

A STUDY INVESTIGATING THE CORRELATION BETWEEN TEACHING ASSISTANTS'
COMMUNICATION APPREHENSION IN THE COLLEGE CLASSROOM AND STUDENT
PERCEPTIONS OF TEACHING ASSISTANT'S COMMUNICATION APPREHENSION

By

HELGA WERNICKE

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To the Faculty of Washington State University:

The members of the Committee appointed to examine the thesis of
HELGA WERNICKE find it satisfactory and recommend that it be accepted.

Chair

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Abstract

By Helga Wernicke, M.A.
Washington State University
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Chair: T. Hopf

This study examined the relationship between teaching assistants' (TA) communication apprehension (CA) within the college classroom and the perceptions of students that observed this phenomenon as exhibited by the TAs. While in the classroom, effective TA communication is vital for student learning. When instructor CA is observed by classroom students, his or her competency and credibility might be in question and learning may be hindered. Furthermore, a teacher's ability to competently communicate is the foundation for building a trusting environment in which active learning can take place. A TA who experiences CA while lecturing may even question his or her own teaching skills and abilities. Inexperienced teachers who experience such state phenomenon might become hampered or ineffective in mastering their pedagogical skills in the classroom.

Specifically, this study investigated whether a correlation exists between self-perceived state TA CA and student-observer-perceived state TA CA. By focusing on perceptions of TA communication behaviors associated with CA while instructing the subject matter, this study advances existing understandings about observable CA behaviors and its influence on student

perceptions in the college classroom. The results of this study indicate TA CA is moderately but significantly correlated with student perceptions of TA CA. While it seems evident that students are able to identify their teacher's CA fairly accurately, questions of other correlating factors influencing the relationship remain unanswered. Additional results of the study suggest that TA training influences self-perceived TA CA, and TA teaching experience and TA age influences student-observer rating of TA CA, raising questions of a need for more specialized TA training. Perhaps, training TAs in effective classroom immediacy behavior as well as techniques on how to cope with CA in the classroom would be beneficial in order to improve the quality and effectiveness of college teaching.

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DEDICATION

This thesis is dedicated to my two sons: Sebastian and Jett.

During the last 6 years of acquiring a higher education degree,
your everyday presence enlightened my days.

When strenuous times burdened my heart,
your sweet and happy personalities made me laugh and rejoice,
giving me new strength to move forward one day at a time.

Together we have learned that reaching a goal is not easy.

It requires dedication and persistence, hard work, a content spirit, and most of all faith.

Thank you for your unconditional love and for always believing in me.

CHAPTER ONE

INTRODUCTION

A substantial amount of research has been accumulated in the field of instructional communication and communication apprehension (CA) in the classroom (e.g. Byers & Weber, 1995; Borzi & Mills, 2001; Freeman, Sawyer, & Behnke, 1997; Chesebro & McCroskey, 1998; Robinson, 1997; Rubin et al., 1997; Whitworth & Cochran, 1996, Allen & Bourhis, 1996; Roach, 1998, 1999, 2003). CA scholars point out that student CA has negatively impacted students' perceived learning (Olaniran & Roach, 1994) and how others perceive students (McCroskey & Richmond, 1976; Colby, Hopf, & Ayres, 1993). In addition, Roach (1999) investigated teaching assistant (TA) instructors and examined the effects of TA CA in the university classroom. Results of his study concluded that high levels of TA state CA were significantly associated with lower student ratings of TA instruction, lower student affective learning, and lower student perceptions of TA non-verbal immediacy.

To date, research has primarily focused on self-perceived teacher and student CA. However, it has not been documented if or to what extent teacher CA affects the student perceptions of teacher CA. A study by Freeman, Sawyer, and Behnke (1997) investigated the relationship between student-speaker state anxiety behaviors and audience-observed student-speaker anxiety. The findings of their study revealed a moderate but significant positive relationship. Student-speakers with higher levels of self-perceived state CA were observed as more apprehensive, rigid, and inhibited in their communication behavior than speakers with lower levels of self-perceived state anxiety. The purpose of the current study is to investigate a similar relationship; however, its focus is directed toward TA instructors. The reasons behind

choosing TA instructors for this investigation are discussed in further detail in the subsequent overview of relevant literature.

CHAPTER TWO

LITERATURE REVIEW

Overview

Over the last decade, there has been an increased reliance on TAs in US colleges and universities. In many universities, TAs take on roles that go far beyond being an “assistant.” According to the National Center for Education Statistics (NCES), 70 percent had at least some teaching responsibility, and 46 percent of all graduate students in the nation had full responsibility for teaching at least one course (NCES, 2000). A national study by Gray and Buerkel-Rothfuss (1991) indicated that TAs are frequently given teaching responsibilities with little or no training in instructional strategies. Fifty-three percent of TAs reported that they received some form of training, and more than 75% indicated that they received less than one week of training. The information provided was more directed toward important university policies and procedures and how to deal with immediate classroom problems rather than effective instructional techniques (Gray & Buerkel-Rothfuss, 1991; Boyd, 1989).

Even though most TAs are competent in terms of their subject matter (Roach, 2003), teaching proficiency does not only entail intelligence, content knowledge, and personality, but also pedagogical knowledge, experience, and communication competence (McCroskey et al., 2004). Limited instructional training and teaching experience can pose serious challenges to graduate instructors. Research by Williams & Roach (1992), points out that TAs often experience anxiety as they approach their teaching assignments. Taking on the role of an instructor can lead the TA to question personal issues of self-efficacy such as teaching abilities, competencies in the subject matter, or possession of the necessary skills for managing and

facilitating students in the learning process. Such concerns can trigger fears or anxieties associated with communication apprehension.

Communication Apprehension

Communication apprehension (CA) is defined as "an individual's level of fear or anxiety associated with either real or anticipated communication with another person or persons" (McCroskey, 1977, p. 269). Originally, CA was perceived primarily from a trait-based perspective. Trait like communication anxiety is regarded as a predisposition for communication anxiety that is relatively stable across different situations, contexts, and audiences. More recent research has broadened this construct to include some state-like qualities. State anxiety is specific to certain situations, contexts, and /or audiences (e.g., Daly & Friedrich, 1981). However, beliefs that those states are a "manifestation of trait CA and other traits of the individual" prevail (McCroskey & Beatty, 1998, p.217).

Studying CA from the state perspective holds significance. While individuals may have low overall trait CA scores, specific contexts, such as the ambiguity of classroom instructing, may foster higher anxiety for these individuals. In such a case, just knowing the individual's overall trait CA score might not provide an accurate picture of the individual's communicative anxiety in a specific context like a classroom. Not understanding how to cope with such apprehension can influence communication behaviors to the point where these anxieties hamper communication abilities and performance (Clevenger, 1955). The following section describes research literature that suggests such behaviors are noticeable by outsiders and influence the observers' perceptions of the communicator.

Communication Apprehension an Observable Construct

Over the last few decades scholarly research has accumulated empirical evidence that anxious communication behavior is an observable construct. Gray (1971, 1972, 1982, 1991), Buck (1984), and Boddy (1983) investigated human neurophysiology. Their findings reveal that certain neural pathways trigger emotions and observable physical responses in people. According to Gray (1971, 1972), the human behavioral activation system (BAS) facilitates active behaviors such as avoidance of threatening situations while the human behavioral inhibitions system (BIS) facilitates and corresponds to anxiety. Gray (1982) argued that behaviors associated with anxiety are controlled by specialized anatomical regions of the brain. An activated BIS results in observable inhibition of motor behavior, increased levels of arousal, and increased attention to the environment (Gray, 1982, 1991). Boddy (1983) noted “our consciousness of the world is determined by structure and properties of our sensory system” (p. 74). He found evidence that the brain interprets the internal and external environment and organizes information to promote survival. Judgments are made from perceived non-verbal responses and verbal behavior of both the self and the interacting environment.

A plethora of scholarly research has pointed out that verbal and non-verbal communication behaviors provide cues about an individual’s emotional well being. Literature reviewed by Siegman (1985) suggests that high speaker anxiety “is associated with more frequent and longer silent pauses even if the speech was a fairly simple one” (p. 42). Siegman pointed out that as anxiety causes arousal and conflict within an individual, even if the anxiety is mild or moderate, it is likely to influence deceleration of the speech pattern. Moreover, individuals with higher levels of speaking anxiety show reduced vocal expressiveness including less vocal volume and inflection (Siegman, 1985).

Ekman and Friesen (1969) hypothesized that certain facial expressions (such as found in people who are experiencing emotions of happiness, sadness, surprise, disgust, anger, and fear) can be identified due to their distinct facial muscle patterns. They later demonstrated that people from diverse cultural backgrounds are capable of distinguishing between different facial behaviors. Individuals “were found to identify the same faces with the same emotion words” (Ekman & Friesen, 1971, p. 125). However, they also argued that relative to the face the body is a better source of cues when judging a person’s emotional state (Ekman & Friesen, 1969, 1971). According to these findings, certain primary emotions have an influence on observer perceptions. If a stimulus triggers the emotional centers of the brain (limbic system), the body reacts involuntarily and instinctively (Buck, 1984). The resulting facial expressions or body behaviors, such as those associated with fear or anxiety are likely to shape observer perceptions.

Mulac and Sherman (1975) defined behavioral speech anxiety as "the degree of assumed speaker anxiety perceived by observers on the basis of manifest speaker behavior" (p. 276). They argued that speech anxiety bears an adverse effect on communication behavior. Speech anxious people were perceived as more inhibited, tense, and unanimated than less anxious people. Observers who evaluated public speakers distinguished four independent factors comprising speech anxiety: rigidity (tension of facial muscles; motionlessness, lack of gestures; and tense arms and hands), inhibition (deadpan facial expressions and a soft voice), disfluencies (hunting for words, speech blocks; non-fluencies, stammers, halting, and vocalized pauses) and agitation (lack of eye contact, fidgeting, and swaying, pacing, and feet shuffling) (Mulac & Sherman, 1974). Daly (1978) investigated the relationship between nonverbal behavior and social anxiety in the classroom. Highly anxious individuals showed less eye contact, were less talkative, and employed fewer arm and hand movements than less anxious people. In support of

these arguments, Freeman, Sawyer, and Behnke (1997) investigated audience perceptions of public speakers in the classroom. The findings of their study supported the above research findings. Those speakers who reported higher levels of speech anxiety were identified by the audience as more apprehensive, behaviorally rigid, and inhibited.

Allen and Bourhis (1996), investigating the relationship between communication behavior and CA, found observers identified speaker communication behavior in terms of qualitative behavior (speaker credibility, choice of communicative options, and persuasiveness) and quantitative behavior (duration or word count of a speech, non-verbal movements). These scholars deduced that "as a person becomes more apprehensive both the quantity and quality of communication behavior diminishes" (Allen and Bourhis, 1996, p. 214).

McCroskey and Richmond (1982) theorized that in terms of behavioral effects "communication apprehension, whether as trait orientation of an individual or as the individual's reaction to a particular situation, is conceptualized as an internalized, affectively experienced response of the person experiencing it" (p. 1). They clarified that although a specific response cannot be correlated with an internal state, certain behavioral tendencies are associated with CA. Building on these assumptions, McCroskey (1997) distinguished three common effects of high CA observable in individuals' communication behavior. These are "communication avoidance, communication withdrawal, and communication disruption" (p. 101). In alignment with research stated earlier, Cole and McCroskey (2003) stated that such behaviors could be identified by outsiders, because they are manifested in certain behaviors such as not talking, talking less than most others, or having their speaking pattern disrupted by vocalized pauses (i.e. "you know") and similar disfluencies. In a study investigating the effects of supervisors' communication behaviors on their employees, Cole and McCroskey found that employees were able to distinguish between

communication apprehension and shyness. Employees were able to recognize whether their supervisors chose simply to not talk or were afraid to talk. Their findings suggest that behaviors associated with CA are overt and recognizable (Cole & McCroskey, 2003).

An examination of TA state anxiety in the classroom (Roach, 1999) revealed that TA state anxiety had significant negative influence on classroom communication as measured by student perceptions of TA behavior. TA state anxiety negatively influenced student ratings of instruction and effective learning, as well as student perceptions of teacher nonverbal immediacy and use of power (Roach, 1999). The anticipation and/or experience of having to teach in front of a class on a weekly basis can be mentally, emotionally, and physically stressful (Roach, 2002). It is common that during episodes of communication anxiety people may forget what they want to talk about, their hands may shake so much that they cannot read their notes, or their mouth may become so dry they can barely speak (McCroskey & McCroskey, 2002). As pointed out by these scholars, such embarrassing behaviors can have a number of negative effects. For example, TAs might try to avoid or withdraw from classroom communication as much as possible. Taking into account the impressions CA behavior might foster, it is reasonable to predict that when a TA is considered less confident, nervous, anxious, or exhibits other physical/vocal symptoms associated with CA, students will be able to identify and judge the behaviors as such.

Immediacy behavior is another construct that researchers have found to be associated with observer abilities to judge anxious or fearful communication behavior. Roach (1999) found that students perceived TAs with higher levels of CA as less nonverbally immediate, suggesting the possibility that CA is expressed through immediacy behaviors influencing student perception.

Observable Immediacy Behavior

Students develop perceptions about their teachers primarily based on verbal and non-verbal communication behaviors (McCroskey et al., 2004) or teacher immediacy behavior (Andersen, 1979; Gorham, 1988). The concept of immediacy in interpersonal communication has been defined as the degree of perceived physical and /or psychological closeness between people (Mehrabian, 1967). Nonverbal immediacy behaviors are nonlinguistic actions such as approach behaviors, signals of availability for communication, and communication of interpersonal closeness and warmth (Andersen & Andersen, 1982). Communication behaviors that have been known to increase immediacy include eye contact, gestures, relaxed body position, smiling, vocal expressiveness, movement, and proximity (Anderson, 1979). The absences of these characteristics are astonishingly similar to communication behaviors associated with identifying CA (i.e. Mulac & Sherman, 1974). Hence, it is plausible that non-verbal immediacy behaviors leave a recognizable impression of CA on the observer.

Verbal immediacy includes the teacher's use of spontaneous humor, verbal praise of students' classroom comments, following up on student initiated topics in classroom discussion, and demonstrations of willingness to have conversations with students outside the classroom (Gorham, 1988). A TA who experiences uncomfortable levels of CA is less likely to engage in such interpersonal activities, which could leave students with perceptions that their teacher is experiencing communication anxiety. Research accumulated over the last two decades confirms that teacher immediacy behavior impacts students' perceptions of their teacher. Perceptions of verbal and non-verbal immediacy are directly related to perceptions of teacher credibility (Frymier & Thompson, 1992; Buhr, et al., 1994; Teven & Trudy, 2004).

Baringer and McCroskey (2000) noted that student immediacy behavior may indicate the extent to which a student is interested in what the teacher has to share (Rosoff, 1978). Baringer and McCroskey (2000) validated Rosoff (1978) showing that student immediacy behavior significantly influences teacher perceptions. “Teachers who perceived their students to be more non-verbally immediate with them in the classroom expressed more positive affect for the students than did teachers who perceived their students as engaging in less nonverbal immediate behavior” (p.178). Similarly, it is likely that if the immediacy behavior projected by students is perceived negatively by the TA, he/she might experience sudden insecurities accompanied by negative emotions cresting a sense of perceived inadequateness, which could lead to state CA. A study by Roach (1999) found evidence that as TA state CA increases, student perceptions of TA nonverbal immediacy decrease. These findings suggest that students were able to identify the absence of certain communication qualities that are associated with both immediacy and CA.

In sum, it can be assumed that students can identify and fairly accurately judge communication behavior involving CA. The following section reviews literature that points out how communication behavior might be a result of self-perceptions and evaluations, influencing both self-perceived and observer perceived TA CA.

TA self-perceptions and evaluations

According to Bandura's social cognitive theory (1986), “individuals possess a self system that enables them to exercise a measure of control over their thoughts, feelings, motivation, and actions” (Pajares, 1996, pg. 2). Moreover, this self system enables people to perceive, evaluate and regulate behavior, creating actions that result from an ongoing interplay between the self system and environmental sources of influence. In relationship to this study, TAs would be able to interpret the results of their own performance based on their self-beliefs and environmental

feedback during classroom interactions. Symbolic Interaction Theory (Blumer, 1969) suggests that individuals create a personal identity or self-concept through interaction with others. In particular, the way individuals think about themselves is a reflection of how they perceive that other people appraise them. These perceptions could alter subsequent performance.

Subsequently, students (as part of the TA environment) observe their teacher and infer performance results based on their own self-beliefs and environmental influences. Bandura's (1986) conception of reciprocal determinism suggests that personal factors in the form of cognition, affect, and biological events, behavior, and environmental influences create interactions that result in a triadic reciprocity (Pajares, 1996). Expanding on views stated by Dewey (1933), Bandura (1986) argued that through the process of self-reflection, individuals are able to evaluate their experiences. Consequently, self-perceptions of one's own communication behavior "may function as precursors of communication choices" (McCroskey, 1988, pg.110). According to these views, self-beliefs are likely to reflect TA classroom communication behavior, which could influence student perceptions of TA apprehension. Moreover, identifying with one's own teaching skills such as experience and training could not only influence perceptions but also TA self-efficacy.

Self-efficacy

The process of creating and using these self-beliefs, a construct more often described as self-efficacy beliefs, is an intuitive practice. Bandura (1997) conceptualized self-efficacy beliefs as "beliefs in one's capability to organize and execute the courses of action required to manage prospective situations"(p. 2). In the same way, TA self-efficacy could be seen as a reflection of how well the TA perceives his/her capabilities to teach the intended class material in a memorable fashion to students. As TAs engage in a communication behavior, they interpret the

results of their actions, and use these interpretations to create and develop beliefs about their teaching capability. If the belief that the TA created is negative, it could be reflected in feelings or thoughts of low self-efficacy. The corresponding classroom communication could mirror behaviors such as those identified in people who are anxious or experience higher levels of CA. In line with Bandura (1986), the self-efficacy belief the TA holds exercises a measure of control over his/her classroom environment including behavioral judgments. Hence, students who observe the TA communication behavior interpret the results of the performance and generate perceptions about their teacher's communication behavior such as classroom CA. According to Bandura (1986), judgments of personal competence to engage in a behavior differ from "judgments of the likely consequence that behavior will produce" (p. 391). Efficacy beliefs then, in part, determine outcome expectations (Bandura, 1986). Roach (1999) noted that if a TA is fearful about his/her teaching competency and is so anxious about teaching the class that he/she expects a poor performance, a self-fulfilling prophecy is likely to result. Once negative student response is fostered by poor TA lesson delivery, anticipation of negative student response at subsequent class meetings is likely to further increase TA anxiety.

Individuals who expect success in a particular activity anticipate successful outcomes. In other words, TAs confident in their academic skills would expect the quality of their teaching abilities to be high. Such beliefs would encourage high levels of self-efficacy and consequently communication behavior that indicates communicative confidence; hence low CA. The opposite is also true of those who lack such confidence. TAs who doubt their academic ability might experience low self-efficacy which could reflect in observable communication behaviors found in insecure and high communication apprehensive individuals.

In sum, a TA experiencing CA in the classroom could have negative consequences on students' perception of their teacher's efficacy; however, "only to the extent that the audience perceives that anxiety and makes attributions about the speaker based on those perceptions" (Mulac & Wiemann, 1984, p. 107). The behavior the student observer perceives from their TA represents the bases of the consequent judgments they make about their teacher. Hence, observer evaluations could become paramount to the TA's sense of teaching "success," perhaps influencing future levels of observable TA CA . The above cited literature presents adequate evidence and illustrates the need to evaluate the nature of the relationship existing between TA CA and student observed TA CA, justifying the following proposed hypothesis.

Hypothesis

Self-perceived TA CA will positively correlate with student perceptions of TA CA.

The following chapter provides the research design and methods employed in this study to test the above stated hypothesis.

CHAPTER THREE

RESEARCH DESIGN AND METHOD

Participants

Participants in this study were 17 graduate teaching assistants and 478 undergraduate students enrolled in their basic speech communication course at a large western university. The TA participants and their students were selected to control for teaching difficulty of the subject matter, amount of lecturing, and classroom agenda at the time of data collection.

The student demographics indicated participants were 233 males (48.7 %) and 245 females (51.3%) with an age range of 17 to 32 and an average age of 19. Of those students, 189 were freshmen, 190 sophomores, 78 juniors, and 20 seniors. The reported racial background of the participants was predominantly White (n=385; 80%). The remaining twenty percent of the student participants included Asians (n= 38; 7.9%), Black/African Americans (n=18; 3.8%), American Indians/ Alaska Natives and Native Hawaiians/Pacific Islanders (n=4; 0.8%), other racial backgrounds (n=21; 5%), and undeclared (n=5; 1%).

The TA participants were 9 males (53%), 8 females (47%), within the ages of 21 to 45, and an average age of 27. Of those TAs, 6 had received some informal TA training, 9 had completed one or two credits of teaching training, and one had completed 3-6 credits of teaching training. None had a teaching certificate. Moreover, of these 17 TAs, 5 had taught for one semester, 5 had taught two semesters, 4 had taught 3 semesters, two had taught 4 semesters, and one had taught 6 or more semesters prior to this survey. The majority of TAs were White (n=13; 76.4%), two TAs were Asians (.1%), one TA was Black/ African American, and one reported “other.”

Instruments

To measure the TAs' self-perceived state anxiety, the Communication Anxiety Inventory (CAI) was utilized (see Appendix C). This measure addresses an individual's communication anxiety during a specific point in time or a given situation with a given person or persons (Booth-Butterfield & Gould, 1986). This instrument was designed to replace Spielberger, Gorsuch, and Lushene's (1970) State Anxiety Inventory because of its inaccessibility and copyright concerns. The state form asks the participants to report how they feel about the communication experience they just completed (see Appendix C). Respondents indicate their levels of state anxiety by responding to 20 statements that feature four frequency based response options (not at all, somewhat, moderately so, and very much so).

The state CAI has been found to be valid and reliable. Booth-Butterfield and Gould, (1986) reported an overall alpha coefficient of .91 and a split-half reliability estimate of .92. Later research by Booth-Butterfield (1987) and Ayres (1988, 1990) reported similar estimates. Moreover, the state CAI forms reported evidence of construct validity in the communication apprehension literature (Booth-Butterfield, 1987). In addition, this measure scored significant correlates ($r = .69$) with Spielberger, Gorsuch and Lushene's (1970) state anxiety measure.

This study also asked students to provide evaluations based on their perceptions of their teacher's level of CA in the classroom. In order to compare TA and student perceptions of TA CA, it was necessary to generate a scale that was asking the TAs and observing students similar questions. To reach this objective, the CAI was reworded to reflect an observers' rating. This was accomplished by removing personal pronouns and substituting them with "my instructor," or "she/he," or "him/herself" in their place (see Appendix D).

A similar approach was taken in a study using the PRCA measure (McCroskey & Richmond, 1982). These authors reported that post-study interviews employing this method, indicated that the observers had little difficulty completing the measures. Moreover, a study by Freeman, Sawyer, and Behnke (1997), investigating the relationship between student-speaker state anxiety behaviors and audience-observed student speaker state anxiety, employed Spielberger et al. (1970) public speaking state anxiety (STAI) measure and the STAI measure phrased for audience perception of speaker state anxiety (Behnke, Sawyer, & King, 1987). In their study, both speaker and observer versions of the STAI yielded high alpha reliability coefficients of .93 and .88 respectively. This study also supported a high reliability of the self-perceived and reworded for observer evaluation CAI instrument. An overall Cronbach's alpha coefficient of .80 for the student observer CAI and .84 for TA self-perceived CAI was reported.

Data collection procedures

Students that were enrolled in the participating TA's classes were asked to fill out a survey reporting on their perceptions of their instructor's communication behavior during the just completed lecture. Data from the survey included student ratings of TA state-CA and information about student sex, age, and college year ranking (freshmen, sophomore, junior, or senior). The TAs were asked to report on their self-perceived communication behavior during the just completed class session. Data from the survey included TA state-CA ratings, and information about TA sex, age, and number of semesters taught, and previous training received. The TAs had not been specifically identified with having CA prior to this survey. Students and TAs were provided with basic information about the nature of the study, that their participation was strictly voluntary and anonymous, and that they have the right to discontinue their participation in the study at any time. The instruments were distributed to all participants present

during the class session. They were then asked to fill out the surveys according to the provided instructions and thanked for their participation and contribution in this research study.

Other studies have investigated the relationship between self-perceived and observer-perceived CA; however, the primary significance of this study lies in its “real” life context. Perceptions of TA CA classroom behavior were measured after the completion of a regular class lecture. Even though the TAs were informed that a researcher would conduct a survey regarding classroom communication, the TAs were not acquainted with the specific nature of the assessment that they would be given, or that they would have to fill out a self-assessment. The evaluating students were completely unaware of the upcoming assessment. If behavioral deception occurred, the perceptions of the TA CA behaviors were unlikely influenced by special lecture preparation time, assessment anxieties, or student preconceptions of an upcoming evaluation.

After survey collection, the data was entered into SPSS. The self-perceived and observer-perceived CAI reports were reverse coded on items 2, 5, 8, 9, 12, 17, and 20 before the results were calculated (see Appendices C and D). The sum of items 1 to 20 reflects the perceived level of state anxiety the TAs exhibited during one specific classroom interaction. The Pearson Product-Moment Correlation was calculated to determine the direction and significance of the relationship between TA and student perception of TA CA. To gain a more complete understanding about the relationship between TA CA and student observed TA CA, additional variables were hierarchically correlated.

CHAPTER FOUR

RESULTS

Data Analyses

The calculated Cronbach's alpha coefficient supported a high reliability for the TA self-perceived CAI ($\alpha = .84$) and reworded for student-observer CAI ($\alpha = .80$). The Pearson Product-Moment Correlation determining the direction and significance of the relationship between TA and student perception of TA CA, revealed a positive significant relationship between self-perceived TA CA and student observer TA CA ($r = .20, p < .01$), accounting for four percent of the variance. The hypothesis of this study is supported. However, the strength of the correlation between self-perceived TA CA and student-observed TA CA was found to be moderate.

Additional hierarchical regressions revealed the strength of the relationship between the self-perceived TA CA (as the dependent variable) and TA demographics (sex, race, and age), teaching experience training received, and student-observer TA CA (as the independent variables). The results suggested TA CA could be predicted by TA sex ($r = .61, r^2 = .37, F = (1, 471) = 38.1, p < .001, beta = -.28$), accounting for 5 percent of the variance; TA age ($r = .41, r^2 = .17, F = (1, 475) = 73.7, p < .001, beta = .41$), accounting for 13 percent of the variance; and TA training ($r = .571, r^2 = .33, F = (1, 472) = 56.3, p < .001, beta = -.41, p < .001$), accounting for 8 percent of the variance. TA race, TA teaching experience, and student observed TA CA were not significantly related to TA CA. A total of 38 percent of the variance could be explained by the relationship when including the variables above (see table 2).

A second hierarchical regression model testing the strength of the relationship between student-observed CAI (as the dependent variable) and TA demographics (sex, race, and age), teaching experience, training received, and TA CA, suggested that TA CA could be predicted by

the semesters the TA previously taught ($r = .35$, $r^2 = .12$; $F = (1, 474) = 6.4$), $p < .01$, $beta = -.16$), accounting for 1 percent of the variance; and TA age ($r = .34$, $r^2 = .11$; $F = (1, 475) = 38.7$), $p < .001$, $beta = .28$), accounting for 7 percent of the variance. TA sex, TA race, TA teaching experience, and student observed TA CA revealed no significant relationship to student observed TA CA (see table 3).

CHAPTER FIVE

DISCUSSION AND SUGGESTIONS FOR FUTRE RESEARCH

This study sought to expand upon the work of previous research directed toward enhancing our understanding about teacher and student interaction in the college classroom. Specifically this study investigated the relationship between TA self-perceived and student-observer-perceived TA CA. The research hypothesis was confirmed. Self-perceived TA CA and student-perceived TA CA are significantly related. In other words, students are able to make fairly accurate judgments about their teacher's level of CA based on behavioral classroom observation. Survey questions asked of students required them to reflect on the quality and quantity of immediacy behaviors such as eye-contact, vocal variety, relaxed body, gestures, movements, smiling, and body position (McCroskey et al., 1995), (see appendices C & D for related questions). In alignment with Roach (1999), the results of this study support the projected expectation that immediacy behaviors provide cues about TA CA. Hence, students observed and evaluated the TA exhibiting more immediate communication behavior as less anxious than the TA displaying less immediate communication behavior.

Moreover, the results of this study support Freeman, Sawyer, and Behnke (1997), who also found a moderate positive correlation between speaker and student-observer perceived state CA.

Additional regression calculations in this current study further explain why the relationship perhaps lacked greater significance, and what other variables might have influenced student's perception of TA CA. Both TA CA and student-observed TA CA were chosen as dependent variables for the following reasons. According to Blumer (1969), individuals' self-perceptions are a reflection of how they think others appraise them. These appraisals might influence a sense

of self efficacy (Bandura, 1986, 1997), which may translate into observable communication behavior (McCroskey, 1988). Therefore, it seemed important to investigate not only what influences student-observed perceptions, but also to evaluate variables that might influence the TA self-perceptions. As Bandura (1986) pointed out, what individuals observe is not only a product of self-evaluation, but a combination of the self and the interacting environment. The regression analysis of models 1 and 2 indicated that those correlating variables show similarities as well as differences directing attention to the varying factors that might influence TA and student perceptions. The correlating variables (sex, age, and training, see table 2) in the first regression model (DV: TA CA) suggested that these variables might play an important factor in TA self-perceptions and consequently the projected communication behavior. Thus, the variables influencing TA perception play an important role when looking at the larger picture of how and what might influence the student perceptions of the TA and the overall relationship between self-perceived TA CA and student-observed TA CA. However, because of the unfortunate small TA sample, this discussion primarily holds anecdotal value, encouraging future research investigations. The following paragraphs illustrate how the TA results (see table 2) might have influenced self-perceived TA behavior and consequently observer-perceptions.

In the first set of calculations, self-perceived TA CA scores were used as the dependant variable (DV). Correlating TA demographics and TA training /teaching experience as well as student observed TA CA, the total variance increased by 34 percent to a total of 38 percent. Interestingly, as additional variables were correlated, the regression analysis revealed a decreasing strength of TA-and student- observed TA CA (see table 2). Conclusively, TA CA and student observed TA CA no longer showed significant values suggesting other variables are better indicators of the relationship. The analyses revealed TA sex, age and training as significant

predictors for the self-perceived TA CA scores. Note: Even though “sex” is not an interval or continuous variable, it is common in regression analysis to apply a numeric value to the sexes. In this study male = 1 and female = 2).

TA sex and TA CA showed a negative correlation, and indicated that female TAs reported lower CA levels than the male TAs. Research on the sex and communication styles suggests that males and females have some different patterns of communicating (Tannen 1990, Gray 1992). In an investigation by Kirtley and Weaver (1999) conceptualizing communication style as the way individuals perceive themselves interacting with others, significant sex differences became evident. Females reported a more socially-oriented style of communicating. They showed a greater desire to be social, talkative, and to involve others when communicating. In contrast, males reported a more direct and results-oriented style of communicating. Males emerged as preferring dogmatic, pragmatic, and cerebral aspects of communication. Research by Berryman-Fink and Wilcox (1983) showed similar patterns. In an analysis of interaction, they found that females more often than males seem to have the tendency to use communication as a socio-emotional function while males more often than females tend to use communication as an instrumental or task fulfillment function. Consequently, and in agreement with these research findings, it could be possible that male TAs showed higher levels of CA because interactive communication in classroom situations, such as being involved in social discussions, might be their less preferred communication style. Perhaps such uncomfortable communication situations could be perceived by the male TA as ambiguous, evoking emotions of anxiety, leading to the reported state CA scores. In contrast, it is possible that the female TA may hold a greater interest than the male TA in interacting socially and being actively involved in classroom

communication processes, which might overshadow personal communicative anxieties due to other factors; hence the females reported CA levels lower than those of the males.

Moreover, both regression analyses (see table 1 & 2) revealed a positive significant relationship between TA CA / student-observed TA CA and TA age. Only seven percent of the variance was predicted by the observer-perceived TA CA in comparison to 13 percent of variance being able to predict a relationship between age and self-perceived TA CA. The data suggest that as TA age increases, the TA CA increases. While these findings could be an anomaly due to the small TA sample, a theoretical explanation exists within Bandura's social cognitive theory. According to Bandura (1977), self-efficacy problems in older adults are related to misappraisal of capabilities. Such perceived communication barriers may differ in younger as compared to older TAs. Bandura (1997) considered perceived barriers to be impediments or deterrents to undertaking and conducting a given behavior. Age brings increasing self-awareness and with it perhaps self-doubt and increasing self criticism. Such ambiguities could generate communication anxieties as reflected in the test results. Moreover, perceived barriers or beliefs might advance when unrealistic expectations of personal teaching performance raise anxieties or when these older TAs assume that teaching excellence is expected of them. Only minimal empirical research exists in explaining the relationship between age and CA. To further assist apprehensive TAs within different age groups these questions may need to be explored in future investigations.

Regression model 1 (see table 2) also predicts a significant negative relationship between TA CA and TA training. The more training the TAs had undergone the lower their TA CA scores. These results support Roach (1998) who also found negative relationships between TA CA and TA training. These findings are of special importance. To become effective in teaching

requires not only subject matter knowledge but also pedagogical training including practical examinations and opportunities to observe other teachers (Roach, 2002). Introducing the TA to pedagogical teaching theories and classroom responsibilities is not enough. Most importantly, TAs may need a plan for how to act in the classroom (Roach, 2002) and ample opportunities to discuss the experiences with their TA supervisor and other TAs. Additional support can be linked to findings by Allen and Bourhis (1996), who demonstrated that less skillful speakers are perceived as more apprehensive in terms of their qualitative and quantitative communication behavior. Future research might investigate whether or not additional pedagogical training could influence first- impression perceptions of TA CA.

Surprisingly, and perhaps another anomaly in reflection to the small TA sample, TA teaching experience showed no significant relationship in terms of TA self-reports. In a study by Roach (1998) investigating TA communication apprehension and willingness to communicate, TA teaching experience revealed significant negative relationships. Rubin et. al., noted that experience might reduce the level of ambiguity regarding CA. Whether the TAs with more teaching experience perceived themselves as competent was not directly identifiable from this data; however, Ayres (1997) suggests self-perceived competence as one component influencing self-perceived state CA. Future research might investigate if TAs with more teaching experience report higher levels of confidence.

The second regression model (see table 3 DV: student-observer TA CA) revealed a significant negative relationship between TA CA and TA teaching experience. The larger student sample size ($n = 478$), might provide a more accurate picture of the influencing strength of certain variables. The data seem to suggest that TA teaching experience might influence the TAs' ability to outwardly project a more or less positively perceived immediacy behavior. This

communication behavior was detected and more or less positively judged by students. As the preceding literature review in this study discussed, immediacy behavior in the classroom seems to influence students' perceptions of their teacher. Hence, student-perceived teacher confidence behavior might have influenced the projected CA scores. This might at first appear contradictory to the insignificant finding between TA experience and TA CA, however, it is possible that the more experienced TAs have gained behavioral coping skills. Even though the TA feels apprehensive or less competent, he or she might have mastered the ability to hide these thoughts and emotions. By acting out immediacy behaviors identified with confidence (hence low communicative anxiety), the observer perceptions of the TA behavior might have been deceived.

Limitations

The awareness that TA CA is an observable and identifiable construct is only the first step in the process of finding additional influences, consequences, and methods to eliminate or lower negative affects on teachers and students. The quality of this study was primarily limited by the number of TAs utilized for data collection. Even though the sample size for the student observer TA CAI (478) was sufficient to achieve a 95 percent confidence level (Tan, 1996), the TA sample was relatively small (17). This imbalance might have influenced the moderate outcome of the relationship under investigation. Perhaps, by recruiting additional TAs and their students from other universities using similar class curricula, the data analysis would have provided a more accurate picture about the relationship between TA CA and the student-observed TA CA.

Another limitation is reflected in the simplicity of this study. Even though the intent of this investigation was to examine whether a significant relationship between self-perceived and observer perceived CA in the classroom exists, using only one instrument limited the possibility

of illustrating how other constructs might explain the significance of the relationship. For example, future research might employ additional instruments to test student and teacher motivation before and after the CAI is administered. This information might provide additional information about the possible influence of motivational factors on self-perceived and observer-perceived judgments. Also, administering a verbal /non-verbal immediacy scale might provide a more complete picture as to how CA perceptions of both teacher and students relate. This information would give further insights into the possible predictors of the CA judgments on either side. It would be interesting to know how student- observer TA CA and TA CA relate to self-and observer-perceived classroom immediacy behavior. Identifying such relationships would perhaps point out the need for TA immediacy training and training in CA coping strategies.

Lastly, the results of the data are based on self-reports. Whether participants answered the questions truthfully remains an issue. Therefore, the data results might not reflect the actual strength of the relationship between TA CA and student- observer TA CA.

Summary and Conclusion

The primary reason for this study was to investigate whether a significant relationship between TA CA and student-observer TA CA existed. Due to the numerous limitations of the study, quality of the results may restrict a sound answer to the question. However, bearing in mind that the test results indicated a positively significant relationship, even with such a low TA sample, this study represents an important finding and could lead to future investigations.

While the implications of this study's findings remain partially unanswered, they raise questions as to the necessity for supervised TA training. Literature is available for TA training programs. References such as *Communication for Teachers* (J. Chesebro & J. McCroskey, 2002)

might be excellent tools for inexperienced TAs. Moreover, a variety of established CA coping methods exists, including systematic desensitization, skills training, visualization, and cognitive modification. Integrating such methods into existing training programs could enhance TA confidence, classroom communication behavior, and consequently overall satisfaction for both TAs and students.

TAs occupy significant roles in colleges and universities. The quality of their contributions influences students' learning. If it is the goal of educators to raise a generation that signifies excellence in academia, and that is prepared for a life of personal and professional success and advancement, then it seems vital to assure that those who teach are well prepared for such responsibilities.

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APPENDIX A
Student Demographics Form

Your participation in this study is strictly voluntary and anonymous. Please do not provide any information that identifies you personally such as your name or student ID.

You are free to not answer questions you may find objectionable, and you may discontinue this survey at any time without penalty.

If you choose to participate, please provide the information below and answer the survey questions on the following page.

Please provide the following information.

Sex: M ____ F ____

Age: ____

Status: Freshmen ____ Sophomore ____ Junior ____ Senior ____

Race:

____ American Indian or Alaska Native

____ Black or African American

____ Asian

____ White

____ Native Hawaiian or other Pacific Islander

____ Other

APPENDIX B

Teaching Assistant Demographics, Training, and Teaching Experience Form

Your participation in this study is strictly voluntary and anonymous. Please do not provide any information that identifies you personally such as your name or student ID.

You are free to not answer questions you may find objectionable, and you may discontinue this survey at any time without penalty.

If you choose to participate, please provide the information below and answer the survey questions on the following page.

Please provide the following information.

Sex: M ____ F ____ **Age:** _____

Numbers of Semesters Taught: _____

Instructional Training: (training in teaching strategies/classroom communication)

____ None

____ Some informal training

____ 1-2 credits

____ 3-6 credits

____ More than 6 credits

____ Teaching certificate

Race:

____ American Indian or Alaska Native

____ Black or African American

____ Asian

____ White

____ Native Hawaiian or other Pacific Islander

____ Other

APPENDIX C
State CA TA Self-Evaluation Form

Instructions: The following items describe how people communicate in various situations. Choose the number from the following scale that best describes how you felt during the class session you just completed.

Not at all	Somewhat	Moderately so	Very much so
1	2	3	4

1. ____ I felt tense and nervous.
2. ____ I felt self-confident while talking.
3. ____ While talking I was afraid of making an embarrassing or silly slip of the tongue.
4. ____ I worried about what others thought of me.
5. ____ I felt calm when I was talking.
6. ____ I felt ill at ease using gestures when I spoke.
7. ____ I could not think clearly when I spoke.
8. ____ My listeners seemed interested in what I had to say.
9. ____ I felt poised and in control while I was talking.
10. ____ My body felt tense and stiff while I was talking.
11. ____ My words became confused and jumbled when I was speaking.
12. ____ I felt relaxed when I was talking.
13. ____ My fingers and hands trembled when I was speaking.
14. ____ I felt I had nothing worthwhile to say.
15. ____ I had a “deadpan” expression on my face when I spoke.
16. ____ I found myself talking faster or slower than usual.
17. ____ While speaking it was easy to find the right words to express myself.
18. ____ I felt awkward when I was talking.
19. ____ My heart seemed to beat faster than in other situations.
20. ____ I maintained eye contact when I wanted to.

APPENDIX D
State CA Observer-Evaluation Form

Instructions: The following items describe how people communicate in various situations. Choose the number from the following scale that best describe how you believe/think your instructor experienced the just completed class session.

Not at all	Somewhat	Moderately so	Very much so
1	2	3	4

1. ____ My instructor felt tense and nervous.
2. ____ My instructor felt self-confident while talking.
3. ____ While talking my instructor was afraid of making an embarrassing or silly slip of the tongue.
4. ____ My instructor worried about what others thought of him/her.
5. ____ My instructor felt calm when he/she was talking.
6. ____ My instructor felt ill at ease using gestures when she/he spoke.
7. ____ My instructor could not think clearly when she/he spoke.
8. ____ My instructor's listeners seemed interested in what he/she had to say.
9. ____ My instructor felt poised and in control while she/he was talking.
10. ____ My instructor's body felt tense and stiff while he/she was talking.
11. ____ My instructor's words became confused and jumbled when she/he was speaking.
12. ____ My instructor felt relaxed when he/she was talking.
13. ____ My instructor's fingers and hands trembled when she/he was speaking.
14. ____ My instructor felt he/she had nothing worthwhile to say.
15. ____ My instructor had a "deadpan" expression on his/her face when she/he spoke.
16. ____ My instructor found her/himself talking faster or slower than in other situations.
17. ____ While speaking it was easy for my instructor to find the right words to express him/herself.
18. ____ My instructor felt awkward when he/she was talking.
19. ____ My instructor's heart seemed to beat faster than usual.
20. ____ My instructor maintained eye contact when she/he wanted to.

APPENDIX E
Approved Human Subject Protocol

TABEL 1
Pearson Product Moment Correlation between TA self-perceived CA and student observed TA CA

Variable	TA CA	Student observed TA CA
TA CA Pearson Correlation	1.000	.201**
Sig. (2-Tailed)		.000
N	478	478

** Correlation is significant at the .01 level

TABEL 2
Model summary of a hierarchical regression for variables predicting the TA CA
Dependent Variable: TA CA

** Correlation is significant at the .01 level

Independent Variables Levels of Regression	R	R ²	R ² Change	Sig.	β
1. Student observed TA CA	.201	.040	.040	.000**	.201
2. Student observed TA CA				.085	.076
TA age				.000**	.380
Regression Model 2	.411	.169	.129		
3. Student observed TA CA				.289	.046
TA age				.000**	.431
TA teaching experience				.000**	-.222
Regression Model 3	.464	.216	.047		
4. Student observed TA CA				.223	.051
TA age				.000**	.477
TA teaching experience				.000**	-.305
TA race				.000**	.196
Regression Model 4	.496	.246	.031		
5. Student observed TA CA				.086	.070
TA age				.000**	.493
TA teaching experience				.461	-.041
TA race				.000**	.189
TA training				.000**	-.388
Regression Model 5	.571	.327	.080		
6. Student observed TA CA				.246	.045
TA age				.000**	.411
TA teaching experience				.603	-.028
TA race				.187	.061
TA training				.000**	-.459
TA sex				.000**	-.283
Regression Model 6	.614	.377	.050		

TA sex (male=1; Female=2)

TABLE 3
Model summary of a hierarchical regression for variables predicting the TA CA
Dependent Variable: Student-observed TA CA

** Correlation is significant at the .01 level

Independent Variables Levels of Regression	R	R ²	R ² Change	Sig.	β
1. TA CA	.201	.040	.040	.000**	.201
2. TA CA				.085	.081
TA age				.000**	.294
Regression Model 2	.336	.113	.072		
3. TA CA				.289	.051
TA age				.000**	.328
TA teaching experience				.011**	-.114
Regression Model 3	.353	.124	.012		
4. TA CA				.233	.059
TA age				.000**	.315
TA teaching experience				.059	-.096
TA race				.432	-.039
Regression Model 4	.354	.126	.001		
5. TA CA				.086	.090
TA age				.000**	.293
TA teaching experience				.009**	-.163
TA race				.386	-.043
TA training				.069	.113
Regression Model 5	.363	.132	.006		
6. TA CA				.246	.063
TA age				.000**	.276
TA teaching experience				.011**	-.158
TA race				.127	-.082
TA training				.234	.077
TA sex				.077	-.099
Regression Model 6	.371	.138	.006		

TA sex (male=1; Female=2)