STUDENTS' EMOTIONAL INTELLIGENCE AND CONTAGION AS MODERATORS OF

THE RELATIONSHIP BETWEEN INSTRUCTOR NONVERBAL IMMEDIACY CUES AND

AFFECTIVE LEARNING

by

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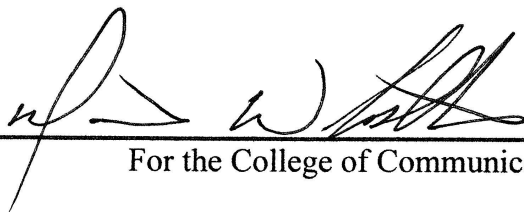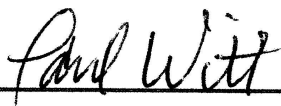
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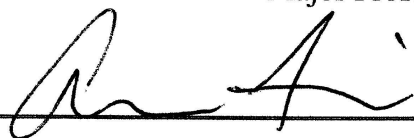
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AFFECTIVE LEARNING

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ABSTRACT

The purpose of this study was twofold: (1) to extend our understanding of nonverbal

immediacy by examining how two student traits, emotional intelligence and emotional

contagion, moderate the positive association between instructors' nonverbal immediacy cues and

students' affective learning and (2) to further explain why nonverbal immediacy cues enhance,

and at times, differentially impact student affect. Participants included 305 college students who

completed measures assessing their instructor's immediacy cues, their affect for the course and

their instructor, and two self-reports which measured their emotional intelligence and contagion.

Collectively, the results extend instructional communication theory by identifying

emotional intelligence and emotional contagion as two key constructs that may transfer over well

from psychology to instructional communication. While hierarchical regression analyses showed

no significant interaction effects for emotional intelligence or contagion, the results suggest that

emotional intelligence was a significant predictor of affect for instructor after controlling for

instructor nonverbal immediacy cues. If these results suggest that students have different

thresholds for affect, researchers could conclude that students with high levels of emotional

intelligence may be more likely to experience affect for instructor than students with low levels of emotional intelligence, regardless of how immediate their instructors are. Further examination of the role of other student characteristics as potential moderators of the association between instructors' nonverbal immediacy cues and students' affective learning may begin to shed more light on our understanding of *why* nonverbal immediacy cues enhance student affect.

PREFACE, INCLUDING ACKNOWLEDGMENTS

As an incoming undergraduate student, I went through the list of majors in the course catalog and eliminated every major I wasn't interested in pursuing. After I did that, it was clear that I needed to declare Communication Studies as my major. As I have pursued my undergraduate and graduate work at TCU, I have encountered many people who have helped me discover a love for the discipline.

First, I would like to thank my committee chair and members. Dr. Schrodt, you have been instrumental in helping me discover that a thesis is more about the process than the product and that advanced statistics is more than just boxes and circles. Thank you for your constructive support and helpful advice throughout the thesis and graduate school selection process. Dr. Witt, you have been a key part of my undergraduate and graduate experience. Thank you for your impeccable editing and passion for integrating theory into research. Dr. Finn, you have been a joy to work with. Thank you for your ability to see the big picture and enthusiasm for the research process.

Second, I would like to thank my graduate school professors, cohort, and students. Dr. Schrodt, Dr. Witt, Dr. Behnke, Dr. King, and Dr. Sawyer, thank you for showing me that there are not always right or wrong answers to every question and that there are often multiple right answers or even no right answer at all. Kristen and Matt, I could not have gotten through graduate school without the two of you. It has been a pleasure to get to know you over the past two years and I am excited that we will get to walk across the stage at graduation together. To my students, you have helped me discover a love for teaching I never thought I would ever have. Thank you for all of the hard work and effort you have put into my class. I admire each and every one of you for conquering your fear of public speaking.

Third, I would like to thank my family and friends. Mom, Dad, Tim, and Trevor, thank you for all that you have done to help me take the next step in my life. Thank you for always supporting me and helping me find the right Ph.D. program. Judy, you have been a great boss, mentor, and friend. Through your help, I have learned to balance my priorities and focus on what is important. Thank you for always being willing to listen, allowing me to share your vision, and helping me wrestle with the many decisions I have had to make this past year.

Finally, I am thankful for the experience I have had at TCU. TCU has taught me that there are faculty and staff who care about developing you as a person as well as a student. TCU has shown me that you have the ability to impact others through teaching, mentoring, and advising. While I have learned a lot inside the classroom, I have learned a lot outside the classroom as well. TCU's mission is "to educate individuals to think and act as ethical leaders and responsible citizens in the global community." Being an ethical leader means that I am not afraid to make the difficult choice if it is the right choice. Being a responsible citizen means that I know that my actions impact other people's lives. Being a part of the global community means that I know that the world is bigger than just TCU or Fort Worth, Texas. I hope that I have been a positive reflection of TCU's mission in my five years here.

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Students' Emotional Intelligence and Contagion as Moderators of the Relationship Between

Instructor Nonverbal Immediacy Cues and Affective Learning

Recently, Schrodt, Turman, and Soliz (2006) argued that interpersonal communication

behaviors are fundamental to developing and maintaining satisfying instructor-student

relationships. One such behavior that has received substantial attention in instructional

communication research is instructor immediacy. Defined as communication behaviors that

"enhance closeness to and nonverbal interaction with another", instructor immediacy consists of

verbal and nonverbal communication behaviors that reduce the perceived distance and increase

the perceived closeness between instructors and students (Mehrabian, 1969, p. 203). In fact,

immediacy is considered by instructional researchers to be one of the most important variables

affecting the instructor-student relationship (Allen, Witt, & Wheeless, 2006). Since Mehrabian's

(1969, 1981) initial observation that immediacy behaviors could be used to engender closeness

between two communicators, instructional communication researchers have devoted substantial

efforts toward investigating how immediacy behaviors impact student learning outcomes.

Although researchers generally agree that there is a positive and substantial relationship

between instructor immediacy and student learning outcomes, the *process* by which immediacy

enhances student learning remains in question (Witt, Wheeless, & Allen, 2004). Several

explanations have been advanced, including the learning (Andersen, 1979), attention-arousal

(Comstock, Rowell, & Bowers, 1995; Kelley & Gorham, 1988), motivation (Christophel, 1990;

Christophel & Gorham, 1995; Frymier, 1994; Richmond, 1990), affective learning (Rodriguez,

Plax, & Kearney, 1996), emotional response (Mottet & Beebe, 2002), and integrating (Zhang,

Oetzel, Gao, Wilcox, & Takai, 2007) models, but no single model has gained widespread

acceptance. Nevertheless, Witt and his colleagues' (2004) meta-analysis confirmed that, at a

minimum, there is a robust and meaningful association between an instructor's immediacy cues and students' affect for the instructor and the course.

Despite knowing that immediacy enhances students' affect, researchers have yet to consider the variability that may exist in students' responses to nonverbal immediacy cues. Anecdotally, some students respond favorably to the use of nonverbal immediacy cues, whereas others are less aroused by such cues and in some cases, may even have adverse reactions as they perceive that an instructor is attempting to inappropriately reduce the psychological distance between him/herself and the students. In addition, McCroskey, Valencic, and Richmond's (2004) general model of instructional communication recognized that student characteristics play a role in the instructional communication process, a tenet that has recently received empirical support (Schrodt et al., 2008). Thus, student characteristics (or traits) may moderate the association between instructor nonverbal immediacy cues and affective learning.

The primary purpose of this investigation was to extend our understanding of nonverbal immediacy by examining two student traits that could potentially moderate the association between nonverbal immediacy cues and affective learning. Specifically, emotional intelligence and emotional contagion are two student characteristics that may help further explain why nonverbal immediacy cues enhance, and at times, differentially impact student affect. *Emotional intelligence* is "an individual's ability to monitor his/her own and others' emotions, discriminate between the positive and negative effects of emotions and use emotional information to guide his/her thoughts and actions" (Akerjordet & Severinsson, 2007, p. 1406). *Emotional contagion* occurs when "precipitating stimuli arise from one individual, act upon one or more other individuals, and yield corresponding or complementary emotions in these individuals" (Hatfield, Cacioppo, & Rapson, 1994, p. 5). In an instructional setting, emotional intelligence and contagion could potentially moderate how students interpret and respond to an instructor's

nonverbal immediacy cues. For instance, students who are emotionally intelligent may be more likely to interpret their instructors' nonverbal immediacy cues as appropriate, thereby enhancing their affect for the instructor and the course. Those low in emotional intelligence, however, would be less likely to perceive an instructor's nonverbal immediacy cues as appropriate and experience a change in affect as a result. Likewise, emotional contagion could enhance the effects of nonverbal immediacy cues by rendering those students high in emotional contagion more susceptible to experiencing a reduction in perceived psychological distance, whereas students low in emotional contagion would be less susceptible to experiencing the effects of nonverbal immediacy cues. Consequently, this study tested this line of reasoning by examining how emotional intelligence and contagion potentially moderate the association between nonverbal immediacy cues and students' affective learning.

<div align="center">Theoretical Perspective</div>

One theory useful for examining emotional constructs that may link nonverbal immediacy cues with students' affective learning is emotional response theory, originally introduced by Mehrabian (1971) and later extended by Mottet, Frymier, and Beebe (2006). According to Mottet and his colleagues (2006), "the theory of emotional response predicts that (1) people pursue things they like, (2) people like things that they feel positive emotions for, and (3) people's emotions are influenced by the implicit messages (e.g., nonverbal immediacy cues) they receive from others" (p. 262). In the classroom, instructors communicate emotional states to their students through both explicit and implicit messages, the latter of which includes nonverbal immediacy cues. When students receive these messages, their emotions may be influenced to the extent that they catch the emotional state of their instructor. Students who feel positive emotions or liking for their instructor as a function of their instructor's immediacy cues experience enhanced affective learning, because students are more likely to pursue things they like and

follow the recommended behaviors provided in the course. For example, researchers have found that a student's emotional response to an instructor's nonverbal immediacy cues can accurately predict whether that student will approach or avoid learning or school related activities like attending class and completing homework assignments (Mottet & Beebe, 2002; Mottet et al., 2006).

More than two decades ago, Mehrabian (1981) suggested that all emotional responses can be described in terms of three independent dimensions: (1) pleasure-displeasure, (2) arousal-nonarousal, and (3) dominance-submissiveness. In the college classroom, instructors' nonverbal immediacy cues are often enacted with the implicit goals of increasing pleasure, arousal, and dominance. First, an emotional response of pleasure is characterized by increased liking (Mottet et al., 2006). In essence, pleasure summarizes how well one is doing and indicates whether or not someone longs to approach something (Russell & Barrett, 1999). Students who experience pleasure are more likely to approach the instructor and course, and feel happy and satisfied (Mottet & Beebe, 2002). Second, an emotional response of arousal is characterized by increased intensity (Mottet et al., 2006), and students who experience arousal are more likely to be active and mentally alert. These behaviors lead to higher levels of focus and increased recall of information (Kelley & Gorham, 1988). Finally, an emotional response of dominance leads to increased permission to approach (Mottet et al., 2006). In the college classroom, students often embrace the sense of empowerment that comes from being in control of their learning environment. As Mottet and Beebe (2002) noted, empowerment gives students confidence in their ability to learn and accomplish their school assignments.

A key tenet of emotional response theory, then, is that the emotional responses of pleasure, arousal, and dominance predict approach behavior (Mottet et al., 2006). Instructors who use nonverbal immediacy cues "engender emotional responses of pleasure, arousal, and

dominance that will, in turn, result in more time on task, student attention, and increased learning" (Mottet et al., 2006, p. 263). Indeed, researchers have already established that nonverbal immediacy is a robust and meaningful predictor of students' affective learning, which in turn enhances cognitive learning (Allen et al., 2006; Witt et al., 2004). What remains unanswered from these lines of research, however, are the primary mechanisms linking students' interpretations of instructors' nonverbal immediacy cues to their own increases in affective learning.

Emotional response theory (Mottet et al., 2006) suggests that the primary mechanisms facilitating the association between immediacy and affective learning consist of specific emotional responses to the instructor's behavioral cues. Thus, a student's emotional make-up (e.g., their intelligence and contagion) may moderate the impact that nonverbal immediacy cues have on affective learning. Therefore, the present study tests the idea that students who possess a higher emotional intelligence and/or are more emotionally contagious are more likely to catch the emotional invitation extended by an instructor's nonverbal immediacy cues. Students who perceive and accept the invitation extended by the instructor experience the positive benefits of reduced psychological distance, including approach behaviors that enhance affective and cognitive learning. Consequently, this study seeks to explain the relationship between instructors' nonverbal immediacy cues and students' affective learning by furthering our understanding of how students interpret and respond to an instructor's behaviors through emotional responses. The remaining sections of this proposal review extant research on nonverbal immediacy cues and affective learning, emotional intelligence, and emotional contagion before advancing two research questions that guided the present investigation.

Nonverbal Immediacy Cues and Affective Learning

The construct of immediacy was introduced by Mehrabian (1969), who posited that certain communication behaviors serve to "enhance closeness to and nonverbal interaction with another" (p. 203). Although some researchers have studied immediacy in interpersonal and organizational relationships, a substantial body of research has emerged examining immediacy in instructor-student relationships. Research on immediacy in the classroom has shown that immediacy can be used to enhance the instructor-student relationship, because "people are drawn toward persons and things they like, evaluate highly, and prefer; and they avoid or move away from things they dislike, evaluate negatively, or do not prefer" (Mehrabian, 1971, p. l).

Since the instructor's primary goal is to help students learn, it comes as no surprise that researchers have examined the extent to which immediacy behaviors are associated with positive learning outcomes. Building upon Andersen's (1979) seminal work, researchers have found that instructor immediacy positively influences students' state motivation (Christophel, 1990; Frymier, 1994), cognitive learning (Hinkle, 1998; McCroskey, Sallinen, Fayer, Richmond, & Barraclough, 1996), recall of information (Kelley & Gorham, 1988), and willingness to talk (Menzel & Carrell, 1999), thus enhancing the overall instructor-student relationship (Frymier & Houser, 1998, 2000).

The benefits of using immediacy cues in the classroom emerge as a function of students' preferences for instructors who make consistent eye contact, who use appropriate gestures, a relaxed body position, smiling, and vocal expressions, and who are friendly, approachable, open, and warm (Andersen, 1979). As noted earlier, extant research has also demonstrated a meaningful relationship between instructors' nonverbal immediacy cues and students' affective learning (Andersen, 1979; Andersen, Norton, & Nussbaum, 1981; Witt et al., 2004), including increased affect for the instructor and the subject matter or course (Chesebro & McCroskey,

2001; Kearney, Plax, & Wendt-Wasco, 1985; McCroskey & Richmond, 1992; Messman & Jones-Corley, 2001; Orpen, 1994; Rodriguez et al., 1996; Sanders & Wiseman, 1990).

Understanding the relationship between nonverbal immediacy and affective learning is described by Rodriguez and his colleagues' (1996) affective learning model. This model posited that students' affective learning mediates the association between an instructor's nonverbal immediacy cues and students' cognitive learning. Unlike scholars who support the motivation model, Rodriguez and his colleagues (1996) do not view affective learning as an end state in-and-of-itself. Instead, it is a means to an end state of cognitive learning. "Nonverbally immediate instructors cause students to acquire or increase positive attitudes toward the subject and/or instructor and in turn, this affective learning causes students to learn cognitively" (Rodriguez et al., 1996, p. 296). In essence, positive affect leads to sustained involvement and deepened interest in the subject matter, and thus, becomes an intrinsic motivator for cognitive learning when students engage in task-relevant behaviors.

Using Witt and his colleagues' (2004) meta-analysis of the relationship between immediacy and learning to inform their research, Allen and his colleagues (2006) further investigated the affective learning model by examining the impact of the instructor's behavior on the psychological orientation of the student, namely, the student's motivation to learn. Their findings confirmed that instructor immediacy has an indirect effect on cognitive learning. Allen and his colleagues (2006) asserted that nonverbal immediacy behaviors represent a conscious choice to employ behaviors that students respond favorably to. Through this conscious choice, immediate instructors seek to enhance students' approach behaviors through communication behaviors that increase enthusism, commitment, and ultimately, cognitive learning.

Researchers have also extended immediacy research to other cultures, such as China, Japan, Finland, Germany, Puerto Rico, and Australia (Allen et al., 2006; McCroskey et al., 1996;

Neuliep, 1997; Roach & Byrne, 2001; Roach, Cornett-DeVito, & DeVito, 2005; Rodriguez et al., 1996; Sanders & Wiseman, 1990; Zhang & Oetzel, 2006; Zhang et al., 2007). This body of research has documented that the positive relationship between instructor nonverbal immediacy and students' affective learning extends across cultures, because many nonverbal immediacy behaviors like vocal expressiveness, smiling, and eye contact are pancultural (Sanders & Wiseman, 1990). Despite the tremendous breadth and scope of research undergirding the association between nonverbal immediacy and affective learning, however, researchers have yet to examine student characteristics that could potentially moderate the strength of this association. Given recent evidence to suggest that student characteristics predict unique variance in learning outcomes (e.g., affective learning) after controlling for instructor prosocial behaviors (e.g., nonverbal immediacy cues) (Schrodt et al., 2008), further research is needed to more fully explicate *why* nonverbal immediacy works in the classroom. In the following sections, two student characteristics that may further our understanding of this relationship are reviewed: emotional intelligence and emotional contagion.

Emotional Intelligence

The interaction of emotions and thinking, and the integration of cognition and affect, inform extant conceptualizations of emotional intelligence (Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006). While intelligence and emotion have often been considered in opposition, an accumulating body of research has shown that affect influences cognitive functioning, including memory, attention, and decision making (Brackett et al., 2006). Emotional intelligence gained widespread acceptance as a concept of intelligence through Gardner's (1983) research into multiple intelligences. According to Brackett and his colleagues (2006), intelligence was no longer merely monolithic, but rather, it could extend to social, practical, and personal intelligences as well. Brackett and his colleagues (2006) stated that emotional intelligence can be

distinguished from other specific intelligences by the kind of information it operates on: emotion-relevant information. Consequently, Mayer, DiPaolo, and Salovey (1990) advanced an emotional intelligence model consisting of four emotional abilities that enable people to accurately process emotion-relevant information and use this information to solve problems.

The four components of Mayer and his colleagues' (1990) emotional intelligence model include perceiving, using, understanding, and managing emotion. *Perceiving* emotion represents a person's ability to recognize and identify emotions in other people's nonverbal cues (Brackett et al., 2006; Ekman & Friesen, 1975; Nowicki & Mitchell, 1998; Scherer, Banse, & Wallbott, 2001). *Using* emotion involves accessing, harnessing, and generating emotions to assist thinking or cognitive processes (Brackett et al., 2006; Isen, 1987; Palfai & Salovey, 1993; Schwarz, 1990; Schwarz & Clore, 1996). *Understanding* emotion reflects an individual's ability to examine how emotions combine, progress, and transition toward behavioral outcomes (Brackett et al., 2006; Frijda, 1988; Lane, Quinlan, Schwartz, Walker, & Zeitlin, 1990), and finally, *managing* emotion involves tailoring emotional responses, experiencing emotions, and making decisions on how emotions should be used and expressed (Brackett et al., 2006, Eisenberg, Fabes, Guthrie, & Reiser, 2000; Gross, 1998).

Possessing the abilities and skills to use the four components of Mayer and his colleagues' (1990) model enables people to gain insight into others (Caruso, Mayer, & Salovey, 2002; Mayer, Salovey, & Caruso, 2004). When emotions are encoded through implicit messages, emotionally intelligent people are able to recognize and interpret the meaning behind the emotion (Buontempo & Brockner, 2008). For nonverbal immediacy behaviors to have their intended effect on students, students must be able to "monitor [their] own and [their instructors'] emotions, discriminate between the positive and negative effects of emotions and use emotional information to guide [their] thoughts and actions" (Akerjordet & Sevirinsson, 2007, p. 1406).

When these three abilities are coupled with social and emotional competencies, students may be better equipped to handle their instructor-student relationship effectively, because they can sense what their instructors are feeling (cf. Dulewicz & Higgs, 2000). Sensing what their instructors are feeling, in turn, should inform students' own understandings of their thoughts, actions, and subsequent feelings in the classroom (cf. Salovey, Detweiler-Bedell, Detweiler-Bedell, & Mayer, 2008).

When students perceive and accurately interpret their instructors' nonverbal immediacy cues, in general, positive outcomes such as higher quality instructor-student interactions, enhanced affective learning, and increased student involvement and motivation are likely to occur. Most college instructors work to create an environment that promotes affective learning, yet students possess their own personalities and trait-like characteristics (e.g., emotional intelligence) that are likely to introduce a degree of variability in how instructors' nonverbal immediacy cues are interpreted. When students possess high levels of emotional intelligence, they may be more likely to perceive and interpret their instructors' nonverbal immediacy cues as implicit messages designed to enhance liking or positive regard for the instructor and the course. When students possess low levels of emotional intelligence, however, they may be less likely to perceive and interpret their instructors' nonverbal immediacy cues correctly. If emotional intelligence assists students in monitoring, discriminating, and using emotional information (Mayer et al., 1990), then according to emotional response theory, students' emotional intelligence may moderate the positive relationship between instructors' nonverbal immediacy cues and students' affective learning. Given no previous research to suggest the direction or magnitude of such an interaction effect, however, a research question rather than a hypothesis was advanced to explore this possibility:

RQ1: How, if at all, does students' emotional intelligence moderate the positive association between instructors' nonverbal immediacy cues and students' affective learning?

Emotional Contagion

A second construct that could potentially explain the association between nonverbal immediacy cues and affective learning is emotional contagion. In psychology, social information-processing researchers have examined how group members share ideas and cognition primarily through words (Bateman, Griffin, & Rubinstein, 1987; Salancik & Pfeffer, 1978; Shetzer, 1993). While some scholars have focused primarily on idea sharing to explain some aspects of group interaction, other scholars have pointed to emotional contagion. Emotional contagion occurs when "the precipitating stimuli arise from one individual, act upon one or more other individuals, and yield corresponding or complementary emotions in these individuals," that is, when emotions are shared (Hatfield, Cacioppo, & Rapson, 1994, p. 5). Emotional contagion occurs when people begin to feel in sync with or catch others' emotions (Ramanathan & McGill, 2007). Examples of corresponding or contagion responses would be smiles eliciting smiles or tears eliciting tears, while complementary or counter-contagion responses would be shrinking back in fear when a fist is raised (Hatfield et al., 1994). According to Barsade (2002), these types of emotional responses are often solicited through exposure to other people's emotions, the expression of emotions through nonverbal signals, and/or when emotions are transferred from one person to another (e.g., contagion). Thus, the emotional contagion process can occur at both conscious (Salancik & Pfeffer, 1978) and subconscious levels (Hatfield et al., 1994; Neumann & Strack, 2000) through one of four mechanisms: conscious cognitive processes, conditioned emotional responses, unconditioned emotional responses, and mimicry/feedback.

Conscious cognitive processes occur when individuals come to share the other person's feelings through perspective taking (Hatfield et al., 1994). These processes are especially potent when individuals love, like, or identify with the other person. *Conditioned and unconditioned emotional responses* occur, however, at the subconscious level, as people who experience these responses are often unaware of the stimulus or find themselves powerless against its forces (Hatfield et al., 1994). Finally, *mimicry/feedback* also occurs at the subconscious level, though when this occurs, people may be affected by the central nervous system, afferent feedback, or self-perception processes. As Hatfield and her colleagues (1994) noted, both conscious and subconscious mechanisms assist the transmission of emotions between individuals.

Although all people have the ability to catch emotions from others, people vary in their tendencies to catch or get swept up in other people's emotions. Susceptibility to emotional contagion can be seen as "the frequency with which emotional stimuli elicit an emotional expression characteristic of the eliciting emotion" (Doherty, 1997, p. 134). These individual differences result from contributing factors like genetics, personality characteristics, and gender, factors which contribute to whether people are susceptible or resistant to emotional contagion. Hatfield and her colleagues (1994) stated that people who are (a) self-aware and emotionally reactive, (b) pay attention to others, (c) see themselves as interrelated to others, (d) read others' emotions well, and (e) mimic others' emotional expressions are fairly susceptible to emotional contagion, while people without these attributes are fairly resistant.

It is also important to note that people who possess these attributes are not just passive recipients of emotions (Bartunek, Rousseau, Rudolph, & DePalma, 2006), but rather, active recipients who seek to make sense of their emotions through reflection, evaluation, and judgment. This, in turn, often results in behaviors like perspective-taking, empathic concern, and communicative responsiveness (Stiff, Dillard, Somera, Kim, & Sleight, 1988). When extended to

the college classroom, differences in susceptibility to emotional contagion may impact the relationship between instructor nonverbal immediacy behaviors and students' affective learning. Students most likely possess varying levels of susceptibility to emotional contagion, and thus, no two students should experience identical emotional responses to perceived instructor nonverbal immediacy cues. Rather, it stands to reason that when instructors employ highly immediate behaviors, more susceptible students (e.g., emotionally contagious) may catch the positive emotional tone set by the instructor's immediacy cues, whereas more resistant students may fail to catch their instructor's psychological invitation to reduce perceived distance in the classroom.

Consequently, students who are highly emotionally contagious may experience a greater degree of perceived closeness in the instructor-student relationship as a function of nonverbal immediacy cues than those students who rarely catch or mimic the emotions of others. This mechanism may further explain why immediacy is more impactful for some students than for others, namely, because emotionally contagious students more easily perceive that their instructor cares about them and is highly empathetic, understanding, and responsive. Given that emotional contagion could potentially explain part of the effects that nonverbal immediacy cues have on affect for the instructor and the course, research further examining the role of emotional contagion as a potential moderator of the association between instructors' nonverbal immediacy cues and students' affective learning appears warranted. To explore this issue, then, a second research question was advanced for consideration:

RQ2: How, if at all, does students' emotional contagion moderate the positive association between instructors' nonverbal immediacy cues and students' affective learning?

Method

Participants and Procedures

Participants were 305 undergraduate students at a medium-sized, private university in the southwest. Respondents included 145 females and 157 males, ranging in age from 18 to 57, with a mean age of 20.41 years (SD = 3.61). Nearly two-thirds of the students were classified as either first-year students (33.1%) or seniors (30.8%). Upon securing human subjects approval, the researcher solicited direct participation from undergraduate students enrolled in one of seven undergraduate communication courses. Participants completed measures assessing their instructor's immediacy cues, their affect for the course and their instructor, and two self-reports which measured their emotional intelligence and contagion. To ensure that the ratings represent instructors from a wide variety of academic disciplines, participants reported the behaviors of instructors from their previous class (Plax, Kearney, McCroskey, & Richmond, 1986). All participation took place during regular class time, and students completed the questionnaire anonymously. After completing the survey, students were thanked for their participation and debriefed.

Measures

Nonverbal immediacy. Students' perceptions of their instructors' nonverbal immediacy cues were operationalized using Richmond, Gorham, and McCroskey's (1987) Nonverbal Immediacy Measure (NIM) (see Appendix A). The NIM is composed of 14 low-inference items measuring the frequency with which instructors engaged in nonverbally immediate behaviors (e.g., "sits behind desk while teaching," "looks at the class while talking"). Responses were solicited using a five-point, Likert-type scale that ranged from (0) *Never* to (4) *Very often*. The NIM is a valid and reliable instrument, with previous researchers reporting alpha reliabilities ranging from .75 to .84 (Fusani, 1994; Mottet et al., 2008; Richmond et al., 1987; Rodriguez et

al., 1996). In this study, the NIM produced an acceptable alpha reliability of .76 ($M = 2.89$, $SD =$ .54).

Affective learning. Students' affective learning for the subject matter of the course and the instructor was operationalized using the Affective Learning Scale (ALS) (see Appendix B), developed originally by Scott and Wheeless (1975) and later revised and extended by Andersen (1979) and McCroskey (1994). The ALS is a semantic differential scale composed of sixteen bipolar items. For affect toward the subject matter, four items measured affect directly and four assessed whether the student would be likely to take future courses in the same content area. For affect toward the instructor, four items addressed affect for the instructor and four assessed whether the student would be likely to take future courses with the same instructor. While affect toward the instructor typically refers to the combined eight item measure, this study focused on the four items that directly assessed affect for the instructor. The ALS is a valid and reliable instrument, with previous researchers reporting alpha reliabilities that ranged from .89 to .93 (Chesebro & McCroskey, 2001; McCroskey, 1994; Mottet et al., 2008). In this study, the Affective Learning Scale produced an acceptable alpha reliability of .95 ($M = 5.53$, $SD = 1.31$), while the four items that directly address affect for instructor produced an acceptable alpha reliability of .87 ($M = 6.01$, $SD = 1.15$).

Emotional contagion. Students' emotional contagion was operationalized using Doherty's (1997) Emotional Contagion Scale (ECS) (see Appendix C). The ECS is composed of 15 items (e.g., "If someone I'm talking with begins to cry, I get teary-eyed," "I melt when the one I love holds me close"). Responses were solicited using a four-point Likert-type response scale that ranged from (1) *Never* to (4) *Always*. The ECS is a valid and reliable instrument, with previous researchers reporting alpha reliabilities ranging from .84 to .90 (Doherty, 1997; Ilies,

Wagner, & Morgeson, 2007; Lamm, Batson, & Decety, 2007; Lundqvist, 2006). In this study, the ECS produced an acceptable alpha reliability of .81 ($M = 2.81$, $SD = .42$).

   Emotional intelligence. Students' emotional intelligence was operationalized using Schutte et al.'s (1998) Emotional Intelligence Scale (EIS) (see Appendix D). The EIS is a Likert scale composed of 33 items (e.g., "I know when to speak about my personal problems to others," "Other people find it easy to confide in me"). Responses were solicited using a five-point response scale that ranged from (0) *Strongly disagree* to (4) *Strongly agree.* The EIS is a valid and reliable instrument, with previous researchers reporting alpha reliabilities ranging from .87 to .90 (Lenaghan, Buda, & Esner, 2007; Munro, Bore, & Powis, 2005; Schutte et al., 1998). In this study, the EIS produced an acceptable alpha reliability of .86 ($M = 2.94$, $SD = .35$).

Data Analysis

   The first research question was addressed using two separate hierarchical regression analyses. In the first model, instructors' nonverbal immediacy cues and students' emotional intelligence were entered at step one, followed by the interaction effect of immediacy and emotional intelligence at step two to predict students' affective learning. To isolate affect for instructor (Items 9-12 in Appendix B) from other measures of affect, such as affect toward the subject matter (Items 1-4 in Appendix B), the likelihood of taking future courses in the same content area (Items 5-8 in Appendix B), or the likelihood of taking future courses with the same instructor (Items 13-16 in Appendix B), a second model was used. In the second model, instructors' nonverbal immediacy cues and students' emotional intelligence were entered at step one, followed by the interaction effect of immediacy and emotional intelligence at step two to predict students' affect for instructor.

   The second research question was addressed using two separate hierarchical regression analyses. In the first model, instructors' nonverbal immediacy cues and students' emotional

contagion were entered at step one, followed by the interaction effect of immediacy and contagion at step two to predict affective learning. Again, affect for instructor (Items 9-12 in Appendix B) was isolated from other measures of affect (Items 1-8 and 13-16 in Appendix B) in the second model. In the second model, instructors' nonverbal immediacy cues and students' emotional contagion were entered at step one, followed by the interaction effect of immediacy and contagion at step two to predict affect for instructor. All tests of statistical significance were conducted at $p < .05$.

Results

Descriptive statistics, including means, standard deviations, and Pearson's product-moment correlations for all variables included in the study, are reported in Table 1.

Table 1

Descriptive Statistics and Pearson Product-Moment Correlations for All Variables (N = 305)

Variables	*M*	*SD*	*α*	*1*	*2*	*3*	*4*	*5*
1. Emotional contagion	2.81	.42	.81	—				
2. Emotional intelligence	2.94	.35	.86	.34**	—			
3. Nonverbal immediacy	2.90	.54	.76	.03	.17**	—		
4. Affective learning	5.53	1.31	.95	.05	.13*	.43**	—	
5. Affect for instructor	6.01	1.15	.87	.11	.19**	.43**	.83**	—

*p < .05. **p < .01.

The first research question inquired as to how, if at all, students' emotional intelligence moderates the positive association between instructors' nonverbal immediacy cues and students' affective learning. The first hierarchical regression analysis, using affective learning as the criterion variable, produced a significant multiple correlation coefficient, $R = .43$, $F(2, 302) = 34.75$, $p < .001$, accounting for 19% of the total variance in perceptions of affective learning. At step one, an examination of the beta weights revealed that nonverbal immediacy ($\beta = .42$, $t = 7.98$, $p > .001$) was the only significant predictor in the model. At step two, the interaction effect of emotional intelligence and nonverbal immediacy was not statistically significant ($\beta = -.07$, $t = -1.31$, $p > .05$). The second hierarchical regression analysis, using affect for instructor as the criterion variable, produced a significant multiple correlation coefficient, $R = .44$, $F(2, 302) = 36.59$, $p < .001$, accounting for 19% of the total variance in perceptions of affect for instructor. At step one, an examination of the beta weights revealed that nonverbal immediacy ($\beta = .41$, $t = 7.76$, $p < .001$) and emotional intelligence ($\beta = .12$, $t = 2.25$, $p < .05$) were significant predictors in the model. Again, at step two, the interaction effect was not statistically significant ($\beta = -.09$, $t = -1.73$, $p > .05$).

The second research question inquired as to how, if at all, students' emotional contagion moderates the positive association between instructors' nonverbal immediacy cues and students' affective learning. The first hierarchical regression analysis, using affective learning as the criterion variable, produced a significant multiple correlation coefficient, $R = .43$, $F(2, 302) = 34.40$, $p < .001$, accounting for 19% of the total variance in perceptions of affective learning. At step one, an examination of the beta weights revealed that nonverbal immediacy ($\beta = .43$, $t = 8.24$, $p < .001$) was the only significant predictor in the model. At step two, the interaction effect of emotional contagion and nonverbal immediacy was not statistically significant ($\beta = .01$, $t = .19$, $p > .05$). The second hierarchical regression analysis, using affect for instructor as the

criterion variable, produced a significant multiple correlation coefficient, $R = .44$, $F(2, 302) =$ 35.80, $p < .001$, accounting for 19% of the total variance in perceptions of affect for instructor. At step one, an examination of the beta weights revealed that nonverbal immediacy ($\beta = .42$, $t = 8.18$, $p < .001$) was the only significant predictor in the model, though students' emotional contagion approached statistical significance ($\beta = .10$, $t = 1.94$, $p = .053$). At step two, the interaction effect was not statistically significant ($\beta = .00$, $t = -.05$, $p > .05$).

Discussion

Using Mehrabian's (1971) emotional response theory, the principal goal of this research was to extend our understanding of nonverbal immediacy by exploring the extent to which students' emotional intelligence and emotional contagion moderate the association between nonverbal immediacy cues and affective learning. Although the findings replicate and support the fundamental conclusion from the instructional communication literature that instructors' nonverbal immediacy cues are positively associated with students' affective learning, overall, the results provide very little evidence to suggest that student characteristics moderate this association. Contrary to the initial line of reasoning advanced in this report, students' emotional intelligence and contagion do not heighten (or mitigate) the effects of an instructor's nonverbal immediacy cues on their own affect. However, the results do provide modest evidence to suggest that emotionally intelligent students are somewhat more likely to perceive their instructors as being nonverbally immediate and to report greater affect, independent of their instructors' behaviors. Consequently, the results extend our understanding of a student characteristic that may influence, to a small extent, students' perceptions of their instructors' immediacy in the classroom.

The first research question advanced the possibility that emotional intelligence assists students in perceiving and interpreting their instructors' nonverbal immediacy cues correctly.

Contrary to this line of inquiry, the results provided no evidence to support the idea that students' emotional intelligence moderates the association between their instructor's nonverbal immediacy cues and their own reports of affective learning. The results of the first research question for affect overall suggest that students' emotional intelligence does not heighten or mitigate the effects of instructors' nonverbal immediacy cues on students' affective learning. One explanation for these results may stem from the timing of the data collection, as the data were collected toward the end of the academic semester after the instructor-student relationship had been established, rather than at the beginning of the semester when student characteristics were perhaps more likely to influence initial perceptions of the instructor. Furthermore, the research design likely impacted the results as well. While low inference measures of nonverbal immediacy increased reliability estimates in this study, students' perceptions of nonverbal immediacy cues like eye contact or body position may not provide the best test of how emotional information is monitored, discriminated, and used by students. Using low-inference measures of nonverbal behaviors that co-occur with other aspects of an instructor's communicator style may have provided a less than ideal test of how emotional intelligence impacts the relationship between nonverbal immediacy and affect for the instructor.

Using a different research design might provide an explanation of how emotional intelligence differentially impacts affective learning, especially if it is done early in the academic semester before other variables confound students' perceptions of instructors' behaviors and their own affective learning. For example, having students evaluate the same instructor might provide varying perspectives on how the same emotional information is monitored, discriminated, and used by different students, while using open-ended questions may more fully explain how students perceive and interpret emotional information that their instructors communicate in the classroom. While this study found no evidence to suggest that emotional

intelligence moderates the relationship between nonverbal immediacy and affective learning, emotional intelligence may moderate the relationship between more robust instructor traits like dynamism or extraversion and affective learning.

At the same time, however, the results do suggest that emotional intelligence may be a student characteristic that influences student affect for the instructor. After controlling for an instructor's nonverbal immediacy cues, the results suggest that emotionally intelligent students are somewhat more likely to report affect for their instructors than less emotionally intelligent students. On one hand, this result may have emerged simply as a function of narrow-banding the measure of affective learning to affect for the instructor. Indeed, affect for course content, the likelihood of taking future courses in the content area, and the likelihood of taking future courses with the same instructor are all dimensions of affective learning that may be more strongly impacted by students' majors or by their general interest in the subject matter than by instructors' use of nonverbal immediacy cues. Majors taking required classes within their major may come in with higher levels of affect for the class content than non-majors taking the same classes as elective classes outside their major. Majors would also be much more likely to take future courses in the same content area or with the same instructor than non-majors, regardless of whether they liked the current course or current instructor. On the other hand, students with high levels of emotional intelligence may be more likely to experience affect for their instructors independent of their instructors' nonverbal immediacy cues. When coupled with previous research documenting the influence that students' trait verbal aggressiveness have on their ratings of instructors' aggressive behaviors in the classroom (e.g., Schrodt, 2003), the results of the present study provide modest evidence to suggest that student characteristics may influence their individual perceptions and ratings of instructor behaviors.

The second research question examined the possibility that emotionally contagious students are perhaps more likely to experience a greater degree of perceived closeness with their instructor as a function of the instructor's nonverbal immediacy cues. The results of the second research question for affect overall suggest that students' emotional contagion does not heighten or mitigate the effects of instructors' nonverbal immediacy cues on students' affective learning. Again, one plausible explanation for these results may stem from the measures used in this report, as global assessments of emotional contagion (e.g., emotions one experiences while watching the news, sitting in a dentist's waiting room, and spending time with a loved one) may not adequately capture the extent to which students are contagious or resistant to emotional expressions in an instructional setting. Compounding these global assessments with low-inference measures of nonverbal immediacy cues may raise additional questions about the validity of using self-report measures to test the theoretical line of reasoning advanced in this report. Tailoring the ECS to fit an instructional setting or observing students to see whether they receive, catch, or mimic nonverbal immediacy cues may provide a more valid examination of students' emotional contagion in the classroom. Using more robust instructor characteristics like dynamism or extraversion might also provide stronger emotional messages with which to test this line of reasoning than low-inference, nonverbal immediacy cues.

Although the results suggest that emotional contagion does not moderate the positive relationship between instructors' nonverbal immediacy cues and students' affective learning, emotional contagion did approach statistical significance for affect for instructor. Nevertheless, the effect size was negligible at best. Similar to the first research question, the marginal effect that emerged for emotional contagion occurred only after narrow-banding the ALS to affect for instructor. While narrowing the focus to affect for instructor may increase the magnitude of the effect, testing for emotional contagion may still prove difficult because, theoretically, three of the

four types of emotional contagion occur subconsciously. Thus, emotional contagion, when combined with a low-inference measure of nonverbal immediacy cues, may provide a relatively weak test of whether emotional contagion moderates the relationship between nonverbal immediacy and affect for instructor. Although both emotionally contagious and resistant students may perceive that a nonverbal immediacy cue has been sent by the instructor, varying levels of emotional contagion may impact whether and how the message is received, caught, or mimicked. Using an observational research design that observes instructors teaching, expressing emotion, and watching students' responses to expressed emotion may better explain how emotional messages are sent and received.

While emotional intelligence and emotional contagion do not explain why nonverbal immediacy cues enhance, and at times, differentially impact students' affect, the results of this study do provide some theoretical implications and directions for future research. First, the results further researchers' understanding of emotional response theory by extending applications of emotional intelligence and emotional contagion from psychology into instructional communication. Since emotional response theory is grounded in the interpersonal relationship between two people (e.g., the instructor and student), the results provide a basis for further understanding nonverbal immediacy cues from the receiver's perspective. In past research, student reports have been used to measure how immediate instructors are without taking into account the role that student characteristics play in the instructor-student relationship. While the sender's role has been well-studied, this study extends nonverbal immediacy research by focusing on the role of the receiver. Continued research is needed to explain why individual students in the class respond differently to the same instructor's nonverbal immediacy cues and experience varying levels of affect for the instructor. Second, this study also shows that relying solely on low-inference, self-report measures of nonverbal immediacy may prevent researchers

from understanding how other aspects on an instructor's communicator style may impact student affect, lending credence to past critiques of the nonverbal immediacy literature (e.g. Hess, Smythe, & Communication 451, 2001; Smythe & Hess, 2005).

With these implications in mind, the results of this study also provide two directions for future research. First, future researchers could examine whether nonverbal immediacy functions collectively with other dimensions of an instructor's teaching style to enhance affect. For example, nonverbal immediacy cues are likely to occur simultaneously with instructor clarity, teaching style, dynamism, and other features of an instructor's communicator style. To the extent that these features of an instructor's behavior co-occur with nonverbal immediacy cues, future research is needed to more carefully tease out the unique and combined effects that immediacy cues have on student affect. Second, and perhaps more importantly, continued research is needed to examine the role that other student characteristics play in the learning process. Indeed, the results of the present study, when coupled with Schrodt and his colleagues' (2008) findings, may suggest that student characteristics simply function as a supporting role in learning, providing an early cameo appearance in the larger film of the instructional communication process. That is, student characteristics are perhaps more likely to influence the instructor-student relationship and learning processes early in the semester, rather than later in the semester after the instructor-student relationship and the classroom environment has had more time to develop.

Despite the contributions of this study, the results should be interpreted within the limitations of the cross-sectional research design. An obvious limitation involves the use of an undergraduate student sample at a predominantly white, private university. Thus, future researchers might address this limitation by collecting a more diverse sample of students from several universities. Another limitation involves the timing of the data collection. Since the data were collected midway through the semester, students may have based their affective learning on

other factors like understanding of course content and instructor competence rather than nonverbal immediacy. Thus, future researchers might address this limitation by employing a pre-test/post-test research design measuring nonverbal immediacy at the beginning and end of the semester. Finally, low inference measures and self-reports may only explain part of the affective learning process. Thus, future researchers might address this limitation by using methodological triangulation (i.e., using multi-trait, multi-method approaches to data collection) to provide a richer understanding of how student characteristics moderate the association between nonverbal immediacy cues and affective learning.

Future researchers might also extend the nonverbal immediacy literature by examining other communication constructs that moderate the effects of immediacy on affective learning. Exploring other student characteristics like learning styles (e.g. visual, auditory, and tactile/kinesthetic) may more fully capture why some nonverbal immediacy cues are more impactful for some students than for others (e.g., gestures for visual learners, vocal variety for auditory learners, and movement around the classroom for tactile/kinesthetic learners). Through the examination of additional student traits that could potentially moderate the association between nonverbal immediacy cues and affective learning, instructional scholars can begin to shed more light on our understanding of *why* nonverbal immediacy cues enhance student affect.

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Appendix A: Nonverbal Immediacy Scale

Instructions: Below is a series of things some teachers have been observed doing in some classes. Please refrain from providing information on the name and course of the professor who is being evaluated. Please use the following scale to indicate how often these behaviors are being used in the teaching of **the last class you attended before this one**. Circle only one number for each item, and please complete all the items.

Never	Rarely	Occasionally	Often	Very Often
0	1	2	3	4

		N				VO
1.	Sits behind desk while teaching.	0	1	2	3	4
2.	Gestures while talking to the class.	0	1	2	3	4
3.	Uses monotone/dull voice when talking to the class.	0	1	2	3	4
4.	Looks at the class while talking.	0	1	2	3	4
5.	Smiles at the class while talking.	0	1	2	3	4
6.	Has a very tense body position while talking to the class.	0	1	2	3	4
7.	Uses touch appropriately for this type of class.	0	1	2	3	4
8.	Moves around the classroom while teaching.	0	1	2	3	4
9.	Sits on a desk or in a chair while teaching.	0	1	2	3	4
10.	Looks at board or notes while talking to the class.	0	1	2	3	4
11.	Stands behind podium or desk while teaching.	0	1	2	3	4
12.	Has a very relaxed body position while talking to the class.	0	1	2	3	4
13.	Smiles at individual students in the class.	0	1	2	3	4
14.	Uses a variety of vocal expressions while talking to the class.	0	1	2	3	4

Appendix B: Affect Scale

Instructions: Please think about **the last class you attended before this one**. Please refrain from providing information on the name and course of the professor who is being evaluated. Circle the number that best represents your feelings. Circle only one number for each item, and please complete all the items.

Very Strong Feeling	Strong Feeling	Fairly Weak Feeling	Undecided/ Don't Know	Fairly Weak Feeling	Strong Feeling	Very Strong Feeling
1	2	3	4	5	6	7

I feel the class content in <u>the last class I attended</u> is:

Bad	1	2	3	4	5	6	7	Good
Valuable	1	2	3	4	5	6	7	Worthless
Unfair	1	2	3	4	5	6	7	Fair
Positive	1	2	3	4	5	6	7	Negative

My likelihood of taking future courses in the content area of <u>the last class I attended</u> is:

Unlikely	1	2	3	4	5	6	7	Likely
Possible	1	2	3	4	5	6	7	Impossible
Improbable	1	2	3	4	5	6	7	Probable
Would	1	2	3	4	5	6	7	Would not

Overall, the instructor in <u>the last class I attended</u> is:

Bad	1	2	3	4	5	6	7	Good
Valuable	1	2	3	4	5	6	7	Worthless
Unfair	1	2	3	4	5	6	7	Fair
Positive	1	2	3	4	5	6	7	Negative

Were I to have the opportunity, my likelihood of taking future courses with the instructor in <u>the last class I attended</u> would be:

Unlikely	1	2	3	4	5	6	7	Likely
Possible	1	2	3	4	5	6	7	Impossible
Improbable	1	2	3	4	5	6	7	Probable
Would	1	2	3	4	5	6	7	Would not

Appendix C: Emotional Contagion Scale

Instructions: Please use the following scale to indicate the degree to which you believe the statement applies to **you**. Circle only one number for each item, and please complete all the items.

Never	Rarely	Often	Always
1	2	3	4

		N			A
1.	If someone I'm talking with begins to cry, I get teary-eyed.	1	2	3	4
2.	Being a happy person picks me up when I'm feeling down.	1	2	3	4
3.	When someone smiles warmly at me, I smile back and feel warm inside.	1	2	3	4
4.	I get filled with sorrow when people talk about the death of their loved ones.	1	2	3	4
5.	I clench my jaws and my shoulders get tight when I see the angry faces on the news.	1	2	3	4
6.	When I look into the eyes of the one I love, my mind is filled with thoughts of romance.	1	2	3	4
7.	It irritates me to be around angry people.	1	2	3	4
8.	Watching the fearful faces of victims on the news makes me try to imagine how they might be feeling.	1	2	3	4
9.	I melt when the one I love holds me close.	1	2	3	4
10.	I tense when overhearing an angry quarrel.	1	2	3	4
11.	Being around happy people fills my mind with happy thoughts.	1	2	3	4
12.	I sense my body responding when the one I love touches me.	1	2	3	4
13.	I notice myself getting tense when I'm around people who are stressed out.	1	2	3	4
14.	I cry at sad movies.	1	2	3	4
15.	Listening to the shrill screams of a terrified child in a dentist's waiting room makes me feel nervous.	1	2	3	4

Appendix D: Emotional Intelligence Scale

Instructions: Please use the following scale to indicate the degree to which you believe the statement applies to **you**. Circle only one number for each item, and please complete all the items.

Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
0	1	2	3	4

		SD				SA
1.	I know when to speak about my personal problems to others.	0	1	2	3	4
2.	When I am faced with obstacles, I remember times I faced similar obstacles and overcame them.	0	1	2	3	4
3.	I expect that I will do well on most things I try.	0	1	2	3	4
4.	Other people find it easy to confide in me.	0	1	2	3	4
5.	I find it hard to understand the nonverbal messages of other people.	0	1	2	3	4
6.	Some of the major events of my life have led me to re-evaluation what is important and not important.	0	1	2	3	4
7.	When my mood changes, I see new possibilities.	0	1	2	3	4
8.	Emotions are some of the things that make my life worth living.	0	1	2	3	4
9.	I am aware of my emotions as I experience them.	0	1	2	3	4
10.	I expect good things to happen.	0	1	2	3	4
11.	I like to share my emotions with others.	0	1	2	3	4
12.	When I experience a positive emotion, I know how to make it last.	0	1	2	3	4
13.	I arrange events others enjoy.	0	1	2	3	4
14.	I seek out activities that make me happy.	0	1	2	3	4
15.	I am aware of the nonverbal messages I send to others.	0	1	2	3	4
16.	I present myself in a way that makes a good impression on others.	0	1	2	3	4
17.	When I am in a positive mood, solving problems is easy for me.	0	1	2	3	4
18.	By looking at their facial expressions, I recognize the emotions people are experiencing.	0	1	2	3	4
19.	I know why my emotions change.	0	1	2	3	4
20.	When I am in a positive mood, I am able to come up with new ideas.	0	1	2	3	4
21.	I have control over my emotions.	0	1	2	3	4
22.	I easily recognize my emotions as I experience them.	0	1	2	3	4
23.	I motivate myself by imagining a good outcome to tasks I take on.	0	1	2	3	4

Appendix D (cont.)

		SD				SA
24.	I compliment others when they have done something well.	0	1	2	3	4
25.	I am aware of the nonverbal messages other people send.	0	1	2	3	4
26.	When another person tells me about an important event in his or her life, I almost feel as though I have experienced this event myself.	0	1	2	3	4
27.	When I feel a change in emotions, I tend to come up with new ideas.	0	1	2	3	4
28.	When I am faced with a challenge, I give up because I believe I will fail.	0	1	2	3	4
29.	I know what other people are feeling just by looking at them.	0	1	2	3	4
30.	I help other people feel better when they are down.	0	1	2	3	4
31.	I use good moods to help myself keep trying in the face of obstacles.	0	1	2	3	4
32.	I can tell how people are feeling by listening to the tone of their voice.	0	1	2	3	4
33.	It is difficult for me to understand why people feel the way they do.	0	1	2	3	4
26.	When another person tells me about an important event in his or her life, I almost feel as though I have experienced this event myself.	0	1	2	3	4
27.	When I feel a change in emotions, I tend to come up with new ideas.	0	1	2	3	4
28.	When I am faced with a challenge, I give up because I believe I will fail.	0	1	2	3	4
29.	I know what other people are feeling just by looking at them.	0	1	2	3	4
30.	I help other people feel better when they are down.	0	1	2	3	4
31.	I use good moods to help myself keep trying in the face of obstacles.	0	1	2	3	4
32.	I can tell how people are feeling by listening to the tone of their voice.	0	1	2	3	4
33.	It is difficult for me to understand why people feel the way they do.	0	1	2	3	4

VITA

Personal Data

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Bachelor of Science, Texas Christian University, Fort Worth, Texas, 2007
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Festival of Student Scholarship and Creativity Research Award, 2007, 2009
Summa Cum Laude, Departmental and University Honors, 2007
Senior Scholar Award, Outstanding Departmental Senior, 2007
Cumulative 4.0 GPA, 2004-2007
Dean's Scholarship, 2004-2007
TCU Guild Award, Outstanding Departmental Junior, 2006
Associate Honors Scholar, 2005
Golden Key International Honor Society, 2005
Sigma Pi Chi Communication Studies Honor Society, 2005

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