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GRADUATE COLLEGE

IS THERE STILL A CHILL?: STUDENT PERCEPTIONS OF GENDER BIAS IN THE COLLEGE CLASSROOM

of
A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment the requirements for

the degree of

DOCTOR OF PHILOSOPHY

By

Robin Steverson Jones

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IS THERE STILL A CHILL?: STUDENT PERCEPTIONS
OF GENDER BIAS IN THE COLLEGE CLASSROOM

A Dissertation APPROVED FOR THE
DEPARTMENT OF COMMUNICATION

By

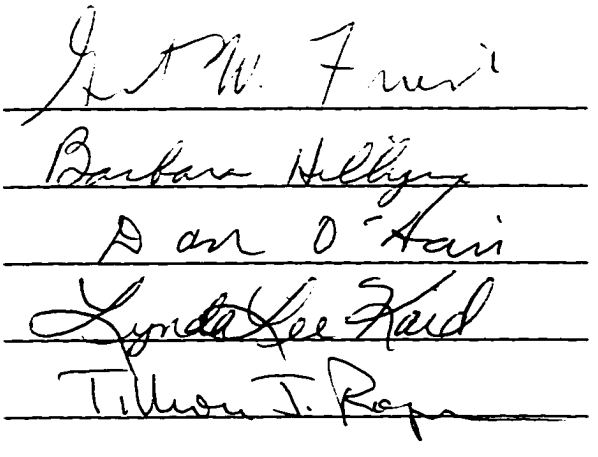

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Table of Contents

List of Tables

List of Appendices

List of Figures

Abstract

This study investigates student perceptions of gender bias in the college classroom. Utilizing the Student Perception Questionnaire, Personal Report of Communication Apprehension, and student perceptions of teacher immediacy, five research questions are answered dealing with patterns of teacher interaction with students and inclass participation by students.

Surveys of student perceptions' of teacher/student interaction and teacher verbal and nonverbal immediacy in classes with enrollments under 50 students and students' self report of personal communication apprehension provided the data for the study. Descriptive statistics and crosstabulations were run in order to determine if differences exist between male and female perceptions of teacher interactions, instructors perceived to be immediate and non-immediate, and students possessing high and low communication apprehension.

Student reports suggest that more immediate instructors are perceived to be less gender biased in their interactions with students. Significant differences exist on five of the items identified as teacher interaction items on the Student Perception Questionnaire. However, no differences are found between male and female responses dealing with

teacher interaction and between high and low communicative apprehensive students.

Further study is warranted to compare student perceptions of classroom interactions with actual classroom behaviors of both students and instructors.

Chapter One

INTRODUCTION

At a recent speech communication conference the following comment was made by an elderly gentleman during a women's issue seminar: "I was born into a family of all males and gender equality was never a problem in my family, my mother even got to pray when my father was gone." As this statement hung in the air, a question formed in my mind: have we gotten anywhere during the last decade in the struggle for women's equality? After all the talk and all the studies, has anything changed? The research area of gender equality is a vast one, and for the purposes of this study it is confined to the classroom and to student perceptions.

Although many people use the term sex and gender interchangeably, the two terms are distinct. Sex refers to the biological characteristics that are present around the sixth week following conception. Gender, however, is the "expansion or elaboration of biological sex distinctions, which occurs through human communication from infancy on" (Bate, 1992, p. 4). Wood (1994) describes gender as a social symbolic creation. "The meaning of gender grows out of a society's values, beliefs, and preferred ways of organizing collective life. A culture

constructs and sustains meanings of gender by investing biological sex with social significance" (p. 21). Wood goes on to state: "Schools are institutions that reinforce cultural prescriptions for gender" (p. 27).

One of the primary means schools have for promoting social images of gender is communication. According to Weedon (1987), communication is one of the primary practices that structures society. "There is difference between knowing and teaching, and that difference is communication in the classroom" (Hurt, Scott, & McCroskey, 1978, p. 3). Daly (1980) suggests that: "Implicit in that statement is the assumption that communication and successful instruction are inherently intertwined; that without communication instruction cannot be successful" (p. 516). When communication is prejudiced toward one group of students, even though it may be subconsciously so, instruction suffers—thereby causing learning to suffer.

Instructional communication scholars regard the classroom as a rich, complex communication process. Cooper (1991) defines classroom communication as "verbal and nonverbal transactions between teacher and students and between or among students" (p. 2). Civikly (1986) describes communication as "systemic, transactional, and complex" (p. 2).

According to Cooper, "the relationships we create with our students affect us, our students, and the educational outcomes of our instruction" (p. 7).

The foundation on which this research project is built features three assumptions which form a conception of the nature of gender bias and classroom communication.

The first assumption is that the classroom inherently involves a socialization process. Students learn very early in their school career what society expects from them. In the book *Gendered lives: Communication, gender, and culture*, (1994) Julia Wood describes socialization:

> Schools are powerful agents of socialization. They are the one specific institution specifically charged by society with responsibility for teaching us about our culture: its history, traditions, practices, beliefs, and values. In addition, schools teach us who is important and who is not, who influenced the directions of history, science, literature, and social organization; and what possibilities and responsibilities exist for various individuals in the society. (p. 206)

As students experience secondary socialization via the school structure, they are often encouraged to see the unequal status and value assigned to women as normal. According to West and Zimmermann (1987), as

students participate in school institutions, they see the prevailing order as normal, and thus tend to reproduce it in their own identities and actions.

A second assumption is that females have often been marginalized and taught subordinate roles by the educational system. When examining the classroom, it is evident that much of the oppression and marginalizing of women has come directly from the educational process. Schools perpetuate gender inequities, limit career aspirations, lack female and minority role models, and misrepresent male and female contributions to society. In a recent study done by Ferree and Hall (1990), it was discovered that women are absent in college textbooks.

As females are socialized by the educational system, they learn directly and/or indirectly that there is a difference in expectations placed on them because of their biological sex. The effect of teachers' expectations on students came under scrutiny in 1968 with the publication of *Pygmalion in the classroom* by Rosenthal and Jacobson. The basic process of expectancy is as follows:

1. Teachers expect certain students to demonstrate certain behaviors.
2. The teacher's behavior toward students is influenced by the teacher's expectations.

3. The students' self-concept, motivation to achieve, and achievement is affected by what the teacher expects of them. What the teacher expects from the student is indicated through the teacher's behavior.
4. High expectation students achieve well and low expectation students do not if the students do not resist the teacher's behavior and if it remains consistent over time.

Braun (1976, p. 206) proposes a model of teacher expectancy. The model demonstrates that, based on student input (which includes, but is not limited to: student abilities, ethnic background, and sex of the student), teachers form expectations (see figure 1). As these expectations are communicated to the students through interaction variables (such as the quantity of interaction), students form self-expectations. If males are expected and encouraged to be aggressive, dominant, and independent, while females are expected to be passive, subordinate, and dependent, then the cycle of teacher expectancy continues based on the sex of the student. According to research done by Benz, Pfeiffer, and Newman (1981), feminine gender role expectations are negatively correlated with high achievement. Grade levels and gender of the teacher do not significantly influence these results.

> The conclusion of this study, to fit the feminine role is not to achieve, sheds important light on evidence . . . that achievement declines the longer females are in school. Not surprisingly, the evidence implies that females may be fulfilling society's expectations for them. (pp. 297-298)

When exploring the sources of marginalization, answers can be located in the patterns of interaction between teachers and students— the third assumption. Research has shown that both elementary and secondary teachers give far more attention to boys than to girls (Sadker & Sadker, 1990). "One of the most powerful and subtle influences teachers exert with students is through the quality and quantity of interactions" (Streitmatter, 1994, p. 125). According to Sadker and Sadker (1990), teachers give more active attention to boys by calling on them more, asking both lower and higher ordered questions, giving more directions, listening to them more, counseling them more, and giving more praise and criticism. This pattern of biased interaction is carried over to the postsecondary level and females in the college classroom "are more likely to be 'invisible' members in teacher-student interactions" (p. 177).

Out of socialization, marginalization, and biased interactions, emerges the question of this study—does the classroom still present a

"chilly climate" for women by perpetuating sexual stereotyping? Gappa and Pearce (1980) define stereotyping as the "assignment of characteristics or traits that may be common to a group to every individual within that group without consideration for individual differences. It may occur in relation to variables such as age, sex, ethnic membership or even activity" (p. 62). In the current coeducational system, the implication is that all students are treated equally and, thus, receive an equal education. According to Adrienne Rich (1985), however, "The bias of higher education, including the so-called sciences, is white and male, racist and sexist; and this bias is expressed in subtle and blatant ways" (p. 24).

The college classroom has been examined in terms of multiple variables and research has shown that when male and female students are treated differently, patterns of female and male participation have developed differently. In 1982, Hall and Sandler coined the term "chilly classroom climate" to describe how women in higher education report they are treated in the classroom. Cooper (1987) found that males are asked higher order questions, are called on more often, and that teachers use sexist language. In 1990, C. G. Krupnick reported that for the dollars spent on higher education men get more than women. Krupnick

also reported that the biases found in 1972 persist and continue to create inequality in men's and women's education.

This study examines the perceptions of students in the college classroom, seeking to determine if students perceive differential treatment from instructors because of their biological sex. Student perceptions of teacher immediacy and personal communication apprehension will also be examined in order to ascertain the extent to which these variables play a role in student perceptions. The purpose of this study is to uncover ways to create a positive, equitable learning environment for all students. Sometimes all a female student needs to reach her potential is to know her importance.

Review of Literature

Teachers may perceive themselves as treating all students equally and without bias; however, if a female student's perceptions of the instruction she is receiving is that of an environment in which interaction with male students differs from treatment of women, the teacher should re-evaluate teaching methods. Based on the framework just outlined, this study examines student perceptions of how gender, personal communication apprehension, and student perceptions of teacher immediacy affect classroom interaction and the classroom culture. "The

importance of communication to instruction makes the topic of interaction in the classroom one of both theoretic and practical utility for the communication scholar" (Daly, 1980, p. 516).

The following literature review develops six themes. First, students and teachers are socialized by the educational system. Second, historical patterns of teacher/student interaction lead to classroom interactions that favor male students. Third, socialization and classroom interactions have led to subordination and marginalization of female students. Fourth, sexual stereotyping leads to an unfavorable classroom climate for female students. The fifth section examines the development and significance of the personal report of communication apprehension (PRCA). Finally, this review examines student perception of teacher immediacy.

Socialization

Numerous researchers (Stewart, Stewart, Friedley, & Cooper, 1990; Streitmatter, 1994; Wood, 1994) agree that schools are powerful agents of socialization. It is through the school system that gender role expectations are fostered and reinforced. Educational institutions prepare students for life outside of school (Durkheim, 1956; Egan, 1983; Feinberg & Soltis, 1985). According to Staton (1990), "It may be that classroom life

is simultaneously a shadow of the larger society yet constitutive of its own unique context and form" (p. 5).

As students and teachers enter the classroom, a process of secondary socialization occurs whereby already socialized individuals are inducted into new sectors of society. Secondary socialization involves learning knowledge relevant to a particular role (Berger & Luckman, 1966, p. 130). Thus, as teachers and students move among classes, they repeatedly undergo secondary socialization. This socialization premise views communication as transactional, socialization as dialectical, and human society as symbolic interaction (Staton, 1990, p. 46). Schools reinforce assumptions of previously established sex-role socialization. This influence begins when a child enters the school system and, for some, is elaborated as it is experienced through the post-secondary experience. According to Stewart et al. (1990), "we find that the educational system helps to mold the future dominant roles of males and channel females into less dominant roles" (p. 148).

Several theorists (Lee & Gropper, 1974; Shulman, 1986; Staton, 1990; Wood, 1994) describe "the hidden curriculum" involved in the socialization of students. According to Wood (1990), "This hidden curriculum consists of institutional organization, content, and teaching

styles that reflect gender stereotypes and have the effect of sustaining gender inequities by privileging white males and marginalizing and devaluing female and minority students" (p. 207). Staton (1990) contends that the hidden curriculum serves to maintain the unequal social order which exists in American society.

Patterns of Interaction

As teachers interact with students in the classroom, research shows that a disproportionate amount of time is spent with males. This classroom interaction imbalance can convey to women that they are inferior to men.

One of the more obvious ways in which interaction is unequal is the sheer amount of time teachers spend with male students. Research shows that male students are given more individualized instruction, greater amounts of higher-order questions, more reinforcement and praise, and more instruction on how to perform tasks independently (Best, 1983; Epperson, 1988; Hall & Sandler, 1982, 1984; Measor & Sikes, 1992; Sadker & Sadker, 1982, 1985, 1986). "Apparently, sex bias is a natural way of life in school, and this inequality is jeopardizing the learning environment" (Pearson, West, & Turner, 1995, p. 205).

Another pattern of interaction that favors the male student over the female is the tendency of schools to reinforce different behaviors and qualities of students. Academic interest and achievement is praised in male students, while female students are praised for being quiet and compliant (Fagot, 1984; Gold, Crombie, & Noble, 1987; Sadker & Sadker, 1986). Although this pattern was first noticed in research done with elementary children, later research shows that it is a prevailing theme at all levels of education (Hall & Sandler, 1982; Sandler & Hall, 1986, Wood & Lenze, 1991).

Researchers (Krupnick, 1985; Sadker & Sadker, 1986; Spender, 1989) identify the following communication behaviors by instructors that devalue female students:

1. Professors are more likely to know the names of male students than female ones.
2. Professors maintain more eye contact and more attentive postures when talking to male students than when addressing female students.
3. Professors ask more challenging questions of male students.
4. Professors give longer and more significant verbal and nonverbal responses to males' comments than to those of

females. When male students cannot respond to a question, they tend to be given additional time along with encouragement and coaching until they come up with a good answer; when female students do not answer correctly, instructors frequently move on.

5. Faculty members call on male students more often.
6. Faculty members are more willing to make time and to devote longer periods of time to confer with male students than with female students.
7. Female students' contributions are interrupted, ignored, or dismissed more often than those of males.
8. Faculty members extend and pursue comments by male students more than those of female students (Wood, 1994, p. 218).

Newsweek, February 24,1992 (Sexism in the schoolhouse) reports evidence from a study that reveals that "the hidden curriculum creates a downward intellectual mobility cycle in which girls are less likely to reach their potential than boys" (p. 62). Wood (1994) explains that the reason for this pattern resides "in the cumulative effects of communication that devalues women students and that presents white heterosexual males as

normal and important, and females, gays, lesbians, and people of color as marginal" (p. 219).

Subordination and Marginalization

When one gender, race, or class is elevated above another, setting it as the standard for all others to attain, a dominant/subordinate pattern is established. "From preschool through graduate programs, communication within educational institutions reproduces cultural views of women as subordinate, passive, deferential, and unachieving" (Wood, 1994, p. 207).

A dominant (patriarchal) society defines the role of subordinates. Subordinates are said to be "unable to perform the preferred roles" (Miller, p. 7) as defined by the dominants. Characteristics such as passivity; submissiveness; docility; dependency; inability to act, to decide, to think; and lack of initiative are encouraged in subordinates by the dominant group (Miller, 1986). According to Miller (1986), "Dominant groups usually impede the development of subordinates and block their freedom of expression and action" (p. 7). Gilligan (1982) states:

> Women not only define themselves in a context of human relationship but also judge themselves in terms of their ability to care. Women's place in man's life cycle has been that of nurturer,

caretaker, and helpmate, the weaver of those networks of relationships on which she in turn relies (p. 17).

When a person's identity is patterned by the dominant model, oppression eventually becomes an accepted "norm." Thus, subordinates suppress true self in order to pacify or please the dominants. "A subordinate group has to concentrate on basic survival" (Miller, p. 9).

When examining the classroom, it is evident that much of the oppression and marginalizing of women has come from the educational system. Students at all grade levels are taught the "norms" of the classroom and the roles they must fit into if they want to succeed in society. Wood (1994) suggests that "institutions normalize cultural values and instill them in individuals by modeling them as standard and correct" (p. 207).

While the majority of educators may not be consciously aware of the effects such marginalization has on females in the classroom, nonetheless "communication within education institutions reproduces cultural views of women as subordinate, passive, deferential, and unachieving and of males as dominant, independent, and achieving" (Wood, 1994, p. 207). Schools are a major contributor to the gender inequity that exists in our society. From a child's earliest experience in

school, she/he learns that males have authority. "In mirroring gender stereotypes of our society, the organization of schools instills in students the belief that men belong in positions of authority and power and women do not" (Wood, p. 209).

The current educational system marginalizes women and their achievements by the amount of attention given to female students and the ways in which women are portrayed in textbooks. "By marginalizing women's activities and contributions, education defines cultural life as the life of men" (Wood, p. 215). Research done by Epperson (1988) and Hall and Sandler (1982, 1984) indicates that males are given more attention and individual instruction than females. Males are praised for achievement and academic interest, while females are encouraged to develop quiet and compliant traits. "Although each specific form of gender inequity in education might seem minor, the cumulative impact can be overwhelming in communicating constantly that women are less valued, less respected, and less able than their male peers" (Wood, p. 221).

Classroom Climate

The climate, or the "social/psychological context within which the teacher and students interact and form their relationship" (Rosenfeld & Jarrard, 1985, p. 205), has been shown to be highly prophetic of effective

schooling (Mackenzie, 1983). Research has shown that classroom climate influences personal growth of the student as well as cognitive and affective behavior (Fraser & Fraser; 1982; Hays, 1967; Martin-Reynolds & Reynolds, 1983; Ross, 1981; Schaffer, 1980; Sundell, 1972).

A majority of colleges and universities have developed policies concerning women and legal issues, and many are beginning to realize the importance of fostering a more supportive climate inside and outside of the classroom. "Although many persons and experiences can help shape the campus climate, faculty attitudes and behaviors often have profound effect — especially for women students" (Hall & Sandler, 1982, p. 2).

If the classroom climate is chilly, women are put at an educational disadvantage. When disparaging remarks about women are made, or female students are treated differently based solely on gender, a profound negative impact is made—especially if the behavior comes from what Hall and Sandler (1982) describe as "gatekeepers who teach required courses, act as advisors, or serve as chairs of departments" (p. 3). A woman's academic and career development can be negatively influenced by:

1. discouraging classroom participation;

2. preventing students from seeking help outside of class;
3. causing students to drop or avoid certain classes, to switch majors or subspecialties within majors, and in some instances even to leave a given institution;
4. minimizing the development of the individual collegial relationships with faculty which are crucial for future professional development;
5. dampening career aspirations; and
6. undermining confidence (Hall & Sandler, 1982, p. 3).

If a chilly climate persists, it can act as a reinforcer of attitudes that females are not full peers in the college environment and thereby have long range effects on students' life away from the institution.

Communication Apprehension

When examining the chilly climate, the question should be asked what part a student's individual characteristics play in perpetuating the situation. One characteristic that needs to be explored is the degree to which a student may be influenced to participate, or not, in class due to their personal level of 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, 1978, p. 192). A student with high CA may be unwilling or unable to communicate his/her opinions or answer questions presented by the instructor. This student "may find communication more punishing than rewarding" (Daly, 1986, p. 22).

Communication Apprehension is conceptualized "as a trait of the individual which may have many implications for the person's every day life" (McCroskey, 1977, p. 79). Trait apprehension is fear or anxiety that occurs across all or most oral contexts. CA research has also been done with regard to state apprehension. State apprehension is the level of fear each individual feels when communicating in a specific situation such as a job interview. "While state CA is a normal experience of most people, trait CA is not characteristic of normal, well-adjusted individuals" (McCroskey, 1977, p. 79).

McCroskey's studies (as cited in McCroskey, 1977) report that approximately 20 percent of students attending large universities have high trait CA, and in small universities and community colleges the percentage increases somewhat. High trait Communication Apprehension has also been observed at similar levels for senior adults, middle adults, and in K - 12 school age children (McCroskey, 1976; Moore, 1972; Scott, McCroskey, & Sheahan, 1977).

In order to measure a person's trait CA, an instrument known as the Personal Report of Communication Apprehension (PRCA) was developed by Jim McCroskey (McCroskey, 1970). The PRCA is a 24-item Likert-type instrument designed to measure apprehension across four contexts: group, meeting, dyadic or interpersonal, and public (Rubin, Palmgreen, & Sypher, 1994).

Student Perceptions of Teacher Immediacy

Instructional communication research has long been concerned with what goes into making an effective teacher. For the past several decades, teacher immediacy has been examined in order to determine if it is a predictor of teaching competency. Friedrich (1978) concludes that although classroom and student-teacher interactions have been examined in thousands of research studies, relatively little is known concerning the impact of such interactions on learning.

Andersen (1979) investigated teacher immediacy and its potential as a predictor of teacher effectiveness. "Teacher immediacy was conceptualized as those nonverbal behaviors that reduce physical and/or psychological distance between teachers and students. Teaching effectiveness was examined in light of teacher ability to produce affective, behavioral and cognitive student learning" (p. 543). Students (N = 205)

and teachers (N = 13) of an introductory interpersonal communication course were used as research subjects in the investigation of teacher effectiveness and teacher immediacy.

Andersen's study found that immediacy can be used as a predictor of teaching effectiveness. "Immediacy is a good predictor of all measures of student affect and of student behavioral commitment. No relationship, however, was found between teacher immediacy and cognitive learning" (p. 554).

According to Andersen (1986), communication behaviors between teachers and students in the classroom influence each other. Communication is affected by the concept of reciprocity — students give teachers what they perceive they have been given.

> Instructors seldom verbalize their feelings, yet students seem to know instructor's attitudes toward students, content areas, and the general teaching process. Students infer these affective data from the instructor's nonverbal behaviors. . . . In classroom settings, instructors who use nonverbal immediacy behaviors manifest greater liking and affect towards their students and engender higher student affect. (p. 45)

Rationale and Research Questions

While the 1982 Sandler article ("The classroom climate: A chilly one for women") caused scholars to seriously consider the issue of gender equality in the classroom, very little research has been done that asks students their perception of communication interaction within the classroom. The review of literature has outlined problems which currently plague the educational system.

In *Taking the sexism out of education* (1978), the statement is made that the "teacher's behavior is probably the most critical factor in determining whether what happened in the classroom will encourage the development of flexibility or the retention of old stereotyping practices" (p. 16). "Consequently, for a faculty member to continuously portray women or men in only traditional roles or to allow students to do so, reinforces the stereotyping and has insidious effect in terms of the restrictions imposed on both" (Gappa & Pearce, 1980, pp. 62-63). Answers to the following research questions will aid both researchers and instructors as they examine the ways in which they communicate with students and as they learn about the interaction patterns which occur in their classrooms in order to observe if instruction has moved away from traditional roles.

Research questions:

RQ 1: Do students perceive that teachers respond with equivalent interest and encouragement to students of both sexes?

RQ 2: Is the instructor perceived as knowing students' name?

RQ 3: Does a difference exist in the perceptions of men and women students in regard to student classroom interaction patterns?

RQ 4: What is the relationship of teacher immediacy to perception of classroom interaction patterns?

RQ 5: What is the relationship of student communication apprehension to perceptions of classroom interaction patterns?

Chapter Two

METHODOLOGY

Procedure

Subjects for this investigation were undergraduate students enrolled in the basic communication courses of a large mid-western university. Because these basic courses fulfill general education requirements, respondents represent a cross section of class rank and academic disciplines. Students were asked to provide information based on their observations of the instructor and students in the class they had attended just prior to the research session. Since the subjects were asked to report on interactions between instructors and students, participants were asked to report on a class with an enrollment of less than 50. This procedure, developed by Plax, Kearney, McCroskey, and Richmond (1986), is used to maximize the range of disciplines represented and the number of instructors evaluated.

Data was collected during the 13th and 14th weeks of school to ensure that students were well acquainted with the instructor's pattern of interaction and to ensure that the instructors had adequate opportunity to learn their students' names and interact with them. Students were told

that their participation was voluntary and would not affect their grades. Participants were also assured of confidentiality.

Measurement

Communication Apprehension

Communication Apprehension was measured using McCroskey's (1982) Personal Report of Communication Apprehension (PRCA-24). The PRCA is a 24-item Likert-type instrument that assesses a person's communication apprehension in four areas: small group, interpersonal, meeting, and public. Six items pertaining to each area are used to score an individual's apprehension in the communication contexts. All 24 items are used to calculate an overall communication apprehension score.

The PRCA-24 is internally consistent. McCroskey, Beatty, Kearney, and Plax (1985) report Alpha reliability estimates for all 24 items ranging from .93 to .95. McCroskey and Beatty (1984) estimate reliability for the four composite areas to be only slightly lower.

Construct and criterion-related validity of the PRCA-24 has been supported through numerous studies. Beatty (1994) reports that McCroskey and Beatty (1984) "found that all four context-based scores predicted self-reported state anxiety experienced in a related context (e.g., public speaking)" (p. 293).

Although other instruments have been developed which measure an individual's trait-like communication apprehension, most parallel the PRCA-24. "With its repeatedly high reliability estimates and its well-documented validity, the PRCA-24 (Appendix A) is highly recommended as a means of assessing persons' trait or generalized-context CA" (Beatty, 1984, p. 293).

Student Perception of Teacher Immediacy

Immediacy was measured using a questionnaire consisting of 14 nonverbal immediacy items (Richmond, Gorham, & McCroskey, 1987) and 20 verbal immediacy items (Gorham, 1988).

The 14-item Nonverbal Immediacy Behaviors (NIB) Instrument (see Appendix B) "assesses students' perceptions of a teacher's physical or psychological closeness by identifying behaviors of approach-avoidance (e.g., eye contact, proximity, gestures, open-body position, and movement)" (Kearney, 1994, p. 238). Estimated reliability for the NIB ranges from .73 to .89 (Christophel, 1990; Gorham, 1988; Gorham & Zakahi, 1990; Richmond et al., 1987).

The 20 items measuring verbal immediacy (see Appendix C) have been reported to have Alpha and split-half reliabilities ranging from .83 to .94 (Christophel, 1990; Gorham & Zakahi, 1990; Powell & Harville, 1990).

According to Kearney (1994), "Numerous studies support the concurrent validity of the NIB Instrument. The items on this instrument consistently result in a single-factor solution when analyzed with items from the Verbal Immediacy Scale developed by Gorham (1988)" (pp.238-239).

For construct validity, evidence supports a moderate to substantial relationship between both the Nonverbal and Verbal Immediacy Behaviors Instruments and affective and/or cognitive learning (Kearney, 1994).

The present investigation incorporated Gorham's (1988) 20-item verbal immediacy scale and Richmond et al.'s (1987) 14-item NIB Instrument to assess student perception of their teacher's verbal and nonverbal immediacy behaviors (see Appendix A). A Likert-type scale was used for the 34-item instrument. Students participating in the study were asked to rank the instructor on a scale from "0" (never) to "4" (very often) for each behavior.

Student Perception Questionnaire

The Student Perception Questionnaire was developed by Gappa and Pearce (1980) as a "self-assessment tool to provide feedback to instructors and to determine if students perceive the instructor as interacting differently in relation to the sex, race, or age of class members"

(p. 111). The questionnaire is appropriate for use in college and university classes of various disciplines and varying sizes.

The following procedures were used to develop the questionnaire:

1. Specific concerns regarding classroom interaction based on a review of the literature were identified and a series of questions was developed.
2. Form I of the questionnaire contained open-ended questions to which students could use their own words to respond. Included were questions such as: "To what extent did you volunteer to respond to questions that were asked of the class by the instructor?" "Were there times you wanted to participate in class by asking a question or making a comment but did not do so? If so, why did you not do so?" "Were there times you raised your hand but did not get called on? How often? Why do you think you were not recognized?" Form I was administered to a sample of approximately 125 students from three university classes in December, 1979.
3. Responses from the open-ended questions were analyzed and categorized. Multiple choice alternatives were formulated from those responses and Form II of the questionnaire was

developed. This form included an "other" category as one of the choices for each question, along with space for an explanation.

4. Form II was administered to a total of 353 students in one section each of introductory economics and psychology and two sections of introductory sociology at Utah State University during the seventh week of winter quarter, 1980. The computer was used to provide an item analysis and an analysis of variance of multiple choice alternatives by age and sex for each of the four classes. Race was not used as a variable in this analysis because of insufficient representation from groups other than Caucasian.
5. Responses to the "other" choice on each question were tabulated. This resulted in further modification of wording and multiple choice alternatives.
6. Form III was provided to task force members for further analysis and recommendations. Additional refinements were made for the field review edition.
7. Over 2,000 students in 18 different classes at six colleges and universities in California completed the questionnaire as part of the field review of the project materials. On the basis of these

students' responses and the faculty evaluations of the questionnaire, it was again modified.

From the initial stages of the development of this questionnaire, it was considered important to avoid being obtrusive about looking for differential treatment of students that could reflect sex or ethnic bias. Therefore, questions were formulated to avoid direct sex or ethnic references, other than those asking for demographic information. In the final version, only one question makes a specific reference to males and females (pp. 104 - 106).

The student perception questionnaire consists of 23 questions. Nine questions are used to collect demographic information regarding the course in which teachers and students are being evaluated: course title; sex of the target instructor; age, sex, classification, and nationality of students completing questionnaire; course classification (lower or upper division); and reason for taking the course (requirement or elective), for comparative analysis. Seven questions ask students their perceptions of instructor patterns of communication, addressing research questions one, two, and four. Research questions three and five are answered with seven questions which address student perceptions concerning their class participation.

Questions one through four on the questionnaire were included by the researcher in order to expand the demographic information for comparative analysis. The course title and course classification was added in order to compare the response differences between lower and upper division courses and the various colleges. Because the questionnaire was originally designed to be used by the instructor in her/his own classroom, the sex of the instructor was added. The fourth question added asks the respondent to report their school classification. This question is included to observe whether lower and upper level students perceive behaviors differently.

Since reliability for the questionnaire has not been reported, reliability was established with the test-retest method described by Frey, Botan, Friedman, and Kreps (1991). Questionnaires were administered to students in a medium size midwestern university during both the 12th and 14th week of classes. First, students read and signed a consent form explaining that cooperation was completely voluntary and non participation would not affect their grade in any way. The students were also assured of confidentiality. At both times students were instructed to recall the most recent class just prior to the one they were in that consisted of 50 or less students and complete the questionnaire based on

student teacher interaction in that class. The number of students completing questionnaires both times was 102. Of the 102, six questionnaires were not usable due to the failure of the students to report on the same class each time. Each questionnaire has 14 items which the students are asked to respond to concerning classroom involvement. Agreement was reported on 10.10 items out of the 14, producing 72.14% agreement.

Data Analysis

Responses to the questions posed by the questionnaire were analyzed in a frequency distribution giving the number of responses (N) and percentage of responses (%) for each alternative on each question. Crosstabs between male and female responses were run in order to locate any differences reported between the two groups.

RQ 1: Do students perceive that teachers respond with equivalent interest and encouragement to students of both sexes?

Frequencies were run to obtain male and female responses to student perception questionnaire items 11, 13, 14, 16, 21, and 22. These items were identified as the faculty patterns of communication by Gappa and Pearce. Crosstabs were run between male and female responses to determine if any significant differences existed.

RQ 2: Is the instructor perceived as knowing students' name?

Frequencies were run to obtain male and female responses to student perception questionnaire item 11 which dealt with the student's perception of the teacher's knowledge of their name.

RQ 3: Does a difference exist in the perceptions of men and women students in regard to student classroom interaction patterns?

Frequencies were run from the student perception questionnaire for items 12, 15, 17, 18, 19, 20, and 24 for male and female students. These items were identified by Gappa and Pearce as student participation questions. Crosstabs were run on each item between male and female responses to determine any significant differences.

RQ 4: What is the relationship of teacher immediacy to perceptions of classroom interaction patterns?

Immediacy scores were calculated for all instructors. Frequencies for scores of those instructors ranking in the lower and upper thirds were run on the items identified as the faculty patterns of interaction. Chi-square was run between high and low immediacy group responses for each group to determine if any significant differences existed.

RQ 5: What is the relationship of communication apprehension on student perceptions of classroom interaction patterns?

Student communication apprehension scores were calculated for all respondents. PRCA scores have a potiential range of 24 to 120. The scores for students rating themselves low in CA ranged from 56 to 69. Scores for students rating themselves high in CA ranged from 74 to 83. Since the ranges of scores considered were so close and the top third of scores did not fall into the range of high communication apprehension, the top third of the student scores are considered to be moderately communicatively apprehensive. Frequencies for those students in the lower and upper thirds were run on items identified as student participation patterns of communication. Chi-square was run between low and high communication apprehension groups in order to determine if any significant differences existed.

Chapter Three

RESULTS

The current study provides a cross disciplinary study of student perceptions of gender bias. It also explores the relationship of student's communication apprehension and perceptions of classroom interaction and teacher immediacy. In this chapter, results from student questionnaires are used to answer the research questions.

Student Questionnaires

Demographics. A total of 198 students completed the student questionnaire. The student pool consisted of 86 males (43.4%) and 112 females (56.6%). The ages of students ranged from 18 to 43 with the majority of students in the 18-21 range 85% (n=168), 22-30 years 12.5% (n=25), and students over 30 2.5% (n=5) (see Table 1).

The majority of students were lowerclass, with 40.4% (n=80) sophomores, 29.3% (n=58) freshmen/women, 19.2% (n=38) juniors, 10.1% (n=20) seniors, and 1% (n=2) graduate or special students (see Table 1).

Table 1

Student Demographics

Category	Frequencies of Respondents	
	Frequency	Percent
Sex		
Male	86	43.4
Female	112	56.6
Classification		
Freshmen	58	29.3
Sophomores	80	40.4
Juniors	38	19.2
Seniors	20	10.1
Graduate	1	00.5
Special	1	00.5
Age		
18 - 21	168	85.0
22 - 30	25	12.5
over 30	5	02.5

Table 1 continued

Citizenship		
U.S.	187	94.4
Non U.S.	11	5.6
Self Identification		
Caucasian	152	76.8
African American	19	9.6
Middle Eastern	0	0
Hispanic	7	3.5
Native American	9	4.5
Asian	5	2.5
Other	6	3.0
Sex of Instructor		
Male	123	62.1
Female	75	37.9

RQ1

Do students perceive that teachers respond with equivalent interest and encouragement to students of both sexes?

To answer research question one, frequencies and percentages were run for items 11, 13, 14, 16, 21, and 22 from the student perception questionnaire. These items were identified by the developers of the questionnaire as items of faculty patterns of communication. Crosstabulations between male and female responses were run and no significance was reported on the items related to faculty patterns of interaction.

Females responding to item 11 (Does your instructor know you by name?) reported yes 90.2%, no 6.3%, and don't know or uncertain 3.6%. Male response to the same question was yes 84.9%, no 7.0%, and don't know or uncertain 8.1% (see Table 2).

Item 13 (How often does the instructor call on you or ask you to respond to a question or comment?) has five possible responses: "1" instructor does not call on anyone; "2" one to three times during the course; "3" an average of once a week; "4" an average of two to three times a week; and "5" never. The majority of females responded "3" 28.6%, "4" 23.2%, "2" 20.5%, "1" 15.2%, and "5" 12.5%. Males responded

a majority of the time "4" 23.3%, "2" and "5" 22.1% each, "3" 18.6%, and "1" 14%. Combined percentages were "1" 9.1%, "2" 23.7%, "3" 20.2%, "4" 19.2%, and "5" 27.8% (see Table 3).

Table 2

Item 11 Student Perception Questionnaire

Does your instructor know you by name?

Value Label	Frequency	Percent
Female		
1 = Yes	101	90.2
2 = No	7	6.3
3 = Don't know or uncertain	4	3.6
Male		
1 = Yes	73	84.9
2 = No	6	7.0
3 = Don't know or uncertain	7	8.1
Combined		
1 = Yes	174	87.9
2 = No	13	6.6
3 = Don't know or uncertain	11	5.6

Table 3

Item 13 Student Perception Questionnaire

How often does the instructor call on you or ask you to respond to a question or comment?

	Value Label	Frequency	Percent
Female			
	1 = Instr. doesn't call on anyone	17	15.2
	2 = 1 to 3 times during the course	23	20.5
	3 = Avg. of once a week	32	28.6
	4 = Avg. 2 to 3 times a week	26	23.2
	5 = Never	14	12.5
Male			
	1 = Instr. doesn't call on anyone	12	14.0
	2 = 1 to 3 times during the course	19	22.1
	3 = Avg. of once a week	16	18.6
	4 = Avg. 2 to 3 times a week	20	23.3
	5 = Never	19	22.1
Combined			
	1 = Instr. doesn't call on anyone	29	14.6
	2 = 1 to 3 times during the course	42	21.2
	3 = Avg. of once a week	48	24.2
	4 = Avg. 2 to 3 times a week	46	23.2
	5 = Never	33	16.7

Item 14 (How does the instructor most frequently call on you?) has four possible responses: "1" by name; "2" by pointing with hand; "3" by eye contact / looking directly at me; and "4" instructor never calls on me. Females responded "1" 65.2%, "2" 2.7%, "3" 17.9%, and "4" 14.3% of the time. Males responded "1" 64.0%, "2" 12.8%, "3" 10.5%, and "4" 12.8%. Combined percentages were "1" 64.6%, "2" 7.1%, "3" 14.6%, and "4" 13.6% (see Table 4).

Item 16 (Why do you think the instructor does not call on you when you raise your hand?) has four possible responses: "1" too many students want to respond; "2" others beat me to it; "3" instructor does not see or hear me; "4" instructor ignores me; "5" this situation never occurs. Females responded "1" 13.4%, "2" 7.1%, "3" 12.5%, "4" 1.8%, and "5" 65.2%. Males responded respectively 8.1%, 5.8%, 9.3%, 2.3%, and 74.4%. Combined total responses respectively were 11.1%, 6.6%, 11.1%, 2.0%, and 69.2% (see Table 5).

Item 21 (How does the instructor react to the questions you make in class?) has four possible responses: "1" encourages me to question or comment again; "2" discourages me from commenting or asking a question again; "3" neither encourages nor discourages me; "4" I never participate. Females responded "1" 91.1%, "2" 3.6%, "3" 17.9%, and "4"

Table 4

Item 14 Student Perception Questionnaire

How does the instructor most frequently call on you?

Value Label	Frequency	Percent
Female		
1 = By name	73	65.2
2 = By pointing with hand	3	2.7
3 = By eye contact	20	17.9
4 = Instructor never calls on me	16	14.3
Male		
1 = By name	55	64.0
2 = By pointing with hand	11	12.8
3 = By eye contact	9	10.5
4 = Instructor never calls on me	11	12.8
Combined		
1 = By name	128	64.6
2 = By pointing with hand	14	7.1
3 = By eye contact	29	14.6
4 = Instructor never calls on me	27	13.6

Table 5

Item 16 Student Perception Questionnaire

Why do you think the instructor does not call on you when you raise your hand?

Value Label	Frequency	Percent
Female		
1 = Too many students respond	15	13.4
2 = Others beat me to it	8	7.1
3 = Instructor does not see/hear me	14	12.5
4 = Instructor ignores me	2	1.8
5 = This situation never occurs	73	65.2
Male		
1 = Too many students respond	7	8.1
2 = Others beat me to it	5	5.8
3 = Instructor does not see/hear me	8	9.3
4 = Instructor ignores me	2	2.3
5 = This situation never occurs	64	74.4
Combined		
1 = Too many students respond	22	11.1
2 = Others beat me to it	13	6.6
3 = Instructor does not see/hear me	22	11.1
4 = Instructor ignores me	4	2.0
5 = This situation never occurs	137	69.2

8.9%. Males responded "1" 66.3%, "2" 1.2%, "3" 22.1%, and "4" 10.5%. Combined total responses respectively were 68.7%, 2.0%, 19.7%, and 9.6% (see Table 6).

Item 22 (In your opinion, how does the instructor react to opinions and comments given by other students in the class?) has four possible responses: "1" respects the opinions of students in this class, "2" does not respect the opinions of students in this class, "3" embarrasses or "puts down" students for their opinions, "4" I did not notice. Females responded to each item respectively 91.1%, 3.6%, 3.6%, and 1.8%. Males responded respectively 88.4%, 2.3%, 3.5%, and 5.8%. Combined responses were 89.9%, 3.0%, 3.5%, and 3.5% respectively (see Table 7).

RQ2

Is the instructor perceived as knowing students' name?

In order to answer research question two, frequencies and percentages were run to obtain male and female responses to student perception questionnaire item 11 which dealt with the student's perception of the teacher's knowledge of the student's name. Multiple-sample chi-square was run between male and female groups. No significant difference was found between the responses of these two groups.

Table 6

Item 21 Student Perception Questionnaire

How does the instructor react to the questions you make in class?

Value Label	Frequency	Percent
Female		
1 = Encourages further comment	79	70.5
2 = Discourages further comment	3	2.7
3 = Neither encourages/discourages	20	17.9
4 = I never participate	10	8.9
Male		
1 = Encourages further comment	57	66.3
2 = Discourages further comment	1	1.2
3 = Neither encourages/discourages	19	22.1
4 = I never participate	9	10.5
Combined		
1 = Encourages further comment	136	68.7
2 = Discourages further comment	4	2.0
3 = Neither encourages/discourages	39	19.7
4 = I never participate	19	9.6

Table 7

Item 22 Student Perception Questionnaire

In your opinion, how does the instructor react to opinions and comments given by other students in the class?

	Value Label	Frequency	Percent
Female			
	1 = Respects opinions	102	91.1
	2 = Does not respect opinions	4	3.6
	3 = Embarrasses/puts down opinions	4	3.6
	4 = I did not notice	2	1.8
Male			
	1 = Respects opinions	76	88.4
	2 = Does not respect opinions	2	2.3
	3 = Embarrasses/puts down opinions	3	3.5
	4 = I did not notice	5	5.8
Combined			
	1 = Respects opinions	178	89.9
	2 = Does not respect opinions	6	3.0
	3 = Embarrasses/puts down opinions	7	3.5
	4 = I did not notice	7	3.5

Females responding to item 11 (Does your instructor know you by name?) reported yes 90.2%, no 6.3%, and don't know or uncertain 3.6%. Male response to the same question was yes 84.9%, no 7.0%, and don't know or uncertain 8.1% (see Table 2).

RQ3

Does a difference exist in the perceptions of men and women students in regard to student classroom interaction patterns?

In order to answer research question three, frequencies and percentages were run on items 12, 15, 17, 18 19, 20, and 24 from the student perception questionnaire. These items were identified by the creators of the questionnaire as student participation questions. Crosstabulations were also run to compare responses between male and female students. No significance was found to exist between these two groups on any of the items related to student classroom interaction patterns.

Item 12 (How often do you voluntarily answer questions or contribute to class discussion in this class?) has five possible responses: "1" never; "2" one to three times during the course; "3" an average of once a week; "4" an average of two to three times a week; "5" an average of one or more times a day. Females responded "1" 9.8%, "2" 25.0%, "3" 17.9%, "4" 22.3%, and "5" 25.0%. Males responded "1" 8.1%, "2" 22.1%,

"3" 23.3%, "4" 15.1%, and "5" 31.4%. Combined responses were 9.1%, 23.7%, 20.2%, 19.2%, and 27.8% respectively (see Table 8).

Item 15 (Are there times when you raise your hand to ask a question or make a comment but do not get called on by the instructor?) has four possible responses: "1" once or twice; "2" three or more times; "3" I am called on when I raise my hand; "4" I never raise my hand. Females responded "1" 17.9%, "2" 3.6%, "3" 63.4%, "4" 15.2%. Males responded 15.1%, 1.2%, 55.8%, and 27.9% respectively. Combined totals in order of response are 16.7%, 2.5%, 60.1%, and 20.7% (see Table 9).

Item 17 (Are there times when you want to participate in class by asking a question or making a comment but choose not to do so?) has five possible responses: "1" once or twice; "2" three or more times; "3" nearly every day; "4" no, because I participate when I want to; "5" I do not want to participate. Females responded 34.8%, 15.2%, 11.6%, 36.6%, and 1.8% respectively. In order, males responded 37.2%, 11.6%, 12.8%, 38.4%, and 0.0%. Combined totals respectively are 35.9%, 13.6%, 12.1% 37.4%, and 1.0% (see Table 10).

Item 18 (If you have wanted to participate in class by asking a question or making a comment but did not do so, what was your reason for not doing so?) has five possible responses: "1" felt insecure,

Table 8

Item 12 Student Perception Questionnaire

How often do you voluntarily answer questions or contribute to class discussion in this class?

Value Label	Frequency	Percent
Female		
1 = Never	11	9.8
2 = 1 to 3 times during course	28	25.0
3 = Avg. once a week	20	17.9
4 = Avg. 2 to 3 times a week	25	22.3
5 = Avg. one or more times a day	28	25.0
Male		
1 = Never	7	8.1
2 = 1 to 3 times during course	19	22.1
3 = Avg. once a week	20	23.3
4 = Avg. 2 to 3 times a week	13	15.1
5 = Avg. one or more times a day	27	31.4
Combined		
1 = Never	18	9.1
2 = 1 to 3 times during course	47	23.7
3 = Avg. once a week	40	20.2
4 = Avg. 2 to 3 times a week	38	19.2
5 = Avg. one or more times a day	55	27.8

Table 9

Item 15 Student Perception Questionnaire

Are there times when you raise your hand to ask a question or make a comment but do not get called on by the instructor?

Value Label	Frequency	Percent
Female		
1 = Once or twice	20	17.9
2 = Three or more times	4	3.6
3 = I am called on	71	63.4
4 = I never raise my hand	17	15.2
Male		
1 = Once or twice	13	15.1
2 = Three or more times	1	1.2
3 = I am called on	48	55.8
4 = I never raise my hand	24	27.9
Combined		
1 = Once or twice	33	16.7
2 = Three or more times	5	2.5
3 = I am called on	119	60.1
4 = I never raise my hand	41	20.7

Table 10

Item 17 Student Perception Questionnaire

Are there times when you want to participate in class by asking a question or making a comment but choose not to do so?

Value Label	Frequency	Percent
Female		
1 = Once or twice	39	34.8
2 = Three or more times	17	15.2
3 = Nearly every day	13	11.6
4 = No, I participate when I want to	41	36.6
5 = I do not wish to participate	2	1.8
Male		
1 = Once or twice	32	37.2
2 = Three or more times	10	11.6
3 = Nearly every day	11	12.8
4 = No, I participate when I want to	33	38.4
5 = I do not wish to participate	0	0.0
Combined		
1 = Once or twice	71	35.9
2 = Three or more times	27	13.6
3 = Nearly every day	24	12.1
4 = No, I participate when I want to	74	37.4
5 = I do not wish to participate	2	1.0

inadequate, or uncertain; "2" another student asked question or commented first; "3" too many students in class; "4" disagreed with instructor but chose not to speak out; "5" this situation never occurs. Females responded respectively 37.5%, 32.1%, 2.7%, 10.7%, and 17.0%. Male responses were 33.7%, 24.4%, 2.3%, 9.3%, and 30.2%. Combined totals were 35.9%, 28.8%, 2.5%, 10.1%, and 22.7% (see Table 11).

Item 19 (In your opinion, which students most frequently participate in class?) has four possible responses: "1" those who are most knowledgeable or most interested in the subject; "2" those who are seeking clarification or want more information; "3" those who are trying to show off or get attention; "4" I have not noticed. Females responded "1" 43.8%, "2" 33.9%, "3" 10.7%, and "4" 11.6%. Males responded 47.1%, 31.8%, 10.6%, and 10.6% respectively. Combined totals revealed 44.9%, 32.8%, 10.6%, 11.1% respectively (see Table 12).

Item 20 (In your opinion, which students ask the most questions and make the most comments in class?) has four possible responses: "1" male student(s); "2" female student(s); "3" male and female students equally; "4" have not noticed. Females responded "1" 28.6%, "2" 20.5%, "3" 37.5%, and "4" 13.4%. Males responded 17.4%, 22.1%, 40.7%, and 19.8% respectively. Combined totals reported 23.7%, 21.2%, 38.9%, and 16.2% (see Table 13).

Table 11

Item 18 Student Perception Questionnaire

If you have wanted to participate in class by asking a question or making a comment but did not do so, what was your reason for not doing so?

	Value Label	Frequency	Percent
Female			
	1 = Felt insecure, inadequate	42	37.5
	2 = Another student went first	36	32.1
	3 = Too many students in class	3	2.7
	4 = Disagreed, but chose not to	12	10.7
	5 = This situation never occurs	19	17.0
Male			
	1 = Felt insecure, inadequate	29	33.7
	2 = Another student went first	21	24.4
	3 = Too many students in class	2	2.3
	4 = Disagreed, but chose not to	8	9.3
	5 = This situation never occurs	26	30.2
Combined			
	1 = Felt insecure, inadequate	71	35.9
	2 = Another student went first	57	28.8
	3 = Too many students in class	5	2.5
	4 = Disagreed, but chose not to	20	10.1
	5 = This situation never occurs	45	22.7

Table 12

Item 19 Student Perception Questionnaire

In your opinion, which students most frequently participate in class?

Value Label	Frequency	Percent
Female		
1 = Most knowledgeable/interested	49	43.8
2 = For clarification/information	38	33.9
3 = Trying to show off/get attention	12	10.7
4 = I have not noticed	13	11.6
Male		
1 = Most knowledgeable/interested	40	46.5
2 = For clarification/information	27	31.4
3 = Trying to show off/get attention	9	10.5
4 = I have not noticed	10	11.6
Combined		
1 = Most knowledgeable/interested	89	44.9
2 = For clarification/information	65	32.8
3 = Trying to show off/get attention	21	10.6
4 = I have not noticed	23	11.6

Item 24 (How often do students participate in this class by asking questions or making comments?) has four possible responses: "1" never; "2" rarely; "3" occasionally; "4" frequently. Females responded respectively .9%, 5.4%, 23.2%, 70.5%. Males responded "1" 0.0%, "2" 3.5%, "3" 37.2%, and "4" 59.3%. Combined responses were .5%, 4.5%, 29.3%, and 65.7% respectively (see Table 14).

RQ4

What is the relationship of teacher immediacy to perceptions of classroom interaction patterns?

In order to answer research question four, immediacy scores for instructors were tabulated by adding those items that reflected immediate nonverbal and verbal behavior--recoding those items that are considered non-immediate behavior (see Appendix B and C). Immediacy scores ranged from 40 to 126. The higher the score, the more immediate an instructor is perceived. The lower one third of the immediacy scores, (N=65) and the top third scores (N=67) were used to determine if a difference exists in the way students perceive gender bias in relation to whether an instructor is considered to be immediate in his/her interaction. Frequencies and percentages were run for items 11, 13, 14, 16, 21, and 22, from the student perception questionnaire. These items were identified by the developers of the questionnaire as items of faculty

Table 13

Item 20 Student Perception Questionnaire

In your opinion, which students ask the most questions and make the most comments in class?

Value Label	Frequency	Percent
Female		
1 = Male student(s)	32	28.6
2 = Female student(s)	23	20.5
3 = Male & female equally	42	37.5
4 = Have not noticed	15	13.4
Male		
1 = Male student(s)	15	17.4
2 = Female student(s)	19	22.1
3 = Male & female equally	35	40.7
4 = Have not noticed	17	19.8
Combined		
1 = Male student(s)	47	23.7
2 = Female student(s)	42	21.2
3 = Male & female equally	77	38.9
4 = Have not noticed	32	16.2

Table 14

Item 24 Student Perception Questionnaire

How often do students participate in this class by asking questions or making comments?

Value Label	Frequency	Percent
Female		
1 = Never	1	.9
2 = Rarely	6	5.4
3 = Occasionally	26	23.2
4 = Frequently	79	70.5
Male		
1 = Never	0	0.0
2 = Rarely	3	3.5
3 = Occasionally	32	37.2
4 = Frequently	51	59.3
Combined		
1 = Never	1	.5
2 = Rarely	9	4.5
3 = Occasionally	58	29.3
4 = Frequently	130	65.7

patterns of communication. Crosstabs were also run between the high and low immediacy groups with significance found on items 11, 13, 14, 16, and 21.

Item 11 (Does your instructor know you by name?) has three possible responses: "1" yes, "2" no, "3" don't know or uncertain. Students reporting on instructors perceived to have low immediacy scores responded "1" 75.4%, "2" 10.8%, and "3" 13.8%. Instructors perceived to have high immediacy scores reported on "2" or yes 100% to item 11. A significant difference was revealed between student perceptions of high and low immediacy instructors, chi-square value 18.767, $df = 2$, $p < .001$ (see Table 15).

Item 13 (How often does the instructor call on you or ask you to respond to a question or comment?) has five possible responses: "1" instructor does not call on anyone; "2" one to three times during the course; "3" an average of once a week; "4" an average of two to three times a week; and "5" never. Teachers with low immediacy scores were reported as "1" 18.5%, "2" 18.5", "3" 16.9%, "4" 20.0%, and "5" 26.2%. Teachers with high immediacy scores were reported as 10.4%, 26.9%, 28.4%, 25.4% and 9.0% respectively. Crosstabulation revealed a significant difference between the high and low immediacy instructors on

item 13. Chi-square value is reported as 10.41, df = 4, $p < .05$ (see Table 16).

Table 15

Item 11 Student Perception Questionnaire

Does your instructor know you by name?

Value Label	Frequency	Percent
Instructors rated high (top 1/3) in immediacy		
1 = Yes	67	100.0
2 = No	0	0.0
3 = Don't know or uncertain	0	0.0
Instructors rated low (lower 1/3) in immediacy		
1 = Yes	49	75.4
2 = No	7	10.8
3 = Don't know or uncertain	9	13.8

Chi-square value	df	significance
18.767	2	.0008

Table 16

Item 13 Student Perception Questionnaire

How often does the instructor call on you or ask you to respond to a question or comment?

Value Label	Frequency	Percent
Instructors rated high (top 1/3) in immediacy		
1 = Instr. doesn't call on anyone	7	10.4
2 = 1 to 3 times during the course	18	26.9
3 = Avg. of once a week	19	28.4
4 = Avg. 2 to 3 times a week	17	25.4
5 = Never	6	9.0
Instructors rated low (lower 1/3) in immediacy		
1 = Instr. doesn't call on anyone	12	18.5
2 = 1 to 3 times during the course	12	18.5
3 = Avg. of once a week	11	16.9
4 = Avg. 2 to 3 times a week	13	20.0
5 = Never	17	26.2

Chi-square Value	df	significance
10.41	4	.03398

Item 14 (How does the instructor most frequently call on you?) has four possible responses: "1" by name; "2" by pointing with hand; "3" by eye contact / looking directly at me; and "4" instructor never calls on me. Instructors with low immediacy scores were reported as "1" 43.1%, "2" 12.3%, "3" 15.4%, and "4" 29.2%. High immediacy instructors scored 85.1%, 0.0%, 11.9%, and 3.0% respectively. Significant differences were revealed for the high and low immediacy instructors, chi-square value 31.855, df = 3, $p < 001$ (see Table 17).

Item 16 (Why do you think the instructor does not call on you when you raise your hand?) has four possible responses: "1" too many students want to respond; "2" others beat me to it; "3" instructor does not see or hear me; "4" instructor ignores me; "5" this situation never occurs. Instructors with low immediacy scores were reported as "1" 9.2%, "2" 6.2%, "3" 16.9%, "4" 6.2%, and "5" 61.5%. High immediacy instructors scored 13.4%, 4.5%, 6.0%, 0.0%, and 76.1% respectively. Significant differences were revealed between perceived high and low immediacy instructors, chi-square value 8.59, df = 2, $p < .02$ (see Table 18).

Table 17

Item 14 Student Perception Questionnaire

How does the instructor most frequently call on you?

Value Label	Frequency	Percent
Instructors rated high (top 1/3) in immediacy		
1 = By name	57	85.1
2 = By pointing with hand	0	0.0
3 = By eye contact	8	11.9
4 = Instructor never calls on me	2	3.0
Instructors rated low (lower 1/3) in immediacy		
1 = By name	13	43.1
2 = By pointing with hand	8	12.3
3 = By eye contact	10	15.4
4 = Instructor never calls on me	19	29.2

Chi-square Value	df	significance
31.855	3	.0000

Table 18

Item 16 Student Perception Questionnaire

Why do you think the instructor does not call on you when you raise your hand?

Value Label	Frequency	Percent
Instructors rated high (top 1/3) in immediacy		
1 = Too many students respond	9	13.4
2 = Others beat me to it	3	4.5
3 = Instructors does not see/hear me	4	6.0
4 = Instructor ignores me	0	0.0
5 = This situation never occurs	51	76.1
Instructors rated low (lower 1/3) in immediacy		
1 = Too many students respond	6	9.2
2 = Others beat me to it	4	6.2
3 = Instructors does not see/hear me	11	16.9
4 = Instructor ignores me	4	6.2
5 = This situation never occurs	40	61.5

Chi-square Value	df	significance
8.59	2	.01359

Item 21 (How does the instructor react to the questions you make in class?) has four possible responses: "1" encourages me to question or comment again; "2" discourages me from commenting or asking a question again; "3" neither encourages nor discourages me; "4" I never participate. Instructors with low immediacy scores were reported as "1" 38.5%, "2" 6.2%, "3" 33.8%, and "4" 21.5%. High immediacy instructors scored 85.1%, 0.0%, 11.9%, and 3.0% respectively. Crosstab revealed a significant difference between the high and low immediacy instructors, chi-square value 31.99, df = 3, $p < .001$. For responses "1" and "2" a significant difference was revealed between the two groups, chi-square 8.24, df = 1, $p < .01$ (see Table 19).

Item 22 (In your opinion, how does the instructor react to opinions and comments given by other students in the class?) has four possible responses; "1" respects the opinions of students in this class, "2" does not respect the opinions of students in this class, "3" embarrasses or "puts down" students for their opinions, "4" I did not notice. Instructors with low immediacy scores were reported as "1" 80.0%, "2" 7.7%, "3" 7.7%, and "4" 4.6%. High immediacy instructors scored 95.5%, 1.5%, 1.5%, and 1.5%respectively (see Table 20).

Table 19

Item 21 Student Perception Questionnaire

How does the instructor react to the questions you make in class?

Value Label	Frequency	Percent
Instructors rated high (top 1/3) in immediacy		
1 = Encourages further comment	57	85.1
2 = Discourages further comment	0	0.0
3 = Neither encourages/discourages	8	11.9
4 = I never participate	2	3.0
Instructors rated low (lower 1/3) in immediacy		
1 = Encourages further comment	25	38.5
2 = Discourages further comment	4	6.2
3 = Neither encourages/discourages	22	33.8
4 = I never participate	14	21.5

Chi-square Value	df	significance
31.99	3	.0000
Responses "1" and "2"		
8.24	1	.004

Table 20

Item 22 Student Perception Questionnaire

In your opinion, how does the instructor react to opinions and comments given by other students in the class?

Value Label	Frequency	Percent
Instructors rated high (top 1/3) in immediacy		
1 = Respects opinions	64	95.5
2 = Does not respect opinions	1	1.5
3 = Embarrasses / puts down opinions	1	1.5
4 = I did not notice	1	1.5
Instructors rated low (lower 1/3) in immediacy		
1 = Respects opinions	52	80.0
2 = Does not respect opinions	5	7.7
3 = Embarrasses/puts down opinions	5	7.7
4 = I did not notice	3	4.6

RQ5

What is the relationship of student communication apprehension to perceptions of classroom interaction patterns?

In order to answer research question five, student personal communication apprehension scores were calculated by summing all responses to the PRCA instrument. Students reporting lower scores have less apprehension than those registering high on the scale. The lower and upper third of the student apprehension scores were then compared to the frequencies and percentages on items 12, 15, 17, 18 19, 20, and 24 from the student perception questionnaire. These items were identified by the creators of the questionnaire as student participation questions. Crosstabulations were also run to compare responses between low and high (moderate) CA students. No significance was found to exist between these two groups on any of the items related to student classroom interaction patterns.

Item 12 (How often do you voluntarily answer questions or contribute to class discussion in this class?) has five possible responses: "1" never; "2" one to three times during the course; "3" an average of once a week; "4" an average of two to three times a week; "5" an average of one or more times a day. Male and female students reporting moderate communication apprehension responded "1" 15.7%, "2" 21.6%,

"3" 21.6%, "4" 17.6%, and "5" 23.5%. Students reporting low CA responded 5.6%, 25.9%, 18.5%, 22.2%, and 27.8% respectively (see Table 21).

Item 15 (Are there times when you raise your hand to ask a question or make a comment but do not get called on by the instructor?) has four possible responses: "1" once or twice; "2" three or more times; "3" I am called on when I raise my hand; "4" I never raise my hand. Male and female students reporting moderate communication apprehension responded "1" 11.8%, "2" 2.0%, "3" 58.5%, and "4" 27.5%. Students reporting low CA responded 14.8%, 5.6%, 59.3%, and 20.4% respectively (see Table 22).

Item 17 (Are there times when you want to participate in class by asking a question or making a comment but choose not to do so?) has five possible responses: "1" once or twice; "2" three or more times; "3" nearly every day; "4" no, because I participate when I want to; "5" I do not want to participate. Male and female students reporting moderate communication apprehension responded "1" 31.4%, "2" 11.8%, "3" 13.7%, and "4" 43.1%. Students reporting low CA responded 38.9%, 14.8%, 11.1%, and 35.2% respectively (see Table 23).

Item 18 (If you have wanted to participate in class by asking a question or making a comment but did not do so, what was your reason for not doing so?) has five possible responses: "1" felt insecure,

Table 21

Item 12 Student Perception Questionnaire

How often do you voluntarily answer questions or contribute to class discussion in this class?

Value Label	Frequency	Percent
Student rated low in communication apprehension		
1 = Never	3	5.6
2 = 1 to 3 times during course	14	25.9
3 = Avg. once a week	10	18.5
4 = Avg. 2 to 3 times a week	12	22.2
5 = Avg. one or more times a day	15	27.8
Students rated moderate in communication apprehension		
1 = Never	8	15.7
2 = 1 to 3 times during course	11	21.6
3 = Avg. once a week	11	21.6
4 = Avg. 2 to 3 times a week	9	17.6
5 = Avg. one or more times a day	12	23.5

Table 22

Item 15 Student Perception Questionnaire

Are there times when you raise your hand to ask a question or make a comment but do not get called on by the instructor?

Value Label	Frequency	Percent
Students rated low in communcation apprehension		
1 = Once or twice	8	14.8
2 = Three or more times	3	5.6
3 = I am called on	32	59.3
4 = I never raise my hand	11	20.4
Students rated moderate in communication apprehension		
1 = Once or twice	6	11.8
2 = Three or more times	1	2.0
3 = I am called on	30	58.8
4 = I never raise my hand	14	27.5

Table 23

Item 17 Student Perception Questionnaire

Are there times when you want to participate in class by asking a question or making a comment but choose not to do so?

Value Label	Frequency	Percent
Students rated low in communication apprehension		
1 = Once or twice	21	38.9
2 = Three or more times	8	14.8
3 = Nearly every day	6	11.1
4 = No, I participate when I want to	19	35.2
5 = I do not wish to participate	0	0.0
Students rated moderate in communication apprehension		
1 = Once or twice	9	31.4
2 = Three or more times	6	11.8
3 = Nearly every day	7	13.7
4 = No, I participate when I want to	22	43.1
5 = I do not wish to participate	0	0.0

inadequate, or uncertain; "2" another student asked question or commented first; "3" too many student in class; "4" disagreed with instructor but chose not to speak out; "5" this situation never occurs. Male

and female students reporting moderate communication apprehension responded "1" 29.4%, "2" 31.4%, "3" 2.0%, "4" 11.8%, and "5" 25.5%. Students reporting low CA responded 35.2%, 31.5%, 3.7%, 11.1%, and 18.5% respectively (see Table 24).

Item 19 (In your opinion, which students most frequently participate in class?) has four possible responses: "1" those who are most knowledgeable or most interested in the subject; "2" those who are seeking clarification or want more information; "3" those who are trying to show off or get attention; "4" I have not noticed. Male and female students reporting moderate communication apprehension responded "1" 27.5%, "2" 49.0%, "3" 11.8%, and "4" 11.8%. Students reporting low CA responded 50.0%, 27.8%, 11.1%, and 11.1% respectively (see Table 25).

Item 20 (In your opinion, which students ask the most questions and make the most comments in class?) has four possible responses: "1" male student(s); "2" female student(s); "3" male and female students equally; "4" have not noticed. Male and female students reporting moderate communication apprehension responded "1" 13.7%, "2" 21.6%, "3" 51.0%, and "4" 13.7%. Students reporting low CA responded 27.8%, 27.8%, 25.9%, and 18.5% respectively (see Table 26).

Table 24

Item 18 Student Perception Questionnaire

If you have wanted to participate in class by asking a question or making a comment but did not do so, what was your reason for not doing so?

Value Label	Frequency	Percent
Students rated low in communication apprehension		
1 = Felt insecure, inadequate	19	35.2
2 = Another student went first	17	31.5
3 = Too many students in class	2	3.7
4 = Disagreed, but chose not to	6	11.1
5 = This situation never occurs	10	18.5
Students rated moderate in communication apprehension		
1 = Felt insecure, inadequate	15	29.4
2 = Another student went first	16	31.4
3 = Too many students in class	1	2.0
4 = Disagreed, but chose not to	6	11.8
5 = This situation never occurs	13	25.5

Table 25

Item 19 Student Perception Questionnaire

In your opinion, which students most frequently participate in class?

Value Label	Frequency	Percent
Students rated low in communication apprehension		
1 = Most knowledgeable/interested	27	50.0
2 = For clarification/information	15	27.8
3 = Trying to show off/get attention	6	11.1
4 = I have not noticed	6	11.1
Students rated moderate in communication apprehension		
1 = Most knowledgeable/interested	14	27.5
2 = For clarification/information	25	49.0
3 = Trying to show off/get attention	6	11.8
4 = I have not noticed	6	11.8

Table 26

Item 20 Student Perception Questionnaire

In your opinion, which students ask the most questions and make the most comments in class?

Value Label	Frequency	Percent
Students rated low in communication apprehension		
1 = Male student(s)	15	27.8
2 = Female student(s)	15	27.8
3 = Male & female equally	14	25.9
4 = Have not noticed	10	18.5
Students rated moderate in communication apprehension		
1 = Male student(s)	7	13.7
2 = Female student(s)	11	21.6
3 = Male & female equally	26	51.0
4 = Have not noticed	7	13.7

Item 24 (How often do students participate in this class by asking questions or making comments?) has four possible responses: "1" never; "2" rarely; "3" occasionally; "4" frequently. Male and female students reporting moderate communication apprehension responded "1" 0.0%, "2" 5.9%, "3" 29.4%, and "4" 64.7%. Students reporting low CA responded 0.0%, 5.6%, 27.8%, and 66.7% respectively (see Table 27).

Table 27

Item 24 Student Perception Questionnaire

How often do students participate in this class by asking questions or making comments?

Value Label	Frequency	Percent
Students rated low in communication apprehension		
1 = Never	0	0.0
2 = Rarely	3	5.6
3 = Occasionally	15	27.8
4 = Frequently	36	66.7
Students rated moderate in communication apprehension		
1 = Never	0	0.0
2 = Rarely	3	5.9
3 = Occasionally	15	29.4
4 = Frequently	33	64.7

Chapter Four

DISCUSSION

Sadker and Sadker (1986) suggest that "college women experience a decline in self-esteem as they progress through college. It is likely that a key factor in this decline is the inequitable communication women experience inside and outside the college classroom" (p. 514).

The purpose of this study was to explore how college students, male and female, perceive gender bias in the classroom. Student perceptions were used to explore teacher patterns of interaction and student participation while examining the issues of instructor immediacy and student personal communication apprehension.

Daly (1980) describes the importance of communication to instruction as both theoretical and practical. This chapter summarizes the findings of the student perception questionnaire, instructor verbal and nonverbal immediacy, and communication apprehension in terms of the five research questions of the study. Finally, limitations of this study and directions for future research are presented.

Summary of Research Questions

Upon examining the data collected for this research project, no significant difference was found to exist between female and male responses for any of the student perception questionnaire items.

Therefore, the discussion of the research questions will explore additional findings for combined responses of all research participants. Significant differences were revealed between the low and high immediacy instructors and will be addressed during the discussion of research question four.

RQ 1: Do students perceive that teachers respond with equivalent interest and encouragement to students of both sexes?

In order to answer research question one, items 11, 13, 14, 16, 21, and 22 of the student perception questionnaire were examined. While the answer to this question is "yes," there are additional interesting findings. Over 30% of the students surveyed responded that an instructor: never calls on them personally or anyone in the class to respond to a question or comment; when the student raises their hand, they can't respond because other students or the instructor either doesn't see them or ignores them; and when an instructor does react to questions by students in a class, the student is either discouraged, ignored, or chooses not to participate at all. When asked how an instructor most frequently calls on students, 13.6% responded that the instructor never calls on them. Although only 6.5% of students reported that the instructor reacts negatively to comments and opinions given by other students in the class,

there is large contingency of students who perceive that instructors do not respond positively to student questions or comments.

RQ 2: Is the instructor perceived as knowing students' name?

Instructor expectancy for students is influenced by several factors (see Figure 1). One of the factors that teachers take in (input) when developing an expectation of a student is the name of the student. Over 12% of the students surveyed responded that they were either uncertain or sure that the instructor did not know their name. Males were less sure (15.1%) with their response to item 11 than females (9.9%). Although this may appear to be an insignificant number of students affected, it is important to remember that name of student is one element of nine items identified by Braun (1976) as contributing to teacher input of student expectancy.

Research data was collected in the last four weeks of a semester in order to ensure that there was adequate time for instructors to be familiar with all students.

RQ 3: Does a difference exist in the perceptions of men and women students in regard to student classroom interaction patterns?

When students responded to how often they volunteer to answer questions or contribute to class discussion, 39 (34.8%) of the females responded that they never contributed or only contributed one to three

times during the course. Males' responses to the same items were 30.2% (n=26). When asked if there were times they raised their hand but did not get called on by the instructor, 21.5% of the females responded this occurs once or twice or three or more times. Males responded to the same item 16.3%. It is interesting to note that 27.9% of the males responded that they never raise their hand, while only 15.2% of the females never raise their hand.

Female students surveyed about how often students participate in class by asking questions or making comments reported that students frequently responded 70.5% of the time. Females thought that males and females responded equally 37.5%, but 28.6% of the females believed that males responded more frequently than females. Only 20.5% of the female respondents thought female students asked the most questions or made the most comments in class. Males responding to the same items reported being less aware of how frequently students participated by asking questions or making comments (59.3%). When asked who they thought responded more frequently, males or females, males believed females students responded more frequently than did males.

Female students who wanted to participate, but did not, stated that the reason they didn't respond was due to either too many students in the

class or another student went first 34.8%. Only 26.7% of the male students made these same responses.

Sadker and Sadker (1986) suggest: "the most valuable resource in a classroom is the teacher's attention. If the teacher is giving more of that valuable resource to one group. . .that group shows greater educational gains . . . . The patterns established in elementary and secondary school continue in higher education. Male students receive significantly more attention, and sex bias persists" (p. 514). Although the data in this study did not identify a significant difference in attention, a difference in the perception of female and male interaction patterns does exist.

RQ 4: What is the relationship of teacher immediacy to perception of classroom interaction patterns?

Instructors who were rated high in teacher immediacy were found to score consistently higher in student interaction by both male and female students. Of the instructors rated low in immediacy, 22% (n=14 out of 65) were instructors in communication courses; as for instructors rated high in immediacy, approximately 45% were instructors in communication courses (n=30 out of 67). One hundred percent of the students ranking teachers high in immediacy believed that the instructor knew their name, while only 75.4% of low immediacy instructors were perceived as knowing their students' names.

When asked how often the instructor called on students to answer a question or comment, over 80% of high immediacy instructors called on students at least sometime during the semester, with 28.4% averaging at least once a week. On the other hand, low immediacy instructors only called on 55.4% of the students over the course of the semester and fell to 16.9% of the students at least once a week. Instructors rated in the top third in immediacy called on 85.1% of the students by name, whereas the lower third only used 43.1% of student's names. Lower immediacy instructors were also found to never call on 29.2% of students; however, high immediacy instructors rated only 3.0% as never calling on students.

Nearly one fourth of students who perceived their instructors to posses low immediacy rated them as either as not seeing/hearing a student or ignoring the student when s/he raises her/his hand, while high immediacy teachers were perceived as never ignoring a student and not seeing or hearing them by only 6.0% of the participants.

When asked to respond to the issue of how an instructor reacts to questions raised by students, the immediate instructors were perceived as encouraging further comment by nearly 50% more students than lower ranked instructors. Low immediacy instructors were reported by 6.2% of the students as actually discouraging further comment. High immediacy instructors were perceived as never discouraging further comment. Three

percent of students with high immediacy instructors never participated, but in low immediacy classrooms this figure rose to a dramatic 21.5%.

As students observed how the instructors related to other students in a classroom, 15.4% reported that low immediacy instructors either didn't respect the opinions of other students or embarrassed/put down their opinions. Instructors reported as having high immediacy were perceived as not respecting or putting down other members of the class by only 3% of those surveyed.

Significant differences were revealed using chi-square statistical analysis between instructors perceived to be high or low in immediacy. Instructors who were perceived by the students as being more immediate were perceived by male and female students alike as calling on students more, respecting what students had to say, and encouraging students to ask questions or make comments. Sadker and Sadker (1986) found that although the need for teacher training at the college level was evident, it was often a challenge. "Changing instructional patterns in the college classroom was a more difficult challenge because inservice training in postsecondary institutions rarely addresses specific teaching skills (nor does preservice training, for that matter)" (p. 514). Although it may be challenging to train college instructors to change their ways, the data

show that the more immediate an instructor is, the better the classroom interaction.

RQ 5: What is the relationship of student communication apprehension to perceptions of classroom interaction patterns?

The self reported scores of student communication apprehension ranged from 56 to 83, with the majority (71.2%) falling in the 70 to 80 range. The scores for the bottom 1/3 of students, or those students rating themselves low in communication apprehension, ranged from 56 to 69. Students in the upper third of communication apprehension scores ranged from 74 to 83. With this relatively small range of communication apprehension scores, there were no measurable differences in scores on items of student interaction patterns. Students with self reported moderate or low CA responded almost identically to the combined scores for males and females to research question three.

Limitations and Directions for Future Research

According to the developers of the Student Perception Questionnaire, when interpreting the results of the SPQ "it must be remembered that the responses are opinions or perceptions and may or may not be consistent with fact" (Gappa & Pearce, 1980, p. 114). With this in mind, it is important to examine the limitations of this project and areas of future research.

When examining perceptions of students or faculty, it is clear that perceived actions on the part of student or instructor can deviate from what actually happens in the classroom. Although perceptions of what occurs in the classroom are important to examine, the causes behind why those perceptions exist can also be very important.

One limit to this research project is the lack of actual in class observation of the interaction taking place between instructors and students. Students were not required to report on the types of questions asked by instructors (e.g. high or low ordered questions), and the history behind why an instructor might ignore a student comment was not requested. Although a student's perceptions may accurately assess what is taking place on the surface of classroom interaction, students may not know or understand why such action is taking place. An instructor may be perceived as relating negatively to a student if that student has dominated or attempted to control the classroom previously. Future research should incorporate instructor and student perceptions of interaction in the classroom as well as actual in class observation and coding of behaviors.

Another limit to this project is the lack of diversity among respondents. The majority of students surveyed fell into the 18-21 year old range and classified themselves as Caucasian freshmen/women or sophomores. The students participating in the survey were also required

to complete a research project for their Communication 1113 or 2613 class or lose 10% of their overall points for the class (a letter grade). Although this practice does generate research subjects, the care and attention given to a self report survey can be lacking. Actual in class observation and anonymous self report separated from threat of grade reductions might improve response.

When examining the college classroom, surveys of upper classmen/women and graduate students would enhance data since these students have been exposed to the post secondary environment longer. Future research should also include non traditional female students. When older students return to the academic setting, they bring with them a variety of life experiences and they can be more aware of gender biases that exist either overtly or subtly.

Although the PRCA is an excellent measurement of a person's small group, interpersonal, or public speaking apprehension, it may not be the appropriate measure of a student's classroom participation apprehension. The items measured with the PRCA do not tap into the actual classroom setting and the apprehension a student may feel when confronted with participating in class with other students or the instructor one on one. Future research should look more at actual in class apprehension. Civikly (1992) suggests using CAPS: Classroom

Apprehension about Participation Scale by M. R. Neer as an effective means of measuring in class participation apprehension.

A fifth limit to this study is the number of students who reported perceived teacher immediacy and personal communication apprehension based on a communication course in which they were currently enrolled. Of the 198 total surveys, 68 (or approximately 35%) were from a basic speech course or an introduction to communication course. Since communication instructors are more aware of the issues of communication apprehension and teacher immediacy, results may be biased to show a favorable climate when in reality this may not be a true reflection of the current educational system. According to Rubin, Rubin, and Jordan (1997), PRCA scores significantly decreased over the course of a semester in basic communication courses. For students reporting they had low communication apprehension, approximately 25% were enrolled in introduction to communication or the basic speech course (n=14 out of 54). Approximately 40% (n=19 out of 51) of students reporting moderate communication apprehension were enrolled in a basic communication course (either introduction to communication or basic speech).

Another limitation to this study is the lack of knowledge obtained about individual classrooms reported on by students. Gappa and Pearce (1980) discuss the importance of the proportion of women and men in a

class. "The proportion of women in the class might be substantially higher than the proportion of men, but the majority of women and men in the class might see men and women as participating equally. This indicates participation rates may be proportionately lower for women than men" (p. 115).

Finally, the lack of a clear measure of gender bias in the classroom was a major limitation of this project. Unlike the Verbal and Nonverbal Immediacy Scale and the PRCA, the Student Perception Questionnaire has no scale or score that can be computed for determination of biases that may or may not exist in a classroom. With gender bias as a major issue of communication research, future work should involve the development of a Gender Bias Scale for use in instructional settings.

Areas of future research to consider in the area of gender bias in the classroom include in class observation, survey of textbook publishers, and a longitudinal study.

When a researcher goes inside the classroom walls and beyond the self-report method of gathering data, numerous areas of possibility are revealed. Utilizing multiple methods of data collection (such as video-taping and actual observation) would allow the researcher to view gender bias in such areas as wait time, level of difficulty involving questioning,

instructional strategies used by an instructor, and classroom techniques students employ.

Surveys of textbooks and publishers is another area of future research for gender scholars. Although several studies have examined textbooks and the use of pictures and examples of males and females, there is a void in the research concerning publishers and their perceptions of gender bias and the needs they might or might not see in the area of gender equity in textbooks.

A third area of future research involves a type of research that is often neglected due to time and money restraints, but is one that can reveal much about a student's development—a longitudinal study. Student ideals and expectations as they enter college and how those expectations are met or crushed through their college experience could give a researcher deep insight into areas of retention and self-esteem, especially for female students since we know from Sadker and Sadker (1986) that "college women experience a decline in self-esteem as they progress through college" (p. 514).

Conclusion

Although gender equity in the classroom is a small part of the class environment, and may seem insignificant to some, when added to other seemingly insignificant problems, there is cause for major concern. "While

some of the issues we have noted here appear small, in tandem they work to disempower women students. Although each specific form of gender inequity in education might seem minor, the *cumulative* impact can be overwhelming in communicating constantly that women are less valued, less respected, and less able than their male peers" (Wood, 1994, p. 221).

It has been suggested that one of the most valuable resources in a classroom is the teacher's attention. If this valuable resource is dispensed in greater portion to one group, it stands to reason that that group will show greater educational gains. According to Cawyer (1994), "while there is no magic formula for teaching and no prescriptions that guarantee student learning, only when classroom barriers have been removed can educators claim that their obligation to students has been fulfilled" (p. 117). Only by being aware that gender bias does exist to some degree in our classrooms and recognizing it as a barrier to students, can we begin to eliminate it.

As the primary agents for effecting change, teachers must be trained "to be aware of and to avoid gender stereotypes in the materials they choose and in their classroom interactions" (Stewart et al. 1990, p. 172). Just like carbon monoxide gas (which cannot be seen, but left unchecked kills), gender bias can kill the self-esteem and self-confidence

of female students. Although this is of course not true for every female, the point is that education should be equal to all regardless of race, religion, or sex.

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Appendix A

Consent Form for Questionnaire Administration

for the dissertation of Robin Jones

_____ I choose to complete the attached questionnaire concerning student perceptions of students and the instructor in the class previous to the one I am in presently. I understand that my participation is purely voluntary, that my responses will remain confidential, and that participation will in no way affect my final grade in this class.

_____ I am unwilling to complete the attached questionnaire and understand that my decision will in no way affect my grade in this course.

Student's Signature: _____

ID Number _____

Student Questionnaire
General Instructions: Either a pen or pencil may be used to complete this questionnaire. You will be asked to provide information based on your perceptions of the instructor, other students, and yourself in the class just prior to the one you are currently attending where the enrollment is less than 50 students. This class may be one you attended earlier today or the last class you attended yesterday.

1. What is the title of the course? _____

_____

2. Course is _____ lower division _____ upper division

3. Day and time of classreporting on ___ M ___ T ____ W ___ R ____ F

Time class meets _____

4 What is the sex of the instructor? _____ female ____ male

5 What is your classification? ___ freshman _____ sophomore

_____ junior _____ senior ____ graduate student

6 What is your age? _____

7 What is your Citizenship? _____ U.S. _____ Noncitizen

8 If U.S. citizen, what is your race? (if not U.S. citizen, do not answer.)

_____ Caucasian (White American) _____ Black American

_____ Hispanic (Mexican-American, Puerto Rican, Cuban, etc.)

_____ Native American (North American Indian/Alaskan)

_____ Asian American

9 What is your sex? _____ Male _____ Female

10 This course is: ____ Major requirement _____ Major elective

_____ General ed. requirement _____ General elective _____ Other

Directions for questions 11 - 24: Answer each of the following questions. Give only one answer to each question. Place the number corresponding to your answer on the blank to the left of the question.

_____ 11. Does your instructor know you by name?
(1) Yes
(2) No
(3) Don't know or uncertain

_____ 12. How often do you voluntarily answer questions or contribute to class discussions in this class?
(1) Never
(2) One to three times during the course
(3) An average of once a week
(4) An average of two to three times a week
(5) An average of one or more times a day

_____ 13. How often does the instructor call on you or ask you to respond to a question or comment?
(1) Instructor does not call on anyone
(2) One to three times during the course
(3) An average of once a week
(4) An average of two to three times a week
(5) Never

_____ 14. How does the instructor most frequently call on you?
(1) By name
(2) By pointing with hand
(3) By eye contact / looking directly at me
(4) Instructor never calls on me

_____ 15. Are there times when you raise your hand to ask a question or make a comment but do not get called on by the instructor?
(1) Once or twice
(2) Three or more times
(3) I am called on when I raise my hand
(4) I never raise my hand

_____16. Why do you think the instructor does not call on you when you raise your hand? (Select the one answer which best reflects your opinion.)
(1) Too many students want to respond
(2) Others beat me to it
(3) Instructor does not see or hear me
(4) Instructor ignores me
(5) This situation never occurs

_____ 17. Are there times when you want to participate in class by asking a question or making a comment but choose not to do so?
(1) Once or twice
(2) Three or more times
(3) Nearly every day
(4) No, because I participate when I want to
(5) I do not want to participate

_____ 18. If you have wanted to participate in class by asking a question or making a comment but did not do so, what was your reason for not doing so? (Select the one response that most closely corresponds with your feelings.)
(1) Felt insecure, inadequate, or uncertain
(2) Another student asked question or commented first
(3) Too many students in class
(4) Disagreed with instructor but chose not to speak out
(5) This situation never occurs

_____ 19. In your opinion, which students most frequently participate in class? (Select the one answer that best represents your opinion.)
(1) Those who are most knowledgeable or most interested in the subject
(2) Those who are seeking clarification or want more information
(3) Those who are trying to show off or get attention
(4) I have not noticed

_____ 20. In your opinion, which students ask the most questions and make the most comments in class?
(1) Male student(s)
(2) Female student(s)
(3) Male and female students equally
(4) Have not noticed

_____21. How does the instructor react to the questions you make in class?
(1) Encourages me to question or comment again
(2) Discourages me from commenting or asking a question again
(3) Neither encourages nor discourages me
(4) I never participate

_____ 22. In your opinion, how does the instructor react to opinions and comments given by other students in the class?
(1) Respects the opinions of students in this class
(2) Does not respect the opinions of students in this class
(3) Embarrasses or "puts down" students for their opinions
(4) I did not notice

_____23. Does your instructor use humor or make humorous references that you feel are offensive, embarrassing, or belittling to any individuals or groups?
(1) Never
(2) One time
(3) Occasionally
(4) Frequently

_____ 24. How often do students participate in this class by asking questions or making comments?
(1) Never
(2) Rarely
(3) Occasionally
(4) Frequently

Please rate the instructor of the class you are reporting on according to the following scale:

Never = 0 Rarely = 1 Occasionally = 2 Often = 3 Very Often = 4

25. Uses personal examples or talks about experiences she/he has had outside of class.
    0 1 2 3 4
26. Asks questions or encourages students to talk.
    0 1 2 3 4
27. Gets into discussions based on something a student brings up even when this doesn't seem to be part of his/her lecture plan.
    0 1 2 3 4
28. Uses humor in class.
    0 1 2 3 4
29. Addresses students by name.
    0 1 2 3 4
30. Addresses me by name.
    0 1 2 3 4
31. Gets into conversations with individual students before or after class.
    0 1 2 3 4
32. Has initiated conversations with me before, after or outside of class.
    0 1 2 3 4
33. Refers to class as "my" class or what "I" am doing.
    0 1 2 3 4
34. Refers to class as "our" class or what "we" are doing.
    0 1 2 3 4
35. Provides feedback on my individual work through comments on papers, oral discussion, etc.
    0 1 2 3 4
36. Calls on students to answer questions even if they have not indicated that they want to talk.
    0 1 2 3 4
37. Asks how students feel about an assignment, due date or discussion topic.
    0 1 2 3 4
38. Invites students to telephone or meet with him/her outside of class if they have questions or want to discuss something.
    0 1 2 3 4
39. Asks questions that have specific, correct answers.
    0 1 2 3 4
40. Asks questions that solicit viewpoints or opinions.
    0 1 2 3 4
41. Praises students' work, actions or comments.
    0 1 2 3 4

Please rate the instructor of the class you are reporting on according to the following scale:

Never = 0 Rarely = 1 Occasionally = 2 Often = 3 Very Often = 4

42. Criticizes or points out faults in students' work, actions or comments.
    0 1 2 3 4
43. Will have discussions about things unrelated to class with individual students or with the class as a whole.
    0 1 2 3 4
44. Is addressed by his/her first name by the students.
    0 1 2 3 4
45. Sits behind desk while teaching.
    0 1 2 3 4
46. Gestures while talking to the class.
    0 1 2 3 4
47. Uses monotone/dull voice when talking to the class.
    0 1 2 3 4
48. Looks at the class while talking.
    0 1 2 3 4
49. Smiles at the class as a whole, not just individual students.
    0 1 2 3 4
50. Has a very tense body position while talking to the class.
    0 1 2 3 4
51. Touches students in the class.
    0 1 2 3 4
52. Moves around the classroom while teaching.
    0 1 2 3 4
53. Sits on a desk or in a chair when teaching.
    0 1 2 3 4
54. Looks at board or notes while talking to the class.
    0 1 2 3 4
55. Stands behind podium or desk while teaching.
    0 1 2 3 4
56. Has a very relaxed body position while talking to the class.
    0 1 2 3 4
57. Smiles at individual students in the class.
    0 1 2 3 4
58. Uses a variety of vocal expressions when talking to the class.
    0 1 2 3 4

Directions: This instrument is composed of twenty-five statement concerning feelings about communicating with other people. Please indicate the degree to which each statement applies to you by marking whether you:

0 = Strongly Agree 1 = Agree 2 = Undecided
3 = Disagree 4 = Strongly Disagree

with each statement. There are no right or wrong answers. Many of the statements are similar to other statements. Do not be concerned about this. Work quickly, just record your first impression.

59. I dislike participating in group discussions.
0 1 2 3 4
60. While giving a speech I get so nervous, I forget facts I really know.
0 1 2 3 4
61. I am very relaxed when answering questions at a meeting.
0 1 2 3 4
62. Generally, I am comfortable while participating in a group discussion.
0 1 2 3 4
63. I face the prospect of giving a speech with confidence.
0 1 2 3 4
64. While participating in a conversation with a new acquaintance, I feel very nervous.
0 1 2 3 4
65. I am tense and nervous while participating in group discussions.
0 1 2 3 4
66. My thoughts become confused and jumbled when I am giving a speech.
0 1 2 3 4
67. Communicating at meetings usually makes me uncomfortable.
0 1 2 3 4
68. I like to get involved in group discussions.
0 1 2 3 4
69. I feel relaxed while giving a speech.
0 1 2 3 4
70. I am very calm and relaxed when I am called upon to express an opinion at a meeting.
0 1 2 3 4
71. I have no fear of speaking up in conversations.
0 1 2 3 4
72. Usually I am calm and relaxed while participating in meetings.
0 1 2 3 4

Please indicate the degree to which each statement applies to you by marking whether you:

0 = Strongly Agree **1 = Agree** **2 = Undecided**
3 = Disagree **4 = Strongly Disagree**

73. Engaging in a group discussion with new people makes me tense and nervous.
0 1 2 3 4

74. Certain parts of my body feel very tense and rigid while giving a speech.
0 1 2 3 4

75. I am afraid to express myself at meetings.
0 1 2 3 4

76. I am calm and relaxed while participating in group discussions.
0 1 2 3 4

77. I have no fear of giving a speech.
0 1 2 3 4

78. Ordinarily I am very tense and nervous in conversations.
0 1 2 3 4

79. Ordinarily I am very calm and relaxed in conversations.
0 1 2 3 4

80. Generally, I am nervous when I have to participate in a meeting.
0 1 2 3 4

81. I'm afraid to speak up in conversations.
0 1 2 3 4

82. While conversing with a new acquaintance, I feel very relaxed.
0 1 2 3 4

Appendix B

Nonverbal Immediacy Items

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

* Presumed to be non immediate items.

Appendix C

Verbal Immediacy Items

1. Uses personal examples or talks about experiences she/he has had outside of class.
2. Asks questions or encourages students to talk.
3. Gets into discussion based on something a student brings up even when this doesn't seem to be part of his/her lecture plan.
4. Uses humor in class.
5. Addresses students by name.
6. Addresses me by name.
7. Gets into conversations with individual students before or after class.
8. Has initiated conversations with me before, after or outside of class.
9. Refers to class as "my" class or what "I" am doing. *
10. Refers to class as "our" class or what "we" are doing.
11. Provides feedback on my individual work through comments on papers, oral discussions, etc.
12. Calls on students to answer questions even if they have not indicated that they want to talk. *
13. Asks how students feel about an assignment, due date or discussion topic.
14. Invites students to telephone or meet with him/her outside of class if they have questions or want to discuss something.
15. Asks questions that have specific, correct answers. *
16. Asks questions that solicit viewpoints or opinions.
17. Praises students' work, actions or comments.
18. Criticizes or points out faults in students' work, actions or comments. *

19. Will have discussions about things unrelated to class with individual students or with the class as a whole.
20. Is addressed by his/her first name by the students.

*Presumed to be non immediate items.

Figure 1 The Behavioral Cycle Between Teacher Input and Learner Output