-retest correlations for observe, describe, act with awareness, and accept without judgment scores were,  $r = .65, .81, .86, \text{ and } .83$ , respectively.

**Toronto Mindfulness Scale.** Lau et al. (2006) constructed the TMS, a 13 item self-report scale used to assess the subscales of curiosity and decentering. Example items that include: (a) I was curious about my reactions to things; (b) I remained curious about the nature of each experience as it arose; (c) I noticed subtle changes in my mood; and (d) I was receptive to observing unpleasant thoughts and feelings without interfering with them. Lau et al. investigated the internal consistency of the TMS. A sample of 390 participants, 176 men and 214 women, with a mean age of 40.8 years participated in the study. The researchers recruited participants from the following settings: (a) a local

Buddhist meditation center, (b) experienced practitioners registered for a mindfulness meditation retreat, (c) clinicians trained in mindfulness techniques, (d) a nonclinical sample of participants who recently completed an eight-week mindfulness-based stress reduction program offered through a local community center, and (e) newspaper advertisements asking for volunteers with experience in mindfulness meditation. The TMS results in an alpha coefficient of  $r = .95$  and an average item-total correlation of  $r = .53$ . The researchers also investigated the relationships between the TMS and several measures of attention and awareness to evaluate the construct validity of the TMS. A subset of 165 participants with an average age of 42.1 years completed additional measures for examination of other constructs. Both reliability estimates for curiosity,  $r = .93$ , and decentering,  $r = .91$ , were significant and positively correlated to the TMS.

**Cognitive and Affective Mindfulness Scale-Revised (CAMS-R).** In 2005, researchers began work on a self-report measure of mindfulness called the Cognitive and Affective Mindfulness Scale (CAMS) (Kumar, Feldman, & Hayes, 2005). The CAMS consists of 17 items designed to represent a broad understanding of mindfulness. In 2007, the CAMS was revised (e.g., CAMS-R) and tested for internal consistency, convergent validity, and discriminant validity. The CAMS-R is a 12-item scale designed to assess mindfulness (Feldman, Hayes, Kumar, Greeson, & Laurenceau, 2007). The CAMS-R instrument reflected five areas of mindfulness competencies: attention, present focus, awareness, and acceptance. Participants responded along a 4-point Likert-type scale anchored by (1) *Rarely/Not at all*, to (4) *Almost always*. Each area of focus was based on self-perceived responses. Example items include: (a) It is easy for me to concentrate on what I am doing; (b) I can accept things I cannot change; (c) I try to notice my thoughts

without judging them; and (d) I can usually describe how I feel at the moment in considerable detail. Mindfulness items reflected in the scale were identified based on a review of the literature to capture the construct broadly. Feldman et al. administered the scale to 548 university students enrolled in an introductory psychology course with an average age of 19.31. The respondents were 35.8% male and 64.2% female who attended the University of Miami. Many scale items were retained even with fairly low loadings in order to broaden the conceptual coverage of the measure. The CAMS-R total correlation scores with various measures were as follows: mindfulness,  $p < .51$ ; distress,  $p < -.24$ ; well-being,  $p < .47$ ; emotion-regulation,  $p < -.46$ ; and approaches to problems,  $p < .25$ . The internal consistency for the CAMS-R was  $r = .76$ .

**Philadelphia Mindfulness Scale (PMS).** Cardaciotto, Herbert, Forman, Moitra, and Farrow (2008) developed the PMS, a 20-item self-report scale designed to assess mindfulness. PMS has two subscales: awareness and acceptance. The instrument is designed along a 5-point Likert-type scale anchored by (1) *never* to (5) *very often*. Example items include: (a) I am aware of what thoughts are passing through my mind; (b) I try to distract myself when I feel unpleasant emotions; (c) When someone asks how I am feeling, I can identify my emotions easily; and (d) When I have a bad memory, I try to distract myself to make it go away. Cardaciotto et al. examined a sample of 204 undergraduate students of whom 94 were male, and 106 female (4 did not indicate gender), with an average age of 21.9 years. Five expert judges (i.e., researchers who published in the field of mindfulness) were recruited to assess for content validity. Construct validity was assessed by means of a factor analysis. Examination of eigenvalues and the scree plot revealed a gap between the first two factors and the

remaining factors (Factor 1 eigenvalue = 7.93, Factor 2 eigenvalue = 6.84, Factor 3 eigenvalue = 2.85, Factor 4 eigenvalue = 2.45; the first two factors accounted for 25.5% of the total variation across factors). Internal consistency was high, with the awareness subscale Cronbach's alpha = .85, and the acceptance subscale Cronbach's alpha = .87.

**Southampton Mindfulness Questionnaire (SMQ).** Chadwick et al. (2008) developed the SMQ, a 16-item self-report scale used to assess the subscales of mindful awareness and distressing thoughts and images. The instrument is designed along a 7-point Likert-type scale anchored by (0) *strongly disagree* to (7) *strongly agree*. SMQ items were prefaced with the following statement, *usually when I experience distressing thoughts and images*. Example items include: (a) I am able just to notice them without reacting; (b) I am able to accept the experience; (c) I “step back” and am aware of the thought or image without getting taken over by it; (d) I find it so unpleasant I have to distract myself and not notice them. Chadwick et al. examined a sample of 256 participants from a nonclinical community sample (mean age 47) of 134 and a clinical sample (mean age 31) of 122 with a current distressing psychosis. The SMQ had good internal consistency and adequate concurrent validity. The SMQ had a Cronbach alpha score of  $r = .89$ . SMQ and correlated significantly with Mindful Attention Awareness Scale (MAAS) scores ( $r = .61, p < .001$ ).

**Mindfulness scale development and measurement summary.** Of the six instruments in the literature on mindfulness scale development and measurement (See Table 1), the MAAS included internal consistency, temporal stability, content validity, and construct validity (See Chapters 2 and 3). The KIMS included internal consistency, temporal stability, content validity, and construct validity. The TMS included internal

consistency and criterion-related validity. The CAMS-R included construct validity and internal consistency. The PMS included content validity, construct validity, and internal consistency. Lastly, the SMQ included internal consistency and criterion-related validity.

Table 1

*Summary of Mindfulness Scale Development Review*

Subscale	Year	Number of Items	Scale Constructs
Mindfulness Attention Awareness Scale	2003	15 items	Cognitive, emotional, physical, interpersonal
Kentucky Inventory of Mindfulness Skills	2004	39 items	Observing, describing, acting with awareness, accepting without judgment
Toronto Mindfulness Scale	2006	16 items	Curiosity and decentering
Cognitive/Affective Mindfulness Scale-Revised	2006	17 items	Attention, present focus, awareness, acceptance
Philadelphia Mindfulness Scale	2008	20 items	Awareness and acceptance
Southampton Mindfulness Questionnaire	2008	16 items	Mindfulness, distressing thoughts/images

### **Listening Competency Scales and Measures**

Four studies with scale development specific to the construct of listening competency were reviewed. Two of the studies found in these searches were conducted in the U.S. and two involved a population outside of the U.S. Reliability and validity specific to each measure are discussed.

**Listening Competency Scale (LCS).** Listening competencies allow individuals to use cognitive and affective factors to function as a listener and communicator in a more efficient manner (Wolvin & Cohen, 1993). The Listening Competency Scale (LCS) is a 24-item instrument designed along a Likert-type scale. The anchors ranges from (1)

*strongly disagree* to (5) *strongly agree* with a midpoint of (3) *neutral*. The instrument reflects five levels of listening competencies: discriminative, comprehension, appreciative, critical, and therapeutic (Ford et al., 2000). Each area of focus consists of both perceived abilities and perceived behaviors. Example items include: (a) I can recognize when persons are not telling the truth; (b) I correctly recall information a few minutes after I hear it; (c) I listen with an open mind to what others have to say; (d) I carefully assess information as it is being shared with me; (e) I encourage persons to share their feelings with me; and (f) I respond nonverbally to let persons know I am listening. Listening items reflected in the scale were identified based on a review of the literature to symbolize the construct accurately for each listening level. All subscale constructs were found to have adequate alpha levels.

**Active Listening Attitude Scale (ALAS).** Kubota, Mishima, and Nagata (2004) developed the ALAS, a 47-item self-report scale used to assess listening by examining three subscales: listening attitude, listening skill, and conversation opportunity. Response alternatives of *agree*, *rather agree*, *rather disagree*, and *disagree* were scored as 3, 2, 1, and 0, respectively. Example items that followed include: (a) I tend to persist in my opinion; (b) I talk about what I want to say, even if I interrupt him/her; (c) When I can't follow, I pretend to understand him/her; and (d) People feel easy to talk to me. Mishima et al. (2000) investigated the construct validity of the ALAS. Samples of 536 individuals (426 male and 95 female) from two Japanese manufacturing companies with an average age of 34.6 years were recruited to participate in the study. A scree test indicated three meaningful factors (e.g., listening attitude, listening skill, and conversation opportunity) whose cumulative factors variance was 81.2%. The Cronbach's alphas and the test-retest

reliability of the subscales were also examined. The reliability alpha results were adequate for research purposes, listening attitude  $r = .83$ , listening skill  $r = .83$ , and conversation opportunity  $r = .79$ .

**Active Empathetic Listening Scale (AEL).** Drollinger, Comer, and Warrington (2006) developed the AEL, a 21-item self-report scale used to assess listening by examining three dimensions: sensing, processing, and responding. A 7-point Likert-type scale was utilized and anchored by (1) *never or almost never true* and (7) *always or almost always true*. Example items include: (a) I am sensitive to what my customers are not saying; (b) I assure my customers that I will remember what they say by taking notes when appropriate; and (c) I assure my customers that I am receptive to their ideas. Drollinger et al. investigated construct validity by considering discriminant and nomological validity of the AEL. Nomological validity refers to the investigation of at least two constructs and the their relationship (Aron, Aron, & Coups, 2009). For example, the examination of human aging with memory loss appears to have a correlation without direct linkage to one another. A questionnaire was mailed to a randomly selected list of 600 members of the International Association of Purchasing Management. Of the larger sample, 164 participants completed and returned the questionnaire. Individuals who participated were 67.7% male and 32.3% female with a median age of 45.5 years. Dimensionality was examined by exploratory factor analysis. Of the 98 items, loadings less than .50 were eliminated, which reduced the set to 21 items. The internal consistencies of these item sets were acceptable (sensing  $r = .83$ , processing  $r = .79$ , responding  $r = .76$ ). Convergent validity was examined by Pearson correlations with two

theoretically related variables. All of the correlations between the AEL scales and the active listening scores were significant at the .05 level.

**The Listening Styles Profile-Revised (LSP-R).** The Listening Styles Profile (LSP-16) is a self-report 16-item instrument based on a 4-point Likert-type scale. Researchers have utilized the measurement despite its low reliability estimates and an unvalidated factor structure. Bodie, Worthington, and Gearhart (2013) revised the LSP-16 based on four factors: relational, analytical, task-oriented, and critical listening. The LSP-R is based on a 7-point Likert-type scale anchored by (1) *never* and (7) *always*. Example items include: (a) When listening to others, it is important to understand the feelings of the speaker; (b) I wait until all the facts are presented before forming judgments and opinions; (c) I am impatient with people who ramble on during conversations; and (d) I often catch errors in other speakers' logic. Bodie et al. (2013) examined internal consistency and construct validity for the LSP-R. A sample of 408 undergraduate students (246 female and 162 male) was recruited to participate in this study. The average age of participants was 20.39, and course credit was given to those who completed the study. The reliability estimates for each subscale were as follows: relational  $r = .86$ , analytical, task-oriented  $r = .91$ , and critical listening  $r = .85$ . Factor loadings were all above .50 and averaged .72.

**Listening competency scale development and measurement summary.** Of the four instruments in the literature on listening competency, scale development and measurement (See Table 2), the LCS researched internal consistency, temporal stability, content validity, and construct validity (See Chapters 2 and 3). The ALAS analyzed internal consistency and construct validity. The AEL investigated internal consistency,

criterion-related validity, and construct validity. The LSP-R researched construct validity and internal consistency.

Table 2

<i>Summary of Listening Scale Development Review</i>			
Subscale	Year	Number of Items	Scale Constructs
Listening Competency Scale	2000	24 items	Discriminative, comprehension, appreciative critical, therapeutic
Active Listening Attitude Scale	2000	47 items	Listening attitude, listening skill, conversation opportunity
Active Empathetic Listening Scale	2006	21 items	Sensing, processing, responding
The Listening Styles Profile-Revised	2013	24 items	Relational, analytical, task-oriented, critical listening

### **Self-Compassion/Compassion Scales and Measures**

Five experimental designs related to scale construction based on the construct of compassion were used. Two studies that were found focused on self-compassion, and two studies were found that focused on compassionate or altruistic love. Three of the studies found in these searches were conducted in the U.S. and one involved a population outside of the U.S. The reliability and validity of each instrument will be examined.

**Self-Compassion Scale.** The Self-Compassion Scale (SCS) is a 26-item instrument designed to assess the construct, *self-compassion* (Neff, 2003). The scale is designed on a five-point Likert scale with six subscales including: (a) self-kindness, (b) self-judgment, (c) common humanity, (d) isolation, (e) mindfulness, and (f) over-identification. The items were worded to represent both positive and negative aspects of each construct anchored by (1) *almost never* and (5) *almost always*. Example items

include the following: (a) I try to be understanding and patient towards those aspects of my personality I don't like; (b) When I see aspects of myself that I don't like, I get down on myself; (c) When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people; (d) When I fail at something that's important to me I tend to feel alone in my failure; (e) When something upsets me I try to keep my emotions in balance; and (f) When something upsets me I get carried away with my feelings. The items on the SCS were based on a review of the literature base.

**Self-Compassion Scale–Short Form (SCS–SF).** Raes, Pommier, Neff, and Gucht (2011) developed a 12-item Self-Compassion Scale–Short Form (SCS–SF) in Dutch and English to offer a practical alternative to the long Self-Compassion Scale (SCS) that measures the construct, self-compassion. Example items include: (a) When I fail at something important to me I become consumed by feelings of inadequacy; (b) I'm intolerant and impatient towards those aspects of my personality I don't like; (c) When something painful happens I try to take a balanced view of the situation; and (d) I try to see my failings as part of the human condition. Although the original long form of the SCS is reduced to half, Raes et al.'s study provided evidence of a shortened instrument with adequate reliability and factorial structure in comparison to the original scale. Two Dutch samples were used to construct and validate the factorial structure of the 12-item SCS–SF as well as a third English sample. The first sample consisted of 271 first-year psychology Dutch-speaking students at the University of Leuven, Belgium; 214 were women and 57 were men with an average age of 18.14. The second sample consisted of 185 participants, of which 131 were women and 54 were men with a mean age of 33.04. The third sample consisted of 425 students at the University of Texas at Austin; 272 were

women and 143 were men, with an average age of 20.62 years. The SCS–SF showed adequate internal consistency,  $r = 0.86$ , and a correlation with the long form SCS,  $r = 0.97$ . Confirmatory factor analysis on the SCS–SF supported the same six-factor structure as found in the long form: (a) self-kindness, (b) self-judgment, (c) common humanity, (d) isolation, (e) mindfulness, and (f) over-identification.

**Compassionate Love Scale.** Sprecher and Fehr (2005) constructed the Compassionate Love Scale (CLS) to assess compassionate or altruistic love. The scale consists of 21 items on a 7-point Likert scale. The response scale for each of the items ranged from (1) *not at all true of me* to (7) *very true of me*. The example items include: (a) When I see family members or friends feeling sad, I feel a need to reach out to them; (b) When I hear about a friend or family member going through a difficult time, I feel a great deal of compassion for him or her; (c) I would rather engage in actions that help my intimate others than engage in actions that would help me; (d) I try to put myself in my friend's shoes when he or she is in trouble. Sprecher and Fehr administered the CLS to a sample of 354 undergraduate students from a Midwestern U.S. university. Of the 354 students, 34.7% were men and 65.3% were women, with an average age of 19.8. The researchers' goal was to provide validation of the scale and to examine correlates of compassionate love. High internal consistency was demonstrated for this scale with a Cronbach's Alpha of 0.95. Factor analyses of the scale items consistently yielded two factors, identified as: other-oriented empathy (e.g., When I see someone being taking advantage of) and helpfulness (e.g., I have offered to help a handicapped or elderly stranger across a street). In support of Sprecher and Fehr's hypothesis, compassionate love was found to be associated positively with prosocial behavior. The researchers found

that those who were more religious or spiritual experienced more compassionate love than those who were less religious or spiritual. Also, evidence supported the notion that compassionate love may be distinct from empathy.

**Santa Clara Brief Compassion Scale (SCBS).** Hwang, Plante, and Lackey (2008) constructed the Santa Clara Brief Compassion Scale based on Sprecher and Fehr's (2005) Compassionate Love Scale (CLS). The purpose of the study was to develop a brief version of the CLS. The original CLS consisted of 21 items that were administered to college student participants. The SCBCS scale consisted of 5 items on a 7-point Likert scale. The response scale for each of the items ranged from (1) *not at all true of me* to (7) *very true of me*. Example items used in the SCBCS include the following: (a) When I hear about someone (a stranger) going through a difficult time, I feel a great deal of compassion for him or her; (b) I tend to feel compassion for people, even though I do not know them; (c) One of the activities that provide me with the most meaning to my life is helping others in the world when they need help; (d) I would rather engage in actions that help others, even though they are strangers, than engage in actions that would help me; and (e) I often have tender feelings toward people (strangers) when they seem to be in need. Sprecher and Fehr administered the SCBCS to undergraduate students at Santa Clara University. The group consisted of 167 females and 56 males with a mean age of 19.95 years. The five items on the SCBCS were selected based on the evaluation of high correlation coefficients between scale item responses and the results of factor analysis. The correlation between the original and brief version was high at  $r = 0.96$ , and the internal reliability of the brief version, using Cronbach's alpha, was  $r = 0.90$ . Based on the factor analysis results, the researchers extracted one factor. That primary factor (e.g.,

empathy) explained 71.05% of the variance. Correlations between the five items of the scale ranged from 0.51 to 0.74. Correlations between each item and the one factor ranged from 0.70 to 0.82.

**Listening competency scale development and measurement summary.** Of the four instruments in the literature on self-compassion/compassion scale development and measurement (See Table 3), the SCS researched internal consistency, temporal stability, content validity, and construct validity (See Chapters 2 and 3). The SCS-SF analyzed internal consistency and construct validity. The CLS investigated internal consistency, criterion-related validity, and construct validity. The SCBS researched construct validity and internal consistency.

Table 3

<i>Summary of Listening Competency Scale Development Review</i>			
Scale	Year	Number of Items	Scale Constructs
Self-Compassion Scale	2003	26 items	Self-Kindness, self-judgment, common humanity, isolation, mindfulness, over-identification
Compassionate Love Scale	2005	21 items	Altruistic love
Santa Clara Brief Compassion Scale	2008	5 items	Altruistic love
Self-Compassion Scale-Short Form	2011	12 items	Humanity, isolation, mindfulness, over identification

### **Overall Scale Development and Measurement Summary**

For purposes of this study, the MAAS was deemed the most useful scale to inform the SCOPE items. The areas of investigation for the MAAS closely aligned with the research questions of this study, and many other researchers made reference to the work of the MAAS in their own research (Chadwick et al., 2008). The LCS was deemed

the most beneficial scale to inform the SCOPE items. The areas of investigation for the LCS closely aligned with the research questions of this study, and the instrument is now in its second iteration of validation due to extended work from its original development. Lastly, the SCS was deemed the most relatable scale to inform the SCOPE items. The areas of investigation for the SCS closely aligned with the research questions of this study, and the instrument is widely known in the literature base and has been used in many research studies following the validation of the instrument (Raes, Pommier, Neff, & Gucht, 2011).

### **Summary**

This chapter reviewed the relevant literature for this study. The following areas were reviewed: (a) EI, (b) CP, and (c) scale development and measurement. Research on EI is beginning to document how positive mental states and socioemotional dispositions may support academic and professional success and wellbeing (Barbezat & Bush, 2014; Gardner, 1989; Goleman, 2006; Salovey & Mayer, 1990). It is essential to create methods to assess CP in order to better facilitate holistic approaches that potentially may enhance student development. There is a scarcity of research on CP. The construct has not been quantitatively tested specific to scale development in the field of higher education. This study focused on the development of a new scale based on the construct of CP. The next chapter will detail the process for the development and administration of the Scale of Contemplative Practice in Higher Education (SCOPE).

## **Chapter Three**

### **Methodology**

This chapter outlines the methodology of this research by detailing the procedures for instrument development, data collection, participant description, and sample selection. To address the issues of reliability and validity specific to the created instrument, two phases were completed for this study as demonstrated below. This chapter is organized in two parts: (a) suggested methods in the literature (DeVellis, 2012) to generate and revise scale items for content validity, and (b) review of data collection and analyses for construct validity and reliability issues.

### **Research Questions**

By utilizing emotional intelligence (EI) theory as the conceptual framework for the study, this quantitative research investigated the following research questions:

1. To what extent does the SCOPE instrument demonstrate content and construct validity?
2. What is the factor structure of the SCOPE instrument?
3. To what extent does the SCOPE instrument demonstrate internal consistency and temporal stability?

### **Participants**

A sample of 253 participants and a scale consisting of 30 items provided an adequate instrument for preliminary norms. The study maintained complete confidentiality regarding the data. The participant had the right to withdraw and discontinue participation at any time. Institutional Review Board approval was obtained.

## **Sample Size**

The size of the sample must be large enough to represent the targeted group of people being studied (Aron, Aron, & Coups, 2009). For instance, a sample is constructed from a group of people who participate in a specific activity or reside in a particular location (Fowler, 2014). The details of the sample design impact the quality of the scale estimates. Fowler argued that the accuracy of a scale increases stability up to sample sizes of 150 to 200. Moreover, Fowler explained that sampling provides a strategy to group population members when individuals in the targeted population cannot be accounted for. A total of 253 participants were used to norm the sample on the Scale of Contemplative Practices in Education (SCOPE).

## **Representativeness**

Representativeness of the sample population includes specific criteria to eliminate subject variance. Fowler (2014) described such criteria as: (a) specific descriptive characteristics of the target population; and (b) specific characteristics relevant to experiences, opinions, and other traits of those answering similar questions. Ideally, these characteristics mirror the general population as much as possible. However, due to the preliminary nature of the study, representativeness was not accounted for. The target population for the SCOPE consisted of graduate students in education. Graduate students in education are a population of convenience, which may provide preliminary reliability and validity for the SCOPE. Instead of seeking representativeness, descriptions of the characteristics of the sample population were accounted for through a demographics survey. Respondents were asked to complete a demographics measure that included the following descriptive categories: (a) gender, (b) age, (c) race/ethnicity, (d) academic

program, (e) public/private university, and (f) year in program. The demographics of the participants are presented in Chapter 4.

### **Recruitment Methods**

Those who were solicited to participate were enrolled in one of 28 accredited master's or doctoral-level education program listed on the National Council for Accreditation of Teacher Education (NCATE) website for the state of California (i.e., [ncate.org](http://ncate.org)). Consequently, participants were enrolled in one of the following types of programs: administrator education, bilingual education, community counseling, counselor education, elementary education, higher education, leadership studies, secondary education, school counseling, school psychology, and special education. Convenience sampling was used to recruit participants who met the sample criteria (i.e., enrolled in a NCATE graduate program).

Convenience sampling recruited in 253 graduate students who agreed to participate in the study via online hyperlink and classroom administration. Each participant was solicited from an NCATE accredited program (see Appendix D). The researcher found all NCATE-approved institutions from the NCATE webpage. Next, the researcher contacted each program director via email and asked the director to forward the scale hyperlink to their graduate students who were enrolled in the above-specified educational programs. It was at the discretion of the director to forward the link to his or her students. A follow-up email was sent as a reminder to complete the scale two weeks after the initial email was disseminated.

To account for temporal stability of the measure, three classes in a private NCATE-accredited university in Southern California were attended to administer the SCOPE. Two weeks later the SCOPE was administered a second time; 27 graduate students agreed to participate in this aspect of the study. In sum, 27 of the participants' data were collected in person via classroom visit, and 226 participants' data were collected via an online survey hyperlink.

The study was a nonexperimental design, utilizing quantitative methods to gather data about self-perceived behaviors specific to contemplative practices (CP) among graduate students in the field of education. Self-reported behavior is explained in the literature (Patten, 2014) as how respondents believe they may act within a specific context. For example, the researcher may ask about how respondents act when learning a difficult subject during classroom lectures. Besides general observations that have not been quantitatively validated, there is no measure that evaluates CP in the higher education setting. The purpose of this exploratory study was to create and validate the Scale of Contemplative Practices in Higher Education (SCOPE). The items on the SCOPE were constructed on three theoretical subconstructs: listening competency (Ford et al., 2000; Wolvin & Cohen, 1993), mindfulness (Brown & Ryan, 2003), and self-compassion (Neff, 2003).

The research questions prompted an investigation into the content and construct validity of a new scale. The first phase involved the recommended method of an expert panel, as well as reference to existing literature related to the topic (see Chapter 2). The review of the literature prompted the first draft of the SCOPE, which was then shared with each panelist on an individual basis. One-on-one meetings were scheduled with each

panelist, in which the definition of key terms, guiding questions, and the SCOPE were shared. A thorough revision of items during the individual meetings yielded the final draft of the SCOPE, which was then statistically examined in the second phase.

### **Phase One Scale Development Procedure**

This section describes the development procedure of the SCOPE. The SCOPE was designed to be a self-report tool that measures graduate students' behavior related to contemplative practices in education. Phase one included the process of item generation for the SCOPE. Consultation with an expert panel was utilized to create the SCOPE items to assess content validity. The procedure includes: (a) Conciseness of construct's working definition; (b) item relevance to intended construct; (c) review wording of items for clarity; and (d) alternative and/or additional items to measure the construct per guidelines of DeVellis (2012).

### **Item Pool Development**

DeVellis (2012) articulated the need to highlight the phenomenon of interest in rating scales by creating a combination of applicable items and developing a structure for those items. DeVellis suggested that this step would capture a broad understanding of the construct of interest. A construct is an attribute, skill, or ability based on theory and/or unobservable human phenomena (DeVellis). To strengthen item pool development of the SCOPE instrument, I drew on concepts and personal experience to inform items specific to the educational setting for the initial draft of the scale. Additionally, the following instruments were considered and informed the choice of specific scale-items: the Listening Competency Scale (LCS) (Ford et al., 2000; Wolvin & Cohen, 1993), the

Mindful Attention Awareness Scale (MAAS) (Brown & Ryan, 2003), and the Self-Compassion Scale (SCS) (Neff, 2003) (See Appendixes E, F, and G).

**Listening Competency Scale.** The Listening Competency Scale originated from Wolvin and Coakley's (1994) work specific to five listening behaviors. Thereafter, Ford et al. (2000) created a scale based on Wolvin and Coakley's work to measure the variable of *listening*. The scale was completed by 469 students enrolled at a public university with an average age of 19 (Ford et al., 2000). The respondents were 50.1% male and 49.9% female and were traditional college students. Cronbach's alpha reliability coefficients were computed for each listening subscale. The five listening subscales were: (a) Discrimination listening is "to distinguish the auditory and/or visual stimuli; (b) Comprehension listening "extends the listener to an understanding of the message"; (c) Therapeutic listening "requires that the listener serve as a sounding board" to provide the speaker the opportunity to talk through a problem"; (d) Critically listening "evaluates what is communicated ... to [assess] it accept or reject it after the listener has comprehended what the speaker has presented"; and (e) Appreciative listening occurs for "enjoyment and sensory stimulation [influenced at the individual level]" (Wolvin & Coakley, 1994). Ford et al. reported the following coefficients: discriminative level .77, comprehensive level .79, appreciative level .84, critical level .74, therapeutic level .80, attending behaviors .75. These reliability estimates are adequate for research purposes. Participants completed the survey at two different points in time, once during the first week of class and once during the last week of class. This measure was chosen because of its adequate content validity, internal consistency, and temporal stability.

**Mindful Attention Awareness Scale (MAAS).** The Mindful Attention

Awareness Scale (MAAS) was administered to a sample of 327 university students in return for extra course credit. Brown and Ryan (2003) defined the construct *mindfulness* as the “consciousness [that] encompasses both awareness and attention. Awareness is the background ‘radar’ of consciousness, continually monitoring the inner and outer environment” (p. 822). The researchers investigated mindfulness within five contexts: cognitive, emotional, physical, and interpersonal areas of life. In an attempt to control for participants’ desire to answering in a favorable manner by others, participants were asked by the researchers prior to administration of the instrument to answer questions according to what really reflects their experience rather than what they think their experience should be (Brown & Ryan, 2003). Using exploratory factor analysis, Brown and Ryan found that the item-level statistics indicated all but two items loaded at above .30. The two items reported below .30 loaded at above .25 and were retained because both items added considerable breadth to the scale. The researchers found an internal consistency (alpha) level of .82, which indicates adequate reliability for research purposes. Temporal stability was examined in an independent sample of 60 introductory psychology students over a four-week period. Additionally, to ensure clarity of scale items, eight faculty and graduate students in psychology rated these items. This measure was chosen because the results indicated high scores related to temporal stability, internal consistency, as well as content and construct validity.

**Self-Compassion Scale.** Neff (2003) administered the SCS to 391 undergraduate students who were randomly selected from an educational psychology discipline at a university in the southwest. The participants were 166 men and 225 women, with an

average age of 20.91 years. The scale consists of six subscales including: (a) self-kindness, (b) self-judgment, (c) common humanity, (d) isolation, (e) mindfulness, and (f) over-identification. Neff defined the Self-Compassion Scale with three subscales with the following definitions: (a) Self-kindness is “being kind and understanding toward oneself in instances of pain or failure rather than being harshly self-critical”; (b) Common humanity is the perception of “one’s experiences as part of the larger human experience rather than seeing them as separating and isolating”; (c) Mindfulness is withholding “painful thoughts and feelings in balanced awareness rather than over-identifying with them” (Neff, 2003). He also included two subscales (i.e., self-judgment and over-identification) that are opposite to his understanding of self-compassion in the SCS instrument. Including the other two subscales was done with the intention of strengthening criterion-related validity. Neff defined self-judgment and over-identification as an emotionally negative self-attitude that promotes negative consequences (e.g., isolation and rumination). To ensure that the SCS was not tainted by external bias (e.g., social desirability), a Pearson’s  $r$  correlation was computed between the SCS and the Marlowe-Crowne Social Desirability Scale. A nonsignificant correlation was found,  $r = .05$ ,  $p = .34$ , indicating that responses to SCS were not only based on social desirability biases. Pearson’s  $r$  correlation was also computed to evaluate criterion-related validity. The SCS was found to have a significant negative correlation with the Self-Criticism Subscale,  $r = -.65$ ,  $p < .01$ , a significant, a positive correlation with the Social Connectedness Scale,  $r = .41$ ,  $p < .01$ , and significant positive correlations with all three subscales of the Trait-Meta Mood Scale (attention,  $r = .11$ ,  $p < .05$ , clarity,  $r = .43$ ,

$p < .01$ , and repair,  $r = .55$ ,  $p < .01$ ) (Neff, 2003). This measure was chosen because the instrument demonstrated good criterion-related validity.

The number of scale-items impacts how adequate and accurate the measured construct will be. Patten (2014) recommended that scales written to measure attitude toward feelings, actions, and potential actions be constructed with a minimum of 20 items. The version of the SCOPE was developed with 30 items reflecting three components of Barbezat and Bush's (2014) theory of CP in the literature. According to Barbezat and Bush, characteristics of CP focus on the following areas: (a) listening competency, (b) mindfulness, and (c) self-compassion (See Table 4).

Table 4

*Pre-Expert Panel SCOPE Model*

Subscale and item	Variable
Self-Compassion	
Item 1	I feel like my instructor and/or peers can relate to me
Item 2	I believe challenging material as part of the academic journey
Item 3	I feel like a failure when I earn grades I don't like
Item 4	I feel accepting of my mistakes
Item 5	I am patient with myself if I don't understand something the first time new information is presented
Item 6	When I am struggling with course material, I remind myself that others may also be experiencing the same feelings
Item 7	When I fall short on my academic performance, I become consumed by feelings of isolation
Item 8	I rehearse negative feelings from past academic experiences
Item 9	I try to cover-up aspects of myself that I do not like
Item 10	When I am trying to learn a difficult subject, I give myself the encouragement I need
Mindfulness	
Item 11	I am focused on learning course content rather than the grade I will achieve
Item 12	I feel like my current class projects are my priority during each academic semester
Item 13	I am forgetful about what I have learned as soon as the course concludes
Item 14	I am attentive during course lectures
Item 15	I am able to name and identify my emotions in the moment
Item 16	When listening to course lectures, I think about the tasks I need to complete that week
Item 17	I worry about past or future academic experiences
Item 18	I read assigned course articles/texts without understanding what I just read
Item 19	I don't follow course assignment deadlines because I'm not paying attention or am thinking of something else
Item 20	I concentrate so much on graduation that I lose touch with the coursework I am currently doing
Listening	
Item 21	I am able to interpret if I have offended someone during class discussions
Item 22	I am open to hearing viewpoints that are opposite to my own
Item 23	I am open to constructive feedback from my instructors and/or peers
Item 24	I am able to ask for help on an assignment if I need it
Item 25	I am fully attentive when someone is speaking to me
Item 26	In class I listen to my instructors/peers with an open mind
Item 27	In class I recognize how my instructors/peers feel by their facial expressions
Item 28	When I don't understand course material I ask clarifying questions
Item 29	In class I feel comfortable sharing opinions that may differ from the majority
Item 30	I maintain eye contact and good posture when listening to my instructors lecture

## **Expert Panel**

Content validity examines whether an instrument adequately covers all subconstructs (i.e., listening competency, mindfulness, self-compassion) of the main construct being measured (i.e., contemplative practices). One way to obtain strong content validity is to use an expert panel with extensive knowledge around the literature of the construct (DeVellis, 2012). A working definition of the subconstructs was provided to six expert panelists. Thereafter, experts reviewed the SCOPE for relevance and completeness of the instrument. Three university professors knowledgeable in the field of CP one university administrator who specialized in assessment, and two university professors who specialize in scale development reviewed the SCOPE in the norming process. The SCOPE was then strengthened by the proposed edits.

The three university professors knowledgeable in the field of CP consisted of two females and one male, all of who taught at a private university in Southern California. The first expert panelist knowledgeable in CP taught graduate students in the school of education's doctoral program and was the school's Associate Dean for Faculty. She had experience as a professor in leadership studies where she had taught for over 20 years. She was intentional about integrating CP into her instruction and also modeled aspects of CP in her leadership. Her holistic approach to leadership was acknowledged by her most recent honor for the "Hidden Heroes Award" (a notable administrator award at her institution) in recognition of being a partner in the mission of reconciliation and justice. The second expert panelist knowledgeable in CP taught graduate students in the college of educational studies' doctoral program while serving as the college's doctoral program director. She had experience as a professor in Disability Studies, which she taught for

over 20 years. She cocreated a course founded on CP offered each term to undergraduate students. Her holistic approach to education was acknowledged by her most recent teaching honor for “Outstanding Teaching Professorship Award” (the highest faculty teaching award at her institution). The third expert panelist knowledgeable in CP, taught graduate students while serving as an academic program director. He had experience as a professor in higher education, and taught in the school of education’s higher education master’s program where he integrated CP into his instruction. Additionally, he served as a Jesuit within the university’s campus ministry. His training in the Jesuit pedagogy called him to actively promote aspects of CP within the academic community.

A university administrator and two university professors knowledgeable in assessment consisted of two females and one male, all of whom taught at a private university in Southern California. The first expert panelist knowledgeable in measurement taught graduate students in the college of educational studies’ doctoral program. He had experience as a professor in school psychology and specialized in quantitative research methods. He also served as a member of the university’s Institutional Review Board (IRB). The second expert panelist knowledgeable in assessment taught graduate students in the school of education’s doctoral program. She was lead faculty in assessment, served as a member of the schools’ IRB, and coauthored a book on best practices specific to assessment for Catholic teachers. The third expert panelist was the director for assessment at a Catholic university. She had experience as both a researcher and professor in cognitive psychology and specialized in improving student-learning outcomes. She coauthored the book on best practices specific to assessment for Catholic teachers in collaboration with the aforementioned panelist.

## **Expert Panel Procedures**

Meetings were held with each panelist and designed to ensure that specific questions were asked while allowing flexibility in the discussion. During each meeting, panelists were provided a copy of the 30 item scale, definitions of the subconstructs originating from a review of the literature, three existing scales that informed the SCOPE items, and three areas to consider to help guide the discussion: (a) Readability to graduate student population, (b) Relatability to graduate student population, and (c) Relevance to the intended construct. Alterations, additions, and eliminations were based on feedback given by the expert panelist. Suggested edits were included in all of the originally drafted scale items. Such edits consisted of the following: grammar, additions, deletions, rewording items written in reverse form, and assigning items to a different subconstruct. For example, previous to the expert panel, one scale item for the listening competency subscale read as “I maintain eye contact and good posture when listening to my instructor’s lecture.” However, postexpert panel, this item was adjusted to read as, “If called upon in class, I am able to repeat the last words of my instructor’s lecture.” This edit was made with consideration of graduate student populations with a physical disability that would impact eye contact or posture. The version of the SCOPE with items generated and reviewed by expert panelist in Phase One contained 30 items within three subscales: (a) listening competency, (b) mindfulness, and (c) self-compassion.

**Listening Competency.** The Listening Competency Subscale contains 10 items. These items inquire about aspects of classroom conduct and peer interaction. According to the literature (Brady, 2009; Mickelson & Welch, 2013; Wolvin & Cohen, 2012), listening competency includes the practice of discriminative, critical, comprehensive,

appreciative, and attending behaviors. Items 3 and 18 inquire about a graduate student's self-perceptions specific to discriminative listening skills. Items 6, 12, and 15 inquire about graduate student self-perception reflective of appreciative listening abilities. Item 9 inquires about a graduate student's self-perceptions related to critical listening competences. Items 21 and 30 align with attending behaviors. Items 24 and 27 reflect comprehensive listening attributes.

**Mindfulness.** The Mindfulness Subscale contains 10 items. These items inquire about aspects of graduate student classroom conduct and self-awareness. According to the literature (Barbezat & Bush, 2014; Germer, 2004), in order to be mindful, it is vital that one focus concentrated attention to the task at hand and provide nonjudgmental attention to the present moment. Items 2, 11, 14, and 29 inquire about a graduate student's self-perceptions toward his or her ability to concentrate attention to the task at hand. Items 5, 8, 17, 20, 23, and 26 inquire about graduate student self-perceptions related to nonjudgmental attention to the present moment.

**Self-compassion.** The Self-Compassion Subscale contains 10 items. These items inquire about aspects of graduate student classroom conduct, peer interaction, and self-care. According to the literature (Neff, 2014), in order to be self-compassionate, it is vital that one offers feelings of self-kindness, provides nonjudgmental understanding toward oneself, and accepts one's experience as part of the larger human experience. Items 1, 10, 13, 22, and 28 inquire about a graduate student's self-perceptions toward him-or herself related to self-kindness. Items 4, 7, and 19 inquire about graduate student self-perceptions related to nonjudgmental understanding toward oneself. Items 16 and 28 inquire about a

graduate student's self-perceptions related to acceptance of one's experience as part of the larger human experience.

The decision to use a five-point Likert scale anchored by (1) *strongly disagree* and (5) *strongly agree*, with a midpoint of (3) *neutral*, was based on discussions with the assessment and measurement experts in scale development. Regarding the number of scale points, Bending (1954) found that fewer rather than more scale points resulted in higher reliability (e.g., five points had higher reliability than six points). Additionally, Chang (1994) conducted a study comparing coefficients computed from four-point and six-point Likert scales with a population of 165 graduate students. Participants responded to nine items measuring three quantitative attitudes. Using a multitrait and multimethod approach, Chang separated trait and method variance and found lower internal reliability with a six-point scale when compared to a four-point scale. Chang also reported the four-point scale had higher reliability when compared to the six-point scale. Chang concluded that increasing the number of scale points created opportunities for response sets.

DeVellis (2012) explained response sets as leading questions that cause respondents to answer in a specific way. Lastly, Patten (2014) recommended including *neutral* as a choice to avoid incomplete questionnaires by unanswered items. For purposes of the study, a five-point Likert scale was used to decrease the likelihood of response sets and increase the internal reliability of the instrument. Other variables of interest in the study were demographic variables. The expert panel reviewed and revised all 30 items in the SCOPE prior to administration (See Table 5).

Table 5

*Post-Expert Panel SCOPE Model*

Subscale and item	Variable
<b>Self-Compassion</b>	
Item 1	I intentionally take care of my physical, mental, and emotional health when I am struggling in a course
Item 2	In class when I ask a clarifying question, I believe my peers may have the same question
Item 3	I am confident about my academic future even when I earn grades lower than my expectation
Item 4	I am accepting of my mistakes
Item 5	I am patient with myself when I do not understand something the first time new information is presented
Item 6	I remind myself that others may also be experiencing the same feelings when I am struggling with course material
Item 7	I am hopeful about my course grade even when I do not perform as well as my peers on a course assignment
Item 8	I have focused on positive past academic experiences during my academic journey
Item 9	I care about how my education will contribute to the common good
Item 10	I am patient with myself when I am trying to learn a difficult subject
<b>Mindfulness</b>	
Item 11	While listening to course lectures I do not engage in off task activities
Item 12	I focus on learning course content rather than my grade
Item 13	Each semester I make my class assignments my academic priority
Item 14	After the course concludes, I find it easy to remember what I have learned
Item 15	I approach course lectures with curiosity and openness
Item 16	When faced with challenging course material I try to keep my emotions in balance
Item 17	I am able to be present in my current academic term without worrying about future academic experiences
Item 18	I am able to focus on my current coursework without concentrating too much on graduation
Item 19	I am able to block out distractions while reading assigned course material
Item 20	I am able to focus on one academic task at a time
<b>Listening</b>	
Item 21	I recognize how my statements may affect someone's feelings during class discussions
Item 22	I am open to viewpoints that are opposite to my own
Item 23	I welcome constructive feedback when I am collaborating with my peers
Item 24	I am able to support my peers when they need help on challenging assignments
Item 25	I demonstrate support for my peers when they are conducting class presentations
Item 26	I am aware of my biases when participating in course discussions
Item 27	In class I pay attention to my instructors' nonverbal behaviors
Item 28	When I am listening to my peers, I ask questions to better understand their point of view
Item 29	In class I am able to focus even when the course content does not interest me
Item 30	If called upon in class, I am able to repeat the last words of my instructor's lecture

## **SCOPE Development Summary**

Findings from the individual meetings with expert panelist and an extensive review of the literature resulted in a self-report instrument that contained 30 items with three subscales intended to measure graduate students' perceived behaviors specific to CP. (See Table 5 for a complete list of the 30 items.) The next phase of the study involved the assessment of reliability and validity of the SCOPE. The following is a detailed report of the methodology and results of Phase Two of this quantitative exploratory study.

### **Phase Two - Data Collection and Analysis**

This section describes the methodology of the SCOPE analysis. The 30-item scale and brief demographics survey were administered to 253 graduate students in education. The SCOPE was administered electronically using Qualtrics software. Qualtrics is a private research software for compilation, organization, and analyzation of data (Qualtrics, 2015). Participants completed the SCOPE electronically via email through an anonymous survey link, and by paper in person at various classrooms. The participants' completion of the anonymous online version of the SCOPE constituted their informed consent to participate in the study. Informed consent was also collected during on-site administration of the in-person version of the SCOPE. The data from the Qualtrics Survey were downloaded into SPSS for analyses purposes. Next, the SCOPE instrument's reliability evaluated internal consistency and temporal stability by analyzing the Cronbach's alpha and test-retest scores. Validity was evaluated by a factor analysis to analyze variability among factors.

## **Validity**

Validity refers to the quality of the instruments being used to measure the intended construct. DeVellis (2012) noted, “Whereas reliability concerns how much a variable influences a set of items, validity concerns whether the variable is the underlying cause of item co-variation” (p. 59). Validity and reliability are independent of one another and are not interchangeable; for example, if reliability is found that does not automatically indicate that the requirements for validity have been met. Muijs (2011) described three aspects of validity that are of importance: (a) content validity, (b) criterion-related validity, and (c) construct validity. In terms of self-reported scales, DeVellis introduced three aspects of validity that may increase the accuracy of the instrument: (a) content validity, (b) criterion validity, and (c) construct validity. Content validity is used to define the degree to which a scale covers all components of the construct being measured. For example, construct validity will assess if the SCOPE accounts for subcomponents such as listening competency, mindfulness, and self-compassion. Criterion-related validity is used to assess the degree to which the instrument predicts the stated construct. For example, criterion-related validity considers how respondents score on the SCOPE in comparison to other measurements similar or different in nature (i.e., self-perceived mindful behaviors, self-perceived impulsive behavior). Construct validity refers to the extent an instrument measures the stated construct. For example, construct validity examines how closely correlated scale items may or may not be to each factor that composes the stated construct. It is important that instruments have adequate validity to ensure adequate and consistent results for future administration (DeVellis, 2012).

**Content validity.** Content validity is used to define the degree to which a scale holistically includes all areas of the construct being measured (Muijs, 2011). Content validity was obtained with an expert panel of six individuals. Please refer to Phase One of the study for a detailed description of the expert panel, scale development procedure, and item pool construction (See Table 5 for a complete list of the 30 items).

**Criterion-related validity.** Criterion-related validity indicates the degree that an instrument predicts the stated construct (Muijs, 2011). It is important that the criterion used be valid, whether it is another scale or criterion. Criterion-related validity has three main subareas: concurrent validity, predictive validity, and divergent validity (DeVellis, 2012). Concurrent validity refers to behavior or knowledge that is being concurrently measured with similar measures of the same construct. Predictive validity is whether a measure is able to predict later behavior or knowledge. Divergent validity represents how the construct being studied is different from its counterparts in the study (e.g., perceived contemplative behavior versus perceived impulsive behavior) (DeVellis, 2012).

Concurrent validity will not be explored in this study due to limited access and resources for similar scales and its administration rights. Partial subconstruct-related scales were found in the literature; however, to maintain brevity, the SCOPE will not be compared to other partial scales. For purposes of this study, predictive validity will not be explored because the objective is not to predict an observable outcome but to assess a level of some unobservable construct. Lastly, divergent validity will not be explored in this study due to limited access and resources for supplementary scales different from its counterparts and its administration rights. The goal of this study is to assess a level of

some unobservable construct by means of an observable indicator making construct validity the primary interest.

**Construct validity.** Construct validity is the extent to which an instrument assesses the stated construct (Muijs, 2011). For example, construct validity may account for how well the SCOPE measures the theoretical construct of contemplative practices, with consideration to three factors: listening competency, mindfulness, and self-compassion. The statistical procedure used to determine construct validity may be assessed by means of a factor analysis.

**Factor analysis.** Aron et al. (2009) explained factor analysis as a statistical technique applied to situations in which several variables are measured for purposes of identifying groups that strongly correlate to one another and less strongly correlate to other variables. This method allows for a statistical examination of the structure related to an instrument's scale items (Muijs, 2011). Aron et al. more specifically defined each group of variables as a single factor and the process of statistically examining the correlation of an individual item with a factor as factor loading. Factor loadings range from -1 to 1, with 0 indicating no correlation (Muijs, 2011). Comrey (1988) suggested having approximately 200 participants with no more than 40 scale items to provide for adequate factor analysis, which in turn increases construct validity. In sum, factor analysis may determine which variables group together and thus tend to be correlated with one another.

There are various approaches to factor analyses to statistically identify how many items create a factor. When conducting factor analyses, there are a number of elements to consider: (a) Determining exploratory and/or confirmatory factor analysis; (b)

Determining the eigenvalues of the items; (c) Identifying the type of rotation for implementation; and (d) Naming the factor(s) (DeVellis, 2012). This study used exploratory (EFA) and confirmatory (CFA) factor analyses, considered eigenvalues with one or greater, and implemented an oblique rotation. If the results seem to make sense as a factor the researcher then names the factor based on item content (Muijs, 2011).

EFA and CFA refer to the intent of the analysis in place of the statistical computation. DeVellis (2012) explained how the primary objective of an EFA is used on the same data set of items to assess the underlying structure. On the other hand, DeVellis stated how the primary goal of the CFA is to identify a predefined pattern of correlations predicted by the literature base and/or previous empirical findings. Those who choose to use CFA may wish to establish validity for a single factor model, compare two different models with the same data set, test significance of a specific factor loading, test relationships between two or more factor loadings, test strength of correlation among factors, and determine the convergent validity of an instrument (DeVellis, 2012). If uncorrelated, the results will indicate a lack of relationship and high influence of external factors (DeVellis, 2012). An EFA and CFA were used to assess the pattern of correlations among the stated construct to inform the retention of items and extraction of items for a lack of fit.

The process of conducting a factor analysis begins with a correlation matrix for all items (DeVellis, 2012). The first step in this process is to extract one factor to account for variance. To be part of a factor, Muijs (2011) explained, “items need to be strongly correlated to one another and less strongly correlated to other variables” (p. 199). For example, the researcher expects “I am accepting of my mistakes” to be correlated with “I

am patient with myself when I do not understand something the first time new information is presented,” but not, or weakly correlated, with “If called upon in class, I am able to repeat the last words of my instructor’s lecture.”

***Principal Component Analysis.*** The principal component analysis (PCA) technique is used in this case to explain as much variance as possible with consideration to the first factor extraction. The PCA explains total variance by retaining the 1.00 values in the correlation matrix during the extraction phase and incorporating both common and/or shared variance as well as the variance unique to each item. The PCA should then be used to continually examine variance with consideration to the extraction of other factors until there are no factors left to examine (Muijs, 2011). The single construct (e.g., contemplative practices) will be assessed for patterns of correlation among items. The individual item scores and total scores are computed for item-total correlation values that serve as correlational estimates between observed and unobserved constructs (DeVellis, 2012).

***Extraction method.*** When deciding how many factors to extract, researchers typically consider two nonstatistical guidelines: (a) eigenvalue rule, and (b) scree test (DeVellis, 2012). Muijs (2011) described eigenvalue as, “the variance extracted by the factor, and as a rule of thumb we retain only eigenvalues above 1” (p. 200). The eigenvalue rule is often employed to drop any factor with an eigenvalue less than 1 (Kaiser, 1960). DeVellis explained the eigenvalue rule as the method of determining the number of factors to retain. For instance, the SCOPE consists of 30 items that represent 30 units of information. Should the eigenvalue equal three, it would represent 10% of the information. Muijs stated that this statistical measure is not founded on any absolute

mathematical criteria; rather these are accepted guidelines in the literature. Additionally, Cattell's scree test (1966) is also based on eigenvalues but utilizes the values as relative in place of absolute numbers. Cattell stated how the correct number of factors might be determined by the drop in eigenvalue in reference to the scree plot. Moreover, DeVellis explained how factors corresponding to the right, on the horizontal portion of the plot, identify numbers that are dispensable and those on the vertical portion as indispensable. Cattell's (1966) criterion requires that factors above "the elbow" of the plot (a point at which the information drops off) be retained. Muijs indicated how the scree plot is somewhat subjective and the method may prove to be partially helpful. For purposes of this study, the eigenvalue rule was utilized to compute correlated factors related to the SCOPE.

There are different guidelines specific to how variance is determined and accounted for in scale development. Gorsuch (1983) stated that the factors should account for 80% of the variance. Stevens (2009) stated that the factors should account for 70% of the variance. Aron et al. (2009) and Muijs (2011) both indicated that factors should account for 60% of the variance. For purposes of this study, Aron et al.'s as well as Muijs's guidelines were used to determine the degree of variance evaluated through factor analysis. Using the eigenvalue rule, any score under 1 will be eliminated (Kaiser, 1960). A factor structure accounting for at least 60% of the variance was the goal of the study.

Factor extraction is conducted to determine how well all factors account for covariation among scale items. The researcher should consider adding more than one factor in the event that remaining covariation is not accounted for. DeVilles (2012)

suggested that this method be repeated until there is little to no covariation left. Factor extraction without factor rotation provides little to no information pertinent to scale development. DeVellis (2012) explained how the rotation of factors allows for varying viewpoints to better understand the relation of each factor.

***Rotation method.*** Given the rotation of factors, multiple vantage points are provided with additional information the researcher may not have acquired by one single observation. Factor rotation reorients factors to help interpret each item's factor loading for commonalities. DeVellis (2012) suggested that factor rotation serves to understand the accurate number of factors and uncovers its meaning to interpret a relational pattern. DeVellis also indicated how factor rotation specifies the various locations of the items relative to one another. The purpose of this method is to discover a particular orientation that aids in the interpretation of the items by using as few items as possible. DeVellis explained two primary methods for factor rotation: orthogonal and oblique. Orthogonal rotation is used when factors are uncorrelated and independent of each other (DeVellis). Oblique rotation is used when factors are correlated with one another. This method aims to group factors with relation to a single category. Potential factors that underlie the SCOPE (i.e., listening competency, mindfulness, and self-compassion) are perceived to relate to one another based on the literature review. With consideration to the literature, oblique rotation was used for this study. After completion of the factor analysis, unshared variation indicates error (DeVellis).

Each item variance shows the variability—shared or unique—that each variable demonstrates. DeVellis (2012) argued that a set of guidelines should be used to help identify how factors should be retained. Aron et al. (2009) considered a factor to be

meaningful if it loaded at above .30 or below -.30. All the items with loadings outside the range of .30 and -.30 should be examined further and should be considered at the discretion of the researcher. After consideration, if the factor is retained due to extenuating circumstances, the researcher may name the factor based on item content (Muijs, 2011). Factor identification involves a degree of interpretation that impacts decision-making on how factors are retained and the production of the final factors. Muijs emphasized that variables forming a factor must be questioned for meaning to ensure appropriate conceptual and/or theoretical understanding behind the factor despite statistical results through factor analysis.

Factor analyses may be beneficial in identifying how many latent variables exist among a set of items, accounting for variation among original and newly created variables, and explaining the meaning of the factors that attribute to the variation (DeVellis, 2012). A latent variable is a construct that produces other extraneous factors that may not be directly observable (DeVellis, 2012). Factor analysis alignment provided this study a method to compute the nature of the latent construct and its underlying variables of the SCOPE. Additionally, DeVellis (2012) stated how factor analysis might help to identify the appropriate number of factors to aid in accurately computing Cronbach's alpha for reliability purposes. Muijs (2011) also added that such a statistical technique might detect structures specific to the relationship among variables.

### **Reliability**

Reliability emphasizes the general consistency of an instrument and reflects the degree of freedom from measurement error. DeVellis (2012) defined a true score of a construct as the total difference of observable outcomes and error. If a scale is evidenced

to yield comparable estimates under similar methodological procedures, its reliability increases (DeVellis, 2012). Another indicator of reliability is the absence or minimal detection of a latent variable. That said, an instrument is said to have high reliability when it “performs in consistent [and] predictable ways” (DeVellis, 2012, p. 31). The less error, the higher an instrument’s reliability will be. Such reliability is vitally important in scale development, as it tells researchers how accurate the data may be. In terms of self-reported scales, DeVellis introduced two main sources of reliability to increase the accuracy of the instrument: internal consistency and temporal stability. Internal consistency states that a scale clearly measures the construct it is stated to measure. Temporal stability evaluates how constant scores remain at two different points in time (DeVellis, 2012). It is important that instruments have adequate reliability (DeVellis, 2012).

**Internal consistency.** Internal consistency reflects the degree to which scale items are intercorrelated. DeVellis (2012) described that different items may correlate due to causal affect among one another and/or due to the sharing of a common cause. A measure generating similar estimates (provided the instrument maintains a common methodological approach) indicates high internal consistency. Such findings reflect the degree of the relationship (positive or negative) among constructs being measured. DeVellis stated that this is done to account for latent variables that cannot be directly observed. The correlational relationship describes how often the instrument gives the true score. The true score is the difference between observed score and error.

Cronbach’s coefficient alpha is a commonly used statistical measure of reliability that indicates internal consistency for a multiple response-format specific to scale

construction research. Urdan (2010) described how the Cronbach's alpha "uses the associations among a set of items to indicate how well the items, as a group, hold together" (p. 178). The Cronbach's alpha refers to the average relationship among all variables that make up an instrument. Muijs (2011) further explained that correlation coefficients vary from 0 to +1, with the understanding that +1 is a perfect correlation and 0 is no correlation.

Muijs (2011) also detailed how the closer the score varies between 0 to +1, the stronger the correlation. Theoretically, the same construct is being measured when various items are highly correlated to one another. However, Muijs also noted how this statistical method is sensitive to the number of items being used. Urdan (2010) explained how the probability of a high alpha rises with an increase in items even if the items do not measure the same construct. That said, when working with a scale maintaining a high number of items, consideration should be given to extraneous factors that may have influenced a high correlation score (Muijs, 2011). Although the literature (DeVellis, 2012) acknowledges the understanding of internal consistency to be ambiguous, the literature also asserts coefficient alphas to maintain a strong conceptual link to the definition of reliability. However, to ensure that findings are strongly supported, the researcher investigated overall coefficient alphas as well as factor structures for reliability indicators.

Similarly, DeVellis (2012) explained that the Kuder-Richardson formula 20 (also known as KR-20) is another alpha indicator for internal consistency. The KR-20 is used for dichotomous instruments (i.e., true/false). The coefficient alpha and KR-20 are equivalent statistical measures of reliability when only two items are concerned.

Alternatively, there are other forms of reliability different from coefficient alphas.

DeVellis also reported how the split-half method compares the first half of a measure to the second half of the measure. This comparison ensures that the test measures the same thing throughout the scale, and should not be used for measures that may become more difficult later in the test (i.e., intelligence and achievement measures) (DeVellis, 2012). However, this method was not used for purposes of avoiding pitfalls related to item number conversion in the analysis phase. Additionally, the researcher opted not to implement the split-half method because the SCOPE was brief enough to avoid respondent fatigue.

There are many guidelines considered in the literature related to the interpretation of the alpha. Urdan (2010) stated that a set of items reflecting a relationship of a minimum value of 0.7 or higher is considered acceptably reliable. This value may vary slightly among authors. Therefore, when interpreting the alpha, researchers must be clear as to what set of guidelines they are referencing. For example, DeVellis (2012) recommended a value between the ranges of 0.70 to 0.80 to be considered respectable. For purposes of this study, Cronbach's alpha was used to measure reliability and DeVellis's alpha level guidelines to interpret the data: below 0.6 is unacceptable, between 0.6 and 0.65 is undesirable, 0.65 and 0.70 is minimally acceptable, 0.70 to 0.80 is respectable, 0.80 and 0.90 is very good, and above 0.90 means the researcher should consider abbreviating the scale.

**Temporal stability.** Temporal stability is an important form of reliability. Researchers may obtain stability by using test-retest reliability where one administers a measure two or more times over a period of time (DeVellis, 2012). DeVellis explained

how researchers should target the same group of participants over time when comparing scores with a correlation. There are a variety of reasons to explain how and why change occurs when assessing a particular phenomenon. Kelly and McGrath (2001) noted four causes that are confounded when analyzing two sets of scores on the same measure over time: (a) Authentic change occurs specific to the construct at hand; (b) External influences may impact the phenomena (e.g., change in day and time); (c) Subject disposition and differences (e.g., current mood when taking assessment) may trigger certain responses as opposed to measurement of the construct; (d) Inconsistent administration of a measure may result in unreliable conclusions regarding the construct. Muijs (2011) recommended a one to two week waiting period before retesting the instrument. This may hinder the carryover effect and provide reliable conditions for assessing temporal stability. There are a number of ways error may arise when testing for temporal stability. Yu (2005) explained how error might arise due to a carryover effect. This particular type of error suggests how participants' first response may influence their later response (i.e., results of the second measure is not based on the assessment of the construct but on external motivation to be consistent). Yu stated that researchers must be cognizant of administration errors to decrease the possibility of low temporal stability.

Test-retest scores typically involve using some form of correlation such as a Pearson's  $r$  or Spearman's rho correlation. Pearson's  $r$  determines the relationship with consideration to variance for variables at two different points in time. Spearman's rho is used when the researcher assesses scores that are not formed to interval-level scaling (e.g., ordinal data) to evaluate ratio of frequencies (DeVellis, 2012). Due to the type of data obtained for nonparametric test (i.e., Likert-scale) a Spearman's rho was used to assess

ordinal data for temporal stability. Muijs (2011) explained a Spearman's rho to be a means of calculating correlation coefficient on rankings rather than actual numerical data. The interpretation of Spearman's rho and Pearson's  $r$  correlation is very similar in that both vary between -1 and +1, with -1 being a perfect negative score and +1 being a perfect positive score. However, considering that Pearson's  $r$  works well in the majority of cases for instrument development (DeVellis, 2012) and may yield additional data related to parametric data, which may allow for more conclusions to be drawn, it will also be used to assess temporal stability. The test-retest method with both Pearson's  $r$  and Spearman's rho correlations were used to ensure thorough analysis of reliability indicators for temporal stability.

Since the online respondents were anonymous graduate students across the state of California, it was impossible to locate the same participants to administer the instrument for purposes of the retest method. The researcher attended a class in a private NCATE-accredited institution in Southern California to administer the test-retest for temporal stability purposes. The SCOPE was administered the first week of the study to 34 students and then two weeks later to 27 students. Seven students were out ill during the second administration of the instrument and were not included in the retest analysis. Therefore, a group of 27 graduate students were compared to assess how consistent coefficient scores remain at differing points in time. DeVellis (2012) guidelines for interpretation used were as follows: a coefficient between 0.7 and .8 or higher is considered adequate.

## **Summary**

This chapter reviewed the methodological procedures for the study. A two-phased approach was outlined: (a) SCOPE development and (b) SCOPE data collection and analysis. There is a scarcity of research on CP and scale development. Therefore, this exploratory study established a measure of CP, Scale of Contemplative Practice in Education (SCOPE), which may be useful in measuring CP in educational settings. In the next chapter, the data analysis and scale results are shared.

## **Chapter Four**

### **Phase Two – Survey Validation**

Phase Two was the quantitative portion of this exploratory study. The purpose of this phase was to test the reliability and validity of the SCOPE that emerged from Phase One. The following is a detailed discussion of the methodology and results of Phase Two of this study.

#### **Restatement of the Research Questions**

By utilizing emotional intelligence (EI) theory as the conceptual framework, this quantitative study investigated the following research questions:

1. To what extent does the SCOPE instrument demonstrate content and construct validity?
2. What is the factor structure of the SCOPE instrument?
3. To what extent does the SCOPE instrument demonstrate internal consistency and temporal stability?

#### **Method**

The SCOPE was administered and data were collected for 253 participants: 226 of the participants' data were collected via email through Qualtrics survey, and 27 of the participants' data were collected by paper in a classroom. A script was read in the classroom before students were asked to complete the survey to standardize the introduction and invitation to the study. The 30-item SCOPE was created and uploaded to Qualtrics—an online survey creation and distribution tool. The survey was then emailed to academic program directors in the following types of programs: administrator education, bilingual education, community counseling, counselor education, elementary

education, higher education, leadership studies, secondary education, school counseling, school psychology, and special education. Convenience sampling was used to recruit participants who met the sample criteria (i.e., enrolled in a NCATE graduate program) from the State of California. The data collection period totaled three weeks. Data from Qualtrics were directly downloaded to SPSS, and data from the paper administration in the classroom were input into SPSS. All data were reviewed for input fidelity, and there was 100% accuracy after the culmination of the data check.

Validity focuses on latent variables emphasizing the constructs that emerge from item responses to an instrument. For example, factor analysis concentrates on individual scale items and its structure as well as on correlation to the overall scale. Data collected from participants for this study were factor analyzed using exploratory (EFA) as well as confirmatory (CFA) factor analysis, and the instrument was used to assess internal consistency and temporal stability. Content validity was also examined, as explained in Chapter 3 of this study, and applied in Phase One. Reliability is considered a basic criterion for scale development (DeVellis, 2012; Muijs, 2011). The reliability measure of a self-report scale may include the degree to which items are correlated to one another (i.e., internal consistency) and the extent to which the measure remains consistent over time with consideration from one administer to another (i.e., temporal stability).

### **Participants**

Factor analysis requires a large sample size. The literature varies in the number of responses appropriate for the technique. Comrey (1988) suggested a sample size of 200 participants for quality results. The combined sample of graduate students in education who completed the SCOPE via online hyperlink and those who completed a paper copy

totaled 253 graduate students in education ( $N = 253$ ). See Table 6 for demographic data on these 253 students.

Table 6

*Total Participant Demographics ( $N = 253$ )*

Characteristics	N	%
Sex		
Female	208	82.2
Male	44	17.4
Prefer not to answer	1	.4
Age		
21-25	70	27.7
26-30	61	24.1
31-45	93	36.8
46-50	9	3.6
50+	18	7.1
Prefer not to answer	2	.8
Race/Ethnicity		
African American/Black (not Hispanic)	17	6.7
Asian American or Pacific Islander	22	8.7
European American/White (not Hispanic)	97	38.3
Hispanic/Latino	77	30.4
Multiracial	28	11.1
Other	5	2.0
Prefer not to answer	7	2.8
Institution Type		
Public University/College	81	32.0
Private University/College	172	68.0
Academic Program		
Administrator Education	17	6.7
Bilingual Education	10	4.0
Community Counseling	2	.8
Counselor Education	21	8.3
Elementary Education	25	9.9
Higher Education	52	20.6
Leadership Studies	25	9.9
Secondary Education	43	17.0
School Counseling	6	2.4
School Psychology	25	9.9
Special Education	11	4.3
Other	16	6.3
Year in Program		
First	116	45.8
Second	81	32.0
Third	32	12.6
Fourth	8	3.2
Fifth	4	1.6
Other	12	4.7

**Temporal stability.** Reliability for temporal stability was assessed with a group of 27 graduate students in education. The 27 students were administered the SCOPE at two different points in time within a two-week time period. See Table 7 for demographic data on these 27 students.

Table 7

*Temporal Stability Participant Demographics (N = 27)*

Characteristics	N	%
Sex		
Female	19	70.4
Male	8	29.6
Age		
21-25	16	59.3
26-30	5	18.5
31-45	5	18.5
50+	1	3.7
Race/Ethnicity		
African American/Black (not Hispanic)	3	11.1
Asian American or Pacific Islander	4	14.8
European American/White (not Hispanic)	3	11.1
Hispanic/Latino	11	40.7
Multiracial	5	18.5
Prefer not to answer	1	3.7
Institution Type		
Private University/College	27	100.0
Academic Program		
Administrator Education	1	3.7
Elementary Education	1	3.7
Higher Education	8	29.6
Secondary Education	17	63.0
Year in Program		
First	27	100.0

### Data Analysis

The SCOPE, a newly developed instrument, was assessed for validity and reliability to answer the proposed research questions. The following section will explain the statistical results specific to each area of inquiry.

## **Validity**

Content validity is the degree to which the items reflect a content area (DeVellis, 2012). An expert panel was established to formulate more substantive insights pertinent to the working definition of CP. The expert panel consisted of six individuals who generated and revised items and assessed their content validity—the extent to which the SCOPE adequately represented the complete range of the subconstructs (i.e., listening competency, mindfulness, and self-compassion) under construction. Construct validity is the extent to which the items correlate to the predicted pattern provided by theoretical support in the literature. Both an EFA and CFA were used to assess construct validity.

**Content validity.** An expert panel reviewed the items prior to administration of the SCOPE. The first draft of the SCOPE (See Table 4) was shared with a panel that included three members with expertise in CP and three members knowledgeable in assessment and scale development (See Chapter 3). All 30 items were adjusted in some manner (See Chapter 3) and resulted in the final 30-item measure used in Phase Two of the study (See Table 5).

**Construct validity.** Factor analysis was used to determine the relationship of the variables to other variables. As a first step, an EFA was used. Next, a CFA was used to examine additional factor structures for thorough analysis of the psychometric dimensions of the SCOPE.

**Factor analysis.** Data factorability was assessed using the eigenvalue rule to examine the factor structure of the SCOPE. The eigenvalue rule suggests that the researcher drop any factor with an eigenvalue less than one (Kaiser, 1960). The EFA seemed more appropriate for this validation study because the items within the SCOPE

were based on a theoretical definition (i.e., listening competency, mindfulness, and self-compassion) provided in the literature. DeVellis (2012) explained how final items of the instrument must be determined prior to the analysis of reliability. Three steps were taken to create the final items within the new instrument: (a) EFA determined items with factor loadings at above 0.3 or below -0.3, (b) temporal stability analysis (i.e., Spearman's rho) determined items with low temporal stability that were considered further, and (c) CFA determined additional factor structure with eigenvalues over one for thorough analysis in an effort to retain the best possible structure and psychometric properties.

The EFA provided support for an eight-factor model using the eigenvalue rule for the factor loadings of the initial EFA. Whereas I hypothesized three factors, eight factors emerged with an eigenvalue of above one with consideration to the EFA (See Table 8).

Table 8

*Item Loadings in Exploratory Factor Analysis*

Number	Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
10	I am accepting of my mistakes	<b>.827</b>	.061	-.019	-.005	-.023	.028	-.072	.033
9	I welcome constructive feedback when I am collaborating with my peers	<b>.608</b>	-.114	.002	.351	.000	-.053	.041	-.023
6	I am open to viewpoints that are opposite to my own	<b>.549</b>	-.191	.005	-.010	.058	-.322	.081	.277
13	I am patient with myself when I do not understand something the first time new information is presented	<b>.413</b>	-.255	-.118	-.285	.175	.266	-.002	.183
23	I am able to focus on my current coursework without concentrating too much on graduation	-.036	<b>-.678</b>	-.226	.202	.113	-.175	-.168	.031
19	I am hopeful about my course grade even when I do not perform as well as my peers on a course assignment	-.016	<b>-.651</b>	.230	.080	-.010	.297	-.037	.100
7	I am confident about my academic future even when I earn grades lower than my expectation	.088	<b>-.599</b>	-.014	-.005	-.200	-.048	.097	.048
20	I am able to be present in my current academic term without worrying about future academic experiences	.254	<b>-.456</b>	-.105	.042	.066	.149	-.035	-.105
27	In class I am able to focus even when the course content does not interest me	-.053	-.136	<b>-.729</b>	.083	-.012	-.051	.086	.165
26	I am able to block out distractions while reading assigned course material	.114	.099	<b>-.697</b>	-.112	.027	.183	.094	-.013
2	While listening to course lectures I do not engage in off task activities	-.124	.142	<b>-.578</b>	.239	.069	.004	-.175	.466
29	I am able to focus on one academic task at a time	.141	-.318	<b>-.527</b>	.099	-.161	.007	-.070	-.063
11	After the course concludes, I find it easy to remember what I have learned	.155	.121	<b>-.450</b>	-.050	.028	.140	.369	-.185

Number	Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
30	If called upon in class, I am able to repeat the last words of my instructor's lecture	-.107	-.351	<b>-.380</b>	.083	.273	-.061	.218	-.095
3	I recognize how my statements may affect someone's feelings during class discussion	-.079	-.228	.037	<b>.648</b>	.042	.042	.048	.022
15	I demonstrate support for my peers when they are conducting class presentations	.139	.035	-.048	<b>.596</b>	.119	.005	.138	.064
8	Each semester I make my class assignments my academic priority	.274	-.055	-.134	<b>.540</b>	.030	.174	-.146	-.146
21	In class I pay attention to my instructors non-verbal behaviors	.052	.084	.053	.111	<b>.690</b>	-.073	.075	.194
22	I have focused on positive past academic experiences during my academic journey	.175	.047	.006	.183	<b>.509</b>	.322	-.033	-.075
18	I am aware of my biases when participating in course discussions	.039	-.103	-.038	.203	<b>-.501</b>	.277	.321	.169
1	I intentionally take care of my physical, mental, and emotional health when I am struggling in a course	-.091	.137	-.224	.241	-.080	<b>.722</b>	-.172	.049
16	I remind myself that others may also be experiencing the same feelings when I am struggling with course material	-.038	-.281	.128	-.098	.088	<b>.573</b>	.176	.083
28	I am patient with myself when I am trying to learn a difficult subject	.364	-.204	-.179	-.292	.208	<b>.448</b>	-.021	.124
17	When faced with challenging course material I try to keep my emotions in balance	.287	-.259	-.034	.028	-.134	<b>.356</b>	.211	.132
24	When I am listening to my peers, I ask questions to better understand their point of view	-.033	.051	-.048	.019	-.004	-.122	<b>.753</b>	.122
4	In class when I ask a clarifying question, I believe my peers may have the same question	-.166	-.224	-.145	.009	.422	.088	<b>.448</b>	-.153
12	I am able to support my peers when they need help on challenging assignments	.383	.078	-.030	.115	-.021	.051	<b>.393</b>	-.112
5	I focus on learning course content rather than my grade	.099	-.128	-.104	-.189	-.051	.103	-.034	<b>.644</b>
25	I care about how my education will contribute to the common good	-.030	.020	.303	.229	.168	.119	.270	<b>.449</b>
14	I approach course lectures with curiosity and openness	.276	.136	-.136	.217	.061	-.081	.215	<b>.418</b>

To further investigate model fit and alignment with the theoretical framework, the following method was used: (a) any items with an extraction under 0.3 were eliminated (Muijs, 2011), and additional CFAs were run with the remaining items that had loadings above 0.3 (See Appendix A); (b) any items with an extraction under 0.4 were eliminated (Muijs, 2011), and additional CFAs were run with the remaining items that had loadings above 0.4 (See Appendix B); and (c) any items with an extraction under 0.5 were eliminated (Muijs, 2011), and additional CFAs were run with the remaining items that had loadings above 0.5 (See Appendix C). After investigating multiple factor structures with consideration of various extraction methods (See Table 9), the EFA, with a 30 item eight-factor model, was the most psychometrically appropriate option for the SCOPE. Additionally, the EFA provided the most meaningful model in the interpretation process of naming the items within each factor.

Table 9

<i>CFAs Structure for SCOPE</i>					
Extractions	Items	Eigenvalue Rule	Variance	Internal Consistency	Temporal Stability
Above .5	10	4	59.808%	.645	$r = 0.682, p < .611$
Above .4	15	4	63.603%	.762	$r = 0.820, p < .753$
Above .3	17	4	48.598%	.793	$r = 0.828, p < .788$

The EFA provided support for a eight-factor model using the eigenvalue rule. The first factor had an eigenvalue of 6.525, the second factor had an eigenvalue of 1.942, the third factor had an eigenvalue of 1.758, the fourth factor had an eigenvalue of 1.483, the fifth factor had an eigenvalue of 1.384, the sixth factor had an eigenvalue of 1.246, the seventh factor had an eigenvalue of 1.174, and the eighth factor had an eigenvalue of 1.068 (See Table 10).

Table 10

<i>Exploratory Factor Analysis Eigenvalues</i>			
Factor	Eigenvalue	% of Variance	Cumulative %
1	6.525	21.751	21.751
2	1.942	6.474	28.225
3	1.758	5.860	34.084
4	1.483	4.944	39.028
5	1.384	4.612	43.640
6	1.246	4.153	47.793
7	1.174	3.914	51.707
8	1.068	3.562	55.269
9	.993	3.311	58.580
10	.937	3.122	61.702

The first factor was four times larger than the second factor, which made it an upper-level factor with seven lower-level factors. The upper level factor aligned well with the theoretical framework as it represented the foundation of EI theory. The first factor, *Awareness of Feelings*, accounted for 21.751% of the variance; the second factor, *Accept Disappointment as Human Experience*, accounted for 6.474%; the third, *Focused Attention*, accounted for 5.860%; the fourth, *Establish Support*, accounted for 4.944%; the fifth, *Listen Without Bias*, accounted for 4.612%; the sixth, *Kindness toward Self*, accounted for 4.153%; the seventh, *Question for Understanding*, accounted for 3.914%; and the eighth, *Nonjudgmental Understanding*, accounted for 3.562%. In total, the final eight-factor model explained 55.269% of the variance in the data. Factor correlations were also examined for a thorough understanding of the factor structure. In sum, the revised SCOPE accounted for five additional factors not considered in the original SCOPE (See Table 11).

Table 11

*Correlations Between Factors*

Factor	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
1								
2	-.219							
3	-.222	.157						
4	.134	-.103	-.173					
5	.082	-.056	-.096	.124				
6	.211	-.203	-.138	.086	.060			
7	.200	-.120	-.097	.133	.143	.116		
8	.163	-.109	-.035	.133	.032	.062	.119	

All items in the Awareness of Feelings (factor one) contained four items. The four included two items from the original SCOPE listening competency subscale: I welcome constructive feedback when I am collaborating with my peers; I am open to viewpoints that are opposite to my own. It also includes two items from the original SCOPE self-compassion subscale: I am accepting of my mistakes; I am patient with myself when I do not understand something the first time new information is presented.

All items in the Accept Disappointment as Human Experience (factor two) contained four items. The two included items from the original SCOPE self-compassion subscale: I am hopeful about my course grade even when I do not perform as well as my peers on a course assignment; I am confident about my academic future even when I earn grades lower than my expectation. It also incorporated two items from the original SCOPE mindfulness subscale: I am able to focus on my current coursework without concentrating too much on graduation; I am able to be present in my current academic term without worrying about future academic experiences.

All items in the Focused Attention (factor three) contained six items. Four items from the original SCOPE mindfulness subscale: I am able to block out distractions while reading assigned course material; While listening to course lectures I do not engage in off task activities, I am able to focus on one academic task at a time; After the course concludes, I find it easy to remember what I have learned. Additionally, it included two items from the original SCOPE listening competency subscale: In class I am able to focus when the course content does not interest me; If called upon in class, I am able to repeat the last words of my instructor's lecture.

All items in the Establish Support (factor four) contained three items. One included an item from the original SCOPE mindfulness subscale: Each semester I make my class assignments my academic priority. Also, it comprised two items from the original SCOPE listening competency subscale: I recognize how my statements may affect someone's feelings during class discussions; I demonstrate support for my peers when they are conducting class presentations.

All items in Listen without Bias (factor five) contained three items. One included an item from the original SCOPE self-compassion subscale: I have focused on positive past academic experiences during my academic journey. As well as two items from the original SCOPE listening competency subscale: In class I pay attention to my instructors non-verbal behaviors; I am aware of my biases when participating in course discussions.

All items in Kindness toward Self (factor sixth) contained four items. One included an item from the original SCOPE mindfulness subscale: When faced with challenging course material I try to keep my emotions in balance. It also included three items from the original SCOPE self-compassion subscale: I intentionally take care of my physical, mental, and emotional health when I am struggling in a course; I remind myself that others may also be experiencing the same feelings when I am struggling with course material; I am patient with myself when I am trying to learn a difficult subject.

All items in Question for Understanding (factor seven) contained three items. One included an item from the original SCOPE self-compassion subscale: In class when I ask a clarifying question, I believe my peers may have the same questions. It also incorporated two items from the original SCOPE listening competency subscale: When I

am listening to my peers, I ask questions to better understand their point of view; I am able to support my peers when they need help on challenging assignments.

All items in Nonjudgmental Understanding (factor eight) contained three items. One included an item from the original SCOPE self-compassion subscale: I care about how my education will contribute to the common good. Additionally, the other two items from the original SCOPE mindfulness subscale: I focus on learning course content rather than my grade, I approach course lectures with curiosity and openness (See Table 12).

Table 12

*Revised SCOPE Model*

Subscale and item	Variable
Awareness of Feelings	
Item 4	I am accepting of my mistakes.
Item 23	I welcome constructive feedback when I am collaborating with my peers.
Item 22	I am open to viewpoints that are opposite to my own.
Item 5	I am patient with myself when I do not understand something the first time new information is presented.
Accept Disappointment as Human Experience	
Item 18	I am able to focus on my current coursework without concentrating too much on graduation.
Item 7	I am hopeful about my course grade even when I do not perform as well as my peers on a course assignment.
Item 3	I am confident about my academic future even when I earn grades lower than my expectation.
Item 17	I am able to be present in my current academic term without worrying about future academic experiences.
Focused Attention	
Item 29	In class I am able to focus even when the course content does not interest me.
Item 19	I am able to block out distractions while reading assigned course material.
Item 11	While listening to course lectures I do not engage in off task activities.
Item 20	I am able to focus on one academic task at a time.
Item 14	After the course concludes, I find it easy to remember what I have learned.
Item 30	If called upon in class, I am able to repeat the last words of my instructor's lecture.
Establish Support	
Item 21	I recognize how my statements may affect someone's feelings during class discussions.
Item 25	I demonstrate support for my peers when they are conducting class presentations.
Item 13	Each semester I make my class assignments my academic priority.
Listen Without Bias	
Item 27	In class I pay attention to my instructors' nonverbal behaviors.
Item 8	I have focused on positive past academic experiences during my academic journey.
Item 26	I am aware of my biases when participating in course discussions.
Kindness toward Self	
Item 1	I intentionally take care of my physical, mental, and emotional health when I am struggling in a course.
Item 6	I remind myself that others may also be experiencing the same feelings when I am struggling with course material.
Item 10	I am patient with myself when I am trying to learn a difficult subject.
Item 16	When faced with challenging course material I try to keep my emotions in balance.
Question for Understanding	
Item 28	When I am listening to my peers, I ask questions to better understand their point of view.
Item 2	In class when I ask a clarifying question, I believe my peers may have the same question.
Item 24	I am able to support my peers when they need help on challenging assignments.
Nonjudgmental Understanding	
Item 12	I focus on learning course content rather than my grade.
Item 9	I care about how my education will contribute to the common good.
Item 15	I approach course lectures with curiosity and openness.

As indicated in the literature review (See Chapter 2), the subconstructs are inter-related and together comprise the variable, CP. By examining all items that most strongly exemplify each factor, the items with the highest loadings were considered when interpreting the nature of each factor in question (DeVellis, 2012). The original three subconstructs were deconstructed and components of its definition (See Chapter 1) were used to name the latent variables that emerged from the EFA. Thus, CP is a multifaceted and inter-related concept that may need a broader definition specific to the eight factors that emerged from the EFA.

### **Final Scale Development**

The final scale development left the SCOPE with 30 items, with a total score range of 30 to 150. Based on the revised scale, 253 participants had a mean score of 115.27, with a standard deviation of 11.826, and a mode of 110, a median of 115, and a range of 71–150. A score of 109 on the SCOPE placed an individual in the 25th percentile; a score of 115 placed an individual in the 50th percentile; and a score of 122 placed an individual in the 75th percentile. Therefore, respondents who scored below 108 may be considered as having lower CP, and respondents who scored at 122 or above may be considered as having higher CP. The revised factor structure of the SCOPE was examined for temporal stability and internal consistency. The following section will explain the statistical results specific to each area.

### **Reliability**

Internal consistency is the degree to which the items in a scale are related to one another (DeVellis, 2012). A scale with strong internal consistency includes items that are strongly correlated with one another, which implies that the instrument is measuring the

same construct. A scale with weak internal consistency contains items that are not correlated to one another. The lack of correlation indicates measurement of an array of latent variables in place of the stated constructs. The Cronbach's alpha technique was used to assess internal consistency for the SCOPE and each of the factors within the SCOPE that emerged from EFA. Both a Pearson's  $r$  and Spearman's rho correlations were used to assess temporal stability. Lastly, a dependent  $t$ -test was used to determine mean difference and standard deviation values.

**Internal consistency.** The internal consistency of the SCOPE was examined with the final 30 items. The Cronbach's alpha of the SCOPE ( $N = 253$ ) was 0.865. The result indicated that the SCOPE possessed acceptable and strong internal consistency. The internal consistency of the eight factors was also examined (See Table 13). Three factor Cronbach's alphas reflected undesirable but minimally acceptable results and five factor Cronbach's alphas indicated unacceptable results. The Cronbach's alpha for the overall scale possessed acceptable and strong internal consistency at 0.865. However, the low number of scale items per factor may have influenced the low internal consistency for individual factors.

Table 13

*Reliability for SCOPE Subscales*

Subscale	Items per scale	Cronbach's alpha
Awareness of Feelings	4	0.673
Accept Disappointment as Human Experience	4	0.644
Focused Attention	6	0.685
Establish Support	3	0.544
Listen Without Bias	3	0.292
Kindness Toward Self	4	0.596
Question for Understanding	3	0.427
Nonjudgmental Understanding	3	0.424

**Temporal stability.** The temporal stability of the SCOPE was calculated on the final 30 items, with a group of 27 graduate students in education at two different points in time over a two-week period. The demographics of the students are described in Table 7. The total of the participants between the first administration and the second administration were compared with a Pearson's  $r$  and a Spearman's rho correlation for thorough analyses of temporal stability. DeVellis (2012) has recommended a correlation of 0.6 or above for strong temporal stability for self-report scale development.

The total scores of the participants between the first administration and the second administration (two weeks later) of the SCOPE were compared with a Pearson's  $r$  ( $r = 0.870$ ) and with a Spearman's rho ( $p < 0.852$ ) correlation for temporal stability. Both Pearson's  $r$  and Spearman's rho correlations reflected strong and acceptable temporal stability. Temporal stability between items of the first administration and the second administration were examined as well (See Table 14).

Table 14

*Temporal Stability Item Correlations*

Number	Item	Pearson's Correlation between first administration and second administration (N = 27)	Spearman's rho Correlation between first administration and second administration (N = 27)	>0.3
1	I intentionally take care of my physical, mental, and emotional health when I am struggling in a course	.443	.454	Yes
2	While listening to course lectures I do not engage in off task activities	.754	.765	Yes
3	I recognize how my statements may affect someone's feelings during class discussion	.635	.415	Yes
4	In class when I ask a clarifying question, I believe my peers may have the same question	.432	.449	Yes
5	I focus on learning course content rather than my grade	.502	.460	Yes
6	I am open to viewpoints that are opposite to my own	.747	.738	Yes
7	I am confident about my academic future even when I earn grades lower than my expectation	.709	.671	Yes
8	Each semester I make my class assignments my academic priority	.624	.640	Yes
9	I welcome constructive feedback when I am collaborating with my peers	.695	.536	Yes
10	I am accepting of my mistakes	.362	.239	No
11	After the course concludes, I find it easy to remember what I have learned	.482	.439	Yes
12	I am able to support my peers when they need help on challenging assignments	.539	.520	Yes
13	I am patient with myself when I do not understand something the first time new information is presented	.789	.722	Yes
14	I approach course lectures with curiosity and openness	.662	.646	Yes

Number	Item	Pearson's Correlation between first administration and second administration (N = 27)	Spearman's rho Correlation between first administration and second administration (N = 27)	>0.3
15	I demonstrate support for my peers when they are conducting class presentations	.400	.384	Yes
16	I remind myself that others may also be experiencing the same feelings when I am struggling with course material	.575	.415	Yes
17	When faced with challenging course material I try to keep my emotions in balance	.417	.439	Yes
18	I am aware of my biases when participating in course discussions	.567	.396	Yes
19	I am hopeful about my course grade even when I do not perform as well as my peers on a course assignment	.666	.654	Yes
20	I am able to be present in my current academic term without worrying about future academic experiences	.492	.521	Yes
21	In class I pay attention to my instructors non-verbal behaviors	.297	.487	No
22	I have focused on positive past academic experiences during my academic journey	.756	.725	Yes
23	I am able to focus on my current coursework without concentrating too much on graduation	.577	.522	Yes
24	When I am listening to my peers, I ask questions to better understand their point of view	.278	.292	No
25	I care about how my education will contribute to the common good	.803	.762	Yes
26	I am able to block out distractions while reading assigned course material	.651	.632	Yes
27	In class I am able to focus even when the course content does not interest me	.630	.586	Yes
28	I am patient with myself when I am trying to learn a difficult subject	.813	.747	Yes
29	I am able to focus on one academic task at a time	.607	.542	Yes
30	If called upon in class, I am able to repeat the last words of my instructor's lecture	.579	.660	Yes

Using the Spearman's rho correlation for nonparametric data, any items that were correlated below a 0.3 were questioned further and examined in the following areas: (a) item wording may be weak and influence different responses over time, and/or (b) item may not be temporally stable for consistent measure. Two items with a correlation under 0.3 between the two administrations were considered for extraction: (a) I am accepting of my mistakes, and (c) When I am listening to my peers, I ask questions to better understand their point of view. After further investigation, the researcher decided to include both items. A meaningful interpretation of the eight-factor structure model called for the inclusion of the two items with low temporal stability to establish a theoretical sound factor structure. Lastly, using the *t*-test, a nonsignificant difference between the first SCOPE administration and the second SCOPE administration was calculated at 0.755, which indicates that the mean difference remains stable (See Table 15).

Table 15

*Means, Mean Difference, and Standard Deviations for Overall SCOPE*

Scale	Mean	Mean difference	Standard deviation
Time 1	3.7951	.04938	.47714
Time 2	3.7457	.04938	.52876

### Chapter Summary

Phase Two of this study resulted in a 30 item scale that contained eight factors, each theoretically matching specific action items related to the three subconstructs in the literature (i.e., listening competency, mindfulness, self-compassion), together accounting for 55.269% of the variance explained by the entire SCOPE factor model. The following chapter is a calibrated discussion of the results of Phases One and Two, future implications, suggestions for future research, and the limitations of this study.

## **Chapter Five**

### **Discussion**

The purpose of this study was to create the SCOPE by modeling CP's subconstructs using the EI theoretical framework to test its reliability and validity. This investigation involved two phases. Phase One applied the expert panel technique, consisting of six panelists with expertise in assessment, scale development, and CP. Phase Two applied quantitative methods such as EFA and CFA to assess the factor structure of the SCOPE. The assumption for Phase Two was that three SCOPE factors would emerge and the factors would theoretically mirror the subconstructs of CP. The following is a discussion of the results and implications of this study.

### **Summary of Study**

The EI theoretical framework supported CP in the literature. A review of the literature indicated a lack of empirically supported research on CP specific to quantitative methodologies. The literature also indicated the need for further investigation of CP to better understand the area of study. With the intention to address this gap in the literature, the development of a scale to assess CP was the purpose of this study.

The SCOPE was piloted with 253 graduate students in education who attended an NCATE-accredited institution in the State of California. By means of a factor analysis, items with low extractions were eliminated, and CFAs were compared to the EFA. Using Spearman's rho estimates, items with low temporal stability were examined further. The results of the study revealed a revised SCOPE factor structure with minimally acceptable construct validity and strong reliability.

This quantitative study investigated the following research questions:

1. To what extent does the SCOPE instrument demonstrate content and construct validity?
2. What is the factor structure of the SCOPE instrument?
3. To what extent does the SCOPE instrument demonstrate internal consistency and temporal stability?

## **Discussion of the Findings**

### **Content Validity**

The SCOPE was reviewed by a panel of six experts in areas of assessment, scale development, and CP. Three panelists were experts in CP, and three panelists were knowledgeable in assessment and scale development (See Chapter 3). All 30 items were adjusted and/or deleted (See Chapter 4) and resulted in the final 30 item measure used in Phase Two of the study (See Table 5). Although an expert panel was used for this study, recommendations include further investigation in operationalization of key terms and the item pool review due to the interrelated nature of the construct. To date, universally agreed-upon definitions are lacking specific to subconstructs (i.e., listening competency, mindfulness, self-compassion) and CP, furthermore empirically supported evidence is needed.

The eight factors were named: (a) Awareness of Feelings, (b) Accept Disappointment as Human Experience, (c) Focused Attention, (d) Establish Support, (e) Listen Without Bias, (f) Kindness Toward Self, (g) Question for Understanding, and (h) Nonjudgmental Understanding. Three factors were originally anticipated in the following areas: (a) Listening Competency, (b) Mindfulness, and (c) Self-Compassion. All original

constructs were deconstructed and components of its definition were explained in the eight-factor structure. Individual items represented in the definitions provided in Chapter 1 accounted for the unexpected eight-factor model. However, additional validation is needed with respect to the factor naming process. The researcher, without consultation of an expert panel, named the factor structure. That said, potential for personal bias may have impacted the results of the factor validation process.

### **Construct Validity**

The eight-model factor was accepted for the SCOPE, as it explained 55.269% of the variance all with eigenvalues of above one. According to the literature, 60% of the variance should be accounted for in the factor structure. In total, the eight-factor model explained 55.269% of the variance. This estimate is a minimally acceptable factor structure to explain the variance within the SCOPE. Further investigation is recommended to strengthen construct validity.

The three subconstructs within the SCOPE and the items of which they are comprised were created from their operational definitions in the research literature (See Chapter 1) with consideration to their application in the educational setting. The first step in validating the SCOPE was to factor analyze the original 30 item instrument using an EFA and compare the results to CFA models to obtain the most psychometrically appropriate properties. One of the main objectives of any data reduction technique was to reduce the number of variables in an instrument while maintaining an appropriate amount of information (Comrey & Lee, 1992). During the CFA, to lessen the number of items in the SCOPE, all items with factor loadings less than .50, .40, and .30 were considered.

However, the EFA eight-factor model, consisting of all 30 items, resulted in the most psychometrically suitable and meaningful factor structure (See Table 8).

The eight-model correlations between factors were investigated. Individual factors were not correlated or weakly correlated with one another. In analyzing the correlations between factors closely, results support how the construct of CP may not relate as closely to the subconstructs (i.e., listening competency, mindfulness, and self-compassion) per the literature base (Barbezat & Bush, 2014). Further investigation with consideration to criterion-related validity is recommended to provide sufficient evidence in support of the inter-relationship among subconstructs. Additionally, future research may consider investigating a one-factor scale to better understand the construct of CP.

### **Internal Consistency**

The Cronbach's alpha technique was used to assess internal consistency for the SCOPE and each of the factors within the SCOPE that emerged from the EFA (See Table 8). The Cronbach's alpha of the revised SCOPE ( $N = 253$ ) was 0.865. Awareness of Feelings had an internal consistency of 0.673; Accept Disappointment as Human Experience had 0.644; Focused Attention had 0.685; Establish Support had 0.544; Listen Without Bias had 0.292; Kindness Toward Self had 0.596; Question for Understanding had 0.427; and Nonjudgmental Understanding had 0.424. Two factor Cronbach's alphas reflected unacceptable results, and six factor Cronbach's alpha showed undesirable but minimally acceptable results (See Table 13). The overall internal consistency indicated the SCOPE possessed an acceptable and strong internal consistency, however the individual factors possessed weak and/or unacceptable internal consistency. The overall internal consistency results indicated the SCOPE might have potential for utility.

### **Temporal Stability**

The temporal stability of the SCOPE was estimated on the final 30 items with a group of 27 graduate students in education. The first administration was followed by a second administration two weeks later. Pearson's  $r$  ( $r = 0.870$ ) and a Spearman's rho ( $p < 0.852$ ) correlations were used between the first administration and the second for the SCOPE instrument, which indicated strong temporal stability results. Lastly, a  $t$ -test was utilized to assess the mean difference over time. A nonsignificant difference was found, which concluded that the mean difference remained consistent. A consistent mean difference estimate indicates no difference in the population means of the SCOPE, which indicates the SCOPE possesses temporal stability.

### **Final Scale Development**

The SCOPE scores range from 71 to 150, where a score of 109 or below placed an individual in the 25<sup>th</sup> percentile and a score above 122 placed an individual in the 75<sup>th</sup> percentile. The breath of scores resulted in restricted variability, as the scores were not evenly spread out and positively skewed with higher scores. Future research may consider investigating a more diverse participant population to broaden the range of responses. For instance, the study self-selected participants in the education discipline, which may have influenced the overall breath of the SCOPE score responses.

### **Limitations**

Whereas the findings indicate that the SCOPE has a theoretically validated factor structure that aligns with the subconstructs reflected in the literature (See Chapter 1), there are several limitations to this exploratory study. The first limitation pertains to a population of convenience when norming a new instrument. Similar to most studies that

utilize self-report measurement scales, the second limitation pertains to participant tendencies to report socially desirable information on self-report instruments. The third limitation includes a minimally acceptable variance within the accepted EFA. The fourth limitation calls for a larger and more diverse temporal stability population for comparable results. The fifth limitation is the lack of criterion-related validity and the sixth refers to clearly defined criteria given to participants prior to participation in the study.

This study recruited a population of convenience that resulted in more females (82.2%) than males, a large sub-sample that self-identified as European American (38.3%), and a large sub-sample that self-identified as attending a private university/college (68%). The study targeted graduate students in education attending an NCATE-accredited institution in the State of California. This population may have also affected the sample as it concentrated solely on the West Coast. When establishing preliminary norms, it is suggested to recruit a representative population to ensure accurate results. The characteristics from this study are not preferred when norming a new instrument. Further examination is suggested specific to sample a more diverse population for future studies of the SCOPE.

Similar to most studies that rely on self-reported data, the second limitation relates to participants' predispositions to respond in a socially desirable manner on self-reported measures such as the SCOPE (Fisher & Katz, 2000). Potential extraneous variables (i.e., self-expectations) may impact how respondents answered the scale items. However, in order to minimize this threat, all potential participants maintained anonymity. Additionally, for the temporal stability group ( $N = 27$ ), confidentiality was assured. Having their names for the in-class administration was necessary for tracking correlations

between the two administrations and was the sole reason why anonymity could not be maintained. Once the in-class administrations were completed, all names were deleted and replaced with a code. Additionally, response format (i.e., paper administration in classrooms) could produce an external confound (i.e., peer pressure) to complete the instrument. To minimize this variable, there was no time constraint in completing the paper-based SCOPE.

The third limitation is specific to the amount of variance accounted for in the accepted EFA. The literature recommends a minimum of 60% of the variance for a factor structure (Mujis, 2011). However, 55.269% of the variance was accounted for that best conveyed the structure with adequate reliability. Additionally, item pool selection is needed to increase the variance percentage for model fit—in parallel, such estimates should complement acceptable reliability and a meaningful factor structure. Further investigation is needed to increase the number of items to adequately cover the potential subconstructs that emerged from the EFA.

Although temporal stability results were acceptable and strong, the fourth limitation calls for further research with a larger sample population to strengthen temporal stability prior to the use of the SCOPE. The SCOPE ( $N = 253$ ) was strong ( $r = 0.870$ ) ( $p < 0.852$ ) and acceptable. However, it is recommended that researchers investigate temporal stability with a larger population for comparable results. A population of convenience that included 27 graduate students attending the same private university may have affected the scores. To develop a strong measure of the SCOPE, it is suggested that further research be conducted to increase support in this area.

The fifth limitation pertains to the lack of criterion-related validity. The SCOPE did not include a validated criterion (i.e., another scale) to indicate the degree to which the SCOPE predicted the stated construct. It is recommended that researchers explore criterion-related validity in the areas of concurrent and divergent validity. Concurrent validity may be investigated by concurrently measuring CP with similar instruments (i.e., mindfulness scale). Divergent validity may be examined by studying CP with scales opposite in meaning (e.g., impulsive behavior scale). These criterion-related validities were not explored in this study due to limited access and resources for similar scales and administration rights.

The final limitation refers to one of the criteria given to participants prior to participation in the study. When the SCOPE was sent to academic program directors, it was stated that participants who chose to take part in the study should be proficient in the English language. This requirement was shared because the SCOPE was written in English and no substitution scales in other languages were developed at this stage. After the SCOPE was launched, one academic program director inquired about the levels of English proficiency to help students determine if they maintained the appropriate criteria to partake in the study. The term *English proficiency* was not defined prior to administration. The researcher assumed that participants were proficient in English due to their current academic standing in a graduate program and deemed this status as adequate. However, to maintain clear and concise instructions to limit external biases, it is suggested that future research define levels of English proficiency if referenced as a point of participant criteria.

## **Future Implications**

The preliminary norms from this study indicate that the SCOPE provided strong reliability. Further inquiry specific to the operationalization of CP is recommended for future construct validity research. Research on the SCOPE should concentrate on further norming of the instrument. Practical implications include establishing pedagogical and programmatic opportunities in areas of CP. Future directions will inform the field of study and further our understanding of the construct.

## **Research Directions**

According to the California Commission on Teacher Credentialing (CTC), over the past five years, there has been a decline in new teaching credentials issued from 20,032 in 2009–2010 to 14,810 in 2013–2014, representing a 26% decrease that may negatively impact the educator pipeline (Suckow & Purdue, 2015). Given this context, if there is to be an increase in the teaching profession pipeline, it must begin by ensuring that teachers receive high quality preparation in areas of content and professional disposition. Similarly, the new national Council of Accreditation for Educator Preparation (2016) for schools/colleges of education require educator preparation programs to document evidence in support of disposition and professional responsibility. That said, results from CP research might inform models of educator preparation programs specific to disposition. The next section will discuss how CP research may focus on expanding the norming process of the SCOPE by diversifying the sample population and include criterion-related validity by including additional scales for comparison results.

Specific participant characteristics may also be examined in this area (i.e., female responses versus male responses). Additionally, research related to the relationship of the SCOPE in other areas of study (i.e., medicine) may also be considered for future norming of the scale. Comparison results between education participants and other disciplines may be examined for similarities and differences. Such results may draw attention on subscale areas and how it may inform each field of study. For example, medical students entering the medical profession may consider how establishing support, listening without bias, and question for understanding impacts their role in the process of diagnosis during medical school training.

It is also important to investigate an adapted version of the SCOPE to provide additional information useful in practice and instruction (i.e., educator preparation professors, field supervisors, master teachers). Such results might be traced back to the existing SCOPE to determine discrepancies or consistencies in self-reported behavior. Additional instruments in this area would also provide future researchers a method to account for social desirability, as the construct would be examined by varying vantage points to minimize external biases. For example, a master teacher may complete an adapted version of the SCOPE with consideration to a student teacher in the field. Researchers may then compare results from the self-reported SCOPE to the adapted scale for similarities and differences. Additional information would guide practice in subscale areas (i.e., non-judgmental understanding) to enhance classroom instruction.

Findings from a strongly normed instrument may also be used in future experimental designs to detect effective socioemotional professional training programs useful for professionals dealing with challenging and fluid environments. Professional

development may be improved with the appropriate evaluations and modifications to support professionals competent in content and proficient in affect. For example, in the teaching profession, “teacher burnout” is a common phrase used to describe mental and/or physical exhaustion resulting from stressors. The results of the SCOPE might be used as a proactive measure to potentially guide professional development programs in targeted subscale areas (i.e., awareness of feelings, accept disappointment as human experience) to mediate and diffuse burnout.

### **Practical Suggestions**

Practical suggestions help refine current curriculum and training programs in support of a more holistic approach to education. Additionally, establishing criteria for CP might also compliment the admissions processes to recruit well-rounded students in content and affect. CP may also attend to emotional competencies that may benefit current practitioners, current K–12 students in education, and professionals in varying fields.

Pedagogical strategies may be incorporated through a holistic approach to education that promotes academic excellence and personal well-being. A holistic understanding of the student as an integrated, whole person should be reinforced through a curriculum that engages cognitive and emotional competencies. It would be beneficial if faculty in higher education focus on the entire spectrum of needs to promote a successful and engaging student experience. The recognition and development of CP may promote a positive learning trajectory, more just and compassionate students, and a skill-set useful for real world intervention that meets the needs of diverse populations in the 21st century (Barbezat & Bush, 2014; Palmer, 2009; Rendon, 2009). Moreover, it may be

helpful for faculty in higher education to understand the range of student needs and to guide their department in prioritizing CP to aid in preparing students to enter the world of commerce postgraduation. For example, students may benefit from an elective course concentrated on subscale areas (i.e., establish support, listening without bias, question for understanding, and nonjudgmental understanding) to practice strategies that may enhance skill-sets in their field of study. For instance, if a student experienced an elective course such as this, the same student may gain practical communication strategies to guide interactions as a future administrator in relation to external stakeholders, teachers, and district level administration.

Professional disposition is gaining importance in candidate consideration and applicant evaluation within graduate programs (i.e., educator preparation programs, medical school programs, law school programs, business administration programs), which further supports how cognitive traits are vital but not adequate for optimal student success. To date, cognitive traits are prominent within the admissions process for graduate programs (i.e., grade point average). Academic program directors may consider that students who pass the first applicant screening for admissions have been approved for desired academic prerequisites, and the second applicant screening may potentially focus on dispositional characteristics to ensure well-rounded applicants. The eight subscale areas that emerged from the EFA may guide interview questions during applicant interviews. Academic program directors may consider composing clinically structured classes whereby each room requires applicants to discuss scenario-based issues specific to their discipline as part of the admissions screening process. For example, in educator preparation programs, students may experience behavioral-based hypothetical

scenarios on parent engagement, community outreach, and collaborative efforts with colleagues. The purpose of this type of interviewing is to listen for complementary characteristics to the field of study and not to assess for content-specific or textbook answers. Additionally, a more holistic interview process offers an opportunity to gain additional applicant information specific to disposition as required by the new national Council of Accreditation for Educator Preparation (2016) for schools/colleges of education nationally. For example, if an applicant shares their dislike for children as they are interviewing for an elementary teaching credential program, the interviewer may wish to inquire further about their interest and/or fit prior to any possible acceptance in the program.

The eight subscale areas that emerged from the EFA may guide practical implications in the area of professional development program design. The eight factors may inform individual lesson plans or curriculum to help support current educators in the field with specific behavioral skills to decrease stress, anxiety, and professional burnout. Practitioners may consider hosting focus groups to identify priority criterion in their field, in turn, to develop innovative professional development opportunities to enhance affective states that will then positively influence the populations they serve (i.e., clients, K–12 students, graduate students). For example, items in the listening competency factor (“I demonstrate support for my peers when they are conducting class presentations”; “I recognize how my statements may affect someone’s feelings during class discussions”; “I welcome constructive feedback when I am collaborating with my peers”) may be taught by an interactive lesson where individuals participate in active listening exercises while their peers observe and provide constructive feedback in real time. The same exercise

may also be conducted virtually through the use of video recordings. An individual may record a listening exercise at home or work and upload the taping to an online platform where peers may view the video and provide constructive feedback. The workshop may aid practitioners in understanding nonverbal and unintentional behaviors to gain awareness and enhance their listening competency. This exercise is not educator specific and may benefit other professionals in varying fields as well as current students in higher education. Student teachers entering the field as working professionals may also serve as role models for K-12 students and extend their understanding of CP as well. This may benefit K-12 students in areas of conflict resolution and peer collaboration.

The SCOPE necessitates further validation before any of the aforementioned practices and suggestions are used. The measure requires further investigation prior to utility to better understand the nature of the construct and the effectiveness of the instrument.

### **Conclusion**

The final eight-factor model evidenced that the SCOPE measures its intended construct at a minimally acceptable level and the reliability evidenced measurement of its intended construct at a strong level. A review of the literature revealed no empirical study specific to scale construction related to CP. The SCOPE may further the field of CP in quantitative research related to scale development. The SCOPE was piloted with the intention of contributing to this line of research and suggesting practical initiatives within the area of CP. The SCOPE possesses strong internal consistency, strong temporal stability, and a minimally acceptable eight-factor structure model. Additional research is recommended to enhance the instrument for future benefit to practice.

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## Appendix A

### Item Extractions above .5

Number	Item	Extraction	>0.5
10	I am accepting of my mistakes	.827	Yes
9	I welcome constructive feedback when I am collaborating with my peers	.608	Yes
6	I am open to viewpoints that are opposite to my own	.549	Yes
13	I am patient with myself when I do not understand something the first time new information is presented	.413	No
23	I am able to focus on my current coursework without concentrating too much on graduation	-.678	No
19	I am hopeful about my course grade even when I do not perform as well as my peers on a course assignment	-.651	No
7	I am confident about my academic future even when I earn grades lower than my expectation	-.599	No
20	I am able to be present in my current academic term without worrying about future academic experiences	-.456	No
27	In class I am able to focus even when the course content does not interest me	-.729	No
26	I am able to block out distractions while reading assigned course material	-.697	No
2	While listening to course lectures I do not engage in off task activities	-.578	No
29	I am able to focus on one academic task at a time	-.527	No
11	After the course concludes, I find it easy to remember what I have learned	-.450	No
30	If called upon in class, I am able to repeat the last words of my instructor's lecture	-.380	No
3	I recognize how my statements may affect someone's feelings during class discussion	.648	Yes

Item 15	I demonstrate support for my peers when they are conducting class presentations	.596	Yes
Item 8	Each semester I make my class assignments my academic priority	.540	Yes
Item 21	In class I pay attention to my instructors non-verbal behaviors	.690	Yes
Item 22	I have focused on positive past academic experiences during my academic journey	.509	Yes
Item 18	I am aware of my biases when participating in course discussions	-.501	No
Item 1	I intentionally take care of my physical, mental, and emotional health when I am struggling in a course	.722	Yes
Item 16	I remind myself that others may also be experiencing the same feelings when I am struggling with course material	.573	Yes
Item 28	I am patient with myself when I am trying to learn a difficult subject	.448	No
Item 17	When faced with challenging course material I try to keep my emotions in balance	.356	No
Item 24	When I am listening to my peers, I ask questions to better understand their point of view	.753	Yes
Item 4	In class when I ask a clarifying question, I believe my peers may have the same question	.448	No
Item 12	I am able to support my peers when they need help on challenging assignments	.393	No
Item 5	I focus on learning course content rather than my grade	.644	Yes
Item 25	I care about how my education will contribute to the common good	.449	No
Item 14	I approach course lectures with curiosity and openness	.418	No

## Appendix B

### Item Extractions above .4

Number	Item	Extraction	>0.4
10	I am accepting of my mistakes	.827	Yes
9	I welcome constructive feedback when I am collaborating with my peers	.608	Yes
6	I am open to viewpoints that are opposite to my own	.549	Yes
13	I am patient with myself when I do not understand something the first time new information is presented	.413	Yes
23	I am able to focus on my current coursework without concentrating too much on graduation	-.678	No
19	I am hopeful about my course grade even when I do not perform as well as my peers on a course assignment	-.651	No
7	I am confident about my academic future even when I earn grades lower than my expectation	-.599	No
20	I am able to be present in my current academic term without worrying about future academic experiences	-.456	No
27	In class I am able to focus even when the course content does not interest me	-.729	No
26	I am able to block out distractions while reading assigned course material	-.697	No
2	While listening to course lectures I do not engage in off task activities	-.578	No
29	I am able to focus on one academic task at a time	-.527	No
11	After the course concludes, I find it easy to remember what I have learned	-.450	No
30	If called upon in class, I am able to repeat the last words of my instructor's lecture	-.380	No

3	I recognize how my statements may affect someone's feelings during class discussion	.648	Yes
15	I demonstrate support for my peers when they are conducting class presentations	.596	Yes
8	Each semester I make my class assignments my academic priority	.540	Yes
21	In class I pay attention to my instructors non-verbal behaviors	.690	Yes
22	I have focused on positive past academic experiences during my academic journey	.509	Yes
18	I am aware of my biases when participating in course discussions	-.501	No
1	I intentionally take care of my physical, mental, and emotional health when I am struggling in a course	.722	Yes
16	I remind myself that others may also be experiencing the same feelings when I am struggling with course material	.573	Yes
28	I am patient with myself when I am trying to learn a difficult subject	.448	Yes
17	When faced with challenging course material I try to keep my emotions in balance	.356	No
24	When I am listening to my peers, I ask questions to better understand their point of view	.753	Yes
4	In class when I ask a clarifying question, I believe my peers may have the same question	.448	Yes
12	I am able to support my peers when they need help on challenging assignments	.393	No
5	I focus on learning course content rather than my grade	.644	Yes
25	I care about how m education will contribute to the common good	.449	Yes
14	I approach course lectures with curiosity and openness	.418	Yes

## Appendix C

### Item Extractions above .3

Number	Item	Extraction	>0.3
10	I am accepting of my mistakes	.827	Yes
9	I welcome constructive feedback when I am collaborating with my peers	.608	Yes
6	I am open to viewpoints that are opposite to my own	.549	Yes
13	I am patient with myself when I do not understand something the first time new information is presented	.413	Yes
23	I am able to focus on my current coursework without concentrating too much on graduation	-.678	No
19	I am hopeful about my course grade even when I do not perform as well as my peers on a course assignment	-.651	No
7	I am confident about my academic future even when I earn grades lower than my expectation	-.599	No
20	I am able to be present in my current academic term without worrying about future academic experiences	-.456	No
27	In class I am able to focus even when the course content does not interest me	-.729	No
26	I am able to block out distractions while reading assigned course material	-.697	No
2	While listening to course lectures I do not engage in off task activities	-.578	No
29	I am able to focus on one academic task at a time	-.527	No
11	After the course concludes, I find it easy to remember what I have learned	-.450	No
30	If called upon in class, I am able to repeat the last words of my instructor's lecture	-.380	No

3	I recognize how my statements may affect someone's feelings during class discussion	.648	Yes
15	I demonstrate support for my peers when they are conducting class presentations	.596	Yes
8	Each semester I make my class assignments my academic priority	.540	Yes
21	In class I pay attention to my instructors non-verbal behaviors	.690	Yes
22	I have focused on positive past academic experiences during my academic journey	.509	Yes
18	I am aware of my biases when participating in course discussions	-.501	No
1	I intentionally take care of my physical, mental, and emotional health when I am struggling in a course	.722	Yes
16	I remind myself that others may also be experiencing the same feelings when I am struggling with course material	.573	Yes
28	I am patient with myself when I am trying to learn a difficult subject	.448	Yes
17	When faced with challenging course material I try to keep my emotions in balance	.356	Yes
24	When I am listening to my peers, I ask questions to better understand their point of view	.753	Yes
4	In class when I ask a clarifying question, I believe my peers may have the same question	.448	Yes
12	I am able to support my peers when they need help on challenging assignments	.393	Yes
5	I focus on learning course content rather than my grade	.644	Yes
25	I care about how my education will contribute to the common good	.449	Yes
14	I approach course lectures with curiosity and openness	.418	Yes

## **Appendix D**

### **National Council for Accreditation of Teacher Education**

#### **(NCATE) California Programs**

- 1 Argosy University
- 2 Azusa Pacific University
- 3 California Lutheran University
- 4 California Polytechnic State University
- 5 California State University at Chico
- 6 California State University East Bay
- 7 California State University San Marcos
- 8 California State University, Bakersfield
- 9 California State University, Dominguez Hills
- 10 California State University, Fresno
- 11 California State University, Fullerton
- 12 California State University, Long Beach
- 13 California State University, Los Angeles
- 14 California State University, Monterey Bay
- 15 California State University, Northridge
- 16 California State University, San Bernardino
- 17 California State University, Stanislaus
- 18 Loyola Marymount University
- 19 National University
- 20 Point Loma Nazarene University
- 21 San Diego State University
- 22 San Jose State University
- 23 Sonoma State University
- 24 Stanford University
- 25 University of La Verne
- 26 University of San Diego
- 27 University of Southern California
- 28 University of the Pacific

## **Appendix E**

### **Listening Competency Scale (LCS)**

(Mickelson & Welch, 2013, Wolvin & Cohen, 2012)

Each item is scored on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree) with a midpoint of 3 (neutral).

#### Discriminative Listening

1. I can easily identify someone's feelings when s/he is speaking to me.
2. I recognize when someone is not telling the truth.
3. I can correctly interpret someone's facial expression.
4. I can recognize when someone is withholding information from me.

#### Critical Listening

5. I express opinions that differ from what others express.
6. I critically evaluate the content of information that is presented to me.
7. I carefully assess information as it is being shared with me.
8. I give feedback to others to let them know what I think of their message.

#### Comprehensive Listening

9. I ask follow-up questions until I fully understand someone.
10. I correctly recall information a few minutes after I hear it.
11. I ask for additional information or explanation as needed.
12. I pay close attention to make sure I understand what is being communicated.

#### Appreciative Listening

13. I appreciate hearing another's point of view.
14. I enjoy listening to others.
15. I listen with an open mind to what others have to say.
16. I appreciate what others have to say.

#### Attending Behaviors

17. I maintain eye contact with someone while s/he is speaking.
18. I give someone my complete attention when s/he is speaking.
19. I maintain an attentive posture while someone is speaking.
20. I respond nonverbally to let someone know I am listening.

## Appendix F

### Self-Compassion Scale (SCS) (Neff, 2003)

Each item is scored on a 5-point Likert scale from 1 (almost never) to 5 (almost always) with a midpoint of 3 (neutral).

#### Self-Kindness Subscale

1. I try to be understanding and patient towards those aspects of my personality I don't like.
2. I'm kind to myself when I'm experiencing suffering
3. When I'm going through a very hard time, I give myself the caring and tenderness I need.
4. I'm tolerant of my own flaws and inadequacies.
5. I try to be loving towards myself when I'm feeling emotional pain.

#### Self-Judgment Subscale

6. When I see aspects of myself that I don't like, I get down on myself.
7. When times are really difficult, I tend to be tough on myself.
8. I can be a bit cold-hearted towards myself when I'm experiencing suffering.
9. I'm disapproving and judgmental about my own flaws and inadequacies.
10. I'm intolerant and impatient towards those aspects of my personality I don't like.

#### Common Humanity Subscale

11. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.
12. I try to see my failings as part of the human condition
13. When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am.
14. When things are going badly for me, I see the difficulties as part of life that everyone goes through.

#### Isolation Subscale

15. When I fail at something that's important to me I tend to feel alone in my failure.
16. When I think about my inadequacies it tends to make me feel more separate and cut off from the rest of the world.
17. When I'm feeling down I tend to feel like most other people are probably happier than I am.
18. When I'm really struggling I tend to feel like other people must be having an easier time of it.

#### Mindfulness Subscale

19. When something upsets me I try to keep my emotions in balance.
20. When I'm feeling down I try to approach my feelings with curiosity and openness.
21. When something painful happens I try to take a balanced view of the situation.
22. When I fail at something important to me I try to keep things in perspective.

Over-Identification Subscale

- 23. When something upsets me I get carried away with my feelings.
- 24. When I'm feeling down I tend to obsess and fixate on everything that's wrong.
- 25. When something painful happens I tend to blow the incident out of proportion.
- 26. When I fail at something important to me I become consumed by feelings of inadequacy.

## **Appendix G**

### **Mindful Attention Awareness Scale (MAAS)**

(Brown & Ryan, 2003)

Each item is scored on a 5-point Likert scale from 1 (almost always) to 6 (almost never).

1. I could be experiencing some emotion and not be conscious of it until some time later.
2. I break or spill things because of carelessness, not paying attention, or thinking of something else.
3. I find it difficult to stay focused on what is happening in the present.
4. I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.
5. I tend not to notice feelings of physical tension or discomfort until they really grab my attention.
6. I forget a person's name almost as soon as I've been told it for the first time.
7. It seems I am "running on automatic" without much awareness of what I'm doing.
8. I rush through activities without being really attentive to them.
9. I get so focused on the goal I want to achieve that I lose touch with what I am doing right now to get there.
10. I do jobs or tasks automatically, without being aware of what I'm doing.
11. I find myself listening to someone with one ear, doing something else at the same time.
12. I drive places on "automatic pilot" and then wonder why I went there.
13. I find myself preoccupied with the future or the past.
14. I find myself doing things without paying attention.
15. I snack without being aware that I'm eating.