Tactile Learning: Touch and Touch Self-Efficacy in College Dance Instruction

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Tactile Learning: Touch and Touch Self-Efficacy in College Dance Instruction

A Dissertation by

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Submitted in partial fulfillment of the requirements for the degree of

Doctor of Education in Organizational Leadership

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“Tactile Teaching” was not created in a vacuum and therefore my gratitude is extensive. It includes a lineage of researchers and artists working diligently before me and supporting me during this process. Thank you to Dr. Bryan Fuller for encouraging me in the continuation of his research, to Dr. Tamerin Capellino for her dedicated guidance and insight as my dissertation chair, and to my dissertation committee of stellar educators.

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A heartfelt thank you to my mother and father, Hilda and Charles Ray Jones, for their generous support throughout the years. They meaningfully live their lives, “touching” all those around them with their dedication, humanity, and a wicked sense of humor. Thank you to my husband for his continual support in my evolution. Thank you to my young daughter whose unsolicited hugs sustained me during long stretches of sitting, especially difficult for a dancer’s body. Little one, you are evidence that much good comes from touch both received and given.
ABSTRACT

Tactile Learning: Touch and Touch Self-Efficacy in College Dance Instruction

by Alyson J. Cartagena

**Purpose:** The purpose of this study was to (a) identify the level of touch self-efficacy (TSE) of college-level dance faculty as measured by the Touch Self-Efficacy (TSE) Scale, (b) explore the factors that influence the use of touch in dance instruction, and (c) describe the perceived benefits as reported by college-level dance faculty.

**Methodology:** In this mixed-methods approach, a sequential explanatory design was conducted in 2 separate phases of research. The first phase provided an opportunity to quantitatively investigate the levels of TSE in college-level dance faculty. The second phase qualitatively explored the factors influencing the use of touch in dance instruction.

**Findings:** College dance faculty members reported (a) student permission, (b) students’ receptiveness to tactile feedback, (c) responding to students’ needs, (d) pedagogical beliefs, (e) instinct, (f) familiarity with students, (g) failure of other teaching approaches, (h) courses taught, (i) intent, and (j) necessity due to the nature of dance as factors influencing their use of touch in instruction. College dance faculty members reported that touch (a) supports individual and group learning, (b) promotes successful epiphanies and transformations, (c) creates a positive learning environment, and (d) provides effective communication.

**Conclusions:** None of the variables, including age, gender, primary area of instruction, and previous formal training in the use of touch, had a significant effect on the TSE score. The study demonstrated the extensive use of touch in dance instruction and dance educators’ elevated TSE scores in comparison to previous studies.
Recommendations: Recommendations to advance this understanding include (a) study of TSE levels in other fields, (b) replication of the present study but with attention to the perceived benefits of touch as reported by college-level dance students, (c) replication of the present study with a target population of dance educators not teaching at the college level, (d) comparison of dance educators’ methods and touch techniques within different dance genres, (e) study of the role of self-touch as a pedagogical practice in dance instruction, (f) exploration of practices and best practices for securing permission to touch in dance instruction, and (g) further research to explore the academic practice of touch between students in dance instruction.
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CHAPTER I: INTRODUCTION

Touch is the first sense humans acquire (Chillot, 2013), yet the United States is not a sensorially aware or sensorially literate culture (Bannon & Holt, 2011). Born with senses and reflexes, the nervous system of an embryo, a baby, and later a child is wired to “speak” through the senses. However, as humans develop, other senses such as visual and auditory are praised due to their association with intelligence, as opposed to touch, which is instinctual (Montagu, 1971). Although, as Deane Juhan (1995) argued, tactile experience is just as central to people’s “thought processes as are language skills or categories of logic” (p. 371), it is generally ignored or avoided in formal education.

The U.S. educational system does not integrate the use of the senses in current practices (Bannon & Holt, 2011), yet it has been recommended that effective pedagogical strategies should address multiple learning styles through kinesthetic, visual, verbal, and spatial experiences (Daniels, 2007). Exploration of touch allows for an interdisciplinary approach (Manning, 2007), yet findings have suggested a lack of current discourse concerning its use (T. Jones & Glover, 2014) in education, specifically movement instruction.

Outside of education, the benefits of touch are well documented. Touch supports body-mind professionals including nurses and alternative therapists (Kramlich, 2014), wellness practitioners (Gavin, 2004), and dance/movement therapists (Devereaux & Loman, 2014). The use of touch in health care is of equal importance in the “classic ritual” between doctor and patient (Vergheese, 2011) and in developing practices such as healing touch, which adjusts energy flow vibrations (T. Dowd, Kolcaba, & Steiner, 2006).
As a component of nonverbal communication, touch goes beyond eye contact, physical proximity, gesturing, smiling, vocal expressiveness, and overall body movements (J. F. Andersen, 1986) to provide emotional and physical connections to others. Instances of touch afford opportunities for “relating, implying the prospect of closeness, tenderness, and intimacy” (Egert, 2013, p. 63). The simplest touch can provide a swift and direct message more brilliant than words (Fast, 1970).

There has been a call for change and reform in dance education (de Kuijper, 2013; Kipling Brown, 2014; Musil, 2010; Risner, 2010), including attention to developing “thinking” dancers and improvements in verbal instruction (de Kuijper, 2013). For transformation in dance education, the traditions must be analyzed to create a more purposeful and invigorating practice (Warburton, 2003). Neither the current practices nor best practices of employment of touch have been addressed.

The use of touch potentially holds positive benefits for students, including (a) improved learning through a multi-intelligence approach, (b) personalized attention in class, (c) nonverbal encouragement, and (d) individualized corrections. Touch may also create and improve connections between students and faculty, having “beneficial physiological consequences” for those touching and those being touched (Chillot, 2013, A Touch of Love section, para. 1). The negative implications may include (a) touch as a taboo (Brandstetter, Egert, & Zubarik, 2013; Nancy, 2013), (b) misleading touch, (c) misinterpreted touch, and (d) sexual harassment or display of power (P. A. Andersen, 1999; Eakins & Eakins, 1978; Guerrero, Andersen, & Afifi, 2007).

Touch is not necessarily the primary form of instruction in movement courses but is often used sparingly and at appropriate times. “Touch is an event” (Manning, 2007,
p. 141) where the involvement and embodied connection between material and person provides a “multidirectional interrelationship between person, form and transmission” (Bannon & Holt, 2011, p. 216). It shifts a visual art form such as dance from a gaze to a sensation (Brandstetter et al., 2013).

If touch is a language (Chillot, 2013), the question stands as to if it is a skill learned through modeling or taught to faculty movement instructors. If taught, further exploration of touch training and the factors guiding faculty members’ decisions to integrate touch within movement instruction is necessary. In addition, an investigation of movement instructors’ levels of “touch self-efficacy” (Fuller et al., 2011) is necessary to further the understanding of touch self-efficacy and positive tactile interactions within various workplace environments (Fuller et al., 2011; Simmering, Fuller, Marler, Cox, & Bennett, 2013).

**Background**

To understand the complexities of touch self-efficacy (TSE) and the differences in the benefits of touch in dance instruction as reported by college faculty members with “low” and “high” TSE, it was necessary to first investigate the literature. The following review of the literature begins with an investigation of the senses, the power of touch, touch for healing and therapy, and touch as nonverbal communication. The background information continues with an exploration of the call for reform in dance education; the implications, both positive and negative, of using touch; and the appropriateness of the use of touch in dance instruction. The conclusion of this section includes the examination of literature in TSE, a burgeoning research area.
**Touch**

As children, humans’ comfort level with touch develops, and it is at this stage in life that people are touched the most (Chillot, 2013). Through touch, people’s bodies engage in articulation with other bodies, which always comes from the outside, including self-touch (Brandstetter et al., 2013). People’s perceptions are then formed and informed by temporal and spatial associations of touch (Rilke, 1926, as cited in Brandstetter et al., 2013). According to Bannon and Holt (2011), people create boundaries in response to sensory information from touch. However, as Brandstetter et al. (2013) asserted, it is people’s skin that both shields and protects them from vulnerability as a thinking, feeling surface.

**Healing and Therapy**

The use of touch in medical practice has been a longstanding “ritual” with doctors (Verghese, 2011) and equally important to nurses (Harley & Timmons, 2010) in examining their patients. In turn, it has been reported that a patient’s perception of touch by a physician can be comforting and healing (Markel, 2012; Osmun, Brown, Stewart, & Graham, 2000). Positive implications of touch have also been documented by various body-mind professionals including alternative therapists (Kramlich, 2014) and wellness practitioners (Gavin, 2004).

Touch as a healing practice in itself was advanced by Mentgen after studying pranic healing and shamanic traditions and developing a practice influenced by the work of healers such as Krieger, Joy, Bruyere, and Brennan (T. Dowd et al., 2006; Hover-Kramer, 2002). In this energy-based care of healing touch (HT), the practitioner works with the client to adjust the vibrations of his or her energy flow (T. Dowd et al., 2006).
While the practice is in its infancy, developed in the early 1980s, HT has been studied by researchers at the University of Arizona for the treatment of babies in the Neonatal Intensive Care Unit (McDonough-Means, Bell, Bigsbury, & Doussard-Roosevelt, 2006) and in patients’ coronary artery bypass surgery recovery (MacIntyre et al., 2008).

In psychotherapy, the use of touch has been extensively debated, including Freud’s original endorsement of and later rejection of its use (Bonitz, 2008; Durana, 1998; Kertay & Reviere, 1993; Matherly, 2014; Zur, 2007). Similarly, the use of touch in dance/movement therapy (DMT) is also contested. A recent study concerning the practice of touch in the field of DMT revealed that there is sufficient evidence that the practice is common, yet there is no mention of touch in its code of ethics (Devereaux & Loman, 2014; Matherly, 2014).

**Nonverbal Communication**

Touch goes beyond eye contact, physical proximity, gesturing, smiling, vocal expressiveness, and overall body movements (J. F. Andersen, 1986) to provide emotional and physical connections to others. As a component of nonverbal communication, touch affords opportunities for “relating, implying the prospect of closeness, tenderness, and intimacy” (Egert, 2013, p. 63). Not all touch is the same (Chillot, 2013), but there is a tendency in a post-Freudian society to concentrate solely “on the assumption of an erotic interpretation of the touch” (Vermes & Incze, 2012, p. 105), creating what psychologist Hertenstein labeled a “touch-phobic society” (Chillot, 2013, para. 6).

Although Bannon and Holt (2011) argued that the United States is not a sensorially aware culture, the simplest touch can provide a swift and direct message more brilliant than words (Fast, 1970), and humans possess an instinctive ability to decode
emotions via touch alone. As demonstrated in Hertenstein, Holmes, McCullough, and Keltner’s (2009) study, volunteers successfully communicated a list of eight distinct emotions including anger, fear, disgust, love, gratitude, sympathy, happiness, and sadness to a blindfolded stranger solely through touch, with accuracy rates as high as 78% (Chillot, 2013).

Additional studies in Spain, the United Kingdom, Pakistan, and Turkey revealed similar findings demonstrating the correct interpretation of touch as an innate skill (Chillot, 2013). These findings support Nancy’s (2013) assertion that people know exactly which body parts and to what degree they have permission to touch (Brandstetter et al., 2013). However, there are cultural differences in comfort levels with touch, including increased touch cultures in warmer climates (Chillot, 2013). Findings have also revealed a higher percentage of interpersonal touch in “contact cultures” such as Greece and Italy versus noncontact cultures such as England, France, and the Netherlands (Markel, 2012; Remland, Jones, & Brinkman, 1991). Andersen (as cited in Chillot, 2013) asserted that this variation suggests that the custom of touch is predominantly learned.

**Call for Dance Education Reform**

Currently, there is a call for change and reform in dance education (de Kuijper, 2013; Kipling Brown, 2014; Musil, 2010; Risner, 2010), including attention to developing “thinking” dancers and improvements in verbal instruction (de Kuijper, 2013). Yet, the use of touch in movement instruction is absent from the dialogue. However prevalent and a part of “folk pedagogy” (Warburton, 2003, p. 13), touch remains undocumented in contemporary research concerning movement instruction.
Neither the current practices nor best practices of employment of touch have been addressed, and findings have highlighted the lack of discourses concerning touch (T. Jones & Glover, 2014).

As argued by de Kuijper (2013) and supported by the work of Daniels (2009), Brodie and Lobel (2004), Franklin (1996), Geber and Wilson (2010), Hay (2009), and Warburton (2003), the objective of dance educators is to empower their students in self-learning and understanding. In dance, this depth of involvement is evident in the embodiment of material and person through transmission (Bannon & Holt, 2011). Touch supports this transmission and allows dance students to deepen their understanding. As Feldenkrais (1972) explained, “To understand movement we must feel” (p. 58).

Warburton (2003) asserted that for transformation in dance education, the traditions must be analyzed to create a more purposeful and invigorating practice. Bannon and Holt (2011) also argued that a moral framework is necessary to promote a safe place to learn in “sense-full” experiences. A. E. Johnson (2011) maintained, “If we disregard, or do not nurture a dialogue with the sensations the body experiences, the body will not simply maintain awareness of that which is not exercised” (p. 26). Furthermore, the lack of integration of the “entwined nature of the sensorium that so purposely affords the possibility of forming our perceptions is an education that is insufficient” (Bannon & Holt, 2011, p. 222).

**Implications**

Kornidau and McElroy (1975) stated that people learn 83% through sight, 11% through hearing, and 1.5% through touch. Although the percentage for touch is low, more recent research demonstrated that touch is of greater importance than originally
assumed (Franklin, 2006). Touch can be a double-edged sword, with both positive and negative implications, and research is needed to further explain the complexity.

**Positive implications.** The act of touching supports the questioning, changing, and transformation provided by a kinetic experience before the learning has solidified into a concrete articulation (Manning, 2007). This is especially vital for dance educators, who direct the learning and the body as an object (Kipling Brown, 2014). The use of touch potentially holds positive benefits for students, including improved learning through a multi-intelligence approach. As Juhan (1995) argued, the tactile experience is central to the thought processes and equally important as language skills or categories of logic. Furthermore, the use of touch by faculty members supports personalized attention in class. For example, a faculty member may verbally direct the class, including cueing and providing general reminders, while simultaneously providing a kinesthetic cue for an individual dancer without disturbing the flow of the class.

In addition, touch can provide nonverbal student encouragement. Although touch is most often used to complement or accent a verbal message (Richmond & McCroskey, 2004), it can also provide educators with the opportunity to continue verbal instruction to the class at large while simultaneously encouraging individual students. For example, a faculty member may need to verbally cue the movement or musical phrasing but may also desire to give a positive kinesthetic feedback cue. With touch, faculty members also have the ability to individualize corrections by providing kinesthetic feedback appropriate to the individual dancers. Touch may also create and improve connections between students and faculty, having “beneficial physiological consequences” for those touching and those being touched (Chillot, 2013, A Touch of Love section, para. 1). As Hackney
(2000) explained, “Touch is a wonderful way to gain knowledge and give knowledge” (p. 56).

**Negative implications.** However beneficial, the use of touch in the classroom, particularly in higher education, is limited, often avoided as it is negatively associated with sexual harassment, “touch paranoia” (P. A. Andersen, 2004), and “touch avoidance” (P. A. Andersen & Leibowitz, 1978; Fuller et al., 2011). One negative implication includes touch as a taboo (Brandstetter et al., 2013; Nancy, 2013). Anthropologists and ethnologists have long studied cultural implications of touch, often linked to people’s religious beliefs, in which certain types of touch are taught to be sinful or inappropriate (Chillot, 2013).

A second negative implication of touch is that it can be misleading. If used incorrectly, touch can give false information or contradictory information to the person being touched. For example, a poke with a finger would provide different feedback than a long-sustained brushing action. Additionally, a student may misinterpret the touch due to personal association with pain and abuse (Bannon & Holt, 2011). In this case, the student may be focused on personal concerns with being touched and remain fixed in past experiences, while the faculty member may be unaware of the student’s hidden history (Marshall, 2009).

Lastly, a negative implication of touch is that it could be perceived as sexual harassment or a display of power (P. A. Andersen, 1999; Eakins & Eakins, 1978; Guerrero et al., 2007). Touch can be categorized as “unwelcome conduct” in addition to other unsolicited verbal or visual behavior (C. Thompson, 2014, p. 50) and may be avoided by faculty members who are unwilling to accept the “risks associated with the
unknown toward whom I reach when I touch” (Manning, 2007, p. 235). Faculty members also face the challenge of using touch without asserting their power (Marshall, 2009) in a situation where the touch is not reciprocal (Eakins & Eakins, 1978).

**Appropriateness in Instruction**

The appropriateness of using touch instruction may be shaped by several factors, the first being the frequency of its use. As many dancers are visual, kinesthetic, and spatial learners (Daniels, 2007), the use of touch is vital to address their multiple learning styles. However, this is one of many pedagogical tools to be considered. In a situation where the involvement and embodied connection between material and person provides a “multidirectional interrelationship between person, form and transmission” (Bannon & Holt, 2011, p. 216), touch should highlight a moment and be treated as an event (Manning, 2007).

The second factor may be the techniques employed. These could include the type of touch employed, such as intentional touch (I. Dowd, 1994), touch for repatterning (Groff, Hackney, & Meaden, 2006, as cited in E. Groff & J. Meaden, personal communication, September 2006), touch with imagery (Franklin, 1996), or celebratory or congratulatory touch (Fuller et al., 2011; Knapp & Hall, 2002). A third factor potentially could be the faculty member’s training. This could include formal training such as integrated movement studies (IMS), body-mind centering, the Feldenkrais method, or the Alexander technique. A fourth factor may be the individual faculty member’s personal belief in his or her skill set, or TSE (Fuller et al., 2011; Simmering et al., 2013).
**Touch Self-Efficacy**

TSE may shape a faculty member’s use of and perceived effectiveness in integrating touch in the workplace. Recent studies by Fuller et al. (2011) and Simmering et al. (2013) were some of the first to “provide understanding of both the antecedents and the possible positive outcomes that may be associated with workplace touch” (Simmering et al., 2013, p. 148). In their framework, TSE served as a self-assessment of a person’s ability to use touch effectively to communicate at work. Although additional research is needed, there is the possibility for increased use of touch in workplace environments where touch is considered appropriate (Fuller et al., 2011). Cultures such as dance instruction may support this claim, where touch is part of the traditional landscape, and the use of touch in the workplace may have positive benefits.

**Statement of the Research Problem**

Touch is a natural human form of communication, nurturing, understanding, and learning, and it is thought to be the “mother of the senses” (Matherly, 2014, p. 77; see also T. Field, 2001; Montagu, 1971). Touch is not only the earliest sense to develop, but without it, infants may perish (Montagu, 1971). However, the use of touch in the classroom, particularly in higher education, is limited, often avoided as it is negatively associated with sexual harassment, touch paranoia (P. A. Andersen, 2004), and touch avoidance (P. A. Andersen & Leibowitz, 1978; Fuller et al., 2011).

The benefits of touch, or “common sense” as Aristotle believed (Manning, 2007), are well documented by various body-mind professionals including nurses and alternative therapists (Kramlich, 2014), wellness practitioners (Gavin, 2004), and dance/movement therapists (Devereaux & Loman, 2014), yet touch is often avoided by dance faculty,
especially by male faculty members (Wright, 2013). Those who do employ touch in their teaching practice may have similar fears to other “touchy” Americans who are apprehensive of the misinterpretation of their touch and the consequences (Chillot, 2013). Potential concerns about touch being perceived as harassing or sending the wrong message may paralyze educators from employing this pedagogical tool.

The use of touch in movement, dance, and exercise courses is prevalent and a part of “folk pedagogy” (Warburton, 2003, p. 13), yet it is undocumented. The techniques, types, approaches, situations for usage, training, and both positive and negative implications are absent from the current discussion and research among college faculty. In higher education, the use of touch, including self-touch and hands-on guidance by the instructor, may address multiple learning styles, which holds great significance for dancers, who tend to be visual, kinesthetic, and spatial learners (Daniels, 2007). It is unknown to what degree college faculty integrate the use of touch in their pedagogical practices in movement instruction and what their comfort level is in relation to their own TSE (Fuller et al., 2011) in doing so.

Although there has been a call for change and reform in dance education (de Kuijper, 2013; Musil, 2010; Risner, 2010), neither the current practices nor best practices of employment of touch have been addressed. Whereas most research has focused on the negative aspects of touch in the workplace (i.e., sexual harassment), there is a need to investigate the benefits of the use of touch (Fuller et al., 2011). Other fields including psychotherapy (Vermes & Incze, 2012) and music (McHugh-Grifa, 2011) have begun to focus attention on the use of touch as a learning instrument, but a need remains for further exploration of the benefits of touch and factors for usage specific to the field of
dance (A. E. Johnson, 2011; Manning, 2007). In addition, because research on TSE is in its infancy (Fuller et al., 2011; Simmering et al., 2013), a need for additional research is vital to better understand TSE in the workplace, specifically in the studio classroom.

**Purpose Statement**

The purpose of this mixed-methods study was to (a) identify the level of touch self-efficacy (TSE) of college-level dance faculty as measured by the Touch Self-Efficacy (TSE) Scale, (b) explore the factors that influence the use of touch in dance instruction, and (c) describe the perceived benefits as reported by college-level dance faculty.

**Research Questions**

1. What level of TSE do college-level dance faculty report on the TSE Scale?
2. What are the factors that influence the use of touch in dance instruction as reported by college faculty?
3. What are the perceived benefits of touch in dance instruction as reported by college faculty?

**Significance of the Study**

As a culture that is not sensorially aware or “sensorially literate” (Bannon & Holt, 2011, p. 217), the United States is in great danger of avoiding integration of touch, a basic human instructional tool, in the classroom due to fear. In the field of dance, where “bodies affect other bodies” (Manning, 2007, p. 144), there is a tremendous need for understanding and knowledge of the continuous interdependence between body and mind (Bannon & Holt, 2011), which touch integrates. As highlighted in the findings of
T. Jones and Glover (2014), the lack of discourse this culture has for touch demands further investigation (Fuller et al., 2011; Simmering et al., 2013).

This study addressed the gap in research concerning touch in education while placing specific attention to the culture of college dance education. Current research has not delved into contemporary practices or best practices of the use of touch by college dance educators, nor has the literature investigated the factors that influence the use of touch in dance instruction as reported by college faculty.

Although there has been considerable research on the negative implications of touch in the workplace, the positive implications and benefits have only recently been investigated (Fuller et al., 2011; Simmering et al., 2013). This study adds to the body of knowledge still in its infancy. Fuller et al.’s (2011) study, “Exploring Touch as a Positive Workplace Behavior,” was a terrific first step in uncovering the benefits of touch in the workplace; however, it did not address the atypical workplace in environments such as college dance studio classrooms. Therefore, this study examined the levels of TSE in college dance faculty and the possible differences in the benefits of touch in dance instruction as reported by college faculty with low and high TSE.

This study also provided a necessary examination of touch practices in a female-dominated field. As women touch the most (Clay, 1968; Eakins & Eakins, 1978) and are touched the most (Eakins & Eakins, 1978), this is a vital area to study in relation to dance, as the majority of students in movement courses are women, and most of their instructors are also female. The culture of touch is inherent. The study may also generate information about the role of females as “supervisors,” who in Fuller et al.’s (2011) study reported “less touch anxiety, greater touch self-efficacy and more use of
touch than male supervisors” (p. 232). The potential benefits of the study could be (a) attention to “workplace tactile intelligence” (Simmering et al., 2013, p. 143); (b) the development of teaching programs that address touch techniques, usage, and approaches for faculty; (c) the discovery of new touch techniques through further research; (d) the integration of current practices with best practices for arts core standards in touch application; and (e) the addressing of a changing population in higher education that meets the needs of a “touch culture.”

Definitions

The following is a list of terms defined for the purpose of this study to facilitate common understanding:

**Body mapping.** Coined by Alexander technique teachers Barbara and William Conable, “Body mapping refers to a person’s perceived view of their own body, how it is shaped, its size, how the body moves, and how it functions” (as cited in Harer & Munden, 2009, p. 127).

**Haptics.** The study of interpersonal touch (Guerrero et al., 2007) and tactile body language (P. A. Andersen, 2004).

**Somatics.** As Thomas Hanna (1995) argued, somatics is “the body as perceived from within by first-person perception” (p. 341) and includes “the human being as experienced by himself from the inside” (p. 343). As related to dance, Bales and Nettl-Fiol (2008) asserted that it is “a current moving the river of contemporary dance” (p. 89).

**Touch approachers.** The degree to which a person likes touch (P. A. Andersen, 2004). This need for touch was defined by Fuller et al. (2011) as “an individual’s general motivation to seek out tactile interaction” with other people (p. 243). This need for touch
may “fulfill our need for closeness” (Richmond & McCroskey, 2004, p. 137) but individually varies in the degree of affiliation desired (Cheek & Buss, 1981; Richmond & McCroskey, 2004).

**Touch avoidance.** The degree to which a person dislikes touch, including same-sex avoidance and opposite-sex avoidance (P. A. Andersen, 2004). “Since babies only a few days old will seek or shun touch,” it is considered to be a genetic trait (P. A. Andersen, 2004, p. 75). However, it can also be shaped by cultural climate (P. A. Andersen, 2004).

**Touch communication.** Tactile interaction, such as handshakes, hugs, and strokes, which serve to communicate messages (P. A. Andersen, 2004).

**Touch deprivation.** “A lack of touch that can leave an adult lonely, stressed, and in ill health” (P. A. Andersen, 2004, p. 349) and in babies can result in death (Franklin, 2006; Montagu, 1971).

**Touch self-efficacy (TSE).** According to Fuller et al. (2011), people’s concept of TSE is based on their belief that they can effectively use touch when interacting with other people. It is their own evaluation of their ability to communicate nonverbally and their perceived aptitude for using physical touch to assess their “interpersonal communication effectiveness at work” (Fuller et al., 2011, p. 233).

**Delimitations**

The study was delimited to college dance faculty participating in the American College Dance Association (ACDA) during the years 2015-2016.
Organization of the Study

The study is organized in a five-chapter structure, including references and appendices. Chapter II presents a review of the literature concerning touch as part of the senses, touch employed in healing, touch as nonverbal communication, both the positive and negative implications of its use, and dance education reform. Chapter II also includes the appropriateness of touch in instruction and TSE. Chapter III describes the methodology used in the study, the population and sample used in the study, and the design of the instrumentation. It also includes a description of the data collection process, data analysis process, and limitations of the study. Chapter IV presents the research findings and discusses findings in relation to the research questions. Chapter V summarizes the study, conveys the conclusions of the study, and provides recommendations for areas of continued research.
CHAPTER II: REVIEW OF THE LITERATURE

This chapter focuses on the conceptual framework of pertinent research related to touch, dance education, the use of touch in dance instruction, and touch self-efficacy (TSE). Eight major areas of literature are reviewed: (a) the senses, (b) touch, (c) healing and therapy, (d) nonverbal communication, (e) dance education, (f) positive and negative implications of touch, (g) appropriateness and usage of touch, and (h) TSE.

**Senses**

An embryo’s nervous system is wired to “speak” through the senses and continues these kinesthetic understandings through infancy and childhood (Feldenkrais, 1981). Considered the “mother of the senses” (Matherly, 2014, p. 77; see also T. Field, 2001; Montagu, 1971), touch is the earliest sense to develop and supports human functions of communication, nurturing, understanding, and learning. As early as Week 6 of development, when embryos are less than an inch long, they react to delicate touches on the upper lip by arching the spine (Juhan, 1995). As cited by Montagu (1971), early studies prompted by the Emperor of Germany, Frederick II (1194-1250), demonstrated that infants denied nurturing touch perished and died. The need for tactuality is a basic need, one necessary for human survival (Montagu, 1971). Additionally, touch supports brain development. As reported by Franklin (2006), children who were deprived of touch and denied play time had less brain matter. In addition, as argued by Bannon and Holt (2011), it is not the quantity of touch but rather the quality of touch that is crucial for human development.

The physical implications are dramatic, and equally vital is the emotional connection touch provides in early developmental years. It contributes significantly to
people’s early emotional life. Babies who are held, hugged, and kissed have a healthier emotional life than those left for continued periods of time without emotional contact (Chapman, 2010). This is also demonstrated in animals, who, in field tests when touched in infancy, are more likely to explore unfamiliar environments and less likely to emotionally act out by defecating or urinating than their untouched counterparts (Montagu, 1971).

This early prelinguistic knowing provides a basis for understanding and sensing in the world. As Bannon and Holt (2011) asserted, it provides an avenue for discovery before verbal discourse and cognition. As part of nonverbal communication, touch affords people the knowing and learning functions necessary for human development (Corballis, 2002; DePaulo, 1992; J. L. Hanna, 2008; Hewes, 1973; Roth, 2001). Its importance as one of the five senses grows if other senses are not present. This heightened sense was evident in the work of Hellen Keller and Laura Bridgeman (D. Johnson, 1995; Montagu, 1971). Without touch, people’s connection to the world, represented in an endless loop of touching and being touched, is lost (Bannon & Holt, 2011).

As people grow and develop, their sense of self is shaped by their use of touch. As demonstrated by the work of Gallagher (2005) and Sunderland (2004), touch as part of people’s sensory network and proprioceptive system provides opportunities for self-discovery (Bannon & Holt, 2011). That is to say, people’s exploration through touch connects them to the world while simultaneously linking them to their own inner world (Juhan, 2011).
Research has revealed that in the development of an organism, early tactile stimulation is more important than later tactile stimulation (Montagu, 1971). However, this does not negate the need for touch later in life. Experiments have revealed that adults deprived of tactile sensations become “psychologically deranged” (Juhan, 2011, p. 61) and that mental health issues arise when people separate themselves from connections to their body (T. Jones & Glover, 2014; Kepner, 1993).

If, according to Aristotle, all the senses are embodied through the single sense of touch, then it is through this “common sense” that people begin and continue their discoveries (Manning, 2007). Touch provides a foundation, then, for connecting human experiences, and the size of the touch centers of the brain demonstrate that “humans are predisposed to comprehend the world through the tactile body language of oneself and others” (P. A. Andersen, 2004, p. 69). These understandings are woven together from people’s impressions, images, and memories, becoming a tactile link to the “memories of the skin” (van Campen, 2014, p. 118). These kinesthetic experiences are brought together by the hippocampus to create memory pathways of tactile, auditory, and visual impressions (van Campen, 2014). As people age, these pathways can transport them back in time, but unlike other senses, they endure time (T. Field, 2001; Matherly, 2014; Montagu, 1971). While other senses are lost or diminished, touch remains.

**Touch**

Through touch, people’s bodies engage in articulation with other bodies, which always comes from the outside and which Brandstetter et al. (2013) argued includes self-touch. As Juhan (1995) suggested, whenever people touch, they touch twice in the same moment. That is to say that people are unable to touch just one thing but are in a constant
simultaneous interchange between the object (external) and the sense of self (internal; Juhan, 1995). Touch in this sense is never abstract but is a concrete and direct exchange or exchanges (I. Dowd, 1991). As cited by Bannon and Holt (2011), the concept of being touched and simultaneously touching was evident in Merleau-Ponty’s (1968) example of the reversibility of a handshake. Further supporting this concept is Manning’s (2007) argument that touch is not solely a passive receiver and an active giver, as the senses are not controlled singly by one body and given or withheld to another. This supports Nancy’s (2010, as cited in Egert, 2013) assertion that touching is “giving free rein to the interplay of attraction and repulsion, integrity and intrusion, differentiation and transference” (p. 63).

People’s comfort level with touch develops and deepens when they are children, and it is at this stage in life that people are touched the most (Chillot, 2013). However, mainly due to cultural norms and taboos about touch with others (Fuller et al., 2011; Hertenstein et al., 2009; Richmond & McCroskey, 2004), research has demonstrated a decrease in tactile experiences from childhood to adulthood. Conversely, there is no evidence to support that people’s need for touch decreases as well (T. Field et al., 1994; McHugh-Grifa, 2011). People continually strive to fulfill the closeness and sociability benefits that tactile interactions provide and that people crave (Cheek & Buss, 1981; Fuller et al., 2011; S. J. Lopez, Snyder, & Rasmussen, 2003). This need for touch was defined by Fuller et al. (2011) as “an individual’s general motivation to seek out tactile interaction” with other people (p. 243).

People’s perceptions are then formed and informed by temporal and spatial associations of touch (Rilke, 1926, as cited in Brandstetter et al., 2013). Hall (1966, as
cited in J. L. Hanna, 2008) found that the body communicates through gesture and locomotion using touch, gaze, facial expression, and proximity. As Juhan (1995) explained, it is through this sensory activity that a key element in the development of people’s disposition and behavior is formed as they embody their preferences and aversions, habits, and departures. She went on to say,

The “feel” in my skin and the “feelings” in my mind, what I “feel” and how I “feel” about it, become so confounded and ambiguous that my internal “feelings” can alter what my skin “feels” just as powerfully as particular sensations can shift my internal states. (Juhan, 1995, p. 370)

This link of body to mind may be due to the fact that the skin and brain grow from exactly the same primitive cells, with the skin being ranked just second to the brain (Juhan, 1995). Although the skin is a vital organ, weighing approximately 13 pounds (Franklin, 2006), it is not valued as much as visual and auditory senses, as Montagu (1971) argued, because those senses are developed subsequent to the senses of touch and smell, which are associated with instinct versus intelligence (A. E. Johnson, 2011). As a feeling and thinking surface, skin senses and protects people while simultaneously rendering them vulnerable (Manning, 2007).

According to Bannon and Holt (2011), people create boundaries in response to sensory information from touch. These boundaries may be considered a “policing” state with strict blocks or guards, but others consider the boundaries of the skin to be porous and membrane like (Bannon & Holt, 2011). This supports Brandstetter et al.’s (2013) assertion that people’s skin fulfills separate roles and concurrently performs openings and closings as a malleable, not rigid, form.
Healing and Therapy

A longstanding ritual with doctors (Verghese, 2011) and equally important to nurses (Harley & Timmons, 2010) is the use of touch in medical practice in examining their patients. Both Verghese (2011) and Harley and Timmons (2010) supported the claim that although technological advances are great, human touch must not vanish from today’s health care. In Verghese’s (2011) TED talk, he claimed that the “i-patient is getting great care” (n.p.) but warned about bypassing the classic ritual of touch, as it has meaning and is both necessary for the patient and cathartic to the physician. Although it is recognized that technology may promote feelings of safety in patients (Harley & Timmons, 2010), it can never replace the empathy and closeness touch provides (Almerud, Alapack, Fridlund, & Ekebergh, 2008; Harley & Timmons, 2010). In turn, it is the patients’ perception of touch by a physician that can be comforting and healing (Markel, 2012; Osmun et al., 2000).

Beyond the skill set of doctor and nurse bedside manner is the growing attention to and use of healing or therapeutic touch, which supports conventional care and is used as a supplement, not as a replacement (MacIntyre et al., 2008). Mentgen advanced touch healing practices by studying shamanic traditions and pranic healing and developing healing touch (HT), which was also influenced by the work of Krieger, Joy, Bruyere, and Brennan (T. Dowd et al., 2006; Hover-Kramer, 2002). In this energy-based care of HT, developed in the early 1980s, the practitioner works with the client to adjust the vibrations of his or her energy flow (T. Dowd et al., 2006). As an aid in relaxation, HT supports the body’s own ability to self-balance and self-heal in a natural healing process (MacIntyre et al., 2008). Its effectiveness has been studied by researchers at the
University of Arizona for the treatment of babies in the Neonatal Intensive Care Unit (McDonough-Means et al., 2006; Weaver, 1990). Additionally, HT has been studied in the recovery of patients who have undergone coronary artery bypass surgery (MacIntyre et al., 2008). Although MacIntyre et al.’s (2008) study found no significant decrease in the use of pain medication or antiemetic medication, the most noteworthy differences were found in the length of stay and anxiety scores of patients who experienced HT treatment. The results demonstrated not only a financial benefit due to shortened hospital stays but also positive emotional contributions provided by reduced anxiety (MacIntyre et al., 2008).

Therapeutic touch specialists are reported to work alongside heart surgeons to help reduce pain after surgery and also aid in lowering blood pressure and heart rates (Franklin, 2006). In addition, massage improves immune function. According to Tiffany Field, director of the Touch Research Institute, research has shown that massage supports immune function by increasing cells that in turn destroy viral, bacterial, and cancer cells (as cited in Daly, 2015). As reported by Franklin (1996), mothers in India use a special form of massage on their babies to keep them healthy regardless of nutritional limitations. This supports Juhan’s (2011) claim that infants who are not touched die regardless of being adequately fed and sheltered. Additional health benefits of touch are evident in reports that premature babies gain weight faster with touch (Franklin, 2006). New research from Sheldon Cohen of Carnegie Mellon University demonstrated that high levels of touch, via hugs, protected participants from colds and flu when under stress (as cited in Daly, 2015).
Body-Mind Professions

Positive implications of touch have also been documented by various body-mind professionals such as wellness practitioners (Gavin, 2004) and alternative therapists (Kramlich, 2014). One could argue that these are not “alternative therapies” but a cyclical return to the basic human understanding of people’s bodies. This was demonstrated in D. Johnson’s (1995) claim that the somatic pioneers who authored chapters in his book, Bone, Breath & Gesture: Practices of Embodiment, all provided effective approaches for “a return to the healing intelligence of the body” (p. xvi). He went on to say that they were successful innovators because they challenged the prevailing methods of manipulation, exercise, and self-awareness that tend to separate people from their bodies. Although D. Johnson’s work included many somatic approaches, it is interesting to note the strong presence of practitioners who relied on or incorporated the use of touch. They included F. M. Alexander, Moshe Feldenkrais, Ida Rolf, Bonnie Bainbridge Cohen, Judith Aston, Irmgard Bartenieff, and Deanne Juhan, to name a few. Although mind-body practitioners must be careful, evidence from findings, such as those demonstrating the effectiveness of the Alexander technique, has confirmed touch as a powerful skill in the healing process (T. Jones & Glover, 2014).

Psychotherapy

The use of touch in psychotherapy has been widely debated. This includes Freud’s first endorsement of and later rejection of its use (Bonitz, 2008; Durana, 1998; Kertay & Reviere, 1993; Matherly, 2014; Zur, 2007). According to Freud’s original theory, touch is a patient’s attempt to gratify his or her infantile needs, preventing the exploration of regressed unconscious thoughts (Kertay & Reviere, 1993). Freud also
believed that touch may arouse sexual feelings in both the patient and analyst (Kertay & Reviere, 1993). Although there is little research on the subject, the literature on touch in psychotherapy generally supports the positive influence of touch as appropriate in psychotherapy. As cited by T. Jones and Glover (2014), “Body-oriented psychotherapies are said to target awareness, breathing and the melting of ‘body armour’ (Smith, 1985, p. 119), and touch in Gestalt therapy has been suggested to help address these areas (Imes, 1998)” (p. 21).

Dance/Movement Therapy

Similar to the use of touch in psychotherapy, the use of touch in dance/movement therapy (DMT) is also contested. Although believed to be a common practice in DMT, recent studies found no mention of touch in its code of ethics (Devereaux & Loman, 2014; Matherly, 2014). While Ba’lint addressed the importance of the therapist’s being in sync with the patient and remaining present (Vermes & Incze, 2012), no professional guidelines are offered in the DMT code of ethics.

There is evidence that touch is incorporated in dance therapy, as DMT pioneers such as Bartenieff stressed the importance of integrating kinesthetic, sensory, and feeling experiences to create change (Bartenieff & Lewis, 1980). Bartenieff and Lewis (1980) argued that “touch can be a form of three-dimensional shaping which is supportive rather than a form of more linear impositions such as poking, unless for a specific purpose” (p. 150). Vermes and Incze (2012) supported the appropriateness of touch by stating that if therapy has reached the suitable phase and the therapist is sensitive to the patient, “physical touch can become acceptable in the therapeutic situation” (p. 104). Although they did not describe the types and specific usage of touch, Bartenieff and Lewis (1980)
specifically named Labananalysis as an educational foundation for the use and sensitization of touch due to its investigation of shape and effort.

**Self-Touch in Healing**

Personal healing can also come from self-touch. There is evidence that self-massage may slow the heart rate as well as lower the level of the stress hormone cortisol (Chillot, 2013). Additionally, British researchers have found that self-touch may reduce pain, which could support new approaches for pain treatments (Dotinga, 2010). This effective method of self-medicating may explain why hundreds of times a day, people self-caress, including rubbing their hands, stroking their necks, massaging their foreheads, hugging themselves, or even flipping their hair (Chillot, 2013).

**Nonverbal Communication**

Unlike words, which may mask people’s intentions, touch on the sensory level is a transparent and effective interaction (Feldenkrais, 1981). William Faulkner eloquently summarized the communication by stating, “There is something in the touch of flesh with flesh which abrogates, cuts sharp and straight across the devious intricate channels of decorous ordering, which enemies as well as lovers know because it makes them both” (as cited in Juhan, 2011, p. 60). The simplest touch can provide a swift and direct message more brilliant than words (Fast, 1970). As Juhan (2011) explained, “Touch is a language that is older, and forever beyond words, and the responses to that touch can open a dialogue that can interpenetrate these personal worlds in ways that words can never achieve” (p. 60). With touch, people enter into communication creating the space between them and are equally touched and moved (Manning, 2007).
Although not generally recognized as an instructional advantage, nonverbal behaviors play an important role in instructional effectiveness as communication, learning, and instruction are interconnected. This is especially important as it is estimated that over 55% of a message is communicated nonverbally (Marler, Cox, Simmering, Bennett, & Fuller, 2011; Mehrabian, 1981). As a component of nonverbal communication, touch affords opportunities for “relating, implying the prospect of closeness, tenderness, and intimacy” (Egert, 2013, p. 63). Touch provides emotional and physical connections to others by going beyond other types of nonverbal communication such as eye contact, physical proximity, gesturing, smiling, vocal expressiveness, and overall body movements (J. F. Andersen, 1986). According to Laura Guerrero, coauthor of Close Encounters: Communication in Relationships, it is through the tactile experience of touch that people bond and feel connected with others (Chillot, 2013). Therefore, a pleasant touch will certainly produce positive feelings such as joy, sympathy, and harmony, as these are conveyed inevitably with the touch itself (Brandstetter et al., 2013). Additionally, people instinctively have the ability to successfully communicate these feelings.

Researchers Bannon and Holt (2011) argued that the United States is not a sensorially aware culture, yet people possess an instinctive ability to decode emotions via touch alone. With accuracy rates as high as 78%, in Hertenstein et al.’s 2009 study, volunteers successfully communicated solely through touch a list of eight distinct emotions including anger, fear, disgust, love, gratitude, sympathy, happiness, and sadness to a blindfolded stranger (Chillot, 2013). In turn, studies in Spain, the United Kingdom,
Pakistan, and Turkey revealed similar findings that validated the correct interpretation of touch as an instinctive ability (Chillot, 2013).

Additionally, tactile cues influence people’s impressions and actions (Gudrais, 2010). Ackerman, Nocera, and Bargh (2010) proposed that touch has a powerful effect on how people both respond to and perceive situations. For example, in their study, before reading a passage, participants were asked to complete a puzzle; those who had handled sandpaper-covered puzzle pieces ranked the incidents they read about as more confrontational than did participants who worked with smooth puzzle pieces. Ackerman et al. also found that study participants who held a wooden block instead of a blanket before reading about an employee-supervisor interaction judged more harshly the employee’s personality when asked their viewpoint on a subsequent questionnaire. Ackerman et al. (as cited in Gudrais, 2010) suggested that these findings demonstrated that tactile input is “coming inside in a metaphorical way and then going back out” (p. 16). Here the emotional qualities aligned with tactile sensations and could be applied to “job interviews, negotiations, and other high-stakes social situations” (Gudrais, 2010, p. 16) and possibly educational interactions.

Not only can people successfully communicate emotions through touch, as Nancy (2013) argued, but they also instinctively know which body part(s), as well as to what degree, they have permission to touch (Brandstetter et al., 2013). This may include limiting tactile engagement to “safe zones” such as shoulders and arms (Chillot, 2013). As Andersen (as cited in Chillot, 2013) agreed, typically it is acceptable between casual acquaintances to touch from the shoulder area down to the hands. As the back is organized with uneven clusters of tactile receptors, it is not as sensitive as other body...
parts such as the fingers, tip of tongue, and nose (Chapman, 2010). In support, Andersen (as cited in Chillot, 2013) stated that the back is a safe place to touch due to the number of nerve endings.

In addition to knowing how to communicate through touch and where to touch, people are instinctively knowledgeable about when not to touch. As Manning (2007) asserted, “Tact is knowing when not to touch” (p. 134). This may be an internalized “tact-ful” approach (Manning, 2007, p. 134) or influenced by cultural norms.

Comfort levels with touch vary culturally. As Hall (1966, as cited in Remland et al., 1991) argued, people belong to either contact or noncontact cultures. Andersen (as cited in Chillot, 2013) asserted that this variation suggests the custom of touch is predominantly learned and may be influenced by climate, religious beliefs, and each other.

Cultural differences in comfort levels with touch may be influenced by religious beliefs. As noted by Andersen (as cited in Chillot, 2013), atheists and agnostics touch more. In contrast, Christian fears of bodily pleasure mark touch as taboo (Montagu, 1971). Evidence of this includes European or North American Protestant heritage where touch that lingers is culturally perceived as inappropriate behavior (Houston, 2009; Novack, 1990).

Cultural touch differences are also influenced by climate, as there are increased touch cultures in warmer climates (Chillot, 2013). Findings have revealed a higher percentage of interpersonal touch in “contact cultures” such as Greece and Italy versus noncontact cultures such as England, France, and the Netherlands (Markel, 2012;
Remland et al., 1991). In support of this argument, Hispanic workers tend to be more
tactile (Simmering et al., 2013; Toossi, 2007).

**Call for Dance Education Reform**

There has been recent attention to reform within dance education (de Kuijper, 2013; Kipling Brown, 2014; Musil, 2010; Risner, 2010). Within this call for change is the expressed need to focus on pedagogical knowledge of faculty versus content of material (Warburton, 2003). This shift stresses the understanding of pedagogical practices beyond teacher certification, which stresses content (Lakes, 2005). J. F. Andersen (1986) echoed this belief when he claimed that instructional competence and content are falsely presumed to be one and the same. The purpose, then, is to reevaluate current pedagogical practices to best serve today’s students. To transform dance education, it is imperative to first examine the current traditions to create purposeful and invigorating dance education (de Kuijper, 2013). This notion is supported by Fraleigh’s (2000) argument that researchers and practitioners must remain open to new or experimental approaches without shutting down opportunities for exploration. With recent findings from T. Jones and Glover (2014), it is evident that the use of touch is absent from or lacking in engaged debate and discourse. Furthermore, “Dance, especially, unlike other art forms, ‘has no single universally accepted pedagogical or technical standard for instruction’ (Ross 1994, 14)” (Batson, 2008, p. 136).

Often instructors are unaware of their pedagogical approaches and may fall victim to “folk pedagogy,” which Warburton (2003) asserted is “a set of beliefs about what teaching is and how it should be done” (p. 13). However, Enghauser (2012) encouraged examination by stating, “Teachers must choose discerningly from this complex menu
only those tools that facilitate authentic proficiencies, thus molding successful citizens of a dynamic and complex, post-twentieth-century world” (p. 54). Concern remains that faculty on autopilot, who teach “by imitating their teachers who imitated their teachers, are not reflective about what assumptions are tacitly communicated by their instructional methods (Gray, 1989; Lakes, 2005; Sims & Erwin, 2012; Warburton, 2008a)” (de Kuijper, 2013, p. 57). In other words, best practices of today may be ignored by faculty on autopilot, who teach as they were taught as students, without attention to current research. This is especially important due to the interwoven nature of the relationships between dance pedagogy, research, and practice (Bannerman, 2009).

With an increasing amount of research concerning inquiry approaches and higher order thinking for teaching dance, findings have suggested a more holistic view of dance students (de Kuijper, 2013). Indeed, the research has suggested that both the dancer’s body (doing) and mind (thinking) are becoming more closely integrated in class. Although Bannon and Holt (2011) argued, “The old ideas of division between body and mind have not gone away” (p. 220), they also supported the belief that there is a renewed focus on the specificity and division in realms of the brain. A. E. Johnson (2011) asserted that with the rise in somatic practices, the belief that body and mind are separate is under intense investigation. This shift not only impacts the pedagogical approaches of faculty but also the attitudes of the students.

To support the needs of the “thinking” dancer, de Kuijper (2013) made a compelling plea that attention is needed in improving verbal instruction in dance. However, missing from her argument was a discussion on the use of touch in dance education. It could be argued that touch could be used in dance to complement and
enhance verbal instruction or to replace verbal instruction. Although investigated in elementary and secondary settings, the importance of nonverbal behavior in instructional effectiveness in college has been largely overlooked (J. F. Andersen, 1986; H. A. Smith, 1979).

As argued by de Kuijper (2013) and supported by the work of Daniels (2009), Brodie and Lobel (2004), Franklin (1996), Geber and Wilson (2010), Hay (2009), and Warburton (2003), the objective of dance educators is to empower their students in self-learning and understanding. However, many dance faculty members overly rely on a “transmission model” of teaching and learning that stresses “the acquisition of content knowledge through direct instruction and memorization” (Warburton, 2003, p. 13). This not only negates the possibility of the “thinking dancer” on a mental level but also limits the dancer’s personal investigation on his or her own terms and approaches on a physical level. It further discounts the dancer’s own self-exploration and knowing by promoting an “all knowing” instructor to emulate. According to Warburton (2003), “In this view, learning occurs via the reception of externally-provided information transmitted from a knowledgeable person” (p. 13).

**Gardner’s Impact**

As a “paradigm shifter” (Smith & Smith, 1994, as cited in M. K. Smith, 2008, para. 4), Howard Gardner provided a new view of intelligence that was rapidly incorporated in school curricula (Brualdi, 1996) and welcomed by the dance community, arguing that “reason, intelligence, logic, knowledge are not synonymous” (Gardner, 1983, p. 1). As cited by Brualdi (1996), Gardner argued that mental and physical activity are connected and advocated the bodily-kinesthetic intelligence. In this intelligence, one
of the seven, attention is placed on the aptitude to use mental skills to coordinate bodily movements to solve problems (M. K. Smith, 2008). Providing multiple approaches to learning by incorporating the senses, in this case touch, provides a whole-system way of thinking, which Gardner promoted as the best way for children to learn (M. K. Smith, 2008).

**Touch as Part of Dance Reform**

As Feldenkrais (1972) explained, “To understand movement we must feel” (p. 58), and the use of touch supports students in that goal. It provides the transmission that permits dance students to deepen their understanding. This depth of involvement that is vital and evident in dance necessitates the embodiment of material through the individual (Bannon & Holt, 2011). As Bannon and Holt (2011) argued, touch is worth studying, as it stimulates curiosity and arouses awareness while also increasing the skills to access knowledge in relation to learning dance. They proposed that “these processes can facilitate access to both an attentive and contextual knowledge” (Bannon & Holt, 2011, p. 216).

For transformation in dance education, Warburton (2003) asserted that current traditions must be analyzed to create a more purposeful and invigorating practice. The use of touch in dance pedagogy could be fully integrated with the right foundation. “Sense-full” experiences are possible as long as there is a framework in place to promote a safe place in which to learn (Bannon & Holt, 2011). It could be foolish not to use the power of touch in dance education, where the senses are already heightened in a body that is in constant flux of hearing (music, found sound, verbal instruction, breath, cues, etc.), seeing (other bodies, choreographer, instructor, set design, props, reflection in the
mirror, etc.), and doing (full spectrum of locomotor movement, stationary movement, and stillness).

As Bannon and Holt (2011) argued, the lack of integration of the “entwined nature of the sensorium that so purposely affords the possibility of forming our perceptions is an education that is insufficient” (p. 222). How, then, can educators afford not to incorporate the use of touch in instruction? Thus, “if we disregard, or do not nurture a dialogue with the sensations the body experiences, the body will not simply maintain awareness of that which is not exercised” (A. E. Johnson, 2011, p. 26).

It should be noted that there have been dance education reforms in K-12, but these are focused on teaching objectives and not pedagogy. As reported by Cardinal (2015), national dance standards have been altered by leading dance professionals associated with the National Dance Education Organization (2014), developed in tandem with the Common Core State Standards (Common Core Standards Initiative, n.d.), the revised national standards for physical education (Society of Health and Physical Educators [SHAPE America], 2014), and the core arts standards (State Education Agency Directors of Arts Education, 2014).

Transforming Population

The population in higher education, which tends to be young, can also be characterized by the increase in enrollment by Hispanics and by women. As the population in college is typically young, that also might support the use of touch in instruction. As P. A. Andersen (2004) explained, younger people are more receptive to touch than older people, who may be touch avoiders. Kershaw (2009) further supported
this argument with the assertion that today’s teenagers are using hugging more than other forms of greetings (Simmering et al., 2013).

With a shifting population in higher education and an increase in the number of Hispanics attending college, students may be more receptive to the use of touch in instruction due to their cultural familiarity with touch. A 240% increase in college enrollment from 1996 to 2012 (N. A. Thompson, 2015) and a higher percentage of Hispanic high school graduates enrolled in college than non-Hispanic Whites in 2013 (Melgoza, 2015) demonstrates a change in demographics in higher education. The use of touch in college instruction necessitates investigation, as Hispanics may be more receptive to touch culturally (Simmering et al., 2013; Toossi, 2007).

The landscape of higher education is also greatly influenced by the rise in attendance by women. Although since 1979, more women than men have enrolled in college (Davis & Bauman, 2008), a noticeable change is evident. In 1994, 63% of recent female high school graduates enrolled in college; however, by 2012, that number had grown to 71% (M. H. Lopez & Gonzalez-Barrera, 2014). With women leading in enrollment in college, it is vital to understand their touch preferences and experiences.

According to Eakins and Eakins (1978), female children are touched more than male children by their mothers from the age of 6 months on. This would suggest a cultural familiarity that women have with touch. However, there are some exceptions. Fundamentalist Protestant women and those from Muslim and Hindu countries are more likely to be touch avoiders (P. A. Andersen, 2004). In general, touch is perceived as a feminine-appropriate behavior (S. E. Jones, 1986; Remland et al., 1991). Eakins and
Eakins (1978) argued that “a considerable amount of touching of women is so much a part of our culture that it goes virtually unnoticed” (p. 175).

Implications

Touch can be a double-edged sword, with both positive and negative implications, and the understanding of its complexity is still in its infancy. Although Kornidau and McElroy (1975) stated that people learn 83% through sight, 11% through hearing, and 1.5% through touch, more recent research has demonstrated that touch is of greater importance than originally assumed (Franklin, 2006). Although nonverbal behavior, such as touch, can improve the learning of students, it is poorly understood by faculty (J. F. Andersen, 1986). An investigation into its possible positive implications, such as physical connections and emotional connections through touch, must be equally weighed against negative implications, such as sexual harassment.

Positive Implications

The positive implications of touch are dually evident in both the student and the instructor. The student benefits by both the physical and emotional connections of the use of touch, including self-touch, touch from a partner, and touch from an instructor. The instructor in turn may employ touch to enhance the physical understanding of course material and to create or enhance a personal connection or experience with a student.

Physical connections for students. The use of touch potentially holds positive benefits for students. These benefits include improved learning through a multi-intelligence approach and heightened bodily awareness. Touch can also be positively utilized in clarification or confirmation of material and with improvements in dancers’ muscular abilities.
**Multi-intelligence learning.** With dancers already in a state of what Gardner (as cited in Brualdi, 1996) labeled as “bodily-kinesthetic intelligence,” the use of touch could heighten the kinesthetic learning experience for students. Since many dancers are visual, kinesthetic, and spatial learners, addressing multiple learning styles through various pedagogical methods is a vital approach with positive benefits (Daniels, 2007). As argued by Puttke (2010) and supported by de Kuijper (2013), dancers are “thinking” beings who are in a constant state of processing information. However, as de Kuijper (2013) pointed out, “Don’t think about it, just do it,” or “Don’t think about it, just feel it” (p. 2). In a discipline that “is founded in bodily processes as a source of its realization” (Bannon & Holt, 2011, pp. 215-216), touch allows the students to connect with both their “thinking” self and their “doing” or “feeling” self. It supports the fostering of understanding and promotes “dance specific higher order thinking through a method of inquiry that uses students’ experience as an entry point, thereby providing opportunities for multiple ways of learning” (de Kuijper, 2013, p. 5).

As Juhan (1995) asserted, the tactile experience is central to the thought processes and equally important as language skills or categories of logic. It can actually be more effective because the communication is not “distorted” (Feldenkrais, 1981, p. 3). In this sense, touch is a tool for transparency in learning. It offers “a rich potential of thinking through the body” (Bannon & Holt, 2011, pp. 215-216).

**Heightened bodily awareness.** As Montagu (1971) suggested, “Awareness of self is largely a matter of tactile experience” (p. 286), and in order to learn, this power of sensing must be honed (Feldenkrais, 1972). Although touch can be used in creating
“awareness of the body’s inner geography,” it takes time (Franklin, 2004, p. 25). Touch in this sense is not locating but provides awareness to connections within (Hackney, 2000). It allows the “senses to fold into one-another creating an in folding and out-folding, an exfoliation of experience” (Manning, 2007, p. 141).

From a student’s perspective, touch allows for an awakening of attention so that the student experience is “like a ripple of connection” (Bannon & Holt, 2011, p. 222). Touch may reawaken sensitivity in the body, which in turn transforms movement in expressive ways (Brodie & Lobel, 2012; Feldenkrais, 2010) and serves as an enhancement of the student’s understanding. It functions “to increase the sensory awareness in an area of the body” (Franklin, 1996, p. 232).

**Clarification and confirmation of material.** As Gardner (2006, as cited in de Kuijper, 2013) asserted, instructors falsely assume that values and educational goals are evident and recognizable during instruction. The use of touch during instruction can highlight areas of importance in course content, making them stand out from other verbal discourse. For example, if a faculty member is attempting to explain muscle and joint action, it would be helpful to also incorporate touch in the discussion to “palpate bony landmarks,” thus deepening the students’ understanding (Daniels, 2007, p. 92). As Franklin (2004) supported, touch can help “clarify the exact location, origin, and attachment of a muscle or muscle group on which you are focusing” (p. 26). The use of touch here, as an “event” (Manning, 2007, p. 141), reveals to the students that the concept is of significance to the class and of importance for the course.

The touch here also creates a shift from external to internal, which is important for students’ understanding and one atypical for an art form based on the visual. As
Brodie and Lobel (2012) and de Kuijper (2013) agreed, in the performing arts field of dance, visual cues can easily override kinesthetic ones. Whereas dancers have a tendency to rely on mirrors for feedback, the engagement of touch shifts the learning from a gaze to a sensation (Brandstetter et al., 2013). Thus, the dancers claim the movement for themselves through internal sensing.

This type of clarifying touch may be part of self-exploration or received from a partner (Franklin, 2004). However, Cohen (as cited in A. E. Johnson, 2011) recommended touch from another person to enhance awareness: “When you use your own hands [to touch yourself] your body registers the hands—it’s easier with someone else” (p. 19). If the partner is indeed another student, both students would be involved in the “touching” and thus simultaneously learning. Conversely, if the students are unsure of where or how to touch and their own TSE is problematic, then the experiences may be mired in more questions than answers. In this case, an experienced faculty member, serving as partner, could help to physically clarify for both students.

In these examples of touching by self, with student partner, or with faculty partner, the questioning, changing, and transformation of the use of touch as a kinetic experience supports the learning as it becomes solidified into a concrete articulation for the student (Manning, 2007). It brings a “freshness of attention” to assist in exploring connects (Bannon & Holt, 2011, p. 218). As Glenna Batson (2008) argued, touch should provide information to facilitate body-level problem solving without stifling the dancer’s independent methods of self-organization.

As Bartenieff and Lewis (1980) supported, touch also aids a student in getting “unstuck” (p. 230). After a student has tried in vain with a movement, a simple guiding
hand could unlock the student’s understanding and the potential for other movement possibilities. Irene Dowd (1994) also employed this touch technique “to present new possibilities for movement interactions” (p. 62). Touch, then, can provide feedback if a pattern is “off the radar” (Brodie & Lobel, 2012, p. 21) or lacking. In this way, touch helps to clearly provide other options.

Once movement has been clarified either through a partner or self-touch, touch can be used to reaffirm a pattern, location, approach, and so forth. Hackney (2000) suggested, “You may want to put your hand on a part of your body to help direct your attention to cells in a particular area” (p. 56) while repeating the gesture.

**Practicality.** The use of touch can serve as a practical means of muscular support, improvements, and connections for students. As both Franklin (1996) and Brodie and Lobel (2012) advised, touch helps to release unwanted tension, thus enabling movement of the dancer. This type of touch may include massaging overworked muscles as part of conditioning, increasing circulation to muscles, or increasing the rate of warm-up (Franklin, 2004). Touching the muscles also allows for a different range of movement and creating ease. Franklin (2004) noted, “You will notice that the exercise feels less strenuous and that you have more muscular endurance than when you do not place the hands on the muscles” (p. 27).

**Emotional connections for students.**

**Supportive learning environment.** Brandstetter et al. (2013) found, “It seems that a pleasant embrace will inevitably produce positive feelings such as harmony, sympathy, and joy, as these are conveyed automatically with the touch itself” (p. 4). People prefer that others have a certain sense of warmth, demonstrating friendliness and familiarity
(Chillot, 2013). This is especially important in dance, as Andersen (as cited in Chillot, 2013) noted, because touch-oriented teachers, as well as managers and doctors, are rated better. Thus, touch supports positive interactions in the workplace (Blanchard & Johnson, 2003; Fuller et al., 2011; Heaphy, 2007; Marler et al., 2011).

These positive feelings provided by touch thus create a foundation of trust where learning is possible. With touch, oxytocin is released, which enhances people’s sense of trust (Chillot, 2013). Here, then, is a necessary mutual intimacy established in the touch (Ihde, 1973). In addition, the touch serves as a bridge “connecting personal, private, and deeply subjective worlds—messages of potentially profound meaning between others and myself” (Juhan, 2011, p. 59). In this way, touch provides a sense of “letting go of the strenuous and entering a place of collaboration” (Kipling Brown, 2008, p. 149), which Kipling Brown (2008, 2014) believed is essential in the relationship between teacher and student. The use of touch may break traditional boundaries, supporting the idea of partnership within the classroom versus authoritarian power. As Ihde (1973) addressed, “Through touch, I am constantly ‘in touch’ with that which surrounds me. But also in these states it is difficult to say just where I end and world begins” (p. 99). However, Marshall (2009) cautioned about using touch in dance instruction due to the existing dynamics of power in the studio.

In successful teaching, both body and mind must be engaged. As Ilse Middendorf (1995) argued, “The body carries everything in itself, since life and soul, mind and body form a whole” (p. 75). Focus, then, should be directed to reaching the mind of the client (Juhan, 2011), in this case, the student.
**Cohesive group.** According to Chillot (2013), “There’s much to be gained from embracing our tactile sense—in particular, more positive interactions and a deeper sense of connection with others” (para. 14). The use of touch unites and provides the opportunity for faculty and students to connect as well as the opportunity for students to bond with other students. It provides a feeling of belonging to something bigger than oneself. As Franklin (2006) asserted, “In general there should be more touching, not only for healing illnesses, or comforting children and older people, but also in daily life” (p. 10).

**Self-soothe.** As a “calming mechanism,” people self-touch by massaging their foreheads, stroking their necks, hugging themselves, or rubbing their hands (Chillot, 2013). These techniques, as well as many others studied by T. Field (2001) of the Institute of Touch Research, help lower the heart rate as well as the stress hormone cortisol. This self-practice may be especially useful for dance students prior to performance or auditioning, when pressure is especially great. It may help them navigate the difficult emotional terrain in a field that is intensely competitive both on- and offstage.

Touch can support the emotional connection of students in class or rehearsal by creating a sense of community and integrating the group. As Cheesman (2011) found in her observations of integrated dance classes, “There seemed to be a high degree of trust amongst the group evidenced by their ability to share space with one another and in the fact that they readily embraced connecting or touching” (p. 36). In this sense, touch supports more than dancers’ working together, supporting humans’ seeking emotional
connections (Cheesman, 2011). T. Field (2001) argued, “Like diet and exercise, we need a daily dose of touch” (p. 115)

A simple touch, such as a pat on the back, can provide encouragement to a student. In addition, touch can provide nonverbal student encouragement. In these types of situations, touch delivers hope (Houston, 2009).

**Pedagogical enhancement for faculty.** According to I. Dowd (1994), “Touching, by its nature, is simultaneously both a means of perception and a means of action” (p. 48). As Hackney (2000) explained, “Touch is a wonderful way to gain knowledge and give knowledge” (p. 56). Thus, it serves to inform faculty, assisting them in learning about their students, and also supports faculty in promoting instruction. The touch is a moment of “discovering something about that student” (Nettl-Fiol & Vanier, 2011, p. 167). As a pedagogical tool, touch supports multi-intelligence teaching and is a practical and effective necessity in the studio classroom.

**Multi-intelligence teaching.** To be effective, faculty should employ pedagogical strategies that address multiple learning styles through “visual, kinesthetic, verbal and spatial cues and experiences” (Daniels, 2007, p. 94). The incorporation of touch to support learning, as part of one of the seven kinds of intelligence, promotes these multiple ways of teaching, thus creating greater flexibility in instruction for faculty (Kornhaber & Gardner, 1993; M. K. Smith, 2008). It is this hands-on technique that Martha Myers argued is vital between pupils, singly or in groups, and practitioners, and for which verbal description is an inadequate substitution (Nettl-Fiol, 2008). As Juhan (2011) argued, “Feeling is experience, and by this experience we grow” (p. 60). Touch, then, should be used to improve and augment the learning experience (Franklin, 2004),
which is especially vital for dance educators, who direct the learning of the body (Kipling Brown, 2014).

**Practicality.** The use of touch is a practical pedagogical approach to communicate lots of information with quick and individualized attention. With much for faculty to navigate in the dance studio—simultaneously verbally and physically demonstrating material, giving corrections, counting, directing an accompanist, and cueing—it may be difficult to communicate all information quickly enough. In dance, time is of great importance, as faculty must work within the confines of time limitations of class and more importantly the music, which drives both class warm-up and combinations as well as rehearsal and performance. Here speed is vital, and touch increases the immediacy of communication (Chillot, 2013).

For example, a faculty member could provide verbal direction to lead with the heel of the foot in a backward walk while students cross the floor in class. Simultaneously, the faculty member could touch a student’s foot to demonstrate the concept, reinforcing the idea. Although touch is most often used to complement or accent a verbal message (Richmond & McCroskey, 2004), it also provides educators with the opportunity to continue verbal instruction to the class at large while simultaneously providing feedback for individual students. For example, a faculty member may need to verbally cue the movement or phrasing for the class but may also want to give feedback to an individual dancer. With touch, faculty members have this ability to individualize corrections by providing positive kinesthetic feedback appropriate to each dancer.

As faculty members tend to walk around to give corrections, their proximity to students supports the immediacy of providing tactile feedback. As Guerrero (as cited in
Chillot, 2013) noted, “If you’re close enough to touch, it’s often the easiest way to signal something” (para. 13). These tactile cues could include corrections (i.e., placement, location, shape, etc.), reminders (i.e., lengthening, releasing, contracting, etc.), and encouragement (i.e., “You can do it,” “Keep going,” “Nice job,” etc.) for the students.

These signals may be in contrast to direction needed for the class, which thus supports individualized attention for the students. For example, the class may need a verbal cueing of the movement sequence such as “développé croise devnat, développé à la second, développé derriere,” while an individual dancer may need a tactile reminder during the développé derriere to relax the shoulders, adjust the location of the leg, engage the abdominal wall, and so forth. In this scenario, both the individual student and the class as a whole receive appropriate feedback without disturbing the flow of the class.

**Effectiveness.** In the learning/Changing process, touch is “a powerful experience” (Meaden, 1997, as cited in E. Groff & J. Meaden, personal communication, September 2006), as “hands are great teachers” (Franklin, 1996, p. 232) and “skin is a sensitive perceiver” (Hackney, 2000, p. 56). It can awaken sensation, bring clarity of spatial intent, invite awareness, and respect and confirm one’s being (Hackney, 1994, as cited in E. Groff & J. Meaden, personal communication, September 2006). As Constantine (2013) supported, the use of touch, such as a handshake, is crucial and “always appropriate” (p. 25). Taking the time to touch while maintaining eye contact makes the other person feel validated and important (Constantine, 2013). It can “build or shatter your credibility, trustworthiness, and reputation” (Constantine, 2013, p. 22).

**Emotional connections for faculty.** Beyond the act of contact, “touch is the act of reaching toward” (Manning, 2007, p. xvi). It permits faculty members to create a
connection with their students by extending themselves and relating to the outside. Ihde (1973) stated, “Every time I touch, I am also touched” (p. 98). In this case, and as Gerko Egert (as cited in Bannon & Holt, 2011) asserted, touching is an opening or articulation to the outside. It supports a vulnerability within the instructor to be open to his or her students. As Ralph Waldo Emerson (1841/1998) eloquently stated,

He teaches who gives, and he learns who receives. There is no teaching until the pupil is brought into the same state or principle in which you are; a transfusion takes place; he is you, and you are he; then is a teaching. (para. 30)

Touch, then, is personalized instruction, tailored to each individual. It implies a touching presence of sharing and giving. To illustrate this point, in dance, faculty members give corrections. In this giving, the full attention necessitated by engaging touch is considered a “gift” (Hackney, 2000, as cited in E. Groff & J. Meaden, personal communication, September 2006). It allows faculty members to be totally present with their students in a meaningful way, which is often lacking in U.S. culture. As Hackney (2000, as cited in E. Groff & J. Meaden, personal communication, September 2006) stated, “We rarely receive it or give it in our society.”

Having “beneficial physiological consequences” for those touching and those being touched (Chillot, 2013, A Touch of Love section, para. 1), touch also creates and improves connections between students and faculty. As Hackney (1994, as cited in E. Groff & J. Meaden, personal communication, September 2006) suggested, touch “creates connection between people.” In this sense, it supports the connections between students and faculty as well as students and other students. It enables faculty to create unity within class, as touch plays a critical role in facilitating group cohesion (Hackney,
Working as a unified group is especially important in dance, which demands teamwork in rehearsal and performance. Additionally, faculty members may inadvertently reap the benefits of touch. In research by T. Field (2001), it was found that people both giving and receiving massages experienced the same great reduction in stress hormones. Dance faculty members, already mentally and physically fatigued from teaching and demonstrating, may enjoy reduced stress levels when providing touch to their students.

**Negative Implications**

As Paterson and Dodge (2012) stated, “touch is not universally positive” (p. 11). It can produce both tremendous physical and emotional harm to students. For faculty members, physical and emotional concerns about touch may outweigh positive implications; hence, touch may be a liability, not an asset.

**Physical harm to the student.** Touch is often perceived as unwelcome due to its association with pain (Bannon & Holt, 2011), and rightfully so. Touch in yoga, with commonalities to dance, has been known to injure students (Lander & Lander, 2012). Brodie and Lobel (2012) noted, “Most dancers have experienced being positioned in the ‘right’ alignment” (p. 17). However, these adjustments may or may not have been conducted with carefulness or accuracy, thus leading to injury. If faculty members have not had training in touch, there is a risk that they may do more harm than good.

Additionally, feedback provided by touch can be misleading. Used incorrectly, touch may contribute contradictory or false information to the student being touched. For
example, a poke with a finger would provide different feedback than a long-sustained brushing action.

**Emotional harm to the student.** Touch should be used with caution, as it contributes to the existing dynamics of power in the studio (Marshall, 2009). Touch by nature can be used to display one’s power (P. A. Andersen, 1999; Guerrero et al., 2007), and this may be especially true in dance where the body is perceived as an object (Kipling Brown, 2014). According to Brandstetter et al. (2013), “Feelings of oppression, anger, self-doubt, or power can develop when touch is more of a hindrance than a help to the dancers’ communication” (p. 4). Inherently, touch is perceived as a sign of power, and this is particularly true of touch that is not reciprocated (Eakins & Eakins, 1978), such as that by faculty. Thus, the students may feel that they are unable to voice displeasure of faculty touch due to the dynamics of power in the studio classroom.

Students may not be emotionally prepared for touch by faculty due to their own personal history. As P. A. Andersen (2004) asserted, touch can both repel and compel. This was supported by the words of Faulkner, who wrote, “There is something in the touch of flesh with flesh which abrogates, cuts sharp and straight across the devious intricate channels of decorous ordering, which enemies as well as lovers know because it makes them both” (as cited in Juhan, 2011, p. 60). If students become overly concerned with the act of touch itself, they may remain fixed in past experiences, with faculty unaware of their undisclosed history (Marshall, 2009).

**Misinterpreted touch: Sexual harassment fears of students.** The touch by an educator to assist a student, however beneficial, could be interpreted as a sexual advance by the student. As Paterson and Dodge (2012) argued, “Touch is not universally
positive” (p. 11) and could be understood as sexual harassment. J. L. Hanna (1999) asserted that sexual harassment, or “unwanted verbal or physical sexual attention, is stressful” (p. 177). In support, Andersen (as cited in Chillot, 2013) stated that “physical contact can be creepy; it can be threatening” (The Laws section, para. 2). For the student, it may have personal or cultural implications of touch as a taboo (Nancy, 2013). Often it is linked to religious beliefs in which certain types of touch are taught to be sinful or inappropriate (Chillot, 2013).

In addition, students may have been sexually harassed before and thus may be paranoid about being touched (P. A. Andersen, 2004). Thus, the students may misinterpret touch by faculty due to their personal association with pain and abuse (Bannon & Holt, 2011). Due to their prior experiences, students may also mistake touch by assuming all touch has sexual implications. To further complicate matters, no gender is without suspicion of misguided touch. J. L. Hanna (1999) explained, “Dancers may be sexually harassed by either gender (heterosexual, bisexual, or homosexual)” (p. 177). Most universities and conservatories have sexual harassment clauses in their human resources policies, “although few contain wording specifically aimed at touch during dance classes” (Marshall, 2009, p. 83).

**Physical concerns to faculty.** In addition to potentially physically harming students, instructors could also be injured themselves in an attempt to assist. As noted in yoga instruction, Lander and Lander (2012) agreed that teachers may be injured too during the use of touch. The possibility for injury might manifest itself in the body’s reaction to touch, unexpected weight shifts, and unpredicted spatial patterns. There are unknowns when touching others, and those unforeseen elements are physical risks for
faculty. According to I. Dowd (1991), “Even though I touch someone with the intention to communicate a specific motion to that person’s body, I can make no assumptions about what his or her actual movement response will be” (p. 24)

**Emotional concerns for faculty.** Seasoned dance educators may find that their comfort levels with using touch supersede their awareness of students’ reaction to and desire for touch. Entranced with helping students, there is potential that instructors will miss warning signs of unease or unfamiliarity with touch. Williams (2011) suggested, “The best advice I can give American teachers of ballet and modern concert dance classes is, first of all, DO NO HARM” (p. 106). Conversely, faculty may be unwilling to accept the “risks associated with the unknown toward whom I reach when I touch” (Manning, 2007, p. 235). Faculty members must stay present to the moment, remembering that their eagerness to help must equally be weighed with the students’ desire to be touched. This requires instructors to recognize the wisdom of the students about their own bodies and “to remain humble to the great mystery we are dealing with in human communication” (Hackney, 2000, as cited in E. Groff & J. Meaden, personal communication, September 2006). Regardless of a faculty member’s expertise in the area, ultimately the students know more about their own bodies (Hackney, 2000, as cited in E. Groff & J. Meaden, personal communication, September 2006). The touch must be free of any emotional content or ulterior motives, such as self-pleasure or fulfillment of touch. Additionally, faculty should be prepared that “what we touch affects and changes us” (I. Dowd, 1991, p. 21).

**Misinterpreted touch: Sexual harassment risks of faculty.** Faculty members run the risk of having their touch misinterpreted by students due to its association with sexual
advances. As Houston (2009) argued, “It is easy to equate the tactile system with a sensuality that has sexual connotations” (p. 106). Although Novack (1990) found that participants, both men and women, reported desexualized touch in dance, it was in a contact dance where participants, all students touching other students, were prepared for the use of touch. Students may be in a situation where they do not have any say or do not believe they have any choice over whether they are touched by a faculty member, and thus the faculty member’s use of touch may be interpreted as a violation or sexual harassment. According to Paul, director of legal and business affairs for Alvin Ailey Dance Company, “The culture of the studio, where touching is part of correcting the body, is very different from that of a regular office” (as cited in C. Thompson, 2014, p. 50). Thus, dancers can find themselves in uncomfortable situations with their choreographers, teachers, and directors. This is especially problematic in a situation where the touch is not reciprocal (Eakins & Eakins, 1978). The touch could be categorized as “unwelcome conduct” in addition to other unsolicited verbal or visual behavior (C. Thompson, 2014).

Educators must be mindful of the power of the use of touch. As Eakins and Eakins (1978) warned, often connection to touch may be superimposed onto experiences. Faculty members face the challenge of using touch without asserting their power (Marshall, 2009). With a student’s touch paranoia (P. A. Andersen, 2004) and an educator’s touch avoidance (P. A. Andersen & Leibowitz, 1978; Fuller et al., 2011), there is little room for mistakes, including techniques and intent, when employing touch.

Regardless of the infrequency of sexual abuse cases in schools, touch misinterpreted as sexual harassment is a risk for faculty. Although schools have become
a primary target for antitouch laws, as little as 1% of all reported sexual abuse cases involving children occur in U.S. schools (T. Field, 2001). T. Field (2001) found, “Ninety percent of abusive incidents involve parents and relatives” (p. 4). Although the focus of this study was on adult learners, it is important to note that the antitouch culture is an underlying theme in U.S. schools.

**Overzealous touching.** Dance is a field that is filled with women as both the students and the educators. This female-dominated environment may be a breeding ground for excessive touching, as it is an innate approach by women toward women. As Eakins and Eakins (1978) revealed, “Mothers have been found to touch their female children more than their male children from the ages of six months on” (p. 172). If educators are “mothering” their students, they may be excessively employing touch to female students. In turn, they may be naturally overlooking male students and thus not emotionally bonding with them through touch equally.

**Appropriateness in Instruction**

Although the aforementioned concerns are unmistakable, so too is evidence in the literature that touch is used in dance and dance-related fields. The extent to which touch can be intertwined in movement instruction is great. As Hackney (1994, as cited in E. Groff & J. Meaden, personal communication, September 2006) argued, “touching possibilities” may include the following:

- Touch which . . .
  - respects and confirms the Ground of Being.
  - is present in order to perceive, “listen” to what is there.
  - creates connection between people.
- awakens sensation, invites awareness
- addresses therapeutically a particular body issues or problem through moving soft tissues (ex. Massage), bone (joint mobilization)
- asks to be matched in a specific spatial or effort intent
- directs attention to specific relationships of body parts (ex. bony landmarks)
- sets up proprioceptive knowledge of patterns of connectivity
- teaches movement patterns through actively moving the body through a prescribed movement
- stimulates proprioceptively a specific location in the body where a prescribed movement will initiate
- brings clarity of spatial intent to a movement sequence

The appropriateness of touch in dance education can be further outlined in the intent, both physical and mental; types; technique; usage, including frequency and occasion; and location.

**Intent**

The use of touch must be clearly defined by the intent of what the instructor is trying to address and the approach he or she is taking to reveal, discover, or inform through touch. As Juhan (1995) stressed, instructors’ intent, in addition to training and experience, is crucial. This includes the physical clarity of the touch. Hackney (2000, as cited in E. Groff & J. Meaden, personal communication, September 2006) noted, “Knowing my own intent and agenda enables me to give clear communication through touch.” Vitally important is the mental clarity of the instructor’s thoughts, which meets simultaneously with the physical intent of the touch.
Physical intent. The physical clarity of an instructor’s touch supports the effectiveness of the intent of the touch. It includes a careful “professional touch” (P. A. Andersen, 2004), one that is not misleading, a knowing touch based on a scientific understating of the body, and course correcting (D. Anderson & Ackerman-Anderson, 2001), or in this case, “touch correcting.” P. A. Andersen (2004) outlined the differences in touch by explaining how professional touch is used by professionals, such as doctors or hairstylists, and accepted by others, such as patients and clients. Interestingly, studies have found that people instinctually identify the difference between professional touch and social touch (Markel, 2012; Nilsen & Vrana, 1998) as the intent of the touch is known. Students and instructors must have awareness of this intent for clarity in the use of touch. This type of intentional touch is a goal-oriented interactive touch (I. Dowd, 1991). This professional touch must also be informed by carefulness and understanding of the body. As Bernard Andrieu, Anne-Flore Laloe, and Alexandre Klein (as cited in Paterson & Dodge, 2012) argued,

The professional touch, conditioned by the logical tact, is therefore a reflective touch that indicates the direction in which it thinks of the being in the world at the time of the effects of contact on the body of the others. (p. 163)

The intent of the touch must support anatomical limitations of the dancer. As touch can injure the student as well as the teacher (Lander & Lander, 2012), careful attention to structural limitations of the body is necessary. Pulling a body part should also be avoided (Nettl-Fiol & Vanier, 2011). This is especially true when giving corrections and fixing alignment. As Bartenieff and Lewis (1980) explained, there is danger in providing tactile information by manipulating a student into a shape. The
intent is to provide physical feedback, but not by positioning a dancer into the “‘right’ alignment” or shape (Brodie & Lobel, 2012, p. 17). Tactile involvement should enhance the work of the student and never detract from his or her investigation or superimpose preexisting notions from the instructor. As Nettl-Fiol and Vanier (2011) suggested, the intent of touch should not solely be to try to fix something about a student but to learn something about the student. As Batson (2008) explained, “The teacher’s role is to provide just enough information to facilitate body-level problem solving but not too much as to impose his or her personal movement strategies on the dancer or suffocate the dancer’s autonomous processes of self-organization” (p. 136).

Besides delivering information, touch must not provide misleading information to the student. The instructor must be aware of both where and how he or she is touching. For example, if the instructor’s intent is to remind a student to lengthen through the spine, a quick, direct touch to pinpoint a muscle group, instead of a brushing stroke following the vertebrae, would send mixed signals to the student. As Juhan (1995) suggested, “Touch can be superficial or penetrating, general or quite precise; it can evoke the sensations that would accompany unrestricted and pain-free movements, or it can be merely an incoherent jumble of pressures and stretches” (p. 376). The intent of the touch must be clear so as to not muddle the message. This pertains to both the tactile message and the verbal message that may accompany it. As touch is typically used to accent or complement what is being said (Fuller et al., 2011; Richmond & McCroskey, 2004), it is vital that these messages are working in tandem to support the pedagogical intent of the instructor.
Lastly, the intent of touch should include the instructor’s and student’s ability to “course correct.” By noticing if a student needs to do more or do less, the instructor may begin to redirect the student’s intent (Nettl-Fiol & Vanier, 2011). An instructor should be aware of how the student processes information and “make instructional decisions based on those observations” (Kaufmann, 2006, p. 18). As Nettl-Fiol and Vanier (2011) encouraged, the use of both eyes and hands to recognize the student’s needs and make adjustments in touch is necessary. The touch should change in response to the student. For example, if the student is underenergized, the instructor should let the touch lengthen, but if the student is overexerting, the instructor’s hands should soften (Nettl-Fiol & Vanier, 2011).

**Mental intent.** The intention of touch, besides having a physical sensitivity to its use, must simultaneously be supported by the mental intentions of the instructor. As organisms, people have been nonverbally communicating among themselves since the beginnings of life, and these energy fields, vibrations, physical contacts, and intentions have organized both individual cells and ever-more complex organizations of life (Juhan, 2011). This “life energy” or “bio-energy,” as MacIntyre et al. (2008, p. 30) described it, provides tremendous power. As Nettl-Fiol and Vanier (2011) warned, when instructors touch students, the students in turn are touching the instructors. As Janice Meaden (1997, as cited in E. Groff & J. Meaden, personal communication, September 2006), in her integrated movement studies (IMS) article “Thoughts and Suggestions Regarding ‘Hands On,’” described, “Touch is a dance between two people.” In this sense, dance instructors are two-way conductors of information and must be sensitive to the messages they in turn are sending. I. Dowd (1991) stated, “When I touch intentionally, my mind is fully
engaged at the surface of contact between myself and the person I am touching” (p. 22).

The instructor’s mindfulness to the changing landscape of touch, whether it is “leading or following,” “meeting,” or “listening” (Meaden, 1997, as cited in E. Groff & J. Meaden, personal communication, September 2006), is vital.

Franklin (1996) warned that people must have a “receptive mind” (p. 232) and must clear their thoughts by concentrating on their breath before touching. He went on to say,

Your hands’ effect on someone else depends very much on your mental state. It is best to concentrate on the image your partner is using and to be in a “helping mood.” When concentrating on an image, see it in your own body as well as projected on your partner’s body. (Franklin, 1996, p. 232)

To create change, instructors must be aware of how they conduct themselves, focusing on their own practice so as to have a greater impact on their students (Nettl-Fiol & Vanier, 2011). Meaden (1997) suggested being present and centering before commencing hands-on work, asserting that it is vital to affirm one’s wholeness in order to be present with another through touch. I. Dowd (1991) warned, “Any thoughts that either of your minds entertain will in some way change the touch interaction. Any distraction of our minds from the locus of contact will dilute our awareness and alter our perception of the intentional touch interaction” (p. 22).

**Touch as Self-Reflection**

The research by Bransford, Brown, and Cocking (2000) supported the assertion that “learning is enhanced when teachers pay attention to the knowledge and beliefs that learners bring to a learning task” (p. 11). The awareness of the use of touch in dance
pedagogy, then, should be addressed in a way that allows students to self-reflect about their past dance training. This serves several functions in dance education. As Enghauser (2012) explained, allowing students to reflect through a pedagogical lens on their own training will support them in their understanding of how they learn and also how others learn. First, thinking about one’s own learning, or metacognition, allows for “the process of generating alternative approaches . . . evaluating their merits in helping to attain a goal, and monitoring progress toward that goal” (Bransford et al., 2000, p. 19). Touch, in this respect, serves as an “alternative approach” to deepen students’ understanding.

Second, the process of self-reflection on touch encourages students to cultivate their own thoughts about dance pedagogy and develop their own approaches to teaching dance. As Enghauser’s (2012) research suggested, the dance student has the opportunity to become an “agent of change” (p. 57) rather than one who simply follows existing norms and traditions. This is especially important in the arts, where it is predicted that approximately 90% of students end up teaching at least part time, yet few have pedagogical training (de Kuijper, 2013; Warburton, 2008). As touch is introduced within the studio, it can be supported with discussions about how the students learn collectively and individually. It can also promote dialogue about personal preferences in instruction.

Types

Not all touch is the same (P. A. Andersen, 2004), and as James Gibson argued, there are two types: active and passive (as cited in Montagu, 1986). A touch approach is considered passive when change in the body is physically initiated by someone else and active when the change is generated by the mover (Brodie & Lobel, 2012; Schmidt &
Active touch facilitates understanding of the nature and form of objects (Montagu, 1986) and has higher rates of exactness. In Gibson’s unpublished work with “feelies,” active touch produced a 95% accuracy rate, while passive touch produced an accuracy rate of only 49% (as cited in Montagu, 1986). These studies were later reproduced by Norman et al. (2012), but the performance in visual and haptic shape discrimination was similar. Active touch can also be seen in IMS types of touch.

Passive touch is similar to what is referred to in the Alexander technique as the “non-doing hand” (Nettl-Fiol & Vanier, 2011, p. 174). In this approach, the hands are receptors of information versus initiators of action. The “non-doing hand” technique is similar to IMS’s (Groff et al., 2006, as cited in E. Groff & J. Meaden, personal communication, September 2006) definition of “cellular” or “being with” touch. In this touch for repatterning, “being with” touch allows for listening rather than doing (Groff et al., 2006, as cited in E. Groff & J. Meaden, personal communication, September 2006). It allows for the “‘what is’ in the present moment” (Groff et al., 2006, as cited in E. Groff & J. Meaden, personal communication, September 2006). IMS further defined these two broad categories of touch into 11 areas where both the passive and active exist. These include (a) cellular/being with touch, (b) growing-shrinking touch, (c) fluid touch, (d) meeting/matching touch, (e) containing touch, (f) locating touches, (g) sending-receiving touch, (h) attracting touch, (i) compression touch, (j) countertensioning touches, and (k) three-dimensional forming touch (Groff et al., 2006, as cited in E. Groff & J. Meaden, personal communication, September 2006).

As Groff et al. (2006, as cited in E. Groff & J. Meaden, personal communication, September 2006) suggested, cellular/being with touch is a “listening touch that is about
being rather than doing.” Growing-shrinking touch exists in the student/client and is then mirrored or heightened by the faculty/practitioner as he or she allows the hand to grow or shrink accordingly. Fluid touch promotes “a sense of mobile ‘swimming’” (Groff et al., 2006, as cited in E. Groff & J. Meaden, personal communication, September 2006) and an internal flow. Meeting/matching touch provides a meeting of intention between client and practitioner. In the meeting touch, the qualitative effort life of the client is mirrored by the practitioner. In the matching touch, the client is asked to match the quality of the practitioner. Containing touch “contains and holds” (Groff et al., 2006, as cited in E. Groff & J. Meaden, personal communication, September 2006) and brings awareness to the structure and form of what is being touched. Locating touches include single-point touch and sliding touch. Single-point touch is a direct pinpointing that brings awareness to one specific area. Sliding touch, on the other hand, brings attention to a pathway or a larger area as it traces “kinetic chains” (Groff et al., 2006, as cited in E. Groff & J. Meaden, personal communication, September 2006). Sending-receiving touch also traces pathways along the body, but the energy is sent “along the pathway through the tissue with one hand and receiving/making a place of arrival for that energy with the other hand” (Groff et al., 2006, as cited in E. Groff & J. Meaden, personal communication, September 2006).

I. Dowd (1994) described sending touch as touch moving away from the practitioner’s hand. Attracting touch also sends energy but offers “opening, lengthening, and expansiveness” (I. Dowd, 1994, p. 3). The energy is sent with one hand while the other receives it and goes past its normal arrival point by extending or pulling it further. As I. Dowd argued, it attracts the motion from or through the client’s body to the
practitioner. “Attracting” touch is touch that moves toward the practitioner’s hand (I. Dowd, 1994, p. 49). I. Dowd further added the category of “alternating,” which is a touch alternating between a sending and attracting touch and “using both hands,” which includes simultaneous combinations of both sending and attracting (p. 49).

Compression touch promotes spaciousness and opening by compressing and then releasing tissue. Countertensioning touches include tractioning touch and mobility-stability touch. Tractioning touch elongates by creating a “spatial relationship where two parts move away from each other” (Groff et al., 2006, as cited in E. Groff & J. Meaden, personal communication, September 2006). Mobility-stability touch focuses on grounding a part of the body so that mobility can be facilitated in another part of the body. Three-dimensional forming touch supports “full voluming within a part or the whole of the body” (Groff et al., 2006, as cited in E. Groff & J. Meaden, personal communication, September 2006) with carving and sculpting touch.

Similar to dance, DMT struggles with the ethical distinctions between types of touch and between “boundary crossings” and “boundary violations” (Zur, 2007, p. 65). As argued by Siegel (2003), the matter of touch and its efficacy remains one of the many aspects of DMT not fully studied by its practitioners. Popa and Best’s (2010) work called for additional research, drawn from body psychotherapy, and professional guidelines to assist DMT practitioners to discern acceptable, positive therapeutic touch.

Techniques

As Bannon and Holt (2011) argued, “Touch, is more than the making of a contact, it concerns qualitative variations in the degrees of attention” (p. 219). In addition, Bannerman (2009) asserted that there was recent confirmation of the significance of not
just what is done but how something is done. The use of touch requires specific
techniques that are responsive to the people with whom one is in contact (I. Dowd, 1991).
However, “instruction or guidance in the acquisition of skill or perceptual acuity in the
use of the tactile sense is not readily available” (I. Dowd, 1991, p. 21).

As current literature had few references to touch technique in dance pedagogy,
looking to the touch techniques employed in IMS and the Bartenieff and Laban training
yielded the most pertinent data. By incorporating dance, as well as attracting dancers to
the practice of IMS, these approaches to movement promote body connectivity for both
the dancer and nondancer.

As part of Laban/Bartenieff certification training, through IMS, touch for
repatterning is an essential element. Groff et al. (2006, as cited in E. Groff & J. Meaden,
personal communication, September 2006) suggested four approaches to consider when
“mapping the terrain” of touch. Although they warned that this was a work in progress,
the list included (a) flow, (b) intention, (c) effort and shape phrasing, and (d) meeting and
amplifying. These IMS Laban/Bartenieff practitioners saw flow as the baseline on which
all touch relies, intention as an investment of the qualitative aspect of the touch, effort
and shape phrasing as variations of effort qualities and modes of shape change, and
meeting and amplifying as a way to “increase and heighten the quality” (Groff et al.,
2006, as cited in E. Groff & J. Meaden, personal communication, September 2006) by
supporting what currently exists. Groff et al.’s ideas of intentional touch were similar to
I. Dowd’s (1994), who said it is “simultaneously both a means of perception and a means
of action, although my conscious attention may be focused primarily on one or another at
any one time” (p. 48). As I. Dowd argued, intentional touch is a “highly specific and
purposeful movement communication between myself and the human being whom I am touching” (p. 48).

As Hackney (2000, as cited in E. Groff & J. Meaden, personal communication, September 2006) proposed, both the variety and the phrasing of the touch are significant. She stated, “The quality of my touch is the communication. Providing different qualities of touch allows for a sense of exertion/recuperation within the session and allows the client to experience new possibilities for dynamic expression” (as cited in E. Groff & J. Meaden, personal communication, September 2006). In addition, “the quality comes through my phrasing of Effort, Shape, Space, and my own Body connections. Clearly phrased touch is easier to receive than touch which is lacking in a clear beginning, middle, and end” (Hackney, 2000, as cited in E. Groff & J. Meaden, personal communication, September 2006). Hackney added, “Following my intuition about where to touch, when to touch, how firmly, etc. is usually the best technique for me” (as cited in E. Groff & J. Meaden, personal communication, September 2006). In this sense, it is an improvisation through approaching the moment with caring exploration, being receptive to messages from the body, using intuition fully, and recognizing that each approach is different as each body is different (Hackney, 2000, as cited in E. Groff & J. Meaden, personal communication, September 2006).

When focusing on releasing touch for relaxation, Franklin (1996) detailed three tapping techniques that can be self-administered or used in partner work. They include (a) a flat hand position with loose fingers, (b) a cupped hand position with tips of the fingers, and (c) a loose fist position all performed with a loose wrist. These techniques are geared toward reducing “excess tension by improving biomechanical efficiency and
movement flow” (Franklin, 1996, p. 233). As suggested by the book’s title, *Dance Imagery for Technique and Performance*, Franklin’s techniques were specific to reducing muscular stiffness.

**Usage**

As many dancers are visual, kinesthetic, and spatial learners (Daniels, 2007), the use of touch is necessary to accommodate multiple learning styles. However, this is one of many pedagogical tools to be considered in a situation where the involvement and embodied connection between material and person provides a “multidirectional interrelationship between person, form and transmission” (Bannon & Holt, 2011, p. 216). The appropriateness of using touch during instruction may be shaped by the frequency of its use and the occasion.

**Frequency of use of touch.** Touch should highlight a moment and be treated as an event (Manning, 2007). Brandstetter et al. (2013) echoed these thoughts by suggesting that touch only be used at the appropriate moment and very prudently. It should be used only to enrich the experience (Franklin, 2004), to increase knowledge/communication (Hackney, 2000), to stimulate awareness (Hackney, 1994, as cited in E. Groff & J. Meaden, personal communication, September 2006) and promote harmonious ways of moving (I. Dowd, 1994), and to excite curiosity (Bannon & Holt, 2011).

Here too, the timing of touch dictates its usage. As P. A. Andersen (2004) recommended, before touching, one should reflect on if the situation is right and if the person is being touched in the right frame of mind. It is important to ask permission, remembering that all have “the right to decline to touch or be touched” (Hackney, 2000, as cited in E. Groff & J. Meaden, personal communication, September 2006). Just as
every day brings new challenges for students, their desire to be touched also fluctuates. A student may have an overall preference, but that may change daily. The educator must remain mindful and respectful of the timeliness of the touch and both “ask permission” before and “check-in” during hands-on work (Meaden, 1997, as cited in E. Groff & J. Meaden, personal communication, September 2006).

As argued by Fuller et al. (2011), the “need for touch, which reflects an individual’s general motivation to seek out tactile interaction, plays an important role in determining the frequency with which supervisors use touch to convey positive affect for their subordinate” (p. 231). Findings have demonstrated that the quantity of touch a supervisor uses with a subordinate is determined by both the supervisor’s need for touch and the subordinate’s need for touch (Fuller et al., 2011).

Touch is a long-term practice that provides the practitioner with a clear dimensional concept of the body (I. Dowd, 1994). According to I. Dowd (1994), “The skill necessary to identify a particular structure develops out of an interaction between extensive knowledge of functional anatomy/physiology/pathology and the subjective experience of touching the various structures on the body on many different people over time” (p. 53). One of Hackney’s (2000, as cited in E. Groff & J. Meaden, personal communication, September 2006) principles about the use of touch was to ensure that she was in tune with her own body and the physical connections. She noted, “Confirming and reinvesting in my own connections makes it possible for me to be with another person clearly” (as cited in E. Groff & J. Meaden, personal communication, September 2006).
Specific occasion for the use of touch. Morris (1971, as cited in Richmond & McCroskey, 2004) identified 14 major types of touch in public contact, with a total of 457 different types of touch. However, the occasion for the use of touch in dance serves very specific functions. Franklin (1996) asserted 10 reasons to use touch with dancers:

Touch could be used in many ways:

1. To indicate the location and direction of an image, to demonstrate a line of action.
2. To help distinguish structures within the body (‘this is bone, this is tendon’).
3. To kinesthetically cue for correct alignment.
4. To release tension.
5. To show the correct initiation of a movement.
6. To help stabilize the body in a difficult movement.
7. To influence the breathing pattern.
8. To increase the sensory awareness in an area of the body.
9. To help store a kinesthetic-tactile image in the student’s mind.
10. To help the student find the correct kinesthetic image for a certain dance step.

(p. 232)

Matherly (2014) presented seven concepts found in DMT literature in which the occasion for touch is warranted:

1. touch for sequencing
2. touch for body awareness
3. touch for boundaries and stimulation (Appel, 2005)
4. touch attunement
5. touch as a way to gain and give knowledge,
6. touch to facilitate cohesion in a group
7. and touching the flow of energy and the Self (Hackney, 2000; Kestenberg Amighi, Loman, Lewis, & Sossin, 1999; Schmais, 1985; Whitehouse, 1977).

The 17 aforementioned usages of touch predominantly focus on the physical guiding, educational, and kinesthetic experience of the person being touched. Additionally, touch may be utilized for its emotional content as a positive reinforcement of desired behavior (Fuller et al., 2011; Knapp & Hall, 2002). For example, congratulatory and celebratory touches such as high-fives and pats on the back can be a “reward” (Simmering et al., 2013, p. 134; see also Heaphy, 2007). In this context, “hugging can be a good thing . . . it is a consoling gesture, not an intimate one” (Constantine, 2013, p. 301). This positive affect touch demonstrates that “one cares for, values, and has an interest in them” (Simmering et al., 2013, p. 135; see also Richmond & McCroskey, 2004). Physical touch can be a “building block” for positive workplace relationships (Fuller et al., 2011, p. 231; see also Heaphy, 2007).

As proposed by Popa and Best (2010), fields such as DMT that engage the use of touch struggle with the ethical distinctions between types of touch and between “boundary crossings” and “boundary violations” (Zur, 2007, p. 65). Their work called for additional research, drawn from body psychotherapy, and professional guidelines to assist DMT practitioners to discern acceptable, positive therapeutic touch. Of note is that Popa and Best proposed that one reason for the use of touch by DMT practitioners is due to their dance backgrounds. Their experiences as dancers “might make touch an implicit
part of dance for them, even if not explicitly intended as a specific therapeutic intervention” (Popa & Best, 2010, p. 32). They argued that this is especially true of DMT practitioners with experience in contact improvisation and modern dance, which may involve a familiarity with body contact (Popa & Best, 2010).

**Location**

As P. A. Andersen (2004) explained, “The location and type of touch is central to its meaning” (p. 78), and thus where an educator touches is critical. In the wrong place, a touch could be considered sexual harassment and viewed as contributing to a hostile work environment (Simmering et al., 2013). As defined by the U.S. Equal Employment Opportunity Commission (1990), touch in “intimate body areas” constitutes sexual harassment, and “a single unwelcome physical advance can seriously poison the victim’s working environment” (Guidance section, para. 27).

According to Andersen (as cited in Chillot, 2013), typically from the shoulder down to the hand as well as the back, which is very low in nerve endings, are acceptable areas for touch between casual acquaintances. In American culture, it is believed that there are nonvulnerable body parts (NVBP), which include the hand, arm, shoulder, and upper back (Richmond & McCroskey, 2004). Richmond (1997, as cited in Richmond & McCroskey, 2004) argued that a person should only touch those NVBP, especially when in doubt. All other parts of the body are considered vulnerable body parts (VBP) and thus should not be touched (Richmond & McCroskey, 2004).

Meaden (1997, as cited in E. Groff & J. Meaden, personal communication, September 2006) suggested, “If you feel you need to work on what might be a sensitive area, ask your client if it is okay with them,” being aware of their boundaries and needs.
Morris (1971, as cited in Richmond & McCroskey, 2004) reported that the head is an incredibly vulnerable area that requires trust and is often associated with intimate relationships. Richmond and McCroskey (2004) concluded that there are differences between men’s and women’s acceptance of where on their body they can be touched (see Table 1). Richmond and McCroskey’s work, however, only applied to “strangers” and “friends” (p. 150). It could be argued that faculty members are somewhere in between.

Table 1

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Conclusion about being touched</th>
</tr>
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<tbody>
<tr>
<td>Close friend of opposite sex</td>
<td>All over</td>
</tr>
<tr>
<td>Close friend of the same sex</td>
<td>Head, neck, arms, hands, upper back</td>
</tr>
<tr>
<td>Stranger of the opposite sex</td>
<td>No part of the body</td>
</tr>
<tr>
<td>Stranger of the same sex</td>
<td>Arms and hands</td>
</tr>
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</table>


**Touch Self-Efficacy**

TSE is defined by an individual’s belief in his or her own skill set in using touch (Fuller et al., 2011; Simmering et al., 2013). In turn, “individuals with a higher overall sense of self-efficacy are more likely to have high self-efficacy related to specific areas, such as touch” (Fuller et al., 2011, p. 237). Gardner and Pierce (1998, as cited in Fuller et al., 2011) argued that general self-efficacy is often perceived as an aspect of conscientiousness and is a “relatively stable expectation that one has the ability to
successfully perform in a variety of situations” (p. 237). According to Richmond and McCroskey (2004),

Henley lay the groundwork for current research by concluding:

1. Individuals have certain expectations about touching and being touched in particular role relationships. For example, individuals expect to touch subordinates more than they touch supervisors, and to be touched by superiors more than by subordinates.
2. Touching depends on the situational context.
3. Touching and dominance are related. Specifically, dominant persons are more likely to initiate touch. (p. 152)

The TSE Scale, developed by Fuller et al. (2011), serves as a self-assessment of a person’s ability to use touch effectively to communicate at work. Although research on TSE is in infancy, TSE studies by Fuller et al. (2011) and Simmering et al. (2013) “provide understanding of both the antecedents and the possible positive outcomes that may be associated with workplace touch” (Simmering et al., 2013, p. 148). The TSE Scale includes the following 10 items:

1. I can easily use touch to achieve a variety of outcomes.
2. I believe I can succeed at communicating a message with touch.
3. Compared to other people, I believe I’m better at using touch.
4. In a difficult situation, I can use touch to ease the tension of others.
5. I believe I can use touch to help others.
6. Even when things are tough, I can use touch to help influence others.
7. I’m confident that I can use touch effectively in a lot of different situations.
8. I feel like I am effective in making others feel better when I touch them.

9. I can use touch to form stronger working relationships with others.

10. I find I can more effectively convey some messages when I use some form of touch than when I don’t use touch. (Fuller et al., 2011, p. 236)

There is a scarcity of research investigating touch in the workplace, and it is suspected that touch in many cultures is considered taboo in the workplace (Fuller et al., 2011). Although Fuller et al.’s (2011) and Simmering et al.’s (2013) work focused on the dynamics of traditional workplace environments, the studio classroom for dance faculty is a workplace environment in which a faculty member’s contact competence could be measured. In the studio classroom, similar to the settings in Fuller et al.’s (2011) and Simmering et al.’s (2013) work, faculty members act as supervisors and students play the role of subordinates. With this research, there is the possibility for greater use of touch in workplace environments where touch is considered appropriate (Fuller et al., 2011). This may be true in dance where the use of touch is part of “dance ecology” (Bannerman, 2009, p. 232) and individuals have a “license to touch,” similar to a hairstylist who has an unspoken agreement to touch a client’s hair (Fuller et al., 2011; Morris, 1973). Heslin (1974, as cited in Richmond & McCroskey, 2004) argued that this type of touch is “professional-function touch” (p. 145) and impersonal in nature. Heslin also separated “professional-function touch” from “friendship-warmth touch” in which the touch serves the purpose of letting another “person know that we care for, value, and have an interest in her or him” (as cited in Richmond & McCroskey, 2004, p. 145). Here too, the expectation is that the professor rather than the student would initiate touch (Storrs & Kleinke, 1990).
It can be argued that individuals can improve upon their TSE through their training and/or experience. However, it has been reported that individuals with high self-esteem are disposed to use touch more than their low self-esteem counterparts (Fuller et al., 2011; Silverman, Pressman, & Bartel, 1973). To gain contact competence, I. Dowd (1994) argued that one must first gain technique in touching with “precise directional intent” (p. 53) before practicing employing touch as a way to interact and identify the body’s structures.

One area of exploration is an educator’s formal training in dance or dance-related fields such as IMS, body-mind centering, the Feldenkrais method, or the Alexander technique and its effect on the educator’s own TSE. Similarly, TSE levels may shape faculty members’ perceived effectiveness and use when integrating touch in their workplace, the studio. Of note is Popa and Best’s (2010) proposal that one reason for the use of touch by DMT practitioners is due to their dance backgrounds. Perhaps it is the DMT practitioners’ TSE that supports their inclusion of contact. Their experiences as dancers “might make touch an implicit part of dance for them, even if not explicitly intended as a specific therapeutic intervention” (Popa & Best, 2010, p. 32). Popa and Best argued that this is especially true of DMT practitioners with experience in contact improvisation and modern dance, which may involve a familiarity with body contact.

**Conclusions**

As a form of communication, nurturing, understanding, and learning, touch is a natural part of being and knowing. However, the use of touch in the classroom, particularly in higher education, is limited or avoided due to negative associations with sexual harassment, touch paranoia (P. A. Andersen, 2004), and touch avoidance (P. A.
Andersen & Leibowitz, 1978; Fuller et al., 2011). Although most research has focused on the negative aspects of touch in the workplace (i.e., sexual harassment), there is a burgeoning field of investigation into the benefits of touch in the workplace (Fuller et al., 2011, Simmering et al., 2013). Due to the infancy of the research, additional studies exploring various workplace environments, including higher education, are necessary.

As touch, known as the “mother of the senses” (Matherly, 2014, p. 77; see also T. Field, 2001; Montagu, 1971), is part of the “dance ecology” (Bannerman, 2009, p. 232) and “folk pedagogy” (Warburton, 2003, p. 13) in dance instruction, an investigation in this area is warranted. This argument is further supported by Fuller et al.’s (2011) assertion that there is an increased use of touch in workplace environments where touch is considered appropriate. Additional research is required to investigate dance faculty current practices, best practices, and perceived benefits of touch, including faculty’s TSE. As TSE literature is sparse, exploration into TSE levels, differences in the factors that influence the use of touch, and the reported benefits by college faculty with low and high TSE is required.
CHAPTER III: METHODOLOGY

Overview

Chapter I introduced the purpose of the study and presented the three research questions that guided the research. Chapter II summarized a review of the literature and provided key concepts surrounding touch, including positive and negative implications, touch in dance education, and touch self-efficacy (TSE). Chapter II also demonstrated the need for this study. This chapter details the statement of purpose, reviews the research questions, describes the population and sample, analyzes the research instruments, explains the processes for data collection and analysis, and establishes validity and reliability of the study.

Purpose Statement

The purpose of this mixed-methods study was to (a) identify the level of touch self-efficacy (TSE) of college-level dance faculty as measured by the Touch Self-Efficacy (TSE) Scale, (b) explore the factors that influence the use of touch in dance instruction, and (c) describe the perceived benefits as reported by college-level dance faculty.

Research Questions

1. What level of TSE do college-level dance faculty report on the TSE Scale?
2. What are the factors that influence the use of touch in dance instruction as reported by college faculty?
3. What are the perceived benefits of touch in dance instruction as reported by college faculty?
Research Design

In this mixed-methods approach, a sequential explanatory design was conducted in two separate phases of research (Creswell & Plano Clark, 2011). As noted by McMillan and Schumacher (2010), using methods sequentially is a standard or common practice. A mixed-methods design was employed for this study to produce a “more comprehensive coverage and more valid findings than either QUANT[itative] or QUAL[itative] alone” (Bamberger, Rugh, & Mabry, 2012, p. 304). This approach was chosen in a five-level decision-making process by the researcher and presented to the committee for input in an attempt to “cover blind spots and enhance their depth of understanding around the issue” (Taylor, 2011, para. 9).

The sequential mixed-methods approach provides quantitative data first, followed by qualitative data to “elucidate, elaborate on, or explain the quantitative findings” (McMillan & Schumacher, 2010, p. 25). Here, both phases of research are equally valuable, and thus neither phase has priority over the other. The first phase of this research provided an opportunity to quantitatively investigate the levels of TSE in college-level dance faculty. In the second phase, a qualitative approach provided the opportunity for exploration of the factors influencing the use of touch in dance instruction as reported by college faculty with low and high TSE.

Pursuit of only one methodology, such as quantitative or qualitative, would not have provided the full exploration of both the levels of TSE and the factors influencing the use of touch in dance instruction. This mixed-methods approach allowed for both the quantitative and qualitative data collection and also supported “generating new insights” (Bamberger et al., 2012, p. 321), which was necessary for this unexplored field of study.
It also provided a baseline for future research, as the TSE Scale is new and no such baseline existed. Benefits of this approach were that the best practices concerning the use of touch were uncovered. Additionally, the mixed-methods approach supported the ability to triangulate data (Adams-Budde, Howard, Joliff, & Myers, 2014; Bryman, 2006; Greene, Caracelli, & Graham, 1989; R. B. Johnson, Onwuegbuzie, & Turner, 2007), thus promoting the strengthening of the validity through triangulation (Bamberger et al., 2012). The data for each phase of the research were addressed independently as there was a specific sequencing of quantitative and then qualitative data collection (Hesse-Biber, 2010).

A sequential explanatory design was chosen in this mixed-methods study so that the TSE levels of faculty could be identified prior to the qualitative interviews. By organizing the study in this manner, “the quantitative component of a research project is collected and analyzed first and serves as input to a second qualitative component” (Hesse-Biber, 2010, p. 100). An analysis of the Phase 1 results prior to Phase 2 also provided triangulation for data collection and an opportunity for revision of Phase 2 interview questions. Thus, the TSE levels acquired in Phase 1 of the research provided a baseline for deeper exploration about touch and TSE in higher education. The results from Phase 1 and Phase 2 were combined after completion of Phase 2, and the data were triangulated.

**Population**

The population is the “total group to which results can be generalized” (McMillan & Schumacher, 2010, p. 129). The population for this study was dance educators. The target population was dance educators who were current members of the American
College Dance Association (ACDA), formerly known as the American College Dance Festival Association. The intent of the use of this target population was to make generalizations about the research results that would be representative of the larger population (McMillan & Schumacher, 2010). This population of ACDA members conformed to specific criteria, which included university and college dance educators who worked in the United States. The population included both 4-year and 2-year college dance program educators who represented their institutions at ACDA. At the time of the study, there were 379 institutions participating in ACDA. Therefore, the population size was 379. The selection of ACDA as the target population allowed for the inclusion of dance educators from across the United States, including 12 regions. The ACDA regions include

- Baja: California (south of the 35th parallel)
- Central: Illinois, Indiana, Kansas, Missouri, Oklahoma
- East Central: Michigan, New York (west of 78° longitude), Ohio, Pennsylvania (west of Hwy 219)
- Mid-Atlantic: Delaware, District of Columbia, Maryland, North Carolina (NE of Hwy 601/52; north of Charlotte area), Virginia, West Virginia
- New England: Connecticut, Maine, Massachusetts, New Hampshire, New York (east of I-81; north of I-88), Rhode Island, Vermont
- Northeast: New Jersey, New York (East of 78° longitude/West of I-81, South of I-88), Pennsylvania (east of Hwy 219)
- North-Central: Iowa, Minnesota, Nebraska, North Dakota, South Dakota, Wisconsin
- South: Alabama, Arkansas, Kentucky, Louisiana, Mississippi, Tennessee
- South-Central: New Mexico, Texas
- Southeast: Florida, Georgia, North Carolina (SW of Hwy 601/52; Charlotte area), South Carolina
- West: Arizona, California (north of the 35th parallel), Hawaii, Nevada.

(ACDA, n.d., para. 4)

**Sample**

The sample included willing participants who were both dance educators and current ACDA members representing their college institutions. The purpose of sampling is to garner information about a population in such a way that the sample represents the larger group from which it was selected (Gay, 1996). As the sample size in this study was expected to be close to 379 participants \((N = 379)\), there was potential for statistical significance. According to McMillan and Schumacher (2010), “Statistical significance is directly related to sample size—the larger the sample, the smaller the difference or relationship needed to be statistically significant” (p. 141). The sample size is “the number of subjects in a study . . . represented by the letter n” (McMillan & Schumacher, 2010, p. 177).

In the first phase of the study, 379 dance educators were surveyed to determine their levels of TSE. Demographic data were also collected to further answer the research questions and to provide protection against cultural bias in the results. Demographic data such as gender, age, and courses taught were collected.
Taking into consideration (a) a target population size of 379, (b) a recommended or “common choice” (Raosoft, 2004, para. 1) of 5% margin of error, (c) a 95% confidence level, and (d) a 50% response distribution, the sample size was required to be 192, as calculated by Raosoft’s (2004) sample size calculator. Thus, 192 was the minimum recommended sample size for the survey. Alternatively, if the confidence level was changed to 90%, a respectable sample size could be 159 (Raosoft, 2004). Additionally, if the survey response rate was low and a sample size of 100 was reached, the margin of error would be 8.42% (Raosoft, 2004).

From the survey participants, a smaller group of respondents was selected in the second phase to contribute in qualitative interviews by phone. This provided an in-depth, small sample selected purposefully (Patton, 1990). Depending on the number of Phase 1 respondents, either a percentage of respondents or a qualitative guide of 12-36 was used in selecting Phase 2 participants.

Studying every faculty member teaching dance in higher education in the United States would not have been as effective as studying a sample (Patten, 2012). For this reason, current ACDA members served as the sample to represent dance educators in higher education. Inferences from the sample were made to generalize the results to dance educators of the United States. The sample of 379 participants was chosen to support the validity of the study. As reported by McMillan and Schumacher (2010), the margin of error in a sampling population is directly correlated to the size of the sample; a larger sample has a smaller margin of error. Additionally, as the size of the population increases, the number of participants needed to maintain estimation decreases (McMillan & Schumacher, 2010). Ultimately, the researcher decided to include all ACDA
representatives in the study to secure representation of various populations, including all 12 ACDA regions.

The sample size is vital for both the statistical purposes and accuracy of the study (McMillan & Schumacher, 2010). Although there was potential that the statistical significance would be problematic (McMillan & Schumacher, 2010), enough respondents volunteered for confidence of the study. To compensate for the possibility of a low response rate, the second phase of the study provided further qualitative investigation.

Samples for qualitative studies are generally much smaller than those used in quantitative studies. This is because there is a point of diminishing return to a qualitative sample. As the study progresses, more data do not necessarily lead to more information (Crouch & McKenzie, 2006). Thus, the sample for the second phase of this study was based on the total number of respondents from Phase 1 and saturation as a guiding principle. Phase 2 interviews were conducted through purposive sampling of willing participants selected based on their TSE level scores. The method of purposive sample allows for engagement of “specific informants whom a researcher deems likely to exemplify patterns that he or she seeks to pursue in an in-depth qualitative study” (Hesse-Biber, 2010, p. 127). Therefore, this sampling technique was appropriate for the Phase 2 qualitative interviews. As this was a small study with modest claims, saturation may be achieved more quickly than in studies with a more extensive scope (Charmaz, 2006). This qualitative research focused on making meaning, not making generalized hypothesis statements (Ritchie, Lewis, & Elam, 2003).
Instrumentation

The study was conducted in two phases including survey and interview. Creswell (2005) described survey research as “quantitative research in which investigators administer a survey to a sample or to the entire population of people in order to describe the attitudes, opinions, behaviors, or characteristics of the population” (p. 354). The survey design provided vital data because surveys can describe the characteristics of a population and can be used to determine the relationships between variables at the time of the study (Babbie, 1990), and they can also be an economical way to collect data quickly.

For Phase 1, the survey instrument used was the TSE Scale (Appendix A), which was developed by Fuller et al. (2011) to examine individual differences of the use of touch in the workplace. As cited by Fuller et al., the constructs for the TSE Scale were “largely drawn from Social Cognitive Theory (Bandura, 1986) and its central notion of self-efficacy, which is a judgment of ‘how well one can execute courses of action required to deal with prospective situations’ (Bandura, 1982, p. 122)” (p. 233).

The Likert survey used for this study was the self-rating version with a 5-point response scale (Avolio & Bass, 2004). The survey instrument contained 10 questions, which were answered on a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The coefficient alpha reliability for the resulting 10-item survey was 0.92. The mean for each respondent was calculated. Participants were labeled as having high levels of TSE (4.0 or greater) and low levels of TSE (2.0 or less). The survey was conducted via SurveyMonkey, a secure online survey provider. The survey was cross-sectional since the data were collected at one point in time and the instrument was self-administered.
For Phase 2, phone interviews were conducted to garner additional information about educators’ use of touch. The interview protocol (Appendix B) was vetted through committee to ensure all questions supported the three research questions. This process enabled later triangulation of the data. As reported by Bamberger et al. (2012), the triangulation of data provides validity to the study. Thus, the qualitative phase supported the quantitative findings (McMillan & Schumacher, 2010).

Reliability

According to O’Sullivan, Rassel, and Berner (2003), components of reliability include internal consistency, stability, and equivalence. The internal consistency for this study included ensuring questions in both Phase 1 and Phase 2 of the study measured and related to the same phenomenon. The consistency came in both phases where the intent was to investigate the TSE of participants. The stability in the study was protected by conducting the survey and interview processes with the same process, same questions, and same question ordering. This ensures that the same results are achieved when the measure is applied to the same phenomenon more than once. The equivalence component was maintained as the researcher conducted and documented the study with the idea that it may be a replicable study. This ensures that the same results are achieved when the measure is applied by a different researcher to the same phenomenon.

Validity

In Phase 1, the TSE Scale, created through inductive and deductive processes, contained 10 questions to measure TSE. Subject matter experts were employed to provide content validity. As reported, their findings of the Substantive Agreement Index scores (J. C. Anderson & Gerbing, 1991) were greater than 96% correct coding.
In Phase 2, the interview questions were verified by the researcher and field tested before being administered. A measure is valid to the degree to which it measures what it is intended to measure (Patten, 2012). As recommended, five to 10 people who were not involved in the interviews made judgments about the interview guide’s validity (Roberts, 2004). Validity refers to the degree to which an instrument measures what it claims to measure, allowing meaningful and justifiable inferences (Creswell, 2005). In addition, a field test of the instrument was given to a sample of educators to determine if the individuals in the sample were capable of completing the survey and answering the questions (Creswell, 2005).

After the field test, modifications were made, if necessary, for Phase 2 interview instrument improvements. Also taken into consideration was the potential for multiple approaches to the metadata, the information providing context for understanding survey-generated data, during the course of the study (Esposito, 2009). A correlation analysis was conducted to determine if a statistical relationship existed between the primary study variables of TSE and factors concerning the use of touch from survey data to answer the research questions (McMillan & Schumacher, 2010).

For Phase 2, a purposive sampling of survey respondents were asked to participate in a phone interview to collect descriptive qualitative data. Descriptive research data are usually collected through means of a survey, interviews, or observation (Gay, 1981). The selected dance educators were interviewed to further explain their touch practices and TSE. As explained by McMillan and Schumacher (2010), this allowed the qualitative phase to support the quantitative findings. The qualitative data
could augment the statistical data, hence potentially further explaining the practices and use of touch in the studio classroom.

Triangulation of both the qualitative and quantitative data was conducted to further strengthen the validity of the study (Bamberger et al., 2012). As Mills (2007) argued, researchers should never rely on any single source of data, interview, observation, or instrument. Triangulation also supports the idea of “trustworthiness,” which Golafshani (2003) argued provides the reliability and validity necessary in qualitative research.

However, reliability and validity issues may occur in Phase 2 of the interview process in the form of badly worded questions, incorrect coding, and problems with data entry. The researcher’s choice of electronic data transmission versus manual data transcription more closely guaranteed that participants’ responses were accurately imported.

**Data Collection**

Prior to Phase 1 of the study, Brandman University Institutional Review Board (IRB) approval was acquired to ensure all appropriate steps were taken to protect the rights and welfare of participants in this study. Following IRB approval, an introductory letter was sent via e-mail to introduce the study and prepare prospective participants. Participants were identified through publicly available ACDA membership lists and contacted through publicly available directories. The introductory letter (Appendix C) contained details about the study, including risks, and provided contact information as a resource for additional questions as well as the Participant’s Bill of Rights (Appendix D). In Phase 1, the survey again contained information about the study, the possible risks,
and contact information, but it also included a consent form. Participants were notified as to the approximate completion time and length of the survey prior to beginning the electronic survey. The survey was administered sequentially in a single survey session, and participants were permitted to opt out of the study anytime midsurvey.

Participants were given 14 calendar days to complete the full survey. Phase 2 commenced once the electronic survey in Phase 1 was completed. In this phase, a purposive sampling of participants from Phase 1 was selected for follow-up qualitative interviews. These participants were selected based on their completed Phase 1 TSE survey and their interest in possible participation. Phase 2 participants were contacted about consideration for a follow-up interview. A second informed consent form was included, which covered permission to record the interview. Interviews were conducted by phone with those selected and willing to participate. Each interview lasted approximately one hour. The rationale behind the 1-hour interviews was that “an hour of steady talk is a useful rule of thumb to guide appropriate length before diminishing returns may set in for both parties” (Glesne & Peshkin, 1992, p. 73). Each interview was audio recorded, as agreed on by the participants in their informed consent, and transcribed by the researcher. The researcher had some flexibility in pursuing more thoroughly participants’ answers, thus allowing for additional questions and probing. The interviews adhered to the interview guide, which was “prepared to ensure that the same basic lines of inquiry are pursued with each person interviewed” (Patton, 2002, p. 343).

Protocol for the interview covered the details of the variables of the interview, including approximate length of time, time frame, selection of interviewees, and guide
for the interview. Also included were the purpose of the study and a description of types of questions. Participants were informed and consent was obtained to record the interviews.

**Data Analysis**

In Phase 1, the data were stored and analyzed in SurveyMonkey. The data were first analyzed independently of Phase 2 data, on the basis of the TSE scores and the mean through descriptive statistics of the TSE scores. As part of the descriptive statistics analysis, it was relevant to assess the difference in the TSE scores by gender, among other factors. The demographic analysis included the frequency of distribution of age and primary area of instruction. The TSE scores included the total score for the survey, not individual questions. This included identifying faculty with high TSE levels and low TSE levels as well as detecting statistical significance. As the TSE Scale is new, there was no baseline for data. By reporting the mean, the research provided that baseline and supported the first research question. To present quantitative descriptions in a manageable form, descriptive statistics were used (Trochim, 2006). A factorial analysis of variance (ANOVA) was used in order to assess what factors had a significant effect on the TSE score, among the variables included in the survey.

In Phase 2, qualitative data from interviews were electronically stored and analyzed. Codes were developed for analysis of the interviews to unearth common themes. The process began with open coding, followed by a second step of axial coding (Patten, 2012). The final stage in the qualitative analysis was the development of a “core category” (Patten, 2012, p. 159) in which the other subcategories and categories belonged. From this process of initial coding, the data were reexamined to scrutinize and
possibly revise interpretations of the data using constant comparative analysis (Corbin & Strauss, 2008). In order to promote accuracy, the data were collected from multiple sources (Yin, 2009).

After independent analyses of both phases of data collection, the data of Phase 1 were embedded into the data of Phase 2 during the final interpretation. The goal was for the quantitative data analysis to provide a representative qualitative sample for the purpose of enhancing the qualitative findings (Hesse-Biber, 2010). This approach was used to encourage understanding of dance educators’ usage of touch, perceived benefits of touch, and TSE.

**Limitations**

The limitations of this study include the truthfulness and accuracy of the participants and the sample size. It was assumed that participants would take the time to self-reflect and be authentic in their answers, but the research was dependent on accurate self-reporting. As Chong-ho Yu (2010) noted in his self-reported data article,

This gives rise to the question: How accurate are self-reported data? Cook and Campbell (1979) have pointed out that subjects (a) tend to report what they believe the researcher expects to see, or (b) report what reflects positively on their own abilities, knowledge, beliefs, or opinions. (para. 1)

As the sample size in this study was expected to be close to 100 participants, the sample size was large enough for the central limit theorem to “kick in” (A. Field, 2013, p. 172). According to A. Field (2013), the theorem states that when samples are large, above about 30, the sampling distribution takes the shape of a normal distribution regardless of the shape of the population from which the sample was drawn. The
research assumed study participation based on university programs, which may not have been a realistic representation of willing participants. Other limitations of this study include the possible lack of survey respondents or minimal use of touch by faculty. Nevertheless, this study addressed a gap in the literature that focused on the level of TSE of college dance faculty, the factors that influence the use of touch in dance instruction, and the differences in the benefits of touch in dance instruction as reported by college faculty with low and high TSE.

**Summary**

Chapter III reviewed both the purpose and the three guiding research questions of the study. Additionally, the methodology used in establishing the research design was investigated to include the reasoning for the chosen population and sample. Information on the study’s instrumentation, procedures, data collection, and data analysis was detailed. The chapter concluded with an explanation of the limitations of the study.
CHAPTER IV: RESEARCH, DATA COLLECTION, AND FINDINGS

Overview

Chapter I introduced the purpose of the study and the three research questions that guided the research. Chapter II summarized the review of the literature and key concept areas in the call for dance reform, positive implications, negative implications, appropriateness of the use of touch in instruction, types of touch, techniques for using touch in instruction, usage of touch in instruction, and the need for the study. Chapter III detailed the statement of purpose, reviewed the research questions, described the population and sample, analyzed the research instruments, explained the data collection and analysis processes, and established the validity and reliability of the study. This chapter begins with a restatement of the study purpose and research questions and includes a summation of the methodology, data collection procedures, population, and sample. Following these sections, the chapter focuses on the presentation and analysis of the data, in table, figure, and narrative form. The data analysis section begins with a presentation of the descriptive statistics and findings for each of the research questions and concludes with a complete summary of the findings.

Purpose Statement

The purpose of this mixed-methods study was to (a) identify the level of touch self-efficacy (TSE) of college-level dance faculty as measured by the Touch Self-Efficacy (TSE) Scale, (b) explore the factors that influence the use of touch in dance instruction, and (c) describe the perceived benefits as reported by college-level dance faculty.
Research Questions

1. What level of TSE do college-level dance faculty report on the TSE Scale?
2. What are the factors that influence the use of touch in dance instruction as reported by college faculty?
3. What are the perceived benefits of touch in dance instruction as reported by college faculty?

Research Methods and Data Collection Procedures

This study used a mixed-methods framework, which included a sequential explanatory design conducted in two separate phases of research (Creswell & Plano Clark, 2011). The mixed-methods approach yields more valid findings and more comprehensive coverage than solely employing qualitative or quantitative data collection (Bamberger et al., 2012), and using methods sequentially is a standard or common practice (McMillan & Schumacher, 2010). Although two phases of research were conducted, neither had priority over the other, and both were equally valuable to address the research questions.

The first phase of this research provided an opportunity to quantitatively investigate the levels of TSE in college-level dance faculty. A qualitative approach in the second phase provided the opportunity for exploration of the factors influencing the use of touch in dance instruction as reported by college faculty. This sequential mixed-methods approach provided quantitative data first, followed by qualitative data to “elucidate, elaborate on, or explain the quantitative findings” (McMillan & Schumacher, 2010, p. 25), and also supported “generating new insights” (Bamberger et al., 2012, p. 321), which was necessary for this unexplored field of study.
Population

The survey sample consisted of dance educators who were current members of the American College Dance Association (ACDA), formerly known as the American College Dance Festival Association. This population of ACDA members conformed to specific criteria, which included university and college dance educators who worked in the United States. The target population included both 4-year and 2-year college dance program educators who represented their institutions at ACDA. At the time of the study, there were 379 institutions participating in ACDA. Therefore, the target population size was 379. The selection of ACDA as the target population allowed for the inclusion of dance educators from across the United States, including 12 regions. The ACDA regions include:

- Baja: California (south of the 35th parallel)
- Central: Illinois, Indiana, Kansas, Missouri, Oklahoma
- East Central: Michigan, New York (west of 78° longitude), Ohio, Pennsylvania (west of Hwy 219)
- Mid-Atlantic: Delaware, District of Columbia, Maryland, North Carolina (NE of Hwy 601/52; north of Charlotte area); Virginia, West Virginia
- New England: Connecticut, Maine, Massachusetts, New Hampshire, New York (east of I-81; north of I-88), Rhode Island, Vermont
- Northeast: New Jersey, New York (East of 78° longitude/West of I-81, South of I-88), Pennsylvania (east of Hwy 219)
Sample

The sample included willing participants who were both dance educators and current ACDA members solely representing their college institutions. The purpose of sampling was to garner information about the population in such a way that the sample represented the larger group from which it was selected (Gay, 1996). The use of ACDA institutional representatives, one from each university, provided the necessary accessibility to dance educators in higher education as well as a sampling from across the United States, as ACDA is a national organization.

Potential study participants were located through e-mail contact sent to all 379 ACDA members listed in the organization’s directory. The e-mail included a request for participation (McMillan & Schumacher, 2010), a brief explanation of the study, and a link to the Phase 1 survey via SurvkeyMonkey. Study participants who followed the link to SurveyMonkey were provided with additional information about the study and a participant’s bill of rights. They were then given the option to continue to the survey, and an informed consent was electronically generated; at this point, participants had the
option to opt out of the study. Out of the 160 surveys submitted, representing 160 institutions, there were 19 missing values and 141 valid values. Therefore, the sample size in this study was 141 participants ($N = 141$).

Upon completion of the Phase 1 survey, participants were thanked for their contributions and received a request for participation in Phase 2 of the study. A description of the second phase of the study was provided, and participants’ rights were addressed. Potential participants were then given the option to select “Yes, I would like to participate,” “Perhaps with more information,” or “No, thank you.” Those who selected “yes” or “perhaps” were asked to provide their contact information on a contact page. The sample for Phase 2 was 12 participants and included two males.

**Presentation and Analysis of Data**

**Research Question 1**

Research Question 1 asked, “What level of TSE do college-level dance faculty report on the TSE Scale?” To answer this research question, the first task consisted of calculating the TSE Scale. For this purpose, the values of Survey Questions 1 through 10 were added to obtain the output of the TSE score for each subject. The TSE score was only computed for individuals who completed all 10 survey questions. If responses to any of the questions were missing, the total TSE score was not computed for that individual.

Table 2 shows the results of the internal reliability analysis for the 10 questions from the TSE survey. The value of Cronbach’s alpha was .90, which is above the commonly accepted threshold of .70; hence, the TSE Scale used in this study was validly constructed. Table 3 shows the corresponding descriptive statistics of the TSE scores.
Table 2

**Internal Reliability**

<table>
<thead>
<tr>
<th>Cronbach’s alpha</th>
<th>Number of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.900</td>
<td>10</td>
</tr>
</tbody>
</table>

Table 3

**Descriptive Statistics of TSE Scores**

<table>
<thead>
<tr>
<th>TSE Scale statistic</th>
<th>Value</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>38.86710</td>
<td>0.51885</td>
</tr>
<tr>
<td>95% confidence interval</td>
<td></td>
<td></td>
</tr>
<tr>
<td>for mean</td>
<td>Lower bound</td>
<td>37.84150</td>
</tr>
<tr>
<td></td>
<td>Upper bound</td>
<td>39.89280</td>
</tr>
<tr>
<td>5% trimmed mean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>39.10100</td>
<td></td>
</tr>
<tr>
<td>Variance</td>
<td>38.49600</td>
<td></td>
</tr>
<tr>
<td>Std. deviation</td>
<td>6.20454</td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>13.00000</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>50.00000</td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>37.00000</td>
<td></td>
</tr>
<tr>
<td>Interquartile range</td>
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<td></td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.68700</td>
<td>0.20300</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>1.47100</td>
<td>0.40300</td>
</tr>
</tbody>
</table>

The mean TSE score was 38.87 (SD = 6.20). The median was 39. The distribution appeared to be left-skewed, considering that the skewness coefficient was -0.687, which was relatively large with respect to its standard error (0.203). The scale constructed was based on the sum of items. Dividing the mean (38.87) by the number of items (10) provided the average as utilized in Fuller et al.’s (2011) TSE results. The average of the TSE scores was 3.89. Figure 1 shows a histogram of the TSE scores.
Figure 1 shows that the distribution was somewhat left-skewed, with a couple of outliers. It was important to assess normality before conducting any statistical procedure that involved the TSE scores. Table 4 shows the results of a normality test on the TSE scores.

As shown in Table 4, the normality assumption was met ($KS = 0.067, p > .200$). Hence, the TSE scores could be safely used for statistical analysis.
Table 4

Tests of Normality for TSE Scores

<table>
<thead>
<tr>
<th>Test</th>
<th>Statistic</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kolmogorov-Smirnov*</td>
<td>0.067</td>
<td>143</td>
<td>.200b</td>
</tr>
<tr>
<td>Shapiro-Wilk</td>
<td>0.967</td>
<td>143</td>
<td>.002</td>
</tr>
</tbody>
</table>

*Lilliefors significance correction. *This is a lower bound of the true significance.

**Descriptive statistics of TSE by gender.** As part of the descriptive statistics analysis, it was relevant to assess the difference in the TSE scores by gender, among other factors. Out of the 160 surveys submitted, there were 19 missing values and 141 valid values. Out of the 141 valid responses, 31 came from males (22%) and 110 from females (78%). Table 5 shows the descriptive statistics for TSE broken down by gender.

For females, the mean TSE score was 39.37 ($SD = 5.80$), whereas for males, the mean TSE score was 38.35 ($SD = 6.64$).

Table 5

Descriptive Statistics for TSE Scores by Gender

<table>
<thead>
<tr>
<th>TSE Scale statistic</th>
<th>Male</th>
<th></th>
<th>Female</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Value</td>
<td>SE</td>
<td>Value</td>
<td>SE</td>
</tr>
<tr>
<td>Mean</td>
<td>38.35480</td>
<td>1.19186</td>
<td>39.26670</td>
<td>0.56586</td>
</tr>
<tr>
<td>95% confidence interval for mean</td>
<td>35.92070</td>
<td>0.19186</td>
<td>38.14450</td>
<td>0.56586</td>
</tr>
<tr>
<td>Lower bound</td>
<td>40.78890</td>
<td>0.19186</td>
<td>40.38880</td>
<td>0.56586</td>
</tr>
<tr>
<td>Upper bound</td>
<td>40.78890</td>
<td>0.19186</td>
<td>40.38880</td>
<td>0.56586</td>
</tr>
<tr>
<td>5% trimmed mean</td>
<td>38.51790</td>
<td>0.19186</td>
<td>39.51850</td>
<td>0.56586</td>
</tr>
<tr>
<td>Median</td>
<td>37.00000</td>
<td>0.19186</td>
<td>40.00000</td>
<td>0.56586</td>
</tr>
<tr>
<td>Variance</td>
<td>44.03700</td>
<td>0.19186</td>
<td>33.62100</td>
<td>0.56586</td>
</tr>
<tr>
<td>Std. deviation</td>
<td>6.63600</td>
<td>0.19186</td>
<td>5.79832</td>
<td>0.56586</td>
</tr>
<tr>
<td>Minimum</td>
<td>23.00000</td>
<td>0.19186</td>
<td>13.00000</td>
<td>0.56586</td>
</tr>
<tr>
<td>Maximum</td>
<td>49.00000</td>
<td>0.19186</td>
<td>50.00000</td>
<td>0.56586</td>
</tr>
<tr>
<td>Range</td>
<td>26.00000</td>
<td>0.19186</td>
<td>37.00000</td>
<td>0.56586</td>
</tr>
<tr>
<td>Interquartile range</td>
<td>10.00000</td>
<td>0.19186</td>
<td>7.00000</td>
<td>0.56586</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.19300</td>
<td>0.42100</td>
<td>-1.05300</td>
<td>0.23600</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-0.53200</td>
<td>0.82100</td>
<td>3.60400</td>
<td>0.46700</td>
</tr>
</tbody>
</table>

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**Demographic analysis.** As mentioned previously, there were 31 males (22%) and 110 females (78%) in the sample. Table 6 shows the frequency distribution of age. The data from this sample revealed that three respondents were 30 years old or younger (2.1%), 33 respondents were 31-40 years old (23.2%), 43 respondents were 41-50 years old (23.2%), 47 respondents were 51-60 years old (33.1%), and 16 respondents were 61-70 years old (11.3%).

Table 6

*Frequency Distribution of Age*

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>%</th>
<th>Valid %</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid 30 and below</td>
<td>3</td>
<td>1.9</td>
<td>2.1</td>
<td>2.1</td>
</tr>
<tr>
<td>31-40</td>
<td>33</td>
<td>20.6</td>
<td>23.2</td>
<td>25.4</td>
</tr>
<tr>
<td>41-50</td>
<td>43</td>
<td>26.9</td>
<td>30.3</td>
<td>55.6</td>
</tr>
<tr>
<td>51-60</td>
<td>47</td>
<td>29.4</td>
<td>33.1</td>
<td>88.7</td>
</tr>
<tr>
<td>61-70</td>
<td>16</td>
<td>10.0</td>
<td>11.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>142</td>
<td>88.8</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Missing System</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>160</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 7 shows the frequency distribution of primary area of instruction. The data revealed that 26 respondents (18.2%) indicated that their primary area of instruction was classical dance, 88 respondents (61.5%) indicated that their primary area of instruction was contemporary dance, four respondents (2.8%) indicated that their primary area of instruction was commercial dance, and five respondents (3.5%) indicated that their primary area of instruction was dance theory. Also, 20 respondents indicated “other” as their answer.
Table 7

Frequency Distribution of Primary Area of Instruction

<table>
<thead>
<tr>
<th>Area of Instruction</th>
<th>Frequency</th>
<th>%</th>
<th>Valid %</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Other (please specify)</td>
<td>20</td>
<td>12.5</td>
<td>14.0</td>
<td>14.0</td>
</tr>
<tr>
<td>Classical dance</td>
<td>26</td>
<td>16.3</td>
<td>18.2</td>
<td>32.2</td>
</tr>
<tr>
<td>Contemporary dance</td>
<td>88</td>
<td>55.0</td>
<td>61.5</td>
<td>93.7</td>
</tr>
<tr>
<td>Commercial dance</td>
<td>4</td>
<td>2.5</td>
<td>2.8</td>
<td>96.5</td>
</tr>
<tr>
<td>Dance theory</td>
<td>5</td>
<td>3.1</td>
<td>3.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>143</td>
<td>89.4</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Factorial ANOVA. A factorial analysis of variance (ANOVA) was used to assess what factors had a significant effect on the TSE score, among the variables included in the survey. More specifically, the ANOVA was used to assess whether age, gender, primary area of instruction, and previous formal training in the use of touch in dance or other fields had a significant effect on the TSE score. Tables 8 and 9 show the results of the ANOVA.

Table 8

Levene’s Test of Equality of Error Variances

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>F</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSE Scale</td>
<td>1.506</td>
<td>62</td>
<td>73</td>
<td>.046</td>
</tr>
</tbody>
</table>

Based on the results obtained with the ANOVA, it was concluded that none of the variables—age, \( F(4, 93) = 1.090, p = .366 > .05 \); gender, \( F(1, 93) = 3.727, p = .057 > .05 \); primary area of instruction, \( F(4, 93) = 0.974, p = .426 > .05 \); and previous formal training in the use of touch in dance, \( F(1, 93) = 0.407, p = .525 > .05 \), or other fields,
$F(1, 93) = 1.534, p = .219 > .05$—had a significant effect on the TSE score. Also, none of the second-order interaction terms had a significant effect on the TSE score (all the interaction terms included in the model had an associated $p$ value that was greater than .05).

Table 9

*Tests of Between-Subjects Effects*

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III SS</th>
<th>$df$</th>
<th>$MS$</th>
<th>$F$</th>
<th>Sig.</th>
<th>Partial $\eta^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected model</td>
<td>1371.159</td>
<td>42</td>
<td>32.647</td>
<td>0.876</td>
<td>.679</td>
<td>.283</td>
</tr>
<tr>
<td>Intercept</td>
<td>23863.241</td>
<td>1</td>
<td>23863.241</td>
<td>640.232</td>
<td>.000</td>
<td>.873</td>
</tr>
<tr>
<td>Gender</td>
<td>138.918</td>
<td>1</td>
<td>138.918</td>
<td>3.727</td>
<td>.057</td>
<td>.039</td>
</tr>
<tr>
<td>Age</td>
<td>162.575</td>
<td>4</td>
<td>40.644</td>
<td>1.090</td>
<td>.366</td>
<td>.045</td>
</tr>
<tr>
<td>Touch in dance</td>
<td>15.184</td>
<td>1</td>
<td>15.184</td>
<td>0.407</td>
<td>.525</td>
<td>.004</td>
</tr>
<tr>
<td>Touch in other fields</td>
<td>57.187</td>
<td>1</td>
<td>57.187</td>
<td>1.534</td>
<td>.219</td>
<td>.016</td>
</tr>
<tr>
<td>Primary area of instruction</td>
<td>145.221</td>
<td>4</td>
<td>36.305</td>
<td>0.974</td>
<td>.426</td>
<td>.040</td>
</tr>
<tr>
<td>Gender * Age</td>
<td>50.117</td>
<td>3</td>
<td>16.706</td>
<td>0.448</td>
<td>.719</td>
<td>.014</td>
</tr>
<tr>
<td>Gender * Touch in dance</td>
<td>5.644</td>
<td>1</td>
<td>5.644</td>
<td>0.151</td>
<td>.698</td>
<td>.002</td>
</tr>
<tr>
<td>Gender * Touch in other fields</td>
<td>110.133</td>
<td>1</td>
<td>110.133</td>
<td>2.955</td>
<td>.089</td>
<td>.031</td>
</tr>
<tr>
<td>Gender * Primary area of instruction</td>
<td>195.154</td>
<td>2</td>
<td>97.577</td>
<td>2.618</td>
<td>.078</td>
<td>.053</td>
</tr>
<tr>
<td>Age * Touch in dance</td>
<td>22.534</td>
<td>2</td>
<td>11.267</td>
<td>0.302</td>
<td>.740</td>
<td>.006</td>
</tr>
<tr>
<td>Age * Touch in other fields</td>
<td>9.545</td>
<td>3</td>
<td>3.182</td>
<td>0.085</td>
<td>.968</td>
<td>.003</td>
</tr>
<tr>
<td>Age * Primary area of instruction</td>
<td>399.238</td>
<td>8</td>
<td>49.905</td>
<td>1.339</td>
<td>.234</td>
<td>.103</td>
</tr>
<tr>
<td>Touch in dance * Touch in other fields</td>
<td>16.019</td>
<td>1</td>
<td>16.019</td>
<td>0.430</td>
<td>.514</td>
<td>.005</td>
</tr>
<tr>
<td>Touch in dance * Primary area of instruction</td>
<td>2.548</td>
<td>2</td>
<td>1.274</td>
<td>0.034</td>
<td>.966</td>
<td>.001</td>
</tr>
<tr>
<td>Touch in other fields * Primary area of instruction</td>
<td>89.816</td>
<td>2</td>
<td>44.908</td>
<td>1.205</td>
<td>.304</td>
<td>.025</td>
</tr>
<tr>
<td>Error</td>
<td>3466.371</td>
<td>93</td>
<td>37.273</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>212318.000</td>
<td>136</td>
<td>136</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected total</td>
<td>4837.529</td>
<td>135</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Dependent variable = TSE Scale.

$^aR^2 = .283$ (adjusted $R^2 = -.040$).
Regression analysis. Finally, a regression analysis was used to assess whether the TSE score had an effect on the perceived benefits of touch as reported by college-level dance faculty. The perceived benefits were operationalized by adding the scores for Survey Questions 11 through 14. The scale obtained by adding those variables was validly constructed, as shown in Table 10, as indicated by the value of Cronbach’s alpha of .86, which is greater than the .70 threshold.

Table 10

*Reliability Statistics*

<table>
<thead>
<tr>
<th>Cronbach’s alpha</th>
<th>Number of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.863</td>
<td>4</td>
</tr>
</tbody>
</table>

Descriptive statistics were obtained for the variable *benefit* that was constructed, as shown in Table 11. The mean for the perceived benefit was 17.67 (SD = 2.12). The distribution appeared to be fairly left-skewed, considering that the skewness coefficient was -1.875 (SE = 0.202). In fact, Table 12 shows that the perceived benefit variable departed significantly from normality (KS = 0.138, p < .05).

The fact that the perceived benefit variable failed the normality test indicated that using it as the dependent variable in a regression model could lead to inaccurate results. Tables 13, 14, and 15 show the results from the regression analysis using perceived benefit as the dependent variable, with TSE and gender (male) as predictors.
Table 11

Descriptive Statistics for Benefit

<table>
<thead>
<tr>
<th>Benefit statistic</th>
<th>Value</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>17.66670</td>
<td>0.17657</td>
</tr>
<tr>
<td>95% confidence interval for mean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower bound</td>
<td>17.31760</td>
<td></td>
</tr>
<tr>
<td>Upper bound</td>
<td>18.01570</td>
<td></td>
</tr>
<tr>
<td>5% trimmed mean</td>
<td>17.78550</td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>18.00000</td>
<td></td>
</tr>
<tr>
<td>Variance</td>
<td>4.49000</td>
<td></td>
</tr>
<tr>
<td>Std. deviation</td>
<td>2.11885</td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>4.00000</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>20.00000</td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>16.00000</td>
<td></td>
</tr>
<tr>
<td>Interquartile range</td>
<td>4.00000</td>
<td></td>
</tr>
<tr>
<td>Skewness</td>
<td>-1.87500</td>
<td>0.20200</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>10.46800</td>
<td>0.40100</td>
</tr>
</tbody>
</table>

Table 12

Tests of Normality for Benefit

<table>
<thead>
<tr>
<th>Test</th>
<th>Statistic</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kolmogorov-Smirnov(^a)</td>
<td>0.138</td>
<td>144</td>
<td>.000</td>
</tr>
<tr>
<td>Shapiro-Wilk</td>
<td>0.804</td>
<td>144</td>
<td>.000</td>
</tr>
</tbody>
</table>

\(^a\)Lilliefors significance correction.

Table 13

Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>(R)</th>
<th>(R^2)</th>
<th>Adjusted (R^2)</th>
<th>Std. error of the estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(\hat{R})(^a)</td>
<td>.154</td>
<td>.141</td>
<td>1.97170</td>
</tr>
</tbody>
</table>

\(^a\)Predictors: (Constant); Is the respondent male?; TSE Scale.
Table 14

ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>93.161</td>
<td>2</td>
<td>46.581</td>
<td>11.982</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>513.165</td>
<td>132</td>
<td>3.888</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>606.326</td>
<td>134</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. Dependent variable = perceived benefit scale.

*Predictors: (Constant); Is the respondent male?; TSE Scale.

Table 15

Regression Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized coefficients</th>
<th>Standardized coefficients</th>
<th>Collinearity statistics</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
<td>Beta</td>
<td>t</td>
<td>Sig.</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>12.391</td>
<td>1.138</td>
<td></td>
<td>10.885</td>
<td>.000</td>
</tr>
<tr>
<td>TSE Scale</td>
<td>0.130</td>
<td>0.029</td>
<td>0.365</td>
<td>4.549</td>
<td>.000</td>
</tr>
<tr>
<td>Is the respondent male?</td>
<td>0.825</td>
<td>0.409</td>
<td>0.162</td>
<td>2.018</td>
<td>.046</td>
</tr>
</tbody>
</table>

*Note. Dependent variable = perceived benefit scale.

The model was significant overall, $F(2, 132) = 11.98, p < .001$. However, the model only explained 15.4% of the variation in perceived benefit. The model was as follows: Perceived benefit = 12.391 + 0.130 * TSE score + male.

The TSE Scale was significantly positive, $t(132) = 4.55, p < .001$, and with every extra point in the TSE score, the perceived benefit score increased by 0.130, on average, when keeping the gender fixed. Also, when evaluating males and females with the same TSE score, males reported a perceived benefit score that was 0.825 points higher than that for females.
Hence, the TSE score had a positive relationship with perceived benefit, and gender was a significant mediator, but it was not a moderator. In fact, Table 16 shows that the interaction term $TSE \text{ score} \times Male$ did not have a significant effect on perceived benefit.

Table 16

**Regression**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized coefficients</th>
<th>Standardized coefficients</th>
<th>Collinearity statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
<td>Beta</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>12.317</td>
<td>1.328</td>
<td></td>
</tr>
<tr>
<td>TSE Scale</td>
<td>0.132</td>
<td>0.033</td>
<td>0.033</td>
</tr>
<tr>
<td>Is the respondent male?</td>
<td>1.102</td>
<td>2.551</td>
<td>0.216</td>
</tr>
<tr>
<td>TSE score * Male</td>
<td>-0.007</td>
<td>0.065</td>
<td>-0.055</td>
</tr>
</tbody>
</table>

*Note.* Dependent variable = perceived benefit scale.

**Research Question 2**

Research Question 2 asked, “What are the factors that influence the use of touch in dance instruction as reported by college faculty?” To answer this research question, data were coded from interviews conducted with participants from Phase 2 of the study. In the following presentation and analysis of the data, pseudonyms were used to protect the identities of the faculty members interviewed. College dance faculty members reported (a) student permission; (b) students’ receptiveness to tactile feedback; (c) responding to students’ needs, both emotional and physical; (d) pedagogical beliefs; (e) instinct; (f) familiarity and/or comfort level with students; (g) failure of other teaching approaches; (h) courses taught; (i) intent; and (j) necessity due to the nature of dance as
factors influencing their use of touch in instruction. These 10 categories were often interwoven in faculty members’ decisions to use touch either in or out of the classroom.

**Student permission.** Each participant interviewed mentioned the factor of seeking a student’s permission before making contact when providing tactile feedback to support learning. These methods of obtaining permission included (a) statements in course syllabi, (b) discussions about the practice at the beginning of the semester, (c) asking permission prior to potential contact, and (d) evaluating students’ body language based on personal instinct.

The interviews revealed that most participants had a statement in their syllabus about the use of touch in instruction. As one participant, Karla, shared, “In my syllabus, I have a clause that says, ‘I teach with tactile aid, and if you are uncomfortable with that, let me know before we proceed with class.’” As Jacqueline revealed, “All the faculty in my department put a statement in all of our syllabi that says, that’s titled ‘Professional Practice.’ We make the statement that touch is a part of effective teaching.” Jacqueline went on to say,

It’s [touch is] a part of recognized and established effective teaching in our field.

And [the syllabi say] that we as teachers will be touching the students, and [they] say if there is a reason they [students] would want this practice to be altered with us in any way, that they speak with us immediately and in private.

David added, “That’s part of my syllabus. That I say, you know, that dance is a physical art” and that touch is part of the artistic process. “I have it physically written in my syllabus,” Irene said, adding that the practice is discussed “when I introduce the class every semester, even if I’ve had the student for all 4 years. I’m very clear about it.”
Participants reported also discussing the practice at the beginning of each semester. One participant, Eileen, shared,

I talk at the beginning of the semester about my use of touch in class, and I ask them [students] to let me know in the first couple of weeks if they would not be comfortable having me respectfully touch them.

Another participant, Audrey, stressed, “They [students] are very much aware that touch is a valuable process in their training, so that in and of itself gives the teacher that permission.” Heidi had a similar approach:

I do say this early on in the class somewhere where I make some sort of statement that says, “If you’re uncomfortable being touched, then please tell me, either [in] a journal, or in a personal session, or at our initial meeting.”

Participants stressed the importance of sharing the tactile approach to learning in classes where students may be new to dance, such as Level 1 and introductory courses. Although Irene said she discussed the practice at the start of the semester, “even if I’ve had the student for all 4 years,” she noted,

I’m particularly . . . even more clear in the Level 1, if I’m teaching the lower level, and I just tell them [students] that if they’re uncomfortable with being touched to come and talk to me before class starts, because I say, “I’m a very tactile teacher.”

Faculty members reported educating their students about the value and practice of using touch. Heidi explained,

I want to be really matter-of-fact, not make a big deal about it; “Yes, of course we touch here. And this is what it is. And it’s not a big deal. I need to, I need to
locate these parts of your body; it’s not your body [meaning] sexual body, and it’s your body [meaning] anatomical body.”

Irene addressed a similar issue: “If it’s a newer student that’s come in, then I kind of work slower, but I definitely as a teacher am confident to work with advanced students.”

Faculty members also reported providing options for students who prefer not to be touched during instruction. Multiple participants offered that students are asked to inform them of their preference. David said, “I always give them several ways to let me know—e-mail, text message, my administrative assistant, other faculty, things like that.”

David went on to say, “I certainly have students who do not like physical touch. I always respect that.”

Although students were informed of touch practices via discussion or course syllabi and were encouraged to come forward privately to request nontactile feedback, some faculty members realized that some students may not voice their concerns or preferences. Heidi stated, “But I don’t trust that they [students] are actually going to tell me [that they do not want to be touched]. These kids are so afraid of being wrong, or they are afraid of crossing the teacher, that they won’t say anything like that.”

To circumvent potential problems from students, including those who may not have previously voiced their touch preferences, faculty members reported asking permission prior to contact. David said, “I always, always, always ask permission to touch a student first.”

David went on to say,

There are certainly days when I’ll go and ask a student, “Jane or Bill, I can see you are really struggling with this. There are some things you can do. Do you mind if I show you? Which means I will have to touch you.”
Carson’s practice was similar: “I always preface it [using touch] with asking permission if it’s okay for me to touch them [students], if it’s okay for me to make an adjustment to their body physically via touch.”

These verbal acknowledgements of consent may also include multiple requests for permission depending on the touch required. For example, David recalled a time he turned to a student and asked, “‘Do I have permission to touch you?’ And then after that she said, ‘Yes,’ and then I said, ‘I’m going to have to touch you in sensitive areas. Do I have your permission?’ ‘Yes.’”

Informal permission to touch, often based on instinct, was also reported. Francis shared, “I can see by their [students’] body language and their general demeanor whether it’s okay to touch or not.” Heidi agreed: “I think I have to read the body language.” Eileen added, “I think occasionally I’ll get those vibes from a student when I get too close and they’re uncomfortable with that.” Proximity was also included as an aspect of permission to touch, as was eye contact. As one participant, Beth, explained, “I would just make sure they [students] know I am approaching them. Because sometimes when you don’t do that, you sometimes scare them or jar them, and then I don’t feel that the touch is that effective.” Francis succinctly reported, “I think with my eyes I ask permission.”

Faculty members reported being highly attuned to students’ body language, including both daily awareness and awareness of the students’ general disposition throughout the course of the semester. Audrey reported, “I am highly sensitive and aware of energy that is going on between a student and themselves and their energy. I am highly attuned to that.” David explained that if he feels that students are “resistant [to
touch] for whatever reason, whether they are just having a bad day, or whether they’re just really struggling with the concept and they’re not just mentally ready to” have tactile feedback, he will not make contact. This was interpreted as a sign, an informal agreement, to not make contact.

Students’ receptiveness. Faculty members reported that most students are receptive to touch. Audrey shared, “I would say . . . 99.9% of the time they are already receptive.” She added, “Because they [students] are receptive and willing to receive touch, that already creates the possibility for touch to support them” and “create[s] the possibility for us to be successful” (Audrey). Gretchen agreed that “through a student’s cooperation” and “willingness to try and keep attempting to develop” and “seeing them continue and try,” success can be achieved due to the student’s openness to tactile feedback. Karla found “that there’s a change in freshmen to seniors. That most people are comfortable with touch, but they’re definitely are much more embracive of touch by the time they are seniors, versus freshmen.”

Receptiveness was reported for individual students. One participant, Beth, answered, “So if they [students] know it [touch] is coming and they can be relaxed about it, then I think the body can receive it, and it can be more effective.” Francis felt that sometimes when I touch male dancers, they will tense up, which is exactly the opposite of what you want. So I think if the person is not receptive to it and if they are not happy with the use of being touched, then they—it’s counterproductive.
Receptiveness was also addressed as a class objective. As Audrey explained, “All of my dancers are already there. They are very much aware that touch is a valuable process in their training.”

However, faculty members also reported not using touch, for example, “when a student doesn’t seem receptive to it, when they just do not seem to respond to it at all or they bristle against it” (Francis). Beth added, “If I feel like a student doesn’t respond well to it [touch], I usually will not do it again and make sure to use verbal cues for that student that I feel . . . [is] not totally comfortable with it.” David affirmed, “So if a student, like, I feel like is resistant [to touch] for whatever reason, whether they are just having a bad day, or whether they’re just really struggling with the concept and they’re not just mentally ready to” be touched, touch is withheld.

Faculty members reported that the resistance to touch was often linked to a student’s struggle with learning in general. Audrey described,

Things happen when you use touch. And energies start to flow, and that is the whole purpose of using touch, that there is always energy happening in one way, shape, or form. And sometimes [the student] knows in their head that they are receiving it, but emotionally they are too afraid, and they lock up and bind to not receive the energy.

Describing one student’s resistance to touch, David said,

I don’t think it jeopardized the student–teacher relationship, but I think it certainly hindered that student from growing. There were some things she just, she just couldn’t quite understand between major and minor muscle groups. And I think if
she, or me, had been able to physically feel those muscles, she probably would have grasped the concept.

One participant, Audrey, argued, “It’s not that they [students] are resistant to receiving touch but that they are resistant to change.”

**Responding to students’ needs.** Faculty members reported responding to students’ needs, both emotional and physical, in the classroom as a factor for using touch. Jacqueline offered, “If I sense that someone needs something, whether it is related to the material, the content we are working on, or needs something emotionally, chances are I’ll reach out and put a hand on them somewhere.” Outside the classroom, less touch or no touch was reported. Irene shared, “As far as touching students outside the classroom, I don’t go that route. In the classroom, [touch is] always part of the class work, but I don’t typically touch a student unless it has something to do with the class.” It was reported that the purpose of touch outside the classroom was for emotional support only of the student.

**Emotional.** Faculty members reported that they used touch in class for encouragement, to calm students, for recognition, and to connect with students. David answered, “I find that students really enjoy, for whatever reason, high-fives and things like that as a source of ‘yes, you got this’ besides just a verbal affirmation that they’ve accomplished something.” Faculty members also reported using touch to calm students. Heidi shared,

I think if a student is upset about something, I will try to place a gentle hand generally on the upper back or shoulders and ascertain whether that helps or not.
I’ll demonstrate and do, and hopefully my energy will calm them down and bring them into a sense that they are cared for and that they matter.

Jacqueline reported, “If we are working on something, I’ll casually put a hand on somebody’s arm or shoulder or even sometimes the small of their back just to make the connection or bring them into the moment.” Gretchen specifically used touch to emotionally connect with her introductory-level students: “I think especially when they are beginners and they have very little body awareness and everything is kind of a new motor pattern for them, I think that relationship has improved because again they know that I’m paying attention.”

Outside of class, faculty members reported limited or no touch for emotional support. The touch that was reported included touch during office meetings typically for advisement. Jacqueline stated that during midterm meetings with students,

I do realize that sometimes I’ll reach out, and this is interesting because usually it is not just one hand but both hands. Every once in a while, I will reach and give them [a touch] with both hands like just above the knee cap, a student who is sitting next to me, to ground them if they are kind of floating. Or sometimes I’ll . . . put my hand in their hand for the same reason . . . with just a little bit of pressure to get them to connect into their center.

David suggested,

Sometimes it does have to go beyond, you know, a high-five or a fist pump. I’ve definitely had students in my office who are crying or crying after class, and it could be a number of things. I’ll even say, “Do you need a hug?”
Faculty members also reported responding to students’ need to not be touched. Eileen noted,

Occasionally I’ll get those vibes from a student when I get too close and they’re uncomfortable with that. I don’t get that very often, especially in the college classes, but every once in a while you get those vibes off of people, and they’re just having a bad day and they just don’t want to deal with it, and I’ve given them one too many corrections.

Francis feared touching students again who did not respond to touch, because “I do not want to upset them.”

**Physical.** In addition to responding to emotional needs of students, faculty members reported responding to the students’ needs for mastery of dance course material. This included touch for correction, placement, alignment, spatial awareness, rotation, weight sharing, anatomy identification, connections, and kinesthetic chains during class instruction. Gretchen explained, “I use touch in dance instruction to help students develop their kinesthetic sense and their body part placement and their alignment.”

Jacqueline revealed,

I look at where they [students] are in their bodies. Like where they are moving, where they are not moving. So, if I see somebody not moving in a part of their body or holding tension or stuck, that influences my decision to make contact.

Heidi noted,

I think initially I don’t go in with hesitation, and I think that’s part of trying to dispel, “I’m being the creepy teacher, and I’m touching you because I want to
touch you for my own benefit.” It’s like, “No, I want to show you this thing, I want to help you feel, I want to help you feel the thing.”

Faculty members also responded to students’ direct requests for tactile feedback. Heidi found that “a lot of them [students] want me to [touch them]. They ask me, ‘Where? Where is this? Can you just locate it on my body? I can’t feel it.’” David had similar experiences: “When a student actually initiates and [says,] ‘I don’t understand. Can you show me?’ ‘Can you help me?’ that’s when I find it’s the most effective.” David continued,

When a student initiates, that’s when I feel the most successful because now they realize that physical touch is both for correction and for affirmation. But I find the best results tend to be when they are actively asking for it. Because then in that case they are really trying to focus on what are probably more minor things that they need to fix versus the major things.

Responding to students’ kinesthetic needs, faculty members may alter their touch to best support the students’ understanding of course material. Audrey shared,

I am constantly finding other ways. So I’m, “Oh, oh, that didn’t work, so let’s try something else and let’s try something else.” And I use sound along with touch, and I use imagery, so I’m constantly talking too at times until I find that moment when the dancer is experiencing it fully and says, “Ahhhhhh, that’s it. There it is.” So I never doubt my abilities other than if something doesn’t work, I say, “Okay.” It’s more of the creative process of finding other possibilities.
Conversely, Beth said,

Sometimes I find that I’ve given a person corrections, and I might have given them the same corrections over and over again, and they don’t seem to be getting it with the physical touch, so I might not continue to do that because they are not responding to that instruction.

**Pedagogical beliefs.** One of the factors influencing faculty members’ use of touch was their own pedagogical beliefs. These included (a) their own tactile learning preferences, (b) their views on their roles as nurturers, and (c) their belief in the value of touch in dance instruction.

Faculty members’ affinity for touch as part of their own learning style was reported as a reason touch was included in instruction. Karla found, “I know for me personally, the second when someone places their hands on me, it just sends an energy through my body. So I really love, I like the use of touch, so I think [I] incorporate it a lot.” David similarly felt that “tactile cues work well on me as well. So I think I carry that forward with the functions that this will also be helpful to my students.” Beth agreed that there are just things that you might just not understand in your mind, but when you feel it, it just makes sense. And I know from my personal experience how I’ve been in classes and how I’ve gotten an adjustment or a correction physically, and it’s just made a world of difference.

Jacqueline revealed,

I have never had a negative experience with touch with a teacher. It’s always been a way that I have learned and continue to learn. I’m not in dance class so
much anymore, but I do privates in Pilates and Gyro every week, and I really depend on both those women to guide me with their hands.

Faculty members reported their pedagogical beliefs in their roles as nurturers and that touch affords the necessary emotional support for students. Gretchen shared, 

So I think I look at teaching an awful lot like parenting, and the prerequisite to teaching I think is caring. And so part of that is just human interaction, and part of human interaction is communication skills, but touch is part of that.

Carson, too, believed in this nurturing approach: “I think my quality of touch is always from a caring perspective.” As David explained, “It [touch] is giving energy to the student. So I think it’s rarely ever sort of a taking sort of feeling.” Irene held similar beliefs: “I find [touch] is really something that’s successful for me and that also is about me building relationships with them [students] and them trusting me.” Beth shared, “I try to reach as many students as possible because I believe it deepens your connection with the student, and I feel like it helps them know that you see them and that you care about them.” “I’ll put my hands or arm around a student’s shoulder, or I’ll just touch their arm, or to connect on their human, emotional, spiritual level,” Gretchen said, adding, “I think that it shows care, shows that I’m paying attention to them, and it shows that I’m attempting to make a connection.”

David revealed, “I try to make my classes a very comfortable place to be,” and he added, “I think for the most part, I think it [touch] makes my classes a great learning environment.” Heidi reported sometimes using gentle touch to connect with students who she believed were “either really intimidated or afraid of me.” She went on to say, “I know I come on strong energetically because I’m trying to galvanize them to action, not
to passivity” (Heidi). Thus, by introducing a different type of touch, Heidi believed she created a balance in their student–teacher relationship. David shared that there is a part of me that feels that especially when it comes to school and academia, that we sort of remove that understanding of humanness. So I mean, you know, would you want to be hugged while you were crying? Would you like a high-five if you did something or accomplished something? . . . Yeah, you’d want one. That’s just human nature.

Another factor was that faculty members valued touch as part of dance. Irene reported that feeling through touch was “a really important part of the aesthetic of dance for me as a teacher.” Irene went on to say, “My teaching aesthetic and method, it’s a really important device for me.” Carson agreed: “I think that it [the use of touch] absolutely refers back to my own experiences as a student and having faculty members, having teachers, who used touch to help me to understand a concept.” Gretchen also found that touch is a really integral part of instruction. I feel that it makes a really strong connection between myself and the student, and I think that is what teaching is—making a connection. So, I think it is a very important part of that.

Irene echoed the thought:

As a dancer my whole life, I’ve always had teachers be very touch oriented in the classroom. And for me, it was really beneficial . . . because I have had the physical experience in a very positive way, and so that’s really where I’m guided in my own teaching.
**Instinct.** A key factor to dance faculty members’ use of touch included their own instinct. Irene shared, “It’s instinctual a lot of times. Like I don’t, I don’t a lot of times stop to analyze what I’m seeing, but I move on instinct.” Gretchen, too, felt,

There isn’t any decision I have to make; it’s just totally natural for me to do that [touch]. No one ever taught me how to do it; no one ever particularly used touch in instruction with me very much. And so it’s just one of those things that’s just a natural part of who I am as a person much more so than it is, you know, it’s just natural.

Beth revealed, “But sometimes I just know a person’s energy.” Audrey pondered,

Maybe other instructors are not [using touch], but I think overall as dancers, dancers have that innate [ability] to be in tune with energy, and because of that, it makes it that much . . . easier to then effectively make choices; “Is this the appropriate time?” “Is this the right time?” “Is this student sending that kind of message nonverbally and/or verbally?”

Gretchen felt, “It’s just really in the blood, if you will.” Audrey shared,

To me, it is always a learning process to [discover] how to fine tune the knowledge of using touch. But it is a skill for some that is innate, and for others it takes time and practice. For me, I think my confidence comes from a natural innate sensitivity to energy.

**Familiarity and comfort with students.** One of the factors influencing faculty members’ decision to use touch was their own familiarity with students. This could be based on (a) the general atmosphere of the class and/or (b) the length of time they have worked with students. Beth shared,
There are some groups of students that I have very warm feelings with, and the atmosphere is very open. And I might feel more comfortable with that group of students; I will definitely tend to use touch more then, whereas if there’s a classroom where the rapport is a little bit different, where the students are a little bit more reserved or they do not communicate as much, sometimes I find I feel a little bit more reserved in those situations because I don’t feel like I know my students as well, that they are not as comfortable with me.

The comfort level may also be related to the length of time faculty members have worked with students. Eileen revealed, “There are some students I’ve gotten over multiple semesters, and so the more comfortable I feel around them as a person, I guess the better I know them, the more comfortable I am with touching them.” As Beth explained, this includes “my comfort level with them as well as me sensing their comfort level with me.” Eileen added,

If it is a new student, first time in class, I usually don’t touch them the first time I’m meeting them. I give them a couple of classes until we get comfortable with each other and with our styles on either end.

Irene reported,

When I touch a student in a level that’s maybe not familiar to dance, I make it very clear that this is, that I am correcting them or assisting them to find how to move through something or where to feel this from. And so that’s—I’m very careful about that. But the more advanced kids, I have a relationship with them.
Another factor influencing some faculty members’ decision to use touch was their own comfort level with students based on (a) the students’ gender and/or (b) the body part being touched. Eileen voiced concern by saying,

I think it is just a worry about coming across the wrong way, or the hips are a very personal part. And I’m normally okay with touching a female student’s hips, but getting to a male student’s hips, that feels different to me somehow.

David answered,

You know, especially when it comes to opposite sex of teachers and students, that you don’t want to be too hesitant. Because then I think that can raise to the student that you’re nervous, you’re nervous and embarrassed about it. So, you know, you need to just be comfortable about it.

Eileen revealed, “I also feel significantly less comfortable with touching men. I tend to avoid that more. But generally, I’m pretty good, pretty confident using touch when I feel it is necessary.” Gretchen argued that gender doesn’t play any role whatsoever. It really doesn’t. I am very professional and matter-of-fact about when I do use touch in instruction, which is very often, and so I don’t, you know, get personal with anyone, male or female, so it really isn’t a factor.

Karla agreed:

Well, I don’t think it [gender] really does play [a role]. I mean, I don’t usually think about the fact that I’m touching a guy . . . . But I don’t think, at least I personally don’t think much about it. It’s a body.
Carson discussed, “Sometimes when we’re [the class is] talking about where a movement should initiate, if it’s somewhere close to the pubic area, I will most often demonstrate on myself so that I don’t, so that I’m not touching another student.” Beth, too, found, “I think sometimes if it has to do with a more vulnerable part of the body, I might be more reserved about using touch.”

To improve students’ comfort level, Heidi reported being specific with the intent of touch and being careful of contact areas:

I try in the way that I touch people to be very clinical. When you are getting into sort of the dangerous areas that are near the tailbone on the gluteus, I generally don’t touch the breasts. I may cue the sternum with a tap, or I may pull their [students’] shirt from their sternum. So where is the touch? I won’t go to certain places. I won’t grab their crotch for them; I’ll ask them to do it themselves, but I won’t actually go in and do that. So I think there are safe zones. I don’t know, for some people the safe zones don’t include the buttocks, but I’m trying, I can’t get around that for me. I need to cue the sacrum. I need to cue the tail, and I try to do it very matter-of-factly.

Jacqueline responded,

And I’m aware of just the care and the, how I need to approach touching anybody. Yes, gender plays—I do think about—gender does play, have an impact on how and where I touch. And in a larger way, I think more about touch in general.

**Failure of other teaching approaches.** Faculty members reported using touch when verbal directions alone were ineffective. Carson revealed,
I find myself using physical touch when my verbal cues are not working, or if I’ve given a verbal cue multiple occasions, then for me the next step is to use touch to help students better understand what I’m looking for.

Eileen said she engaged touch “especially when my vocal instructions are not getting it across.” David reported that he went to tactile feedback when “I’ve given the same instructions or same corrections for a student probably more than three times.” Beth added, “But a lot of times students either don’t hear me or they hear me and they don’t understand, or they don’t know that their bodies are . . . doing something different.”

Carson shared,

I think I achieve the best results when the student has been given the opportunity to execute a movement on their own, that they have received the verbal cues on multiple occasions, and then I will go to using touch, probably as the third tier of a correction.

Beth reported one instance where she used touch, “and the student was able to access that [body connection], whereas before they weren’t quite understanding it when I was just verbally saying it.” Eileen explained that she reviewed with students after using touch to make sure the student[s] understood what I was trying to do with their bodies. And then helping them also recreate. So if I’m manipulating their leg in one way and then I step back and have them try and do it themselves again.

Eileen observed, “I use it [touch] finally as a last resort and then discover, ‘Oh, that works. I should probably have been doing that earlier.’”

Courses taught. Another factor influencing faculty members’ use of touch was the course being taught, including the subject and the level. Faculty members reported
the majority of their touch in dance activity classes, such as dance technique courses, with little discussion of touch in dance theory courses, except for anatomy or kinesiology courses. Although Audrey said, “I use it [touch] in all of my classes,” she was referring to dance activity courses and not lecture courses. Irene reported, “I mainly use it [touch] for correcting students in the classroom if we are in technique class.” Karla shared, “Well definitely in the technique classes, in modern and ballet, I use a lot more touch than, say for instance, in tap or even in jazz. I’ll still use touch in tap, but not as much.” Carson answered,

So I certainly use touch when I’m trying to get a student to make a change in alignment, especially in technique classes, especially ballet, modern, jazz. Sometimes it takes physical touch to get them to understand what’s happening with their spine or what’s happening with their turn-out, or lack of turn-out.

Heidi felt,

A lot of my teaching tends to be in a technique class and anatomically based also, so that just naturally lends itself to “you [have] got to find out where things are in your body,” and sort of the easiest way to do that is to touch.

Conversely, Irene said,

I teach lecture courses, and I would not be using touch in the lecture courses. They may, might have some, end of lecture course, have some experimental opportunities for them [students], but it’s—something like dance history, I am typically not touching the students. But something like injury prevention, I am very much touching the students because it is so important for them to find,
sometimes, just giving them that little bit of tactfulness to locate a particular area of their body.

Karla noted,

But when I am out working with the community, we don’t use very much touch, or we do very light touch, just because I’m not so sure how comfortable they are because they are not trained dancers and not as confident in their bodies.

In turn, Irene shared, “It really is dependent on the level. So if I have a lower level [class], I’m very, very careful about communicating with them [students] that I’m going to touch them or give them a correction,” as “there is a sense, a sensitivity and vulnerability where I can tell maybe dancers that are newer to experience dance” are not comfortable with touch. Karla added,

I don’t know that I would say I doubt my abilities, but certainly at the more intro-level classes, I think the students sometimes are not sure, especially when I’m using it [touch] as a corrective tool, that they’re, that they feel uncomfortable or they’re not confident enough to know what they should be fixing or not fixing, or what they should be feeling or not feeling.

Irene added, “Typically with the advanced kids, it’s, I’m always using touch.”

**Intent.** Faculty members reported intent as a factor in their use of touch. Audrey shared, “Depending on what the intent is at a very specific time, I will use light, free-flowing touch. I can use more direct sending-energy touch and use sliding touch.” Heidi reported, “So I’m trying to think about what I want them [students] to feel, and then I’m trying to use the touch to augment that.” Francis suggested,
I think that I do it [use touch] in a spirit of concern and kindness and in the spirit of teaching and helping. I think the student can tell that. . . . So I believe that in the spirit that I’m doing it, that gives me the confidence to touch.

Jacqueline revealed that the intent of using touch is “I guess really achieving the best results, meaning the purpose of the touch and what result you are trying to get from that touch.” Jacqueline continued, “I try to create touch that is direct and directed and not wishy-washy or too widespread.” Audrey noted,

The act of, the energy of touch in and of itself and the intent behind my touch I think is huge. My intent of what it is that I am doing. Am I trying to activate a muscle group? Am I even giving a dancer a touch to give them affirmation that they can do something physically, and/or am I using touch to just even give them emotional support?

Beth found, “If I approach a student and I’m not totally clear about what needs to be corrected in their body,” it can create a challenging situation. For example,

Sometimes I correct a certain part of their body, and then I realize that it’s not their shoulder, it’s actually their hip, or it’s not their hips, it’s actually their alignment of their feet. And so I kind of fumble around before I find the thing that needs to be corrected. That might be an instance where I might feel like I wasn’t as effective as I could have been. (Beth)

Faculty members reported that the intent of the touch must be clear to the faculty member and the student being touched. For example, Irene shared her approach of telling students, “I am going to make a correction. I am going to touch you. Is that okay?” I am very clear about it.” Carson noted, “You certainly don’t want to just dive in and start
touching a student. You want to make sure you have a rapport and that they understand why you are touching them.”

Audrey reflected, “So I think to me what makes me successful in communicating is my intent. Then that means my intent relates to my sensitivity to what is happening at the present moment.” This intent may be linked to simultaneous verbal cues, as Eileen described, “by explaining what I’m doing while I’m doing it.”

**Necessity due to the nature of dance.** Faculty members reported the necessity of touch due to the demands and nature of dance. Irene shared,

The whole thing with being tactful or touching the student is really more about the kinesthetic feeling, and you know, as dancers we are both visual, but we are feeling things from within, [which] is really important. It is really important to me as a teacher that it’s not a visual, it [is] not just a visual act, but they [students] really need to find things from within. So giving that feedback physically all the [sic] sudden sets a different, sets that imagery for them within and not just from without.

Jacqueline reflected,

My first instinct is that I feel like it [touch] is necessary. I mean, we are, as dancers in our bodies, as artists, and we have to be able to feel. We have to be able to feel our bodies, and we have to be able to feel on our bodies. And so it makes sense to me that the kind of feedback I would be giving would have something to do with, with being tactile, with having that sensory awareness of, having that feeling of ways to feel through the body, I mean through all the senses, not just touch, not just tactile, but it’s a big part. I mean, we feel our feet
on the floor, we feel the air move past us in the studio, we feel the light on our bodies when we are dancing in the studios and on stage, and it makes sense to me that part of that would be learning through tactile feedback.

Beth responded,

Just something physical opens up in your body and your mind and that it happens in a different way than just processing in the mind. I think it is a really good way to connect the body and the mind, which is what we are doing all the time when we are dancing.

Carson argued,

Touch falls into that category [of] why we cannot teach dance classes through an online medium. There is a lot of focus on that every class has an online option, and I think that in some ways that the need for physical contact excludes dance or dance technique from being taught online. I think there may be ways to effectively teach things like dance history online, but I don’t [think] that we’ll ever get to the point where we can teach dance technique via [an] online delivery system.

Heidi reported,

I think that dance is, well it is a very social form, and if you are not being comfortable being touched, then you are going to have kind of a hard time with at least the modern, contemporary-based styles, with contact improv being thrown in there and partnering, things like that.
Heidi continued,

And again, if I know someone is really, really uncomfortable with it [touch], I have to figure out for myself whether or not I want to challenge that. And that’s not something usually done in class; that’s something done outside of class in a personal session where we [instructor and student] talk about it and have to go into a little bit [of] psychology and background to bring to the surface what it really is and see if there is a way to facilitate comfort in that.

**Research Question 3**

Research Question 3 asked, “What are the perceived benefits of touch in dance instruction as reported by college faculty?” To answer this research question, data were coded from Phase 2 interviews conducted with participants from Phase 1 of the study. In the following presentation and analysis of the data, pseudonyms were used to protect the identities of the faculty members. College dance faculty members reported that touch (a) supports individual and group learning, (b) promotes successful epiphanies and transformations, (c) creates a positive learning environment, and (d) provides effective communication through the use of touch.

**Supports individual and group learning.** Faculty members reported that touch supported individual and group learning. As Heidi argued, “Touch is just another strategy . . . as we are trying to attack all the different kinds of learners in the classroom.” Irene noted,

It doesn’t matter whether one student is more advanced or one student is newer to dance. It is really important to me to be able to give them the best experience that they can have so that they can really understand the aesthetic of dance and not just
come in and—we’re not an aerobics class. I want them to understand that it’s a very internal experience, and if they can feel what they are doing, the actions come from within, that’s when I feel like I have the greatest success, because I can see it.

Gretchen shared that touch helps them [students] to understand what they’re doing, what they’re doing before let’s say, before I touched them or after, meaning they need to do a technique or alignment the wrong way, so to speak, so they can feel what it’s like to do it the right way.

Karla agreed: “I don’t . . . really know how to explain it, but it’s just this complete understanding that they [students] didn’t have previously.” Irene discovered,

As I started to become a teacher as a young person, it became really prevalent that in order for me to help my students have the greatest success, that touching them and helping them find things that they couldn’t find on their own was giving them the greatest success.

Heidi revealed that when using touch, “they [students] know that I’m paying attention to them and really looking at what they are doing. And it’s really hard to feel new pathways, and generally it just brings so much clarity to their bodies.” Beth noted, “I try to give everybody an opportunity to learn in that way [through touch].”

Irene believed that touch supported the individuals’ internal feedback and prompted dancers from “copying” shapes and steps. She stated,

And when you use touch, they [students] actually have their own experience.

That’s what I’m trying to get them to have. It’s that that’s their own experience;
they can find it whether they are in front of a mirror or whether they are not in
front of a mirror. (Irene)

Heidi added, “Internally, they [students] feel me pay attention to them and giving those
proprioceptive cues so they can pay attention to themselves internally rather than an
external picture through the mirror.”

Faculty members also used touch to support group learning through
demonstration. As Karla explained, “I think they [students] can see it [the technique or
concept], they can feel it on themselves and then on other people. And so they’re
understanding the movement, the anatomy—they become a lot clearer.” Karla continued,
“I always demonstrate on one student first and then have them go work, working with
each other.” Audrey shared, “I am constantly using touch and showing how to use touch
with my students. Every time, I get a positive, successful result.” Irene noted,

It’s just how, as a dancer and as a teacher, I find it [touch] very effective because
not only do the students who are observing see the interaction between the student
that I’m demonstrating with or working with, but the students that are receiving
the touch feedback are getting that kinesthetic feeling.

Francis confirmed, “We know that students learn in different ways; some people can
learn just by watching, but other people need to feel something.”

**Promotes successful epiphanies and transformations.** The majority of faculty
members reported that touch provided a moment of epiphany for the students in their
learning. As Audrey described, “Time and time again, the partner that is receiving the
touch says, ‘Oh, my gosh. I understand what is happening.’” Irene described the
epiphany as, “It’s just like this light bulb goes off. And they [students] are like, ‘Oh, my
gosh! I never knew that’s that. That muscle is there?” or ‘I never knew that could be initiated.’” Heidi revealed, “Most of them [students] when they’re touched, it’s like, ‘Ahhh.’ They have like ‘Oh’ moments.” David described the epiphany as a physical reaction “when students’ eyes light up. I mean their eyes literally get bigger.” Eileen reported,

I think usually it [touch] is helpful because usually I then get the reaction, “Oh, that’s what that’s supposed to feel like?” Or I say, “You see how your hip isn’t moving and how you’re fighting against me?” And they say, “Yes!” I usually find it to be helpful.

Audrey added,

So it [touch] not only is a kinesthetic and cognitive enhancement; it then also even gives them [students] emotionally and physiologically their self-esteem and empowerment to say that “I understand this,” and “I now know how to do this even more efficiently.”

Faculty members also reported that their touch provided a moment of epiphany not only for the students but for the faculty members themselves as well. Heidi revealed,

I’m really trying to figure out what is the thing that’s going to help them [students]. So I generally wouldn’t stay with that cue if it doesn’t work. I’ll discard it and go to a different, “Try this, let’s see what sticks, what actually works.” And then it actually facilitates this process of discovery and discussion and helping them find their own internal research methodologies, because I can lead them through, “Okay, did that work? Did that work? What . . . do you think about this? When did it, like try something else. Here, let me give you this—did
that work?” And then they have to make that judgement for themselves, like, “No, that didn’t work,” or “Yes, it did,” and then I can go in further.

Heidi also shared, “I’ll use that as tactile feedback for me to ascertain whether or not they’re [students are] giving me 100% that I want and for them to feel the relative laxity of the muscle fibers or the engagement of it.” Francis agreed: “They [students] need to feel the difference, and when I can see that they are feeling it . . . they say, ‘Oh yes, I get it now.’”

Although tactile feedback does not always have the outcome anticipated, faculty members reported that they used that information as a moment of learning and connection to their students. For example, when Francis had an unexpected moment with a student who was “jumpy” when touched, she used that experience to connect. She explained, “We just kind of laughed about it and talked about it afterwards. And I let them [the student] know that I’m a jumpy person too, and we laughed about it, and I think it strengthened our relationship” (Francis). Heidi shared similar experiences:

Sometimes tactile cueing goes awry, and they [students] misinterpret what I’m asking them to do. So then I back away. So then I’m like, ‘Okay. Let’s either wait for a time outside of class in a personal session to talk through this,” or maybe I try a different strategy that has to do with demonstration or verbal cuing.

**Creates a positive learning environment.** Faculty members reported that the use of touch in class had the added benefit of creating a positive learning environment. Gretchen proposed,

I think it [touch] has a really positive effect that keeps students wanting to return back to class for that individual attention. I’m told by students, on a pretty regular
basis, that there are lots of instructors that don’t make connections the way that I do.

Audrey explained that students “who receive touch are affected in such a way that they feel emotionally nourished, understood, cared for. They are affected by having a sense of confidence, trust—huge, massively huge. They feel trusted, and they also are trusting.”

Gretchen shared, “When you actually contact that other person, then there is a shared sense of synergy, if you can sort of open your awareness, which is what I think we want, or at least what I want, for my students.”

Eileen noted, “When I’m giving corrections [I make sure] that they [students] get it and have that epiphany moment. I think that is an important moment in a student–teacher relationship and one that I enjoy.” Karla argued,

But I think there’s just a greater bond. When I look around at my other colleagues who are not in the dance field, I have a much stronger connection to my students than they do. And I’m sure it’s because we are physical with each other, where they are not. And I climb over them [students] and around them and under them. So we definitely create a different type of relationship.

Francis agreed: “I think a bond of trust is strengthened between us [instructor and students].” Additionally, Heidi described using touch “to break down the walls of formality in order to encourage I think more of an equal working relationship so that they [students] can actually take charge of their learning.”

Carson proposed,

I think we live in a kind of a culture where touch certainly can be very complicated, and so I think it is also very useful for students to have a positive
experience where they’re being touched and for it to, to change how they
approach their dancing.

David recommended using touch for both corrections and affirmation to maintain a
positive learning environment. He cautioned,

I think that a lot of dance teachers make that mistake that they only use physical
touch in corrections. Therefore, it becomes like the “red pen theory.” For a long
time, teachers only used red pens to correct papers. So if a teacher only uses
touch for corrections, the student, I think, can come to almost fear touch because
it is only for corrections, only for things they’ve done wrong rather than things
they’ve done right. (David)

Heidi shared, “Outside the class, I think it [touch] does promote a better working
relationship, so the hierarchy gets to release its structure.” David agreed: “But I think
that sort of physical touch can really lead for students to understand that their teachers are
not just people here to ‘correct them,’ but their teachers really do want the best for them
in all things.”

**Provides effective communication.** Faculty members reported that touch was “a
powerful, meaningful tool” (Audrey) and provided a form of effective communication.

“Well, touch is another form of communication. That in and of itself makes me
successful as a communicator,” Audrey shared. Beth added,

Students learn differently, so some students might not be getting the message
that’s being shown or being talked about, but they might understand it when they
feel the touch in their body. Their body can get it in a different level than if they
are trying to process it with their mind. And dance is a physical thing, and so that,
I think that direct communication from one body to the other is the best.

Chris argued, “I think that a lot of my students don’t have a real understanding of
how] their bodies work, and so I find touch to be a useful method of having them really
understand how their bodies work.” Francis reflected,

Well, it’s so interesting. So often students will just be so positive that they are
doing what I am asking them to do or what the technique calls for them to do, and
I can see that clearly they’re not. So quite often our minds and our bodies aren’t
connected, and if they [students] cannot see in the mirror what is happening, then
I find they often don’t believe me when I tell them that they are not doing
something. So, touch brings their attention to that specific body part, and it lets
them feel what it is that they’re not feeling proprioceptively. So, I think it’s
another form of teaching and learning.

Karla shared, “I usually find that most students appreciate it [touch] and can sense
their bodies differently when hands are placed on them.” Beth agreed: “There are just
things that you might just not understand in your mind, but when you feel it, it just makes
sense.” David described that after touching students, “you can see that they understand
what you’re talking about now.”

There are some things “students will just not find on their own without touch, or
they may, but it will be many years later,” David proclaimed. Carson agreed: “When the
student is able to apply a correction because of the physical touch and they’re able to
progress faster,” it is successful communication. The quick result was also considered a
benefit. Audrey shared, “I think the influence is always in a positive manner. They
[students] see the results immediately, and when the results are immediate, they are successful results.’’ Jacqueline stated,

I’m able to give immediate feedback. I am also aware that not everybody has the same learning pathways, so it [touch] doesn’t necessarily work. But most dancers are kinesthetic learners, and they seem to respond well. It’s a real fundamental benefit basically.

Summary

In summary, the purpose of this mixed-methods study was to (a) identify the level of TSE of college-level dance faculty as measured by the TSE Scale, (b) explore the factors that influence the use of touch in dance instruction, and (c) describe the perceived benefits as reported by college-level dance faculty.

In answer to Research Question 1, the data revealed that college-level dance faculty reported the mean TSE score at 38.87 (SD = 6.20). Based on the sum of 10 items in this 5-point Likert scale, the average TSE score was 3.89. For females, the mean TSE score was 39.37 (SD = 5.80), or 3.94 average, whereas for males, the mean TSE score was 38.35 (SD = 6.64), or 3.84 average. The study revealed that none of the demographic factors—age, gender, primary area of instruction, and previous formal training in the use of touch in dance or other fields—had a significant effect on the TSE score. However, it was found that the TSE score had a significantly positive effect on the perceived benefit. Gender had a mediating effect, but it did not have a moderating effect on the relationship between TSE and perceived benefit.

In answer to Research Question 2, the study revealed 10 categories that college-level dance faculty members considered factors in their decision to use touch either in or
out of the classroom. These factors were often interwoven with each other and included (a) student permission; (b) students’ receptiveness to tactile feedback; (c) responding to students’ needs, both emotional and physical; (d) pedagogical beliefs; (e) instinct; (f) familiarity and/or comfort level with students; (g) failure of other teaching approaches; (h) courses taught; (i) intent; and (j) necessity due to the nature of dance.

In answer to Research Question 3, the study uncovered four key areas of perceived benefits of touch in dance instruction. College dance faculty members reported that touch (a) supports individual and group learning, (b) promotes successful epiphanies and transformations, (c) creates a positive learning environment, and (d) provides effective communication through the use of touch.
CHAPTER V: FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

In this standalone chapter, a review of the purpose of the study and a final summary are provided. Both the research questions and methodology that formed the parameters of this study are reaffirmed. The conclusions derived from the analysis of the data, implications for action, recommendations for future research, concluding remarks, and the researcher’s reflections serve as the final chapter.

Purpose Statement

The purpose of this mixed-methods study was to (a) identify the level of touch self-efficacy (TSE) of college-level dance faculty as measured by the Touch Self-Efficacy (TSE) Scale, (b) explore the factors that influence the use of touch in dance instruction, and (c) describe the perceived benefits as reported by college-level dance faculty.

Research Questions

1. What level of TSE do college-level dance faculty report on the TSE Scale?
2. What are the factors that influence the use of touch in dance instruction as reported by college faculty?
3. What are the perceived benefits of touch in dance instruction as reported by college faculty?

Methods

In this mixed-methods approach, a sequential explanatory design was conducted in two separate phases of research (Creswell & Plano Clark, 2011). A mixed-methods design was employed for this study to produce a “more comprehensive coverage and more valid findings than either QUANT[itative] or QUAL[itative] alone” (Bamberger et
As noted by McMillan and Schumacher (2010), using methods sequentially is a standard or common practice.

The sequential mixed-methods approach provides quantitative data first, followed by qualitative data to “elucidate, elaborate on, or explain the quantitative findings” (McMillan & Schumacher, 2010, p. 25). Here, both phases of research are equally valuable, and thus neither phase has priority over the other. The first phase of this research provided an opportunity to quantitatively investigate the levels of TSE in college-level dance faculty. In the second phase, a qualitative approach provided the opportunity for exploration of the factors influencing the use of touch and the perceived benefits in dance instruction as reported by college-level dance faculty.

Pursuit of only one methodology, such as quantitative or qualitative, would not have provided the full exploration of both the levels of TSE and the factors influencing the use of touch in dance instruction. This mixed-methods approach allowed for both the quantitative and qualitative data collection and also supported “generating new insights” (Bamberger et al., 2012, p. 321), which was necessary for this unexplored field of study. It also provided a baseline for future research, as the TSE Scale is new and no such baseline existed. Benefits of this approach were that the best practices concerning the use of touch were uncovered. Additionally, the mixed-methods approach supported the ability to triangulate data (Adams-Budde et al., 2014; Bryman, 2006; Greene et al., 1989; R. B. Johnson et al., 2007), thus promoting the strengthening of the validity through triangulation (Bamberger et al., 2012). The data for each phase of the research were addressed independently as there was a specific sequencing of quantitative and then qualitative data collection (Hesse-Biber, 2010).
A sequential explanatory design was chosen in this mixed-methods study so that the TSE levels of faculty could be identified prior to the qualitative interviews. By organizing the study in this manner, “the quantitative component of a research project is collected and analyzed first and serves as input to a second qualitative component” (Hesse-Biber, 2010, p. 100). Thus, the TSE levels acquired in Phase 1 of the research provided a baseline for deeper exploration about touch and TSE in higher education.

**Major Findings**

The major findings of this study are organized by research question.

**Research Question 1**

*What level of TSE do college-level dance faculty report on the TSE Scale?*

**Major Finding 1.**

In answer to Research Question 1, the data revealed that college-level dance faculty reported the mean TSE score at 38.87 (SD = 6.20). In Fuller et al.’s (2011) study, “Exploring Touch as a Positive Workplace Behavior,” adult workers and student workers using touch in the workplace reported significantly lower TSE scores, with a mean of 3.46 in Study 2 and a mean of 3.26 in Study 3, as compared to college-level dance faculty in this study, who reported a mean of 3.89. In this study, dance faculty TSE scores were 12% and 19% higher, respectively, than the scores of supervisors in Fuller et al.’s research. This research revealed that the TSE score has a significantly positive effect on perceived benefit of using touch in instruction for college-level dance faculty, which was also reflected in Phase 2 interviews. In these interviews, faculty members positively described their touch as “caring,” “kind and respectful,” “giving energy” and “sending energy,” “helpful,” “gentle,” communicative, “direct,” and “very clear.” This is
additional evidence of “faculty’s beliefs that he or she can effectively use touch while interacting with other people in a work context” (Fuller et al., 2011, p. 233).

In addition to the high TSE scores, it is important to note that all faculty members interviewed reported using touch during dance instruction. This is further evidence of touch as part of “folk pedagogy” (Warburton, 2003, p. 13). Although not all faculty members used touch outside of the classroom studio, touch was reported by all to support learning. Tactile feedback was provided with the intent of serving the students both physically and mentally and was conducted in “a spirit of concern and kindness,” “in the spirit of teaching and helping,” and to show “that [faculty members] respect their efforts.”

Although none of the demographic factors of age, primary area of instruction, or previous formal training in the use of touch in dance or other fields had a significant effect on the TSE score, gender had a mediating effect. For females, the mean TSE score was 39.37 ($SD = 5.80$), whereas for males, the mean TSE score was 38.35 ($SD = 6.64$). In interviews, faculty members, both male and female, reported sensitivity, awareness, and carefulness in touching students, especially those of the opposite sex. Although faculty members’ comfort levels in touching students of the opposite gender ranged from “it’s just a body,” noting no difference in their comfort levels, to “I’m much more apt to go right in without questioning and touch the women in my class,” noting more comfort with students of the same gender, there was no reported absence of the use of touch during college-level dance instruction based on the gender of faculty members touching or students being touched. In turn, it was found that gender does not have a moderating effect on the relationship between TSE and perceived benefit.
Research Question 2

*What are the factors that influence the use of touch in dance instruction as reported by college faculty?*

**Major Finding 2.**

Although often interwoven in dance faculty members’ decision to use touch either in or out of the classroom, 10 separate categories were revealed in the study. College dance faculty members reported (a) student permission; (b) students’ receptiveness to tactile feedback; (c) responding to students’ needs, both emotional and physical; (d) pedagogical beliefs; (e) instinct; (f) familiarity and/or comfort level with students; (g) failure of other teaching approaches; (h) courses taught; (i) intent; and (j) necessity due to the nature of dance as factors influencing their decision to use touch.

Seeking students’ permission to be touched was revealed as a major factor in faculty members’ decision to touch; this area of research was not fully evident during the literature review. Although Meaden (1997, as cited in E. Groff & J. Meaden, personal communication, September 2006) and Hackney (2000, as cited in E. Groff & J. Meaden, personal communication, September 2006) stressed the importance of asking permission before touching, their focus was on integrated movement studies (IMS) and body connectivity. This study, on the other hand, focused solely on dance instruction, revealing that seeking students’ permission was a common practice. It is also important to note that the study revealed additional strategies that faculty members used to garner permission, including class discussion and student education, as well as information on syllabi about the practice of tactile feedback in dance education. These important practices were absent from the literature.
Students’ receptiveness to touch was another factor in faculty members’ decision to use touch. Of note is faculty members’ assertion that students’ receptiveness fluctuated within class or over the course of the semester. It was a changing factor in their decision to touch. Here too, the students’ willingness, during individual class sessions and/or throughout the length of the course, to receive touch created the possibility for touch to be supportive and successful. These results support Fuller et al.’s (2011) assertion that the relationship between touch and any outcome is likely to be dependent on factors such as “how receptive the individual is to being touched” (p. 251). The students’ receptiveness was also linked to their granting of permission to be touched and/or faculty members’ instinct based on their perception of students’ “energy” and/or comfort level.

Another factor in faculty members’ decision to use touch was that they were responding to students’ needs. In class, these needs included physical responses to support learning body awareness, connectivity, weight sharing, partnering, and corrections, as well as emotional needs such as recognition and encouragement. Outside of class, touch was seldom used except to emotionally support students through comforting or breaking down hierarchical walls. This finding supports Fuller et al.’s (2011) assertion that the “need for touch, which reflects an individual’s general motivation to seek out tactile interaction, plays an important role in determining the frequency with which supervisors use touch to convey positive affect for their subordinate” (p. 231). The finding also demonstrates that faculty members adjust their touch to meet students’ needs and tend to be nurturers regardless of whether the touch is intended to be for physical or emotional support.
The study also found that one of the factors influencing faculty members’ use of touch was their own pedagogical beliefs. These included (a) their own tactile learning preferences, (b) their views on their roles as nurturers, and (c) their belief in the value of touch in dance instruction. The finding supports Hackney’s (2000) claim that “touch is a wonderful way to gain knowledge and give knowledge” (p. 56) and I. Dowd’s (1994) assertion that “touching, by its nature, is simultaneously both a means of perception and a means of action” (p. 48). The touch approaches revealed by the data demonstrate instinctual and simultaneous giving and receiving influenced by personal preferences.

Additionally, the findings suggested that the experiences of faculty members in their own training shaped how they approached the use of touch in their teaching and the types of touch they incorporated. Although the study focused on touch from faculty members to their students, it is important to note that the discussion of classroom-guided touch between dance students, as well as self-touch as an educational tool, was highly prevalent and included in faculty members’ pedagogical beliefs on dance.

The study found instinct as a factor in faculty members’ decision to use touch, which supports Nancy’s (2013) assertion that people instinctively know which body part(s), as well as to what degree, they have permission to touch (Brandstetter et al., 2013). Additionally, faculty members in this study reported that their instinct was guided by reading students’ body language, sensitivity to “energy” or “vibes,” and making eye contact. Faculty members felt beyond the physicality of the bodies in front of them to be in tune with the students’ presence.

The findings suggested that faculty members’ decision to use touch was influenced by their own familiarity with students and was based on (a) the general
atmosphere of the class and/or (b) the length of time they had worked with students. Additionally, their comfort level with students may be influenced by (a) the students’ gender and/or (b) the body part being touched. This finding supports Fuller et al.’s (2011) work, which revealed that female-to-female touch was more prevalent and that women reported higher TSE scores and reported using touch more than men. Hence, the TSE score has a positive relationship with perceived benefit, and gender is a significant mediator, but it is not a moderator.

Additionally, faculty members reported using touch when verbal cues alone were ineffective. Findings suggested that the failure of other teaching approaches was a catalyst for using tactile feedback but that it also accompanied verbal instruction. These results support Richmond and McCroskey’s (2004) claim that touch is typically used to accent or complement a verbal message.

Although Phase 1 of the study revealed that dance faculty members’ primary area of instruction did not have a significant effect on the TSE scores, the courses faculty members taught were a factor in their decision to use touch. Faculty members reported rarely or never using touch during lecture courses, but they often used touch in dance technique courses, such as ballet and modern, with little discussion of touch in anatomy or kinesiology courses.

In the study, faculty members reported both physical and mental intent in their touch. This finding supports Franklin’s (1996) assertion that people must clear their thoughts before touching and have a “receptive mind” (p. 232), as well as Hackney’s (2000, as cited in E. Groff & J. Meaden, personal communication, September 2006) argument that being clear with “intent and agenda” promotes clear communication.
through touch. However, the study also revealed that faculty members’ intent in a situation of physical contact with students may change due to discovery during the touch, including “trial and error.” Faculty members shifted their contact point or touch stroke, evening halting entirely, to accommodate for the physical and emotional needs of the students or because they incorrectly perceived where or how touch was needed in moments of learning or correction. This study additionally found that faculty members publicly shared, through class discussion, their intent to touch, not only to the students being touched but to those observing as well. This witnessing of the touch and its intent served as part of dance faculty members’ pedagogical beliefs in a holistic education.

The necessity of touch due to the nature of dance, reported as a factor influencing faculty members’ decision to use touch, supports Fuller et al.’s (2011) claim that “contextual factors such as workplace norms regarding touch are likely to influence the use of touch in the workplace” (p. 251). This was evident by faculty members’ assertion that touch is a “necessary” and “powerful, meaningful tool” required for an art form based on “sensory awareness” and is a “good way to connect the body and the mind, which is what we are doing all the time when we are dancing.” Additionally, this study finding supports Fuller et al.’s argument that “individuals are more likely to use touch in a workplace where touch is considered appropriate and common place” (p. 251). Participants reported “modeling the behavior from former teachers, but also experiencing that from former teachers.” This goes beyond the idea of observing to experiencing the practice firsthand. Participants also reported teaching their students about this “Professional Practice” through classroom discussion, demonstration on self and others, and syllabi inclusion.
Research Question 3

What are the perceived benefits of touch in dance instruction as reported by college faculty?

Major Finding 3.

The study found that the TSE score has a positive relationship with perceived benefit as reported by college-level dance faculty. Findings suggested that touch (a) supports individual and group learning, (b) promotes successful epiphanies and transformations, (c) creates a positive learning environment, and (d) provides effective communication through the use of touch.

As expected, faculty members reported that touch supported individualized learning, allowing for an awakening of attention, including reaching students with different learning styles. This finding seems to support Daniels’s (2007) argument that because many dancers are visual, kinesthetic, and spatial learners, addressing multiple learning styles through various pedagogical methods is a vital approach. Additionally, the study found that touch as a pedagogical tool allows educators to provide personalized feedback, recognition, and attention for individual dancers. However, the data also revealed that faculty members believed touch enhanced group learning through moments of witnessed contact, which were supported through lecture and demonstration. In the study, faculty members reported using individualized and personalized touch of students as a way to reach the entire class by creating a moment of class witnessing to frame the touch. Here, touch was center stage, amplifying the reach beyond the students being physically supported to connect to the class as a whole through demonstration and dialogue. The reach of the faculty members’ touch went beyond individual correction of
students to a deep-rooted pedagogical belief in how to holistically educate. They noted the equal value of the individual touch and students’ observation of their interaction.

Although individual and group learning was a major factor in the perceived benefits for students, it was the evidence that touch promoted successful epiphanies and transformations that stood out in the findings. These “aha” moments where the “light bulb goes off” and “students’ eyes light up” reflect intense moments of understanding for students. Thus, the study revealed that touch acts as the catalyst for moments of epiphany and transformation in students’ dance education.

The study revealed that a perceived benefit of touch was to create a positive learning environment. This finding supports the argument by Blanchard and Johnson (2003), Fuller et al. (2011), Heaphy (2007), and Marler et al. (2011) that touch supports positive interactions in the workplace. Faculty members reported using touch as a way to connect with their students and to keep them returning to class. The finding upholds Fuller et al.’s (2011) assertion that touch is used to “develop or reaffirm a friendly relationship” (p. 234). The study finding further supports Chillot’s (2013) assertion that “there’s much to be gained from embracing our tactile sense—in particular, more positive interactions and a deeper sense of connection with others” (para. 14). It is interesting to note that faculty members reported using touch to break down “hierarchical walls” and traditional boundaries, supporting the idea of partnership within the classroom versus authoritarian power. This finding seems to conflict with P. A. Andersen’s (1999) and Guerrero et al.’s (2007) argument that touch by nature is used to display one’s power. The finding suggests that touch comes from a nurturing and caring perspective, allowing all students to “feel invited into the space.”
Furthermore, the study revealed that the TSE score has a positive relationship with perceived benefit, as demonstrated in Table 12 (in Chapter IV), which showed that the perceived benefit variable departed significantly from normality ($KS = 0.138, p < .05$). This finding is reinforced by data concerning faculty participants’ positive descriptions of and experiences using touch in teaching, their extensive use of touch in classroom instruction, and their perception of the value of touch in dance instruction.

Additionally, faculty members reported that touch provided effective communication. Faculty members described their touch as an effective tool to promote communication, believing that “direct communication from one body to the other is the best.” This finding supports I. Dowd’s (1994) argument that intentional touch is a “highly specific and purposeful movement communication” (p. 48). It also supports Fuller et al.’s (2011) claim that “individuals high in TSE are likely to believe that they can use the appropriate type of touch at the right time to achieve successfully outcomes such as enhancing their interpersonal communication effectiveness” (p. 234).

**Unexpected Findings**

Due to the infancy of TSE and the limited research on touch in dance education, there were multiple unexpected findings from this study. Although not discovered in the literature review, almost all educators interviewed linked the use of touch with students’ moments of epiphany in their learning. These “aha” moments were a common theme to educators, who were driven to use touch because they knew a tactile connection would undoubtedly trigger spontaneous understanding for their students. Faculty members spoke of these epiphanies as magical moments for both their students and themselves.
All faculty members who participated in Phase 2 of the study reported positive outcomes concerning their use of touch. None reported touch jeopardizing their student–teacher relationships. In contrast, faculty members only reported touch improving their student–teacher working relationships, and they purposefully used it to do so. It would have been expected that with the extensive amount of touch reported in dance instruction, there would have been a greater incidence of endangering student–teacher relationships due to the increased possibility of unwanted touch or misinterpreted touch.

The TSE scores for dance educators were fairly high in general, with an average of 3.89, but unexpectedly they were not influenced by variables such as age, gender, area of instruction, or formal training. Although the literature supported touch being used more by younger people (P. A. Andersen, 2004; Kershaw, 2009), it is interesting to note that in this study age did not have an effect on TSE scores. Surprisingly too, gender had only a mediating effect, yet the literature stressed the importance of gender differences with touch. Additionally, the area of instruction was not a factor in TSE scores. This was unexpected because different areas of dance education require different approaches to instruction. For example, ballet is not taught identically to jazz dance and therefore may require different touch approaches and necessity for touch during instruction. Thus, it was expected that faculty members teaching in different areas of dance would report different TSE scores, as the unique touch demands of each genre were expected to influence the use of touch and faculty members’ comfort level with touch. Also unexpected was that formal training was not a factor affecting TSE scores. It would have been predictable that those with formal training would have higher TSE scores.
Another unexpected finding was that faculty members reported different approaches to securing permission from students prior to touch, yet the literature review did not address these approaches. Asking student/client permission was part of the literature review, but absent were other acts of methods of securing permission such as statements in course syllabi, discussions about the practice at the beginning of the semester, asking permission prior to potential contact, and evaluating students’ body language based on personal instinct. As all faculty members reported pursuing multiple methods of consent, it is startling that these common practices are not formally part of dance education dialogue.

Although all faculty members who participated in Phase 2 of the study reported using touch during instruction, none could recall any coursework or training that they encountered during their own graduate or undergraduate studies concerning touch in dance instruction. Faculty members noted touch training through yoga, Pilates, Franklin, IMS, or other similar certifications, yet standalone courses on touch or components of touch practices, uses, types, and so forth in dance education courses were not reported. It was surprising that with the extensive use of touch in dance education, more faculty members had not been formally trained.

**Conclusions**

The conclusions from this study are based on the synthesis of the findings from the three research questions. The study met the intended purpose and determined the level of TSE for college-level dance faculty, the factors that influence the use of touch in dance instruction as reported by college faculty, and the perceived benefits of touch in dance instruction as reported by college faculty.
Although the present study concluded that none of the variables—age, $F(4, 93) = 1.090, p = .366 > .05$; gender, $F(1, 93) = 3.727, p = .057 > .05$; primary area of instruction, $F(4, 93) = 0.974, p = .426 > .05$; and previous formal training in the use of touch in dance, $F(1, 93) = 0.407, p = .525 > .05$; or other fields, $F(1, 93) = 1.534, p = .219 > .05$—had a significant effect on the TSE score, the perceived benefits of touch are unmistakable. Based on faculty members’ reports of the benefits of touch in dance and its prolific use, a conclusion can be made that TSE scores are influenced by the field of dance in general rather than variables such as age, gender, area of instruction, or formal training. As dancers use their instrument to communicate to audiences and are in tune with their body due to the demands inherent to dance, it is reasonable to believe that their sensory awareness is heightened, thus increasing their confidence in their touch, or TSE. Supported by the fact that dance faculty members in this study reported extensive use of touch, but with little to no formal training, it can be concluded that dance by nature promotes an instinctual understanding of touch.

Another conclusion is that the dance field uses and incorporates touch extensively in dance education, not only between faculty and students but also between students and in self-touch practices. Although this study focused on touch from teacher to student, the findings demonstrated the prolificacy of touch in general in dance instruction, as evidenced by the TSE score distribution being somewhat left-skewed in the findings. Interestingly, and perhaps a reflection of high TSE levels, faculty members described additional uses of touch to include students’ use of touch with each other, not limited to partnering, and students’ self-touch in self-discovery. Whereas dance, especially social dance involving partner work, has a history of connecting, leading, and following through
touch, the study illuminated touch used between dance students as part of guided instruction from faculty. It can be reasonably concluded that the peer-to-peer touch not only eliminates touch concerns, fear, or discomfort for faculty members, who remove themselves from the touch equation, but also places students in charge through greater autonomy. By making students the directors of the touch and not just receivers, faculty members shift the students’ engagement in their own learning. This change not only supports reform in dance education, as argued by de Kuijper (2013), but is also evidence of a transformation in education in general for self-directed, inquisitive exploration.

It can be concluded that touch in dance as a positive workplace behavior supersedes potential negative outcomes, such as sexual harassment. Although both male and female faculty members reported being cautious when touching students of the opposite gender, touch was extensively used and highly valued. Hence, garnering permission, in general, to touch is more important than possible issues arising from sexual harassment or gender concerns. However, gender does play a role as a significant mediator but not a moderator in TSE scores. As the study’s data demonstrated, the TSE score * Male did not have a significant effect on perceived benefit. However, gender of students plays a minor or no role in faculty members’ decision to use touch. Thus, touch is perceived as a positive workplace behavior, displacing any prospective damaging effects.

Other reported factors in faculty members’ decision to use touch, such as their own pedagogical beliefs, instinct, students’ receptiveness to tactile feedback, and responding to students’ needs, both emotional and physical, are linked to TSE. As these reported factors are based on perception, similarly, TSE is a personal evaluation of one’s
ability (Fuller et al., 2011). Thus, it could be concluded that faculty members’ TSE, or tactile intelligence, is linked to their emotional intelligence, as both require identification and recognition of the faculty members’ own internal landscape.

As evidenced by additional factors influencing faculty members’ use of touch in instruction, it can be concluded that the results of this study further support Fuller et al.’s (2011) claim that

the relationship between touch and any outcome is likely to be dependent upon a variety of factors such as the type of touch, the meaning the individual gives to the physical contact, or how receptive the individual is to being touched. (p. 251)

As these factors, such as faculty members’ familiarity and/or comfort level with students, failure of other teaching approaches, courses taught, intent, and necessity due to the nature of dance, are in a constant state of flux based on time and space, the relationship between touch and any outcome is also one of fluidity.

The major conclusion from this study is that touch is a vital practice in dance education, serving multiple purposes and addressing different teaching and learning strategies. The high TSE scores reflected dance faculty members’ confidence in their use of touch, which was evidenced by their robust beliefs that the use of touch promotes successful epiphanies and transformations, supports individual and group learning, creates a positive learning environment, and provides effective communication through the use of touch. It can be concluded that touch is part of the intimate yet public dance between faculty members and students, one that preserves dance as a temporal and tactile art.
Implications for Action

This study has contributed to improving the understanding of touch and TSE by identifying the level of TSE of college-level dance faculty as measured by the TSE Scale, exploring the factors that influence the use of touch in dance instruction, and describing the perceived benefits of touch as reported by college-level dance faculty. With this study, the dance field joins body-mind professionals (Kramlich, 2014), wellness practitioners (Gavin, 2004), dance/movement therapists (Devereaux & Loman, 2014), healing touch specialists (T. Dowd et al., 2006), and traditional physicians and their “rituals” between doctor and patient (Verghese, 2011) in the documentation of the benefits of touch.

The left-skewed TSE scores revealed in this study further support the need to develop college-level dance educators’ touch skills, touch practices, and understanding in this area. Education for faculty in the area should include touch workshops, courses, certification, public dialogue, and collaborative exploration. Programs need to be developed and cascaded throughout dance organizations to create highly skilled touch practitioners whose TSE scores and natural instinct match their training and experience.

The high TSE scores are a good indication of the knowledgeable and accomplished faculty members in dance instruction, but their practices need to go beyond “folk pedagogy” (Warburton, 2003, p. 13) to promote and encourage innovative touch practices. Best practices and standard practices for areas including giving corrections, finding connections, locating body parts, promoting kinesthetic awareness, and providing encouragement are vitally needed in the profession.
To reach future college-level dance faculty, there is a tremendous need for inclusion of touch practices in graduate coursework. It is alarming with the prevalence of touch in dance education that current educators do not recall instruction in the topic in their own graduate studies. Best practices and uses of touch should be integrated in current graduate studies on dance pedagogy. However, due to the complexity of touch and the many benefits and uses as reported in the study by faculty and in the literature review, touch pedagogy could also serve as a standalone course in graduate education.

As part of pedagogical practices, the discussion and investigation of best practices, specific touch techniques for use in dance, specific touch techniques as appropriate to different genres of dance, and student reflective practices about where and how and by whom they prefer to be touched, if any, should be covered. This touch pedagogy course, or course components on touch, should not be limited to graduate students but should be extended to undergraduates as well, as they too may serve as future dance educators.

For further improvements, the touch education programs developed for dance faculty in higher education should be duplicated in primary and secondary schools. Additionally and equally important is the need to create dance education courses concerning touch practices for the private sector, including dance studios, schools, and conservatories. It is also recommended that parents of younger students, such as those found in dance studios and schools, be educated as well on the benefits, needs, and purpose of touch in dance education.

To create greater awareness of touch practices and to provide transparency and education for students, dance departments, programs, divisions, and professional organizations should develop and generate their own polices on the use of touch in
These standardized practices and protocols should be included on all dance syllabi and in course expectations. Additionally, touch practices should be regularly evaluated during program reviews, annual planning, and other assessments of division goals and objectives. Other divisions in higher education, such as kinesiology and physical education, should also have similar policies about the use of touch, especially for courses involving body-mind practices, such as yoga, Pilates, or other somatic work.

**Recommendations for Further Research**

This study filled a research gap to provide further understanding of TSE levels of dance educators, the perceived benefits of touch in dance instruction as reported by college-level dance faculty, and the factors that influence the use of touch in dance instruction. Recommendations to advance this understanding include (a) studies of TSE levels in other fields, (b) replication of the present study but with attention to the perceived benefits of touch as reported by college-level dance students, (c) replication of the present study with a target population of dance educators not teaching at the college level, (d) comparison of dance educators’ methods and touch techniques within different dance genres, (e) a study of the role of self-touch as a pedagogical practice in dance instruction, (f) exploration of practices and best practices for securing permission to touch in dance instruction, and (g) further research to explore the academic practice of touch between students in dance instruction. The recommendations are further discussed in the order listed.

**Recommendation 1**

Although this study provided substantial evidence concerning touch practices and TSE, additional studies of TSE levels are needed in other non-dance-related fields. This
would enable further study of positive uses of touch in different workplace environments and expand the understanding of TSE, still in its infancy. It would fulfill the “need to explore other antecedents and outcomes of the use of touch” (Fuller et al., 2011, p. 251).

**Recommendation 2**

Replication of the present study with attention to the perceived benefits of touch as reported by college-level dance students would significantly add to the body of knowledge generated in this study. Although the research provided a rich understanding of dance educators’ practices and own comfort levels in using touch in dance instruction, the study did not have the benefit of the receivers’, in this case students’, perceptions of the use of touch. Dance students may or may not report the same benefits of the use of touch, and thus their experiences are vitally important to understand the subject fully.

**Recommendation 3**

Replication of the present study with a target population of dance educators not teaching at the college level would provide a deeper understanding of the larger role the use of touch plays in dance instruction. Exploration of touch practices in private studios, conservatories, and/or dance academies could expand this body of knowledge. Replication with a different dance population would provide a comparison of the touch practices in these unique populations, providing a balcony view on the subject.

**Recommendation 4**

Recommendations for future research also include studies to compare dance educators’ methods and touch techniques within different dance genres. Although areas of instruction did not influence TSE scores in this study, faculty members reported some differences in how they touched depending on the courses they taught. A specific
investigation into dance educators’ methods and touch techniques within different dance
genres could reveal best practices within those dance genres. This could in turn provide
improved methods of instruction based on specialized touch techniques for different
dance genres.

**Recommendation 5**

The present study design was based on touch from dance educators to their dance students. However, the study revealed the use of self-touch in dance instruction. Absent from the literature, the role of self-touch as a pedagogical practice in dance instruction should be explored independently. This would serve the purpose of filling the gap in the literature and would also provide additional possibilities for the use of touch in dance education.

**Recommendation 6**

Although the topic of seeking permission to touch and the strategies for securing permission were addressed during the interviews, a study focused on this subject is needed. Concentrating on faculty members’ permission practices would improve and increase the knowledge in dance education and uncover best practices and techniques for securing permission.

**Recommendation 7**

A final recommendation is further research to explore the academic practice of touch between students, as guided by faculty, in dance instruction. As revealed in the study, the use of touch between students is a part of faculty members’ pedagogical approach to dance education. However, these touch practices have not been studied.
Additionally, an understanding of the use and benefits of touch among dance students is also required to fully understand the breadth of the use of touch in dance instruction.

**Concluding Remarks and Reflections**

This study has contributed to improving the understanding of TSE levels of college-level dance faculty as measured by the TSE Scale, the factors that influence the use of touch in dance instruction, and the perceived benefits of touch in dance instruction as reported by college-level dance faculty.

The TSE scores from the study indicate that dance educators at the college level are confident in their use of touch while being attuned to the power touch has on their students. It was concluded that none of the variables—age, gender, primary area of instruction, and previous formal training in the use of touch in dance or other fields—had a significant effect on TSE scores. However, the TSE scores for dance educators were higher than those found in previous studies on workplace touch. Additionally, it was also found that the TSE score has a positive relationship with perceived benefit, and gender is a significant mediator, but it is not a moderator. The issue of gender was also reported as a minor factor in faculty members’ decision to use touch, but it was based on faculty members’ own comfort and the receptiveness of their students.

The conclusions of this study support the current literature on touch, but they also illuminate a specific area of touch practices and perceived benefits of touch. These perceived benefits of touch, such as supporting individual and group learning, promoting successful epiphanies and transformations, creating a positive learning environment, and providing effective communication through the use of touch, outweighed any potential negative implications for faculty.
The conclusions of the study also further advance the understanding of touch in
dance education, including the factors of student permission; students’ receptiveness to
tactile feedback; responding to students’ needs, both emotional and physical; pedagogical
beliefs; instinct; familiarity and/or comfort level with students; failure of other teaching
approaches; courses taught; intent; and necessity due to the nature of dance, influencing
faculty members’ use of touch in instruction.

This study was initiated in a quest to gain knowledge about TSE and touch
practices of other college-level dance faculty. Highly valued as a pedagogical tool by
this researcher, touch is an integral but undocumented legacy of dance educators. Touch
serves as a gateway to personal discovery, self-reflection, awareness, and presence and is
a sacred means of sharing and connecting between faculty and students. It is an open
doorway for personal and collective transformation and one invaluable to the researcher
in her own personal journey toward successfully “touching” the lives of students.
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APPENDIX A

Touch Self-Efficacy Scale

1. I can easily use touch to achieve a variety of outcomes.
2. I believe I can succeed at communicating a message with touch.
3. Compared to other people, I believe I’m better at using touch.
4. In a difficult situation, I can use touch to ease the tension of others.
5. I believe I can use touch to help others.
6. Even when things are tough, I can use touch to help influence others.
7. I’m confident that I can use touch effectively in a lot of different situations.
8. I feel like I am effective in making others feel better when I touch them.
9. I can use touch to form stronger working relationships with others.
10. I find I can more effectively convey some messages when I use some form of touch than when I don’t use touch.
APPENDIX B

Interview Questions

1. How do you feel about using touch as part of dance instruction? RQ1
2. What do you believe are the benefits of touching your students? RQ3
3. Describe a situation where you effectively convey a message/information using touch. RQ3
4. When working with students, when has touch improved your student/teacher working relationship? RQ3 & RQ1
5. What do think most impacts your decision to use or not use touch during instruction? RQ2
6. Was touch used by your teachers with whom you trained? RQ2
7. How does what you teach influence your use of touch? RQ2
8. What role does gender play in your decision to use touch? RQ2
9. What effect does your touch have on others? RQ3 & RQ1
10. When do you most doubt your abilities to use touch? RQ1
11. What makes you successful when communicating a message with touch? RQ3?
12. What type of formal training, if any, have you had using touch? RQ2
13. Where did you learn most of your touch skills? RQ2
APPENDIX C

Informed Consent Form

INFORMATION ABOUT: Tactile Learning: Touch and Touch Self-Efficacy in College Dance Instruction
BRANDMAN UNIVERSITY
16355 LAGUNA CANYON ROAD, IRVINE, CA 92618
RESPONSIBLE INVESTIGATOR: Alyson Cartagena

PURPOSE OF STUDY: The purpose of this mixed-methods study is to identify the level of touch self-efficacy of college faculty in movement instruction. The study will also identify the factors that influence the use of touch in movement instruction and the perceived benefits by college faculty. The study addresses 1.) What level of touch self-efficacy do college faculty of movement instruction report on the “Touch Self-Efficacy Scale”? 2.) Are there differences in the factors that influence the use of touch in movement instruction as reported by college faculty with low and high touch self-efficacy? 3.) Are there differences in the benefits of touch in movement instruction as reported by college faculty with “low” and “high” touch self-efficacy?

This study will fill in the gap in the research as it will explore additional workplace environments. It may also illuminate current and best practices of dance faculty in the use of touch in the studio classroom.

By participating in this study I agree to participate in an electronic survey using SurveyMonkey. The survey will take approximately 10 minutes to complete. I may also be asked to participants in a one-on-one interview. These interviews will be conducted by phone and will last between 30-60 minutes. Completion of the electronic survey and one-on-one interview and will take place August through September 2015.

I understand that:

a) There are minimal risks associated with participating in this research. I understand that the Investigator will protect my confidentiality by keeping the identifying codes and research materials in secured electronic files that are available only to the researcher.

b) The possible benefit of this study to me is that my input may help add to the research of dance regarding touch in higher education. The findings will be available to me at the conclusion of the study and will provide new insights about touch self-efficacy in which I participated. I understand that I will not be compensated for my participation.

c) Any questions I have concerning my participation in this study will be answered by Alyson Cartagena. She can be reached by email at acartage@mail.brandman.edu or by phone at 562-463-7405.
d) My participation in this research study is voluntary. I may decide to not participate in the study and I can withdraw at any time. I can also decide not to answer particular questions during the interview if I so choose. I understand that I may refuse to participate or may withdraw from this study at any time without any negative consequences. Also, the Investigator may stop the study at any time.

e) No information that identifies me will be released without my separate consent and that all identifiable information will be protected to the limits allowed by law. If the study design or the use of the data is to be changed, I will be so informed and my consent re-obtained. I understand that if I have any questions, comments, or concerns about the study or the informed consent process, I may write or call the Office of the Executive Vice Chancellor of Academic Affairs, Brandman University, at 16355 Laguna Canyon Road, Irvine, CA 92618, (949) 341-7641.

I acknowledge that I have received a copy of this form and the “Research Participant’s Bill of Rights.” I have read the above and understand it and hereby consent to the procedure(s) set forth.
APPENDIX D

Participant’s Bill of Rights

BRANDMAN UNIVERSITY INSTITUTIONAL REVIEW BOARD
Research Participant’s Bill of Rights

Any person who is requested to consent to participate as a subject in an experiment, or who is requested to consent on behalf of another, has the following rights:

1. To be told what the study is attempting to discover.
2. To be told what will happen in the study and whether any of the procedures, drugs or devices are different from what would be used in standard practice.
3. To be told about the risks, side effects or discomforts of the things that may happen to him/her.
4. To be told if he/she can expect any benefit from participating and, if so, what the benefits might be.
5. To be told what other choices he/she has and how they may be better or worse than being in the study.
6. To be allowed to ask any questions concerning the study both before agreeing to be involved and during the course of the study.
7. To be told what sort of medical treatment is available if any complications arise.
8. To refuse to participate at all before or after the study is started without any adverse effects.
9. To receive a copy of the signed and dated consent form.
10. To be free of pressures when considering whether he/she wishes to agree to be in the study.

If at any time you have questions regarding a research study, you should ask the researchers to answer them. You also may contact the Brandman University Institutional Review Board, which is concerned with the protection of volunteers in research projects. The Brandman University Institutional Review Board may be contacted either by telephoning the Office of Academic Affairs at (949) 341-9937 or by writing to the Vice Chancellor of Academic Affairs, Brandman University, 16355 Laguna Canyon Road, Irvine, CA, 92618.
APPENDIX E

Synthesis Matrix
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