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THE RELATIONSHIP BETWEEN CLASSROOM PARTICIPATION
OF ADULT LEARNERS AND COMMUNICATION APPREHENSION

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By

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* * * * *

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A significant and growing portion of the total pool of undergraduate students in higher education consists of adult learners. This dissertation will explore the challenges that adult learners pose for the college/university teacher within the classroom setting, specifically dealing with the communication factors involved in the teaching-learning transaction. From this discussion, which will include definitions of terms, a problem statement will be derived. From the problem statement eight research questions will be generated. A review of the relevant literature and a discussion on methods will also follow.

Nature of the Problem

The increase in the number of adult learners in colleges and universities has stimulated research in adult learning. Kidd's (1973) analysis of learning theory as applied to adults suggests that teaching adults creates some new challenges for educators. Adult learners, compared to
traditional undergraduate students, 18-21 years of age, are said to be more active participants in the learning process and to require a more structured and person-centered approach to learning (Brookfield, 1985). Knowles' theory of andragogy, as explained in The Adult Learner: A Neglected Species (1979), emphasizes the importance of allowing adults to be self-directed in their learning. Traditional teaching methods of lecturing and teacher-directed research are seen to have little regard for differences in age and experience of learners. In contrast, adult educators are urged to focus on more experiential techniques such as simulations, field experiences, team projects, and discussions where the adult learner can more actively participate in the learning experience.

Experiential techniques, however, depend upon willing participation and a high degree of trust between student and facilitator and among students. Experiential situations can be potentially embarrassing for students and, therefore, threatening for both student and facilitator. The assumption that all adults are ready and willing to participate in such activities can be erroneous. As Brookfield (1986) points out, "many learners within formal courses, classes, and programs have stubbornly resisted the efforts of educators to transfer control over learning to
them. Some are visibly intimidated . . . others feel resentful . . . still others are confused" (p. 67).

Communication, psychology and education literature identifies several communication traits that may predict student willingness to engage in experiential techniques in the classroom. For example, communication apprehension (CA) refers to an individual's level of fear or anxiety associated with either real or anticipated communication with another (McCroskey, 1971); willingness to communicate refers to an individual's tendency to talk to others encountered in a wide variety of situations (Burgoon, 1976; McCroskey & Baer, 1985); communication competence refers to qualities of an individual who is attentive and perceptive of the behaviors of others and capable of modifying his or her behavior to accomplish certain communicative goals and objectives (Cegala, 1981). While there is a large body of research examining these traits in the elementary and secondary school classroom, little has been done to study these traits among adult students in classroom situations. As Mezirow explains, "self-directedness is inherent in the way our culture defines adulthood, and communicative competence is the essence of self-direction" (1991, p.69).

Two studies have been conducted involving communication traits among adult students in the college classroom
environment. Lam (1981) found a high association between various types of anxiety and classroom behaviors of adult learners. Comadena, Semlak, Chandler and Escott (1989) compared adult learners and traditional undergraduate students in terms of communication apprehension, willingness to communicate, and interaction involvement in an effort to explain the different levels of student classroom involvement. Results indicated that the two groups were not significantly different on communication traits. Adult learners were no more willing to communicate than traditional undergraduate students. Furthermore, communication apprehension and interaction involvement, while significantly related to traditional undergraduate achievement (measured by grade point average), was not related to adult learner achievement (also measured by grade point average).

Adult education literature indicates that, generally speaking, adult learners want to participate and that educators should be prepared for this willingness to be an active part of the education process. For example, in Beder and Darkenwald's study (1982) of 173 public school and college teachers who taught adults and preadults, there was an awareness among the teachers of differing learning styles between these two groups. Adult learners were perceived as
more motivated, serious, and self-directed than preadult students. Yet the adult education literature also warns practitioners that returning adults may lack self-confidence and basic study and communication skills, especially female returning adults (DiSilvestro, 1978; Berryman-Fink, 1982; Redding & Dowling, 1992). Does this drive to participate overcome communication apprehensive feelings? Or do adult learners react differently to apprehension than traditional age students? If adult learners are communication apprehensive, will they avoid classes that involve experiential methods in favor of the traditional class lecture format?

Since 1971, numerous studies have demonstrated that communication apprehension and academic achievement are inversely related (Bashore, 1971; Comadena & Comadena, 1984; McCroskey & Anderson, 1976; Powers & Smythe, 1980; Smythe & Powers, 1978). Findings indicate that students high in communication apprehension either avoid or fail to participate meaningfully in classroom communications with teachers and peers in order to avoid experiencing the anxiety they have learned to associate with communication. Since the essence of instruction is communication, fear or anxiety about participating in classroom communication results in low levels of learning. "Higher communication
apprehension is always implicated with poorer outcomes of academic achievement" (McCroskey, Booth-Butterfield, & Payne, 1989, p.104). One of the few studies which directly examined communication apprehension and the achievement of adult learners in the classroom, the Comadena (1984) study, found no relationship between communication apprehension, interaction involvement, and adult learners' achievement. Why would adult learner achievement be different from the traditional student?

Purpose Statement
This study proposes to continue the comparison of traditional and adult learners in the college classroom setting by reconciling the predicted differences in adult classroom behavior stated in the adult education literature with the observed behavior indicated in the communication apprehension literature. The pedagogical implications of these behaviors will also be explored. The following research questions will be addressed.

Research Questions
Research Question One: Are communication apprehension and amount of classroom participation related for both traditional and adult students?
Research Question Two: Are adult learners less communication anxious than traditional age students in the classroom setting?

Research Question Three: Do adult students engage in more verbal interaction than traditional students in the classroom setting?

Research Question Four: Is student acceptance of interactive teaching methods inversely related to level of communication apprehension?

Research Question Five: Are female adult students more communication apprehensive than male adult students?

Research Question Six: Do degree seeking students have a higher level of communication apprehension than non-degree seeking students?

Research Question Seven: Is level of communication apprehension directly related to the subject matter of the course for adult or traditional students?

Research Question Eight: Is class related to the level of participation or level of communication apprehension?

Research Question Nine: What are the best predictors of classroom participation and communication apprehension?
Definitions

In order to fully investigate the above research questions the following definitions are offered for clarification.

(1) Adult learners are those students age 23 and over who have returned to continue their formal education in credit earning classes at the college level.

(2) Communication is the process by which we understand others and in turn endeavor to be understood by them. It is dynamic, constantly changing and shifting in response to the total situation (Anderson, 1959).

(3) Communication apprehension, as defined by McCroskey (1984) refers to fear or anxiety associated with either real or anticipated oral communication with another person. Levels of communication apprehension will be determined through the results of the Classroom Apprehension Participation Scale (Neer, 1987).

(4) Classroom communication behavior refers to the verbal communication occurring while in the classroom during the formal class. Who students communicate with and how much they communicate will be documented through direct class observations.

(5) Class format refers to the overall teaching strategy used in the classroom. The education literature identifies
the four most common strategies as defined by Seaman and Fellenz, as lecture - "a well-prepared oral presentation on a topic by a qualified person" (p.54); class discussion - class participants exchange information, share insights or experiences in order to gain knowledge or come to a decision; small group work - a group of five to fifteen people meeting face-to-face for the purpose of sharing knowledge or making a decision; and independent study - an individual, with the assistance of the teacher, designs the curriculum, outcomes, and evaluation of a course of study to be followed by that individual. Students will be surveyed concerning preferred class format based on these categories.

Assumptions of the Study
1. The study sample is representative of the adult student population at Otterbein College.
2. The specific classes observed were typical classes for that course.
3. The presence of the observer did not change the typical behavior in the class.
4. Classroom behavior is an indicator of feelings of anxiety.
5. Oral participation in the classroom is desirable.
To place this study in perspective, a review of the relevant literature is in order. The adult education literature specific to adult student behavior in the formal classroom setting will be reviewed as well as the literature on communication apprehension as it applies to classroom situations.
CHAPTER II
LITERATURE REVIEW

Adult Classroom Behavior and Teaching Techniques

In 1926 Eduard C. Lindeman published his now classic *The Meaning of Adult Education*. Lindeman affirms the need for adult education for self-improvement as well as for social change. Education is viewed no longer as the preparation for life but is life. Since life consists of experiences adult education must be built on these experiences. In Lindeman we see the bases for contemporary adult learning theory. Knowles built upon the importance of experience in his theory of andragogy. The volunteer nature of adult education is reflected in the development of self-directed learning. As Lindeman proclaims, "Authoritative teaching, examinations which preclude original thinking, rigid pedagogical formulae—all of these have no place in adult education" (1926, p. 7). While Lindeman serves as the basis for many contemporary theories, it must be noted that Lindeman was writing at a time of great social change, when formal education was not open to the general masses. Thus,
if education is the basis for change, but not generally available, then the people had to look for self-directed ways to meet their needs. Today, higher education is more open to the public and with shifting demographics and technological advances, education is having to appeal to and adapt to the returning adult student.

Darkenwald and Merriam's *Adult Education: Foundations of Practice* (1982) provides a very useful topology of the different sources of adult education. They list four categories of organizations that provide adult learning opportunities today: independent adult education organizations, educational institutions, quasi-educational organizations, and noneducational organizations. This proposal will focus on the second category, educational institutions, and more specifically institutions of higher education.

Within educational institutions education is generally approached from a formal perspective. While educators within these institutions acknowledge the differences between adult learners and traditional learners little is done to adapt to the needs of adult learners. J. Roby Kidd in *How Adults Learn* (1973) emphasizes the learning process and traditional learning theory as applied to adults, but acknowledges from the outset that "much more is known than
is generally practiced" (13). This attitude is confirmed in a 1987 article in *The Chronicle of Higher Education*. "Many [professors and administrators] perceive older students as intruders who have been admitted to college only because the enrollment of "real" students is dwindling" (Kastenbaum, p. B2). Adult students are seen as second-class students. More recent articles from *The Chronicle of Higher Education* (Watkins 1989; Giezkowski 1992) reveal that some colleges are making adjustments for the returning adult student. "Colleges are responding to the influx of older students with—among other things—new teaching methods, such as collaborative learning" (Watkins, p. A32). So while attitudes may be shifting, the change to meeting adult student needs is a slow process and by no means universal.

Institutions of higher learning that are adjusting to meet the needs of the adult student are adapting alternate instructional methods. Probably the best known theory for an alternate mode of instruction is Malcolm Knowles' theory of andragogy (Knowles, 1980, 1987). Knowles proposes a learner-centered environment where the learner and facilitator are viewed as mutual partners in the learning process. In *Self-Directed Learning* (1975), Knowles presents specific suggestions on how to facilitate a self-directed classroom based on small group activities that the learner
and facilitator design to meet the learners' needs. Stephen Brookfield in *Understanding and Facilitating Adult Learning* (1986) looks at the successes and difficulties of various programs that use andragogical practices and identifies methods that seem to be the most effective for adult learners. His identification of the many possible institutional barriers to self-directed methods in formal educational settings is most helpful to adult education practitioners. Brookfield (1987) makes an important distinction between self-determination and self-direction. While self-determination is of paramount importance within the social and psychological stages of adulthood, self-direction may not always be possible or preferred. Thus, the assumptions of andragogy may not be appropriate for all adults in all learning situations. While these two authors have contributed greatly to the field overall, most of the information available on teaching adults describes how to teach to specific learners, such as the undereducated or disadvantaged or are very subject specific (for example, Friedman & Knight, 1970; Mattran, 1976; Ulmer, 1972).

What is available on teaching methodology tends to be general in nature and usually only brief sections within larger texts (for example, Knowles, 1960; Smith, Aker, and Kidd (1970). *Effective Strategies for Teaching Adults* by
Seaman and Fellenz, while not adding any new material to the field does present specific strategies and materials for use by the practitioner stressing "that active participation by the learner and meaningfulness of the content are two constant factors influencing the effectiveness of the teaching/learning process" (p. 5). While many techniques are discussed and illustrations offered of their use in the past, the attitude of the adult learner's reaction to the method is only mentioned in a very general way. All of the above resources stress adapting to the learners' needs, but none connect the learner's needs with their behavior within the classroom situation. Joe Heimlich and Emmalou Norland, in Developing Teaching Style in Adult Education (1994), focus on the adult educator's style in an effort to get educators to self-evaluate their teaching styles and methods in the classroom. Specific approaches for matching methods to style and the development of a personal style of teaching are offered. But the focus of the book is clearly one for the practitioner's benefit. Patricia Cross, in Accent on Learning (1976), suggests that searching for the right teaching method is probably futile as she writes:

It now seems clear that we are not going to improve instruction by finding the method or methods that are good for all people. . . . When we look at the data student by student, it is clear that some students improve, some remain unaffected, and a few actually regress under various teaching conditions. The very
A few researchers have attempted to study adult learners in the classroom situation. In her review of research on adult undergraduates, Carol Kasworm (1990) identifies the "contextual relationship between the adult and the undergraduate environment" as a key research focus (p. 365). Both adult learners and institutions serving them change as a result of the "transactional relationship between adult students and higher education environments" (p. 365). While there is theory to support this relationship, there is little empirical data focused on instruction. Philip Candy (1981) conducted interviews with adult learners in an attempt to establish situations in which they learned in order to discover if there are any commonly shared dimensions along which adult learners usually perceive or define learning situations and experiences. Candy found twelve different dimensions some of which are clearly understood, such as the difference between learning alone and with others, and some of which have only clear meaning to individuals in their world. While Candy's study involved a small sample size it does illustrate the differences in needs, perceptions, and expectations of the learner in the learning situation.
Fayne (1991) calls for qualitative and quantitative research focusing on faculty and student perceptions of instruction in higher educational settings and verification of these perceptions through actual observations within classrooms. She then begins this research surveying 370 adult degree students and 120 full-time faculty who taught in adult degree programs on course content, workload, attitudes toward adult and traditional students, applicability of work experience, and comfort level on class format. While Fayne’s study is based on one institution, her results are worth noting. Fayne directly observed 16 classes for levels of participation and types of participation. Each class had both adult and traditional age students enrolled. The results reveal more similarities than differences. Faculty reported that load and content did not vary between adult and traditional age classes and students reported that course content was generally appropriate. Adult and traditional-aged males preferred a lecture format and 40% of the faculty assumed that students would respond in this fashion. The female students were fairly evenly distributed across the format categories. All student groups reported discomfort when asked to speak in large group situations. Adult students also reported concerns over group assignments and student-directed
learning. "The more traditional format was easier to control" (p. 9).

The results of the classroom observations indicate that adults tend to be more participatory. Only in small group settings did traditional students show a high level of participation without having an instructor solicit comments in a deliberate fashion. During class time adults are more likely than traditional age students to voice concerns, to ask for clarification on directions, and to make sure that instructor's expectations are articulated. This level of participation was also reflected by the traditional students' comments that "adult classes tended to be more active; based on the observation data, it appeared that this activity resulted from a vocal adult minority" (p. 8). In classes with 23 or more adults only 3 to 5 adults made substantive responses to instructor invited participation. Thus, while adults many seem more participatory, this study found that it is a small minority creating that impression.

Fayne concludes her study by challenging some tenets of andragogy as applied to collegiate settings.

"While adults may be self-directed, interested in applying prior experiences in an active manner, willing to set their own learning agenda, and insistent upon immediate application under certain conditions, a typical undergraduate course of study many not foster these proclivities. . . . It is possible that self-determination and self-directed learning potentially conflict with one another. Adults pursue a college
degree while playing a number of roles: parent, worker, community volunteer, to name a few. Self-direction and agenda setting as well as active participation in group tasks take an unspecified amount of time. Adults who appear to require that the rules of the "academic game" be precise and predictable, might find such open-ended contexts psychologically disconcerting and practically unmanageable" (p. 10).

Fayne's findings of level of participation and level of discomfort with instructional method verify findings from previous studies which did not deal with direct classroom observation, but focused on the affect of anxiety on performance within the classroom situation.

**Communication Apprehension and Adult Classroom Behavior**

Communication apprehension has been reported to be American's number one fear (Wallechinsky, Wallace, & Wallace, 1978). Research suggests that communication apprehension is related to negative personality traits (McCroskey, Daly, & Sorenson, 1976) and causes certain social withdrawal behaviors (McCroskey, 1977). Since 1971, a number of research projects (for example, Bashore, 1971; Comadena & Comadena, 1984; Comadena & Prusank, 1988; Davis & Scott, 1978; McCroskey & Anderson, 1976; Powers & Smythe, 1980) have demonstrated that communication apprehension and academic achievement are significantly and negatively related. This inverse relationship is based on the belief that students high in communication apprehension, compared
to students low in communication apprehension, either avoid or fail to participate meaningfully in classroom communication with teachers and peers in order to avoid experiencing the anxiety they have learned to associate with communication. As previously mentioned, the adult education literature acknowledges that the adult student may find returning to the classroom situation anxiety provoking. In a study of adult students enrolled in the graduate programs of the College of Agricultural and Life Sciences and the School of Education at the University of Wisconsin-Madison, Daniele Flannery and Jerold Apps (1987) found that one of the major barriers perceived by the returning adult students was an increase in stress and that this stress increased over time. Apps (1988) addresses the possibilities for higher education to meet the needs of adult learners through diversifying instructional methods and approaches, and the revamping of student services.

Many programs have designed orientation activities specific to the relief of anxiety produced by returning to a formal educational situation. Berryman-Fink (1982) recommends that all returning adult programs provide a course for which credit is earned that reintroduces the adult student to the academic environment and teaches skills necessary for academic success. Berryman-Fink's proposal
rests on the premise that "communication training is imperative to the academic success of the adult learner" (p. 349) and provides an example of a course, Communication Skills for Adult Learners, as taught at the University of Cincinnati. The course is designed to help students "develop the proper mindset, acquire study and communication skills for subsequent courses, and gradually orient themselves into the university environment" (p. 354). The goal of the course is to aid adult learners in becoming communication competent.

The concept of communication competence deals with more than effective communication skills. It includes the ability to adapt to the surrounding environment in order to achieve your communication goal. As Spitzberg and Cupach indicate, "the need to specify the nature of communication competence is significant. It is the yardstick for measuring the quality of our interpersonal relationships. Moreover, the acquisition of communication competence is necessary to fulfill the general need of all humans to control their environment" (p. 11). Jurgen Habermas has written extensively on the concept of communication competence. In the introduction to Habermas' Communication and the Evolution of Society (1976/1979), Thomas McCarthy explains Habermas' perspective of a speaker's competence as including
"not only the ability to produce and understand grammatical sentences but also the ability to establish and understand those modes of communication and connections with the external world through which speech becomes possible" (p. xviii). Thus in addition to the claim that what a speaker utters is comprehensible, the speaker also claims that what he or she states is true, his or her intentions sincere, and all cultural and contextual norms are being followed and are appropriate. Habermas' theory goes beyond the analysis of an individual act or skill but to the analysis of society itself. As Foss, Foss, and Trapp explain in their summary of Habermas in Contemporary Perspectives On Rhetoric (1985), "Habermas' theory of communication, then, is not intended simply as a way of conceptualizing human interaction. His distinctive contribution to our understanding of communication lies in his ability to illustrate how a non-arbitrary set of values and norms necessary for the practice of critical theory already is embedded in communication... According to Habermas, he has uncovered, in the ideal speech situation, a universal principle of rationality that is true because it taps a necessary structure of our world" (p. 237).

Habermas' theory of communicative action with the emphasis on full participation in reflective discourse
becomes the basis for Jack Mezirow's theory of transformative learning. Mezirow (1991) begins by examining the learning process and how individuals create meaning. Basic to reaching understanding is being able to participate in communicative action. Dialogue or communicative action allows us to relate to the world around us. Communicative action is the essence of self-direction which is how our society defines adulthood. Also drawing on the theories of Bateson and Cell, Mezirow develops a learning theory based on developing new interpretations that challenge previous meanings and perspectives through an emancipation from the forces that have controlled our thinking. This becomes the essence of adult learning. Children rely on authority for learning. Adults, through data collection, reflection, elaboration, imagination, transform what was previously learned into new meaning. Mezirow then explains how andragogy can foster transformative learning through encouraging decrease in dependency on the instructor and increasing the learners' responsibility in the learning process. Patricia Cranton, in Understanding and Promoting Transformative Learning: A Guide for Educators of Adults (1994), applies Mezirow's transformative learning to the learner as well as to the adult educator with some suggested strategies. While Mezirow and Habermas agree that the ideal
conditions for communicative discourse may not exist, it is the educators' responsibility to anticipate intrusive forces and plan to counter them so that learning can occur. Since learners enter any situation at different levels of readiness to learn, the educator needs to work with this diversity to assure that the chance for learning is enhanced for everyone. But if learners are not willing to enter into a dialogue with other learners than this learning could be severely inhibited. Self-directedness depends on a willingness to communicate. If the negative affects of anxiety are affecting the learning process than they need to be identified and addressed.

There are three studies that have been completed specific to classroom communication anxiety and the adult learner. Yee-Lay Jack Lam (1978) examined how needs and expectation changes affect variation in anxiety levels in the adult learner. Eighty-one adult learners enrolled in six different special education and educational administration courses offered through the education extension courses on one campus were surveyed twice to assess both the level and contextual sources of anxiety. The first questionnaire consisted of nine items with a five-point scale on which the respondent indicated which point best reflected his/her feelings at that period of time. The
second questionnaire measured content and structural aspects of the teaching-learning process. Both questionnaires were administered at three different times during the semester. The data, subjected to Principal Factoring Analysis, reveal three underlying types of anxiety: anxiety about course setup (teaching method used, understanding of the content, and course satisfaction), anxiety about interpersonal process (approachability of the instructor and classmates socialability), and anxiety about evaluative outcomes (grading, course outcome expectations). In terms of variance, anxiety about the course setup explained a greater proportion of overall anxiety than did anxiety about the interpersonal or evaluative outcomes. All three types of anxiety were found to decrease over the course of the semester. Females maintained a lower level of anxiety than the males throughout the learning process but especially in the last period of the evaluative process. Anxiety about evaluation increased overall in the second testing period but then disappeared in the last period, seeming to suggest that "once adults are assured of their ability to perform well, their self-confidence is reestablished . . . and did not require continued encouragement from the instructor" (p. 89). Lam concludes from this study that while course setup tends to constitute the predominant source of anxiety, adult
learners seem most susceptible to anxiety concerning their learning outcomes. Those students who initially had expectations different from those of the instructors generally had a higher level of anxiety. Therefore, adult educators should tailor "course materials to the capability of learners and establish good human relations between instructors and learners, as well as among learners themselves. . . . [It] is perhaps pertinent for educators to assist learners to develop more realistic educational objectives at the outset so as to reduce unnecessary tension in the subsequent learning process" (p. 92). While Lam does not indicate what type of teaching style was used by the instructors of his study, the conclusions still indicate that the method and organization of the course can directly influence the type of participation in the course. If the learners find the setup of the course threatening then previous research indicates that they will participate less. If there is less participation then instructors will have to alter their teaching methods.

Lam (1981) followed up on how anxiety can affect classroom behavior in another article in what appears to be the exact same sample as the first study. Lam adds to the study observation of classroom behavior based on a time-sampling design. The observers were looking for verbal and
non-verbal behaviors as described by Feichtner and Burstyn: vague questions, in-depth questions, clarification of assignments, interaction with instructor, interaction with classmates, experience sharing, positive responses, and negative responses. Lam found that anxiety and classroom behavior were significantly related, particularly during the beginning of a course. High anxiety about evaluative outcome and course arrangement were positively related to negative responses. Learners were restrained from voicing unsupportive remarks or gestures. Anxiety about the interpersonal process prompted learners "more often to raise vague questions and less frequently 'in-depth' ones, to ask further clarification about assignments, to be less ready to interact with the instructor and classmates or to share experiences related to the course, and to display far less positive responses" (p. 94). Throughout the course, high anxiety about the course, the interpersonal process and evaluative outcomes significantly decreased student participation in the class.

In order to explore whether the anxiety and behavior had the same or different causes, Lam used canonical variate analyses. Lam found that various types of anxiety could be directly linked to classroom behavior. Thus, an understanding of adult learners' anxiety can be traced to
reasons why adults do or do not behave in certain ways in class. Lam concludes that

"The establishment of a direct causal relationship between the intangible emotional state of the learners and observable behaviors hopefully would sensitize instructors to adult learners' needs and capabilities in the process of acquiring knowledge and skills. To the extent that highly anxious learners display strong avoidance behaviors from active participation in class, instructors should no longer take for granted that absence of participatory behaviors on the part of the learners denotes that things have gone well for them. Rather, they should initiate greater interaction with highly anxious learners in order to identify problem areas" (p.96).

While Lam's two studies seem to verify the communication apprehension research, results have not always verified the adult education literature. In another attempt to explain the different levels of student classroom involvement and its relationship to communication traits and student learning, Comadena, Semlak, Chandler, and Escott (1989) conducted a study that compared adult learners and traditional undergraduate students in terms of communication apprehension, willingness to communicate, and interaction involvement. One hundred sixty-five traditional undergraduate students and 108 adult learners attending a large midwestern university all of whom were enrolled in the identical four-year degree granting program were surveyed. McCroskey's Personal Report of Communication Apprehension-24 (PRCA) was used to assess trait communication apprehension;
Neer's Class Apprehension about Participation Scale (CAPS) was used to assess generalized context communication apprehension; McCroskey and Baer's Willingness to Communicate Scale (WTC) was used to assess willingness to communicate; and Cegala's Interaction Involvement Scale (IIS) was used to assess communication competence. Student achievement was operationally defined as student's cumulative grade-point-average (GPA). All scales were compiled in a single questionnaire. The results indicate that adult learners were not found to be significantly different from traditional undergraduate students in terms of trait communication apprehension (PRCA), classroom communication apprehension (CAPS), willingness to communicate (WTC), or interaction involvement (IIS). Traditional students' trait communication apprehension and classroom communication apprehension were significantly and inversely related to GPA and significantly and positively related to communication competence. For the adult learners, none of the correlations were statistically significant. Thus, Comadena, Semlack, and Escott conclude, "while the two populations have the same levels of communication apprehension, willingness to communicate, and communication competence, these communication traits do not appear to be associated with adult learners' academic
performance, but they do appear to be associated with traditional students' level of academic performance" (p. 13). In an effort to understand these results the authors compared the GPAs of the two groups. Adult learners had an average GPA of 3.2 while the traditional undergraduate students' had a GPA of 2.72. The authors hypothesize that adults may differ from traditional undergraduates in terms of intelligence or academic ability and, as a result, better compensate for the effects of high communication apprehension and low communication competence. A second possible explanation could be that adult learners have more experience through employment and perhaps academically which has taught them to better compensate for their communication apprehension and/or lack of competence. A third hypothesis offered by the authors is one of motivation. Because of the sacrifices adult learners make to attend school they may be motivated to work harder and overcome any performance barrier presented by this level of communication apprehension and communication competence. The need for further research is clearly emphasized. One possible explanation for the difference in results of this study as compared to previous studies on communication apprehension and academic performance is that this study operationalized academic performance as overall GPA and not the grade
received in the class attended at the time of the study. Thus the specific situation could be influencing the results of the study. No information is given on the nature or design of the course in which these students were enrolled. The nature of the course itself could have been more appropriate for the adult learner than the traditional student.

Based on the small amount of empirical work and on the potentially contradictive results of the studies that have been done I propose further examination of communication apprehension and its relationship to communication behavior and academic performance for adult learners in an effort to provide direction for the development of more appropriate classroom teaching techniques. The following study is proposed in order to achieve this goal.
CHAPTER III
METHODOLOGY

In order to answer the previously stated research questions, survey and observational research will be conducted in a clinical study of adult and traditional students at Otterbein College. Otterbein College is a small (1994-95 enrollment, 2599) private college located in suburban central Ohio. The mission statement for the college includes the sponsorship of traditional and continuing education programs in a liberal arts tradition. Over one-third (909 for 1994-95 academic year) of the student population consists of continuing studies students. The Continuing Studies Program offers evening classes and Weekend College, as well as traditional day classes. All of Otterbein's degrees and majors are available to adult students. Nine majors are available through the evening and Weekend College programs exclusively. Simplified admission and registration procedures are designed to accommodate the unique needs of adult students. The focus on the adult learner through the Continuing Studies Program makes
Otterbein College an ideal location for the study of formal adult education.

Subject Selection

The researcher surveyed and observed ten classes that contain both undergraduate traditional students and adult learners attending Otterbein College. The classes were large enough so that a traditional classroom environment was established, yet not so large that interaction among students and instructor was prohibited.

In order to insure a variety of subject matter and class formats, purposive sampling was used. Through consulting course catalogues and individual instructors, an attempt was made to survey and observe liberal arts and non-liberal arts courses as well as courses in which instructors used different teaching strategies. Classes were chosen if the instructor indicated that students were active oral participants during normal class sessions. Permission to survey and observe these classes was obtained ahead of time from the appropriate instructors. Nine of the classes were evening classes, one class was a Weekend College class held on Saturday morning. A total of ten classes were observed with a total of 230 students, 116 adult students and 114 traditional students.
Conditions of Testing

All students in the classes were surveyed during regular class time and in their normal classrooms. The CAPS survey was distributed and explained by the researcher. Since the completion of the questionnaire varied the normal routine of the class, observations of the classes were conducted during separate classes.

In order not to be disruptive to the normal routine of the class the observer arrived early to the class and sat in a seat in the back. If the class arrangement was not in rows but in a more casual arrangement for group discussion, the observer sat towards the back of the group. In small group situations the observer became a member of a group but again remained towards the back and did not participate in the discussion. No mention was made of the observer's presence except in the small group class where the observer's presence was obvious. The instructor briefly explained that the observer was gathering data for a study and that the observer was welcome in the class. Students did not seem bothered by the observers presence in any of the classes. Since adults are expected in these classes having another adult present did not seem to appreciably influence the situation.
**Instrumentation**

The Class Apprehension about Participation Scale (CAPS) was administered to each class. CAPS consists of 20 Likert-type statements designed to measure communication participation and communication confidence within the classroom situation (appendix A). According to Neer (1987), the reliability of the CAPS has been assessed with correlation and associated statistics (i.e. Cronbach's alpha, factor analysis, analysis of variance and discriminant analysis). "CAPS provides a highly reliable measure of classroom apprehension (alpha = .94) with estimates of .88 and .91 for the confidence and participation dimensions. The dimensions correlated at .82 with each dimension correlating above .91 with the overall scale. Factor analysis demonstrated that the internal structure of the instrument provides a unitary measure of classroom apprehension with all 20 items contributing to a one-factor solution" (p. 158) contributing to its construct validity.

Along with the CAPS instrument, each class was observed to determine the frequency of student participation, the types of participation, and the duration of participation within the classroom situation. All observations were done by the researcher. Types of participation were broken down
into two categories: procedural questions and comments (ie. due dates, test requirements, directions, schedule) and substantive questions and comments (ie. content-related comments, responses to questions). An observation data sheet was used to track the frequency, type, and initiator of participation (See Appendix B). Every time a student spoke during class the observer placed the appropriate symbol in the participation square. A "P" indicated a procedural comment, "S" indicated a substantive comment, and a "U" indicated an unsolicited or "small talk" comments. Numeric subscripts were used to identify students making comments. Estimated durations of the participation were also indicated since highly apprehensive communicators usually give short responses to questions and find difficulty carrying on a conversation (McCroskey & Richmond, 1980). Next to the type codes the observer indicated the duration of the comments by placing a "-" for a one word response, a " " for short duration (a couple sentences), and a "+" for long duration (over ten seconds). The results of the observations were then compared to communication apprehension levels as indicated in the CAPS survey. The questionnaires and observations of classes were conducted between weeks four and seven of the school term. As stated in previously cited research, conducting the study in the
middle of the term should minimize the effects of initial
discomfort or nervousness and should reveal a more accurate
comfort level for the students.

Data Analysis

To answer research question one, are communication
anxiety and amount of classroom participation related for
both the traditional and the adult student, correlational
analysis was used with an alpha level of .05. The analysis
looked at amount of participation, duration of
participation, and type of participation (procedural,
substantive, and unsolicited comments). The second research
question, are adult learners less communication anxious than
traditional age students in the classroom setting, and the
fifth research question, are female adult students more
communication apprehensive than male adult students, are
specific to amount of classroom communication anxiety and
were addressed through frequencies in the CAPS surveys which
will be tabulated according to the procedures described by
Neer. T-tests were also run to determine significance at an
alpha level of .05. The amount and type of classroom
participation for the observed classes were described with
appropriate t-tests run in order to address the third
research question, do adult students engage in more verbal
interaction than traditional students in the classroom setting. The fourth research question, is student acceptance of interactive teaching methods inversely related to level of communication apprehension, was addressed through the use of ANOVA and follow-up Tukey tests. Research question six, do degree seeking students have a higher level of communication apprehension than non-degree seeking students, was addressed through a comparison with the CAPS survey results. Research question seven, is level of communication apprehension directly related to the subject matter of the course for adult and traditional students, was addressed through a comparison with the CAPS survey results and the course in which they were enrolled with an ANOVA run for possible relationships. Research question eight, is class size related to classroom participation or level of communication anxiety, was addressed through correlational analysis. Research question nine, what are the best predictors of class participation and communication apprehension, was addressed using ANOVA and CAPS frequency results.

Conclusion

This study continued the comparison of traditional and adult learners in the college classroom setting and helped
to reconcile the differences reported in the theoretic literature and the observational studies. The pedagogical implications of this study are many. The basic assumption that adults prefer a more interactive approach to learning was challenged because of the influence of communication apprehension. The teaching strategies and techniques proposed by adult educators in the field may have to be altered in order to meet the communication needs of their students.
CHAPTER IV
RESULTS

In order to determine the influence of communication apprehension on adult learning the eight research questions were investigated. First, a description of the sample studied will be provided and then each research question will be answered.

Ten classes in the evening and Weekend College programs at Otterbein College were studied. Classes were of varying size, subject matter, and format. A total of 230 students were surveyed including 116 adult students, 114 traditional students, representing 168 females and 62 males. For a specific breakdown by class, see Table 1. The large female adult population is consistent with the typical returning adult student population, but may have influenced the results of gender specific research questions. The average age for returning adult students in this study was 33 with an age range of 23 to 65. The average age of the traditional students was 21 with a range of 16 to 22. The
average CAPS score for adult students was 63.5 with a range of 34 to 85. The average CAPS score for traditional

Table 1

Description of Research Sample

<table>
<thead>
<tr>
<th>Class</th>
<th>Enrollment</th>
<th>Gender</th>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art History</td>
<td>Traditional: 10 Adult: 10 Male: 2 Female: 18</td>
<td>lecture</td>
<td></td>
</tr>
<tr>
<td>Astronomy</td>
<td>Traditional: 27 Adult: 16 Male: 15 Female: 28</td>
<td>lecture</td>
<td></td>
</tr>
<tr>
<td>Comp &amp; Lit.</td>
<td>Traditional: 10 Adult: 5 Male: 3 Female: 12</td>
<td>small group</td>
<td></td>
</tr>
<tr>
<td>Nonwest. Religion</td>
<td>Traditional: 29 Adult: 21 Male: 17 Female: 33</td>
<td>lecture</td>
<td></td>
</tr>
<tr>
<td>Ohio History</td>
<td>Traditional: 9 Adult: 16 Male: 6 Female: 19</td>
<td>lecture</td>
<td></td>
</tr>
<tr>
<td>Operations Mgmt.</td>
<td>Traditional: 1 Adult: 6 Male: 3 Female: 4</td>
<td>lecture</td>
<td></td>
</tr>
<tr>
<td>Persuasion</td>
<td>Traditional: 1 Adult: 16 Male: 6 Female: 11</td>
<td>discussion</td>
<td></td>
</tr>
<tr>
<td>Public Relations</td>
<td>Traditional: 8 Adult: 3 Male: 3 Female: 8</td>
<td>discussion</td>
<td></td>
</tr>
<tr>
<td>Small Group Com.</td>
<td>Traditional: 6 Adult: 10 Male: 4 Female: 12</td>
<td>discussion</td>
<td></td>
</tr>
<tr>
<td>Ways Women Perceive</td>
<td>Traditional: 13 Adult: 13 Male: 3 Female: 23</td>
<td>discussion</td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>114</td>
<td>116</td>
<td>62 168</td>
</tr>
</tbody>
</table>

students was 57.4 with a range of 18 to 85. No statistical relationship was found between age and CAPS score. Of the 232 students surveyed, 230 usable CAPS instruments were returned. The scores on the CAPS instrument are interpreted as follows: Scores of ten to 44 are considered high
communication apprehensive scores, 45 to 74 are considered medium communication apprehensive scores, and 75 to 90 are considered low communication apprehensive scores. Most people fall in the medium range (Neer, 1987) which is true for the current sample as well. Of the 230 people surveyed 166 (72.2%) are in the medium range, 32 (13.9%) are in the low range, and 32 (13.9%) are in the high range. All observations and surveys were conducted by the researcher. While an attempt was made to study classes that included regular oral participation it became clear that instructors do not all agree on what is considered a significant amount of oral participation. In the lecture format specifically, a couple questions by students which were answered by the instructor was later referred to as "great discussion" by the instructor. Since all classes did have some oral participation this difference in interpretation did not negatively influence the results of this study, but it did make for some rather long observation sessions and less direct observation of actual participation than had been anticipated.

Research Question One, are communication apprehension and amount of classroom participation significantly related for both traditional and adult students.
The results for participation show that of the 114 traditional students, 55 (48.2%) participated in classroom conversation and of the 116 adult students, 57 (49.1%) participated in classroom conversation. Table 2 shows the number of comments by participation category. Both adult and traditional students spoke more to the instructor than to each other. Overall, the adult students spoke more than the traditional students in this sample.

Duration of comments within participation category and type of comments were also observed. The results of the correlation analysis, are reported in Table 3, significance at the .05 level shows a very high relationship between word duration \( r = .73 \) short duration \( r = .79 \) and long duration \( r = .81 \) when adult students speak to the instructor. When traditional students speak to the instructor we also see a very high relationship with short duration \( r = .87 \) and long
duration ($r = .91$) but no significant relationship with word duration. The results also show a substantial relationship between long duration and adult students talking to adult students ($r = .65$) and a very high relationship between word duration and traditional students talking to traditional students ($r = .80$).

The type of response refers to procedural, substantive, and unsolicited comments or small talk. As indicated in Table 4, there is a substantial relationship between substantive comments by adult students and word duration ($r = .66$) and a very high relationship between substantive comments by adult students and short duration ($r = .93$) and long responses ($r = .91$). There were no significant relationships indicated for unsolicited or procedural responses and duration for adult students. Results for traditional students indicated a very high relationships between substantive responses and short duration ($r = .89$) and long responses ($r = .90$). Traditional students also show a very high relationship between procedural responses and short duration ($r = .77$).
Table 3

Correlations between Participation Category and Comment Duration

<table>
<thead>
<tr>
<th>Participation Category</th>
<th>Correlations with Comment Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Word</td>
</tr>
<tr>
<td>Adult to Adult</td>
<td>.53</td>
</tr>
<tr>
<td>Traditional</td>
<td>.39</td>
</tr>
<tr>
<td>Instructor</td>
<td>.73*</td>
</tr>
<tr>
<td>Traditional to Adult</td>
<td>.02</td>
</tr>
<tr>
<td>Traditional</td>
<td>.80*</td>
</tr>
<tr>
<td>Instructor</td>
<td>.19</td>
</tr>
</tbody>
</table>

* p<.05
Table 4

Correlation between Participation Type and Comment Duration

<table>
<thead>
<tr>
<th>Participation Type</th>
<th>Word</th>
<th>Short (sentence)</th>
<th>Long (&gt; ten seconds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult Comments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procedural</td>
<td>.08</td>
<td>.03</td>
<td>.29</td>
</tr>
<tr>
<td>Substantive</td>
<td>.66*</td>
<td>.93*</td>
<td>.91*</td>
</tr>
<tr>
<td>Unsolicited</td>
<td>.20</td>
<td>.06</td>
<td>.07</td>
</tr>
<tr>
<td>Traditional Comments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procedural</td>
<td>.37</td>
<td>.77*</td>
<td>.25</td>
</tr>
<tr>
<td>Substantive</td>
<td>.32</td>
<td>.89*</td>
<td>.90*</td>
</tr>
<tr>
<td>Unsolicited</td>
<td>.60</td>
<td>.03</td>
<td>.26</td>
</tr>
</tbody>
</table>

*p<.05

When looking at the relationship between participation category and type of response, as indicated in Table 5, we see that there is a very high relationship between substantive comments and adult to instructor participation (r=.91). There is also a very high relationship between unsolicited comments and traditional students to traditional students (r=.91) and substantive comments and traditional students to instructor (r=.97). None of the other relationships were significant at the .05 level.
Table 5

Correlations between Participation Category and Participation Type

<table>
<thead>
<tr>
<th>Participation Category</th>
<th>Procedural</th>
<th>Substantive</th>
<th>Unsolicited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adults to Adults</td>
<td>.14</td>
<td>.56</td>
<td>.69*</td>
</tr>
<tr>
<td>Traditional</td>
<td>.43</td>
<td>.08</td>
<td>.07</td>
</tr>
<tr>
<td>Instructor</td>
<td>.15</td>
<td>.91*</td>
<td>.28</td>
</tr>
<tr>
<td>Traditional to Adults</td>
<td>.55</td>
<td>.36</td>
<td>-.21</td>
</tr>
<tr>
<td>Traditional</td>
<td>.01</td>
<td>.11</td>
<td>.91*</td>
</tr>
<tr>
<td>Instructor</td>
<td>.56</td>
<td>.97*</td>
<td>-.33</td>
</tr>
</tbody>
</table>

* p<.05

Also, when looking at the relationship between adult students and traditional students in terms of participation category and CAPS Score, the ANOVA revealed no significant relationship.

Research Question Two, are adult learners less communication apprehensive than traditional students in the classroom setting, was addressed by comparing CAPS scores to adult and traditional status. The results indicate that adults are less apprehensive than traditional students...
Research Question Three, do adult students engage in more verbal interaction than traditional students in the classroom setting, was addressed through the use of the t-test. As indicated in the data concerning research question one, adults seem to engage in more verbal interaction than traditional students. When total class participation percentages are compared, adult student participation rate is 65.8% while traditional student participation rate is 34.2% of the total classroom participation. T-test results indicate a statistically significant relationship between amount of participation and adult/traditional status (t=2.9, p<.003). The relationship between total amount of participation and adult students (t=4.1, p<.0001) and participation with the instructor specifically (t=2.61, p<.0096) were also found to be statistically significant. The relationship between total amount of classroom participation and traditional students was not significant.

Research Question Four, is student acceptance of interactive teaching methods inversely related to level of communication apprehension, was answered through the use of analysis of variance (ANOVA). This analysis resulted in a significant F (26.28, p<.0001). Follow-up Tukey tests
revealed that means on the CAPS instrument for those preferring the lecture format were significantly lower than means on the CAPS instrument for those preferring discussion or small group (See Table 6). The more apprehensive the student the less interaction was preferred. When broken down by adult and tradition status as shown in Table 7, we see that both groups are very similar in that students with higher CAPS scores reflecting lower apprehension report a teaching format preference requiring more interaction and students with lower CAPS scores reflecting higher apprehension report a teaching format preference requiring little interaction.

Table 6
CAPS Means and Preferred Teaching Format

<table>
<thead>
<tr>
<th>Preferred Format</th>
<th>Means for CAPS</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent Study</td>
<td>58.00a, b</td>
<td>11</td>
</tr>
<tr>
<td>Lecture</td>
<td>49.50b</td>
<td>66</td>
</tr>
<tr>
<td>Discussion</td>
<td>66.02a</td>
<td>130</td>
</tr>
<tr>
<td>Small Group</td>
<td>60.67a</td>
<td>21</td>
</tr>
</tbody>
</table>

Note. Items with the same superscripts are not significantly different.
Table 7

**CAPS Means and Preferred Teaching Format by Status**

<table>
<thead>
<tr>
<th>Preferred Format</th>
<th>Means for CAPS</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Adult Students</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independent Study</td>
<td>59.83</td>
<td>6</td>
</tr>
<tr>
<td>Lecture</td>
<td>53.38*</td>
<td>31</td>
</tr>
<tr>
<td>Discussion</td>
<td>67.85*</td>
<td>68</td>
</tr>
<tr>
<td>Small Group</td>
<td>65.22</td>
<td>9</td>
</tr>
<tr>
<td><strong>Traditional Students</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independent Study</td>
<td>55.80</td>
<td>5</td>
</tr>
<tr>
<td>Lecture</td>
<td>46.05*</td>
<td>35</td>
</tr>
<tr>
<td>Discussion</td>
<td>64.00*</td>
<td>62</td>
</tr>
<tr>
<td>Small Group</td>
<td>57.25</td>
<td>12</td>
</tr>
</tbody>
</table>

*Note. * items are significantly different.*

Research Question Five, are female adult students more communication apprehensive than male adult students, was addressed through a comparison of the CAPS instrument results and gender and a t-test. As indicated in Table 8, females may be slightly more apprehensive than males. CAPS results show a higher percentage of females scoring at the high apprehension level. However, t-tests revealed no statistically significant difference.
Table 8
Comparison of CAPS Results by Sex

<table>
<thead>
<tr>
<th>CAPS Result</th>
<th>Female</th>
<th>Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Apprehension</td>
<td>28</td>
<td>4</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>12.17%</td>
<td>1.74%</td>
<td>13.91%</td>
</tr>
<tr>
<td>Medium Apprehension</td>
<td>111</td>
<td>55</td>
<td>166</td>
</tr>
<tr>
<td></td>
<td>48.26%</td>
<td>23.91%</td>
<td>72.17%</td>
</tr>
<tr>
<td>High Apprehension</td>
<td>29</td>
<td>3</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>12.61%</td>
<td>1.30%</td>
<td>13.91%</td>
</tr>
<tr>
<td>Total</td>
<td>168</td>
<td>62</td>
<td>230</td>
</tr>
<tr>
<td></td>
<td>73.04%</td>
<td>26.96%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Research Question Six, do degree seeking students have a higher level of communication apprehension than non-degree seeking students, cannot be answered in this study. Of the 230 participants only four were non-degree seeking status which is not enough to draw conclusions.

Research Question Seven, is level of communication apprehension directly related to the subject matter of the course for adult or traditional students, was addressed through an ANOVA using the CAPS instrument scores and the classes enrolled for both the adult students and traditional students. This analysis resulted in no significant F for either adult students or traditional students.

Research Question Eight, is class size related to classroom participation or level of communication apprehension, was addressed through correlational
statistics. There is a low but significant relationship between CAPS score and class size ($r=-0.17, p>.0079$). Class size and total participation was also found to be significant ($r=-.29, p>.0006$) as well as the relationships between size and traditional to traditional student participation ($r=.34, p>.0001$), traditional student to instructor ($r=-.18, p>.03$), and adult student to instructor ($r=-.02, p>.0008$).

Research Question Nine, what are the best predictors of classroom participation and communication apprehension, was partially answered through the use of ANOVA. The results of the ANOVA, as reported in Table 9, indicate that class subject, status, class format, class preference, and interaction between gender and status, and gender and preference are probable predictors of communication apprehension as measured by the CAPS instrument. Since CAPS scores could not be directly identified with individual participants in the large lecture format classes (instructor did not know the names of the students participating) it could not be determined if communication apprehension is a predictor of participation. Based on the frequency results it can be hypothesized that class format is directly related to class participation.
Table 9

Predictors of Communication Apprehension

<table>
<thead>
<tr>
<th>Variable</th>
<th>DF</th>
<th>Mean Sq</th>
<th>F</th>
<th>P</th>
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Summary of Results

Research Question One: No statistical relationship was found between communication apprehension and class participation but adult students were found to make longer comments and to make significantly more comments about substantive issues more than procedural issues.

Research Question Two: Adult students are less communication apprehensive than traditional students.

Research Question Three: Adult students participate more than traditional students overall, with each other, and with the instructor.
Research Question Four: Student acceptance of interactive teaching methods is inversely related to the level of communication apprehension. The more apprehensive the student the less interactive teaching method preferred.

Research Question Five: No statistical difference was found between male and female communication apprehension.

Research Question Six: The effect of degree seeking status could not be answered in this study.

Research Question Seven: There is no statistical relationship between subject matter and communication apprehension among adult or traditional students.

Research Question Eight: There is a statistically significant relationship between class size and CAPS score, as well as between class size and participation of traditional students with each other and adult and traditional students with the instructor.

Research Question Nine: Based on the ANOVA results, status, class format, class preference, and interaction between gender and status, and gender and preference are probable predictors of communication apprehension. Based on frequency results, class format is directly related to class participation.
CHAPTER V

DISCUSSION

The results of this study, while applying only to the student populations at Otterbein College, verify some of the assumptions of the adult education literature while challenging others. This study confirms that the adult student participates more than the traditional student. What should be noted is that adult student participation is with the instructor and other adult students. The adult and traditional students do not seem to be interacting with each other which would seem to be consistent with the adult education literature that indicates that adults may feel apprehensive about returning to the traditional classroom. The adult education literature lists intimidation by the younger students as a possible reason for this apprehension. Other reasons could include a perception of a lack of interest in each other due to age difference; intimidation by adults with each other as well as with traditional students; or plain fatigue at the end of the day. However, the results of the CAPS instrument show that adults are less
communication apprehensive than the traditional students in the classroom setting indicating that adult students are focusing their attention in areas in which they are comfortable, communicating with other adults and the instructor. The results on duration of comments would also seem to confirm this comfort level. As indicated in Table 3, not only are adult students participating more with the instructor but they are talking for a longer period of time; and as indicated in Table 4 and Table 5, adults are talking about substantive issues. Active participation and participation based on course content is a possible explanation of why adult students are perceived as more academically motivated than traditional students.

The lack of procedural comments by adult students contradicts earlier findings by Fayne that found adult students more likely than traditional age students to voice concerns, to ask for clarification on directions, and to make sure that instructor's expectations are articulated. Lam's findings in 1978 identifying course setup and evaluation as anxiety producing factors would also seem to indicate a need for procedural questions by adult students. The results of this study did not find procedural comments to be a significant part of classroom participation. As Lam indicates in his 1981 study, anxiety over procedural matters
tend to be concentrated in the first couple weeks of the course and once clarified did not require continued reinforcement from the instructor. Since observations for this study took place during weeks four through seven, students' procedural questions and comments may have already been addressed.

The increased participation with the instructor is an example of adapting to the environment to achieve communication goals as espoused by Mezirow's theory of transformative learning. Dialogue with the instructor and other adults allows students to relate to the world around them while avoiding potentially anxiety producing situations. Since the traditional students seem to be more communication apprehensive it is expected that they would participate less than adult students. The adult student is engaging in participation which traditional students find apprehensive; it follows that the traditional student would avoid not only the behavior but also the people engaging in the behavior. The fact that this study found no relationship between type of participation and CAPS scores challenges these assumptions. A possible explanation for this incongruity could be class format. In the large lecture sessions a student may not participate because the environment is not one that encourages participation rather
than the student being communication apprehensive. In the group or discussion format, a student may be more willing to participate, even if communication apprehensive, because of a possible comfort level that has been established within the smaller class. Another possible explanation could be the ability of the instructor to engage the students in class discussion. While this study did not look at the apprehension level of the instructor it follows that if the instructor is communication apprehensive than they would not be encouraging oral communication in the classroom. The lack of a relationship between the CAPS scores and type of participation supports Comadena, Semlack, and Escott's (1989) finding that communication apprehension does not appear to be associated with adult learners' academic performance.

The greater amount of participation by adult students confirms the findings by Fayne (1991) that adult classes tend to be more active but challenges her finding that the activity resulted from a vocal adult minority in each class. While this study found that in large lecture formats only a small minority participated, in discussion formats almost all of the adults participated. Fayne also found a preference for the lecture format which would seem to preclude a large amount of active participation. This study
found, as indicated in Table 6, that a discussion format is the most frequently stated preference in class format except by communication apprehensive students. The communication apprehensive students preferred the lecture format. This preference was true for both the traditional and adult students, as indicated in Table 7. A possible reason for this difference is that the Fayne sample of classes consisted of a higher percentage of lecture format classes. Students who prefer lecture will try to sign-up for lecture classes.

The implication of the amount of participation by adult and traditional students in classes that contain both populations is that the educator must prepare for the participation needs of the adult learner while not allowing the adult participation to detract from the needs of the traditional student. While it is impossible to state an ideal level of classroom participation overly active adults in the classroom could inhibit the traditional student from participating and thus detract from the educational experience. The level of participation should match the needs of the student and the instructor within the established classroom environment. The educator should not think that just because the adult student is participating more than the traditional student that the traditional
student is not as interested or as involved in the material as the adult student. McCroskey (1977) reports that students high in communication apprehension either avoid or fail to participate meaningfully in classroom communication with teachers and peers in order to avoid experiencing the anxiety they have learned to associate with communication. This lack of communication does not equate with a lack of interest or knowledge but with a fear of open communication. The student may be interested and knowledgeable just unwilling to express this interest openly in the classroom setting. The possibility of intimidation between the generations should not discourage programs from offering courses that enroll both adult and traditional age students. Both populations can learn from each other's perspectives. The experiences of the adult students and the youthful perspective of traditional age students can benefit all students if the class format is such that sharing of this information is encouraged. The instructor has to be flexible in teaching method to allow for such interaction.

Since there is a substantial amount of literature on organizational efforts to reduce anxiety for the returning adult student, especially the female student, it is interesting to note that it is the adult student that is less communication apprehensive and that there is no
evidence of significant difference between genders on communication apprehension in the classroom setting. There are a few possible reasons for these findings. One reason could be that Otterbein College is very successful in orienting adult students to the classroom and college environment and thus reducing anxiety. Another possibility is that adults are able to use their greater amount of experience to help compensate for apprehensive situations. Or it could be that adults actually find the traditional classroom situation safer than an unknown learning environment since students enrolled in degree programs are already familiar with the classroom environment on some level. Perhaps entry level courses should begin as traditional lecture formats and evolve into a more interactive format. In this way a comfort level is established for the students and the educator before more anxiety producing demands are made of the students.

As indicated in the results for research question four, there is a strong relationship between communication apprehension and class format preference. The more apprehensive the student the less interactive the preferred class format. Thus, a class of highly apprehensive students will prefer a lecture while less apprehensive students are going to prefer more discussion and engagement in the
classroom. The self-directed learning approach advocated by many in the adult education field would require students to work some on their own, but also in a cooperative effort with other students and/or instructor. The level of interaction with the instructor may be the reason why the independent study format was not preferred by highly communication apprehensive students. Independent study takes a degree of self initiative and responsibility not required in the lecture situation. It is much easier for a student to "hide" in a lecture format. In an independent study the student is on the spot, which could be seen as very threatening. The same is true for self-directed learning. More responsibility is placed on the student and high communication apprehensive students will not be ready or willing to participate.

The implications for the educator are to be ready and willing to adapt classroom situations to meet the communication needs of individual students as determined by their level of communication apprehension. If students need more interaction to stay engaged in the material being presented then the instructor must offer the opportunity for that engagement. Likewise, if students are not ready for active interaction the educator must be able to present options that maintain a level of comfort for high
apprehensive students as well. Being apprehensive about interaction does not mean that educators should not attempt to engage apprehensive students, but to be prepared to deal with resistance by the students. It is very easy and common for apprehensive students to respond by leaving the situation, i.e. dropping the course. If this happens, no one has benefitted. Therefore, it is the responsibility of the educator to give students options to meet their comfort level and slowly expand their learning and communication boundaries.

One of the variables considered in this study was that of class subject. Many students, while not generally communication apprehensive, are subject apprehensive. For example, while the student may generally be a willing participant in classroom discussions, there are some subjects that they do not feel comfortable dealing with and so do not participate. There has been much written on how to deal with the anxious writing student, math student, science student, etc. In order to prevent subject apprehension from becoming a confounding variable in this study, class subject was directly addressed. The results of research question seven indicate, however, that subject matter did not affect the level of communication apprehension, but class format did. Class format, as the
results of research question four indicate, has more influence than the subject when dealing with communication apprehension. Thus, if a certain class causes anxiety for a student an educator can reduce the level of communication anxiety by changing format or offering a variety of formats. The educator has to remember to be sensitive to the needs of all the students and not just the apprehensive. These results confirm the findings by Lam (1978) that method and organization of the course can directly influence the type of participation in the course. As this study shows, the more interactive the teaching method the more participation, especially from adult students, will occur.

One variable that this study examined which the Lam study did not address was the variable, class size. The negative correlation between class size and participation reveals that as the size of the class decreases participation increases. The smaller classes allow for greater opportunity for students to express themselves and for instructors to use methods that encourage participation. While the correlation was statistically significant it was a low correlation. A possible explanation could be that in this sample the smallest class was a lecture format. While students did ask questions during this class there was not free flowing discussion. Thus, while the smaller class size
does allow for more participation the class format is the most influential variable in promoting overall participation.

When class size was correlated with type of participation there is a negative correlation with both traditional and adult student participation with the instructor. The smaller the class the more participation with the instructor which helps to support the correlation with total participation since most of the participation in this sample was with the instructor. Traditional students participating with traditional students is significantly correlated with class size as well. The positive correlation reveals that as class size increases the more traditional students communicate with each other. This was not true for the adult students. In the large classes traditional students find more opportunities to socialize while the adult students tend to stay by themselves. The fact that the adults do not communicate with other adults in the large classes is possible indication of intimidation by the situation or the traditional students. A more likely explanation is that the adult students are not as likely to know each other as traditional students know each other and the large classroom situation is not conducive to starting relationships. Since the large classes take place in large
auditoriums in stationary row seating there is little opportunity to move around and talk to people unless a previous relationship exists. These results confirm again that the class format is very influential in determining amount and type of participation in the classroom.

Does class size affect levels of communication apprehension? The correlation between class size and CAPS scores was a statistically significant negative correlation. As class size increases the CAPS score decreased. The higher the CAPS score the lower the level of apprehension. In the smaller classes there is a higher level of apprehension than in the larger size classes. A possible explanation for this is that in the smaller classes the students may be expected to participate more and thus experience apprehension, while in the larger classes a student can "hide" more and not have to orally participate in class. There is also more of a risk involved in participating in larger classes. Since participation is not expected the student would be acting against the norm and risks a negative peer evaluation. The increase in apprehension in the smaller classes is also an explanation for the low correlations in the type of participation in small classes. Even though the class size allows for more participation the level of communication apprehension is
keeping this participation at a statistically low level. The correlations reveal that significantly more participation goes on in smaller classes but with the small size class comes an increase in communication apprehension.

Is it possible to predict level of participation or level of communication apprehension within the classroom? As an educator planning a course it would be nice to be able to answer a definite yes. However, the results of this study do not indicate this possibility. Since it was impossible to directly match student CAPS scores with their amount of participation this study could only make generalizations about the overall levels of participation and CAPS averages. This research suggests that adult/traditional status and class format preference are predictors of communication apprehension and that class format predicts amount of participation. However, more study is needed to make a definitive statement about prediction.

Conclusion

This study supports the findings in the communication apprehension literature that the more apprehensive the student the less the student will be willing to participate. However, it also seems that the adult
learner, when placed in a format that is preferred or deemed comfortable is able to compensate for some of these apprehensive feelings and communicate with other adults and the instructor. This study did not find the level of apprehension in the female adult student population or the adult student population as a whole to be higher than traditional students as indicated in the adult education literature. Since this study dealt with only the formal classroom setting and almost all of the students were degree seeking a certain level of motivation was already present. This level of motivation could be a possible reason for the lack of apprehension. Clearly more research is needed in other settings with other populations for conclusions to be drawn.

At Otterbein College, in the formal classroom situation, communication apprehension plays a role in class format preference and in the amount of participation in the class. Adults are not as apprehensive as traditional students, and gender does not play a role in level of apprehension. Class size affects level of participation as well as level of communication apprehension. There seems to be a strong indication that class format predicts level of communication apprehension and amount of participation.
The pedagogical implications of this study are that first, educators cannot assume that just because there is a higher level of participation by some students that all students are ready and willing to participate. Educators must be willing to adapt and adjust the format of a course to meet the individual needs of the students. Second, when both adult and traditional students enroll in the same class the educator must be prepared for differing levels of communication apprehension and differing levels of participation. The educator needs to encourage interaction between the groups in order for both groups to benefit and learn from the others experiences. Participation in discourse with others outside one's personal environment can assist in the development of independent thought and self-direction which, as Mezirow (1991) explains, is what defines adulthood. Third, not all adult students are ready for highly interactive methods and highly apprehensive adult and traditional students may take actions to avoid the situation. Beginning with a more traditional approach and moving into more interactive methods may be the best option for classes that contain a variety of apprehension levels. The educator must remain flexible and open to different teaching methods in the formal classroom setting.
Further Research

Because of the lack of male participants, this study did not directly look at the level of participation between males and females in the classroom. The role gender plays in participation would be interesting to investigate in further studies; not only the amount of participation, but the type of participation. Do women ask more questions than men and what level of cognition is asked by the different genders?

This study did not look at learning styles. It would be interesting to see if learning styles and an individual's personality affects not only classroom participation but communication apprehension levels as well.

A longitudinal study that follows students throughout their degree program in an effort to see how communication apprehension and participation change and why would also be of interest. Does communication anxiety reduce over time? The results of this type of study could contribute greatly to the different approaches taken in helping communication apprehensive students adapt to the classroom environment.

The development of an instrument that looks specifically at communication apprehension and class format preference could be extremely helpful to instructors in the development of course methods and approaches taken with returning adult students.
The roll that the instructor plays in influencing classroom participation and the influence of communication apprehension on the instructor would also be interesting to investigate.

The role communication apprehension plays in classroom participation and learning will continue to be an important consideration for instructors of returning adult students and traditional age students. The benefits of intergenerational learning should not be lost in a lack of effort to adapt to the varying needs of both student populations.
APPENDIX A

CLASS APPREHENSION PARTICIPATION SCALE
CAPS Survey

Directions: This instrument is composed of twenty statements concerning feelings about communicating within the classroom situation. Indicate the degree to which the statements apply to you by marking whether you (1) strongly agree, (2) agree, (3) are undecided, (4) disagree, or (5) strongly disagree with each statement. Work quickly, just record your first impression.

1. _____ I worry that the instructor will call on me during class.

2. _____ If I have a question I want answered, I usually wait for someone else to ask it in class.

3. _____ I don't like speaking in class because I feel that I do not have as much to say as most other students.

4. _____ I usually do not speak in class unless called on by the instructor.

5. _____ I have difficulty organizing my thoughts when I want to say something in class.

6. _____ I enjoy assuming the role of leader during a class discussion.

7. _____ I often hesitate to speak during class discussions because many other students seem to be more fluent than me.

8. _____ I don't like speaking in class even when I think I know an answer to a question asked by the instructor.

9. _____ I like participating in discussion because I feel I can convince others about what I am saying.

10. _____ I always avoid speaking in class discussion if possible.

11. _____ If the instructor called on me during discussion I would feel at a loss for words or wouldn't know what to say.

12. _____ I participate in class discussion more often than most other students.

Continued on other side . . . .
Survey continued: 1-Strongly agree, 2-agree, 3-undecided, 4-disagree, 5-strongly disagree

13.____ I am often afraid that the instructor or the class may not understand what I am trying to say during discussion.

14.____ I would rather listen than participate in a class discussion.

15.____ I like speaking during class discussion because most students listen to what I say.

16.____ I am hesitant about speaking in class unless the instructor specifically asks for questions from the class.

17.____ I am often afraid I will say something that is wrong during a discussion.

18.____ I would speak during a class discussion even if I was not required to do so for part of my grade in the course.

19.____ I usually feel too tense or nervous to participate in class.

20.____ I avoid enrolling in classes that I think require class participation.

For the purposes of this study, please answer the following questions. All answers will be kept confidential.

Name:______________________________________________

Gender (male or female):___________

Age:_______

Course title:________________________________________

Are you taking this course in order to complete a degree?
   YES    NO   (circle one)

The class format you like best is (circle one):
lecture class discussion small group work independent study

Thank you for your time and input.
APPENDIX B

OBSERVATIONAL TALLY SHEET
Observational Tally Sheet

Comment Codes: "P"=procedural  "S"=substantive placed in initiator square. A "u" is used for unsolicited comments. Placed next to type codes "-" indicates a one word response, " " indicates short duration (a couple sentences), "+" long duration (over ten seconds) in response.

Date:___________  Class:_____________________________________
Format:___________

# Traditional _____  # Adult _____
Traditional to Adult  Adult to Adult

Traditional to Traditional  Adult To Traditional

Traditional to Instructor  Adult to Instructor
LIST OF REFERENCES


