

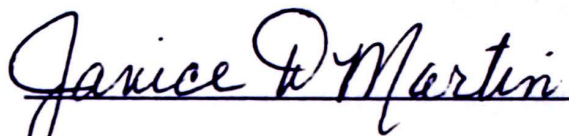
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IDEAL CLASSROOM ENVIRONMENT:
PREFERENCES OF MEN AND WOMEN STUDENTS

LISA BARNETT SISK

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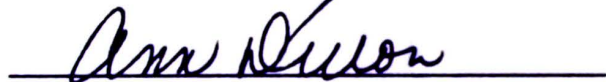
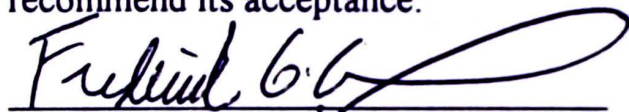
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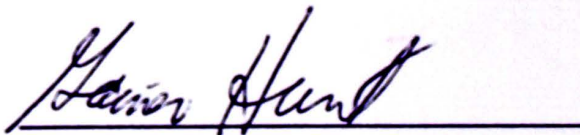
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**Ideal Classroom Environment:
Preferences of Men and Women Students**

A Thesis
Presented for the
Master of Art
Degree
Austin Peay State University

Lisa Barnett Sisk

May 1998

ACKNOWLEDGMENTS

I would like to express my sincere appreciation and thanks to my advisor and committee chair, Dr. Janice Martin. She provided continued encouragement and guidance throughout my graduate studies. I would also like to thank the other committee members, Dr. Frederick Grieve and Dr. Ann Dillon, for their advice and suggestions. I am also grateful for the continued patience and never ending support from my husband, Joseph. I would like to thank my parents, Johnny Barnett and Diane McGuire, and my grandparents, George and Jean Barnett, for always believing in me and being there for me when I needed anything. I would also like to thank my brother, John, and my friends at Austin Peay State University.

Abstract

The current study examined classroom environment preferences reported by men and women in order to determine if differences between the genders exist. With more women entering college, a change in the college classroom environment may need to take place to maximize learning for all students. In order to form an effective classroom environment for all students, the preferences and learning styles of the students need to be taken into account. Several studies have shown that women learn differently than men. The current study used the Ideal Classroom Environment Scale adapted from the College Classroom Environment Scales (Winston et al., 1989) to determine if women have different preferences in their ideal classroom environment than men. Results suggest that men and women differ in the amount they prefer the classroom to be hostile and competitive. Men seem to prefer a classroom environment that is more competitive and more hostile.

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Chapter I

Ideal Classroom Environment:

Preferences of Men and Women Students

Women are becoming an increasingly significant part of the college environment. Since a change in the college student population is occurring, a change in the college classroom environment may be necessary in order to maximize learning for all students. The preferences and learning styles of students warrant consideration in forming an effective classroom environment. Several studies have shown that women learn differently than men; therefore, the classroom environment may bear adjustment in order to be conducive for optimal learning for both men and women (Brady & Eisler, 1995; Feldhusen & Willard-Holt, 1993; Gledhill & Van der Merwe, 1989; Harpin & Sandler, 1979; Hickson & Baltimore, 1996; Lawrenz, 1987; Magolda, 1989; Nadler & Nadler, 1990; O'Brien, 1991).

Several factors in the classroom environment have been shown to significantly influence learning. Variables such as the nature of feedback (Nadler & Nadler, 1990), work praise and work criticism (Pintrich & Blumenfeld, 1985), class size (Brady & Eisler, 1995), and the manner in which material is presented (Lam, 1985) have been shown to affect learning.

In order to assess gender differences in learning and preferences for classroom environment, the variables that affect classroom environment must be identified. Nadler and Nadler (1990) found that students, regardless of gender, feel more comfortable in a

class if they are called on by name, are given positive verbal and nonverbal feedback, are not given negative verbal and negative nonverbal feedback, and are given credit for their ideas. Previous research by Pintrich and Blumenfeld (1985) also showed that work praise increased the students' perceptions of their ability and effort and work criticism had a damaging effect on perception of effort. Brady and Eisler (1995) concluded that smaller classes seemed to result in more student participation. Lam (1985) also noted that classroom discussion was important in leading to greater understanding and to lessen the social distance between teachers and students. Lam found that at the beginning of a semester, lecture was more highly associated with cognitive and affective factors such as comprehension and satisfaction. However, later in the semester when students became more familiar with one another, they viewed discussion as the preferred method of teaching.

Perceptions of and interactions with the teacher are also important in learning outcomes. Nadler and Nadler (1990) showed that men and women teachers were viewed differently by students of different genders. Lawrenz (1987) suggested that the difference in perceptions of teachers becomes even more pronounced as students get older. Teachers also view boy students differently than they do girl students. Cullingford (1993) and Pintrich and Blumenfeld (1985) showed that teachers give more attention to boy students because of perceived behavioral problems.

While some research has not found any gender differences (Feldhusen & Willard-Holt, 1993; Kline, 1995), most research supports the idea that women learn differently than men. Byrne, Hattie, and Fraser (1986) suggested that boys like more competition

than girls. They found that girls prefer more structure and more social environments than do boys.

Hickson and Baltimore (1996) found that girls differ in learning in several areas. Their results showed that girls were more visual learners and were more persistent than boys. Girls were shown to prefer quieter environments and were more favorable of their teachers. Girls were also more likely to perform to please parental figures.

In several studies women have been shown to be more social and affiliative than men (Beer & Darkenwald, 1989; Byrne, et al., 1986; Hayes, 1990; O'Brien, 1991). O'Brien (1991) found that women rely more on emotions and abstract thinking than men. Beer and Darkenwald's (1989) findings agreed that women perceive the classroom environment as more affiliative than men perceive the classroom environment. They suggested that women experience a more supportive social climate in the classroom than men experience.

Hayes (1990) found that women rely less on concrete thinking and are not overly reliant on details. However, Magolda (1989) found that almost an equal number of both boys and girls prefer abstract conceptualization and concrete experience. In addition, Magolda revealed some patterns of difference between genders in their learning styles and view of knowledge.

Many researchers have suggested that students' preferences need to match the actual classroom for optimal learning to occur. Fraser and Fisher (1982, 1983) and DeYoung (1977) both suggested that in order for optimal learning to take place the preferences of the students regarding the classroom environment should match what is

actually done in the classroom. Students' perceptions of the classroom environment have been shown to be very powerful predictors of success. Winston et al. (1994) and Waxman (1991) both said that the best predictors of achievement were the students' perceptions of the classroom environment. Cheng (1994) suggested that the perception of the classroom environment influenced the effort that the students exerted and therefore affected learning.

Past studies have shown that gender differences in learning styles exist but none have concentrated on what women prefer in a college classroom environment as opposed to men. Many studies focused on differences in children. More information needs to be collected to determine if results regarding gender differences in children can be generalized to adults. The current study examined classroom environment preferences reported by men and women in order to determine if differences between the two genders exist. This is important because more women are going to college now and they should be offered the best education possible. The classroom environment should be conducive to learning for all students.

Definition of Terms

Classroom Environment: For the purpose of the current study, classroom environment will include the students' perceptions of the academic subject matter, the style of instruction, the professor, the interactions between students, the structure of the class, and the feelings generated by the class. The classroom environment will be measured using a preferred form of the College Classroom Environment Scales (Winston, Vahala, Nichols, & Gillis, 1989).

Men: For the purposes of this study, men will refer to males of college age and older.

Women: The term women will refer to females who are of college age or older.

Boys: In this study, boys will refer to males who are of high school age or younger.

Girls: Girls will refer to females who are of high school age or younger.

Cathetic Learning Climate (CLC): The CLC subscale evaluates the type of academic atmosphere found in the classroom. ("This class seems to go fast." "Students are enthusiastic about participating in class activities.")

Professional Concern (PC): This is the subscale that evaluates the student's perspective of the instructor's concern about the individual student. ("The professor is willing to assist students after class." "The professor spends time talking informally with students before and/or after class.")

Inimical Ambiance (IA): This scale is used to evaluate whether the classroom environment is perceived as a friendly place to learn or a hostile, highly competitive environment. ("Students do not feel comfortable volunteering ideas or opinions in this class." "In order to get good grades in this class it's important to appear to agree with the professor.")

Academic Rigor (AR): AR is a subscale which measures the student's perception of the classroom as intellectually challenging. ("The professor has set high standards that the students must meet in order to get good grades." "Students in this class are challenged to think for themselves.")

Affiliation (AF): The fifth scale describes whether the class is student driven and contains informal interactions. ("Relationships established among students in this class carry over outside the classroom." "Students often help each other with assignments or in understanding difficult material.")

Structure (ST): The final subscale evaluates students' perceptions of how precisely the instructor follows the syllabus and gives instructions. ("There are firm deadlines when things are due." "The professor follows the syllabus very closely.")

Limitations

The results from the current study may not be generalizable to a larger population due to some limitations. A geographic bias may have been created because the data were gathered only from the south-central region of the United States. Data collected were from students of only a small sample of intended majors. For these reasons, the study may need to be replicated in order to generalize to a larger population.

Purpose of the Study

The purpose of the study was to determine whether or not gender differences exist in the preferences of an ideal classroom environment. It is important to provide both men and women students the best possible education, and in order to do so an understanding and application of their preferences are necessary.

Research Questions

a) Do men and women have different preferences in ideal classroom environment as measured by the Ideal College Classroom Environment Scales? b) Do responses of men and women differ regarding academic atmosphere as measured by the Cathetic Learning Climate subscale? c) Do men and women's preferences regarding the professor's concern for students differ as measured by the Professional Concern subscale? d) Do the scores between men and women differ on the Inimical Ambiance subscale showing how friendly the students perceive the classroom to be? e) Do men and women differ in their perception of the classroom as intellectually stimulating as measured by the Academic Rigor subscale? f) Do men and women's scores differ on the Affiliation subscale? g) Do men and women prefer different degrees of structure in the classroom as measured by the Structure subscale?

Hypothesis

Null hypothesis: Men and women students prefer similar classroom environments.

Specifically, there will be no significant differences in the scores on the Ideal College

Classroom Environment Scales between men and women students ($\alpha < .05$) across any of the six scales.

Chapter II

Literature Review

The typical college student is no longer a single, Caucasian man who recently graduated from high school. Over the past few decades, college enrollment rates for women have been gradually increasing (Kaufman, 1987; Marks, 1986; McDonald, 1997; Wetzel, 1989). Because there is an increase in the population of women in college, it is important to make the classroom environment fit their needs also.

Recently, McDonald (1997) found that the number of bachelors' degrees in psychology has risen by 59% mainly due to the 80% increase of women in college during the last decade. In 1989, Wetzel found that college enrollment and graduation rates had increased for women but had declined for African Americans and men since the 1970's. Similarly, Kaufman (1987) reported that an enrollment increase since 1978 has been partially due to the increased enrollment of women, particularly those over the age of 25.

Colleges in different geographic areas have had similar increases in the college women student enrollment rate. Marks (1986) investigated college enrollment rates in the Southern Regional Education Board and found that women represented 53% of all college enrollments in the south. In the Montana community colleges, enrollment data for fall 1985 showed that women accounted for 66.9% of community college students ("Enrollment in Community," 1986).

Learning styles of men and women differ

Learning styles of men and women were assessed by Magolda (1989). Magolda randomly selected 101 beginning freshmen, 50 men and 51 women, from a large state university and assessed the learning styles (approach to learning) and cognitive complexity (way a student viewed knowledge). Magolda chose to use Kolb's (1984) outline of learning styles and Perry's (1970) positions in cognitive structures.

Magolda used the Learning Styles Inventory (LSI; Kolb, 1985) to assess learning styles. Cognitive complexity was evaluated by administering the Measure of Epistemological Reflection (MER; Baxter Magolda & Porterfield, 1985) and conducting semi-structured interviews (Baxter Magolda, 1987). The MER and interview assessed six domains: role of the instructor, role of peers, role of the learner, evaluation in the learning process, nature of knowledge, and educational decision making. Using the MER, the respondent makes a choice on each of the six domains and shows their reasoning related to that choice. With both the interview and the MER results, learning preferences were identified based on the student's underlying assumptions about knowledge. Students were assigned a position in Perry's developmental process by averaging the rating they gave for each of the six domains. The assigned positions allowed comparison between men and women's cognitive structures. There was then an assignment of a reasoning structure within each position or cognitive structure. A qualitative analysis of men and women's reasoning within structures involved two steps. The first was tallying reasoning structures to get the number of men and women using each reasoning structure in each position in

each of the six domains. The second step involved separating the protocols by gender and position and reading them aloud to a blind rater. The rater identified themes in each of the positions and genders. The author reported findings similar to the results from step one.

Results showed that the learning style least preferred by students was what Kolb called the converger style which involves a combination of abstract conceptualization and active experimentation. There were no significant differences in learning styles between men and women but some patterns did emerge. Although not significant, the author reports more women preferred concrete experience (59%) as opposed to abstract conceptualization (41%). Men were also almost evenly divided on the preference of concrete versus abstract conceptualization. There were no significant gender differences in MER scores or interviews.

Preferences between abstract and concrete conceptualization were different between students assigned in different positions. Sixty-five percent of women who believed that all knowledge was known by the professor preferred abstract conceptualization while only 30% of women who believed that all knowledge would be gained in the future preferred abstract conceptualization. While not significant, men and women who believed that all knowledge was either known by the professor or would be gained in the future preferred reflective observation versus active experimentation.

Pattern differences within cognitive structures appeared also. Women and men viewed the obtainment of knowledge differently. Women who believed that all knowledge was known by the professor relied more on authority than men; however, women who believed that all knowledge would be gained in the future relied less on authority than

men. Women were more likely to listen to others ideas rather than debate ideas. Men took a greater initiative in learning, but placed less emphasis on personal interpretation than women.

Magolda's results merit cautious interpretation because he used only freshmen in their first semester. These students have not had time to adapt their learning styles to the college environment. College classes and their structure can be much different from high school classes and may lead a student to modify their different learning styles as they continue in higher education.

Hickson and Baltimore (1996) also used the LSI (Kolb, 1985) to assess learning preferences. Two hundred and eleven 4th, 5th, and 6th graders who were not in special education or gifted classes filled out the LSI to determine if gender made a difference in learning preferences. A discriminate analysis showed that boys and girls differed on these five variables: visual, noise level, parent figure motivated, persistent, and late morning. Girls preferred to learn visually more so than boys. Girls were also more inclined to learn in quiet environments and gave more favorable impressions of their teachers than were boys. Girls reported being more likely to perform in order to please parental figures and were more persistent than boys. Boys preferred to learn later in the morning while girls preferred to learn earlier in the morning.

Feldhusen and Willard-Holt (1993) studied some different aspects of learning styles. They developed a questionnaire to investigate gender differences in the areas of high aspirations, gender differences in classroom behavior, and preference for complex math or science related tasks. T-tests were conducted on questionnaires completed by

229 gifted students in grades five through twelve. The subscale measuring high aspirations showed no significant difference between the genders. This finding suggests that girls and boys have similar achievement motivation. The results showed that boys perceived more gender differences in the classroom and boys tended to prefer more complex math and science related tasks than girls. Lee (1992) proposed that boys preferred math because girls were given less attention than boys in mathematics classes.

In a study done with 176 final year medical students, Gledhill and Van der Merwe (1989) also found gender differences in learning. The Lancaster Approach to Study Inventory (LI; Entwistle & Ramsden, 1983) was administered and a Mann Whitney U-test was performed on the self-report questionnaire. They found that women reported taking their training more seriously than men and reported putting forth more effort than men. Women reported being less concerned about the status and rewards offered by a medical degree. In the area of learning, women reported being less inclined to concentrate on facts and logical analysis or to display overcautious reliance on details. Women stated being less likely to be dependent on staff to define learning tasks, but said they preferred a structured curriculum. Women reported being more likely than men to relate knowledge or ideas learned in one part of their training to other parts of their training.

Cathetic Learning Climate

The academic atmosphere was one aspect studied by Byrne, et al. (1986). They used a sample of 1675 Australian students in grades 7, 9, and 11. The Individualized Classroom Environment Questionnaire (ICEQ; Rentoul & Fraser, 1979), the Classroom

Environment Scale (CES; Moos & Trickett, 1974; Trickett & Moos, 1973), and three scales from the Quality of School Life Instrument (QSL; Williams & Batten, 1981) were used. To assess whether school, gender, or grade level, alone or in interaction, affected perceptions of actual or preferred classroom environment, a three-way multivariate analyses of variance was performed. Boys scored higher than girls on preferred Differentiation, but girls scored higher on preferred Participation. This suggests that boys prefer to have more freedom to work at their own pace while girls have more input in class work and discussions. However, boys and girls had similar preferences for the amount of control they had over their work habits and behavior.

Similarly, Hayes (1990) found that women stated they verbally participate in the classroom more than men. From a review of the literature on gender differences and interviews with instructors and adult students, Hayes developed a questionnaire to assess classroom behavior. Two hundred students and 30 instructors answered the 44 item Likert-type questionnaire. The participants' answers could range from 1 (never) to 6 (often) or the participants could answer N for "never noticed." Five items were thrown out of the analysis because more than 15% of the participants answered "never noticed" to those items. Women rated themselves significantly higher on verbal participation. The finding that women tend to speak in class more than men contradicts previous research findings some of which used more objective measures of verbal interactions (Brady & Eisler, 1995; Canada & Pringle, 1995; Dart & Clarke, 1988; Feldhusen & Willard-Holt, 1993). Women were rated as having more positive feelings and attitudes toward learning than men.

Classroom involvement was addressed by Beer and Darkenwald (1989) as well. The Adult Classroom Environment Scale (ACES; Darkenwald, 1987; Darkenwald & Valentine, 1986) was given to 439 adult students aged 19 to 66 to measure perceptions of the classroom social environment. The students were enrolled in one of 43 classes randomly selected at a small, urban community college. The students rated their perceptions of the actual classroom environment with the ACES Form A. Type of class, proportion of women in each class, and within class differences for all 43 classes were controlled in the statistical analysis because they were identified as variables that could have an effect on responses. It was found that women students perceived a greater degree of involvement in the classroom than did men students.

On the other hand, Feldhusen and Willard-Holt (1993) found no differences between men and women regarding participation in the classroom. Feldhusen and Willard-Holt developed a questionnaire to investigate gender differences in the area of confidence and verbal activity. T-tests were conducted on questionnaires completed by 229 gifted students in grades five through twelve. Results showed that there were no significant differences on the subscale confidence and verbal activity. The population of gifted children may not be generalizable to adults or other students of the same age.

Professorial Concern

How a professor affects the classroom environment has been investigated by several researchers. Hickson and Baltimore (1996) assessed whether men and women differ in how they viewed teachers. Two hundred and eleven 4th, 5th, and 6th graders

who were not in special education or gifted classes filled out the LSI (Kolb, 1985) to determine if gender made a difference in learning preferences. A discriminate analysis showed that boys and girls differed on teacher motivation. Girls were more favorable of their teachers than were boys.

Dart and Clarke (1988) found that boys had a greater number of interactions than girls but girls initiated more interactions with the teacher. In a sample of 113 secondary school students enrolled in science classes, cognitive and affective characteristics were measured using a number of cognitive ability assessment instruments. No significant differences between genders were found on those measures. An audiotape of verbal interactions in the classroom was then analyzed for teacher-student interactions. Interactions from the teacher to student were classified as organizational, behavioral, or task oriented. Student to teacher interactions were classified as response or initiation. T-tests showed that in every area except student initiated interaction with the teacher, boys had the greater number of interactions. Girls initiated more interactions with the teacher. The greatest difference between boys and girls in the interactions was in the behavioral category. Therefore, boys had more behaviorally-oriented interactions with teachers.

Cullingford (1993) interviewed secondary school students and concluded that the students are aware of gender issues but believe boys get more attention from the teachers because of bad behavior. Pintrich and Blumenfeld (1985) also found that boys received more negative behavioral feedback although they did not misbehave more than girls.

Feldhusen and Willard-Holt (1993) obtained conflicting results. A questionnaire developed by Feldhusen and Willard-Holt was used to investigate gender differences in the

area of teacher reinforcement. Two hundred and twenty-nine gifted students in grades five through twelve completed the questionnaire. T-tests showed no differences on the subscale of teacher reinforcement indicating that boys and girls perceive the teacher as providing an equal amount of reinforcement to all students.

Teacher reinforcement may be due in part to gender of the teacher. Nadler and Nadler (1990) examined 272 undergraduate students enrolled in introductory communication classes to study communication patterns in the classroom. Half of the students were asked to focus on their instructors who were men while completing the questionnaire and the other half of the participants were asked to concentrate on their instructors who were women. Results of an analysis of variance performed on the answers to the questionnaire showed that students perceived men teachers to interrupt more often than women teachers. Women instructors were described as more supportive. Students reported that women instructors also called on students more by name and provided more positive nonverbal feedback than men instructors. Men students disagreed more with instructors than did women students. There were no significant gender differences in class-related behavior or for amount of comfort felt in the classroom.

In a sample of 1675 Australian students in grades 7, 9, and 11, Byrne, et al. (1986) found gender differences in the classroom. The ICEQ (Rentoul & Fraser, 1979), the CES (Moos & Trickett, 1974; Trickett & Moos, 1973), and three scales from the QSL (Williams & Batten, 1981) were used. A three-way multivariate analyses of variance was performed to assess whether school, gender, or grade level, alone or in interaction, affected perceptions of actual or preferred classroom environment. Results indicated that

girls preferred to get the teacher's help and personal attention more than boys. Girls reported that in their actual classroom environment they had a more positive attitude toward teachers than boys reported.

Hayes (1990) also found that women seek more support from teachers. Hayes developed a questionnaire from a review of the literature on gender differences and interviews with instructors and adult students to assess classroom behavior. Two hundred students and 30 instructors answered the 44 item Likert-type questionnaire. The participants' answers could range from 1 (never) to 6 (often) or the participants could answer N for "never noticed." Five items were thrown out of the analysis because more than 15% of the participants answered "never noticed" to those items. Women rated themselves significantly higher on support-seeking suggesting that women saw themselves as wanting more assistance from teachers and students than men saw themselves. The later finding contradicts Magolda (1989) and Gledhill and Van der Merwe's (1989) finding that women do not rely on teachers as much to define learning tasks.

Inimical Ambiance

Competitiveness and aggressive behaviors of students in the classroom were examined by Lawrenz (1987). Lawrenz randomly selected schools in Arizona to participate. Fourth graders (149 from 13 schools), seventh graders (184 from 21 schools), and high school students (58 from 6 schools) were randomly selected from those schools. Fourth and seventh graders filled out the My Class Inventory (MCI; Fisher & Fraser, 1981) and the high schoolers filled out a parallel version appropriate for their age, the

Learning Environment Inventory (LEI; Anderson, 1973; Anderson, Walberg, & Fraser, 1982). Two of the scales examined were Friction and Competitiveness. A two-way MANOVA with the factors of student gender and teacher gender was done for each of the three grades. Results showed that gender comparisons for fourth graders were not significant. However, seventh grade classes taught by men teachers were perceived by the students as having less friction than classes taught by women teachers. High school girls viewed classes taught by women as more competitive while boys viewed classes taught by men as more competitive. Girls also viewed classes taught by women as having more friction while boys viewed classes taught by men as having more friction. Differences in students' perceptions became more prominent as they matured.

Lawrenz's (1987) findings were supported by Byrne, et al. (1986) who also found significant gender differences in the classroom regarding friction and competitiveness. They used a sample of 1675 Australian students in grades 7, 9, and 11. The ICEQ (Rentoul & Fraser, 1979), the CES (Moos & Trickett, 1974; Trickett & Moos, 1973), and three scales from the QSL (Williams & Batten, 1981) were used. To assess whether school, gender, or grade level, alone or in interaction, affected perceptions of actual or preferred classroom environment a three-way multivariate analyses of variance was performed. Boys scored higher than girls on preferred Friction and Competitiveness. This suggests that boys may prefer a more competitive classroom environment.

Contrary to Lawrenz (1987) and Byrne, et al. (1986), Kline (1995) found no differences between men and women on the characteristic of competitiveness. Kline used the competitiveness factor from the Classroom Life Instrument (Johnson & Johnson,

1983; Johnson, Johnson, & Anderson, 1983) and administered it to five classes of undergraduate psychology students (195 women and 45 men). In the 15 item survey (7 cooperativeness and 8 competitiveness), he found no significant difference between the sexes on the competitiveness scale although he described the difference as a trend with men scoring slightly higher ($p < .10$).

Academic Rigor

The level of difficulty in classes was studied by Lawrenz (1987). Lawrenz found that high school students exhibited more gender differences in student perceptions of classroom environment than did fourth or seventh grade students. Lawrenz randomly selected schools in Arizona to participate. Fourth graders (149 from 13 schools), seventh graders (184 from 21 schools), and high school students (58 from 6 schools) were randomly selected from those schools. Fourth and seventh graders filled out the MCI (Fisher & Fraser, 1981) and the high schoolers filled out a parallel version appropriate for their age, the LEI (Anderson, 1973; Anderson, Walberg, & Fraser, 1982). One of the scales examined was Difficulty. A two-way MANOVA with the factors of student gender and teacher gender was done for each of the three grades. No significant differences were found at the fourth or seventh grade levels. However, at the high school level, classes taught by women were perceived by the students to be more difficult.

Other studies have shown that there are no differences between genders on some educational variables (Kline, 1995; Wilson, Smart, & Watson, 1996). Feldhusen and

Willard-Holt (1993) found no differences on the subscale of effort. Feldhusen and Willard-Holt developed a questionnaire to investigate gender differences in the area of effort. T-tests were conducted on questionnaires completed by 229 gifted students in grades five through twelve. Boys and girls rated themselves as exerting a similar amount of effort in their academic work.

Byrne, et al. (1986) also found no significant differences between genders for some educational variables. They used a sample of 1675 Australian students in grades 7, 9, and 11. The ICEQ (Rentoul & Fraser, 1979), the CES (Moos & Trickett, 1974; Trickett & Moos, 1973), and three scales from the QSL (Williams & Batten, 1981) were used. To assess whether school, gender, or grade level, alone or in interaction, affected perceptions of actual or preferred classroom environment a three-way multivariate analyses of variance was performed. They found that girls and boys have a similar preference for the amount of difficulty found in the classroom environment. Girls and boys also had similar preferences for the amount of individual research that they wish to perform.

Affiliation

Even more research has shown that differences exist between men and women in the perception of social and affective behavior. Women were found to be more socially oriented (Beer and Darkenwald, 1989; Byrne, et al., 1986; Hayes, 1990; Kline, 1995; O'Brien, 1991). O'Brien (1991) found that women relied more on emotions and abstract reasoning rather than concrete experiences. O'Brien assessed gender differences in cognitive styles and preferences of cognitive styles. The Gregore Style Delineator

(Gregore, 1982) was administered to 121 men and 142 women in various majors. Four student characteristic factors were evaluated: Concrete Sequential (CS), Abstract Sequential (AS), Abstract Reasoning (AR), and Concrete Random (CR). A MANOVA showed that men scored higher on the AS scale which suggests that men focus on more broad constructs and process information in an analytical, logical, and sequential way. Women scored higher on the AR scale than did men. This finding suggests that women place more emphasis on feelings and emotions. On the CR scale, men scored significantly higher suggesting that men concentrate more on physical reality and process information instinctively and independently.

In another study, Beer and Darkenwald (1989) gave 439 adult students aged 19 to 66 the ACES (Darkenwald, 1987; Darkenwald & Valentine, 1986) to measure perceptions of the classroom social environment. The students were enrolled in one of 43 classes randomly selected at a small, urban community college. The students rated their perceptions of the actual classroom environment with the ACES Form A. Type of class, proportion of women in each class, and within class differences for all 43 classes were statistically controlled in the analysis because they were identified as variables that could have an effect on responses. They found that women perceived the classroom social environment to be more affiliative than men students. Both men and women perceived more affiliation in social science/humanities classes compared to math/science classes. These findings suggest that women experience a more supportive social climate.

Hayes' (1990) research with 200 adult students and 30 instructors suggested that women rated themselves significantly higher on self-disclosure and sociability. Women

were rated as having more positive feelings and attitudes toward learning than men. Women were found to be more self disclosing and sociable which agrees with other research which suggests that women are more affiliative than men (Beer & Darkenwald, 1989; Byrne, et al., 1986; O'Brien, 1991).

Byrne, et al. (1986) found gender differences in the area of social climate. They used a sample of 1675 Australian students in grades 7, 9, and 11. The ICEQ (Rentoul & Fraser, 1979), the CES (Moos & Trickett, 1974; Trickett & Moos, 1973), and three scales from the QSL (Williams & Batten, 1981) were used. To assess whether school, gender, or grade level, alone or in interaction, affected perceptions of actual or preferred classroom environment a three-way multivariate analyses of variance was performed. Girls reported that in their actual classroom environment they had a greater amount of General Affect. These findings suggest that girls prefer more social environments.

Contrary to previous studies, Kline (1995) found no significant differences between men and women on the characteristic of cooperativeness. Kline used the cooperativeness factor from the Classroom Life Instrument (Johnson & Johnson, 1983; Johnson, Johnson, & Anderson, 1983) and administered it to five classes of undergraduate psychology students (195 women and 45 men). In the 15 item survey (7 cooperativeness items and 8 competitiveness items), he found no significant difference between the sexes on the cooperativeness scale.

Structure

The structure of classroom environments has also been studied. Byrne, et al. (1986) found differences in the preferences of boys and girls concerning the amount of structure desired in a classroom. They used a sample of 1675 Australian students in grades 7, 9, and 11. The ICEQ (Rentoul & Fraser, 1979), the CES (Moos & Trickett, 1974; Trickett & Moos, 1973), and three scales from the QSL (Williams & Batten, 1981) were used. To assess whether school, gender, or grade level, alone or in interaction, affected perceptions of actual or preferred classroom environment a three-way multivariate analyses of variance was performed. Girls preferred more structure than boys except on Rule Clarity. Boys and girls desired a similar amount of knowledge of the rules and consequences of breaking them. This suggests that girls may need a more structured classroom environment in order to perform at their optimal level of achievement.

The structure in which a class is taught has an effect on learning as well. Lam (1985) also noted that classroom discussion was important in leading to greater understanding and to lessen the social distance between teachers and students. Lam found that at the beginning of a semester, lecture was more highly associated with cognitive and affective factors such as comprehension and satisfaction. However, later in the semester when students became more familiar with one another, they viewed discussion as the preferred method of teaching. This suggests that as affiliation in the classroom rises, discussion becomes more important in optimal learning.

Matching Perceptions to the Classroom Environment

Fraser and Fisher (1982, 1983) noted that classroom environment influences students' learning outcome, but in order for the influence to be positive the environment needs to be as close as possible to the classroom environment preferred by the students. The ICEQ (Rentoul & Fraser, 1979) and the CES (Moos & Trickett, 1974; Trickett & Moos, 1973) were given to 1,083 junior high students in 116 classrooms to assess the association between environment and outcome. Fraser and Fisher found that in classrooms where the students' preferences more closely matched the actual classroom, the students' learning levels were higher.

DeYoung (1977) created a classroom environment that more closely matched the preferences of the students by using the CES (Moos & Trickett, 1974; Trickett & Moos, 1973) in an actual and ideal form. Junior and senior undergraduates who were enrolled in a required sociology-social psychology section for education majors answered the different forms of the CES. He found that attendance increased and the satisfaction rating for the class increased as a result of the restructuring of the course. Winston et al. (1994) suggested that students' perceptions of the classroom environment influenced the amount of effort exerted by students and ultimately affected learning.

Cheng (1994) found that students' perceptions were strong predictors of students' performances. The participants, 21,622 sixth-grade students from schools in Hong Kong, answered 36 questions from an adapted form of the CES. Cheng showed that students' attitude toward the teacher and the effectiveness of what was taught were most influenced by the students' perceptions of the classroom environment. He concluded that if the

perceptions of the teaching skills of the instructor and the perception of the physical environment of the classroom were high, then students' performances would also be high. Rentoul and Fraser (1980) also concluded that learning outcomes were highest when the perceptions of the actual environment matched the preferred classroom environment.

Waxman's (1991) findings also agreed with Cheng. Waxman formulated the student cognition paradigm which suggests that the student's success is more closely associated with their perceptions of and reaction to the classroom environment than the actual classroom environment. The students' perceptions were said to be more influential than the instructor's teaching style or the students' individual background characteristics. However, Harpin and Sandler (1979) stated that the classroom climate, in addition, needs to match the person in order for optimal learning to occur.

Summary

Women have become an important part of the college environment. Since a change in the college student population is occurring, a change in the college classroom environment may need to take place in order to maximize learning for all students. The preferences and learning styles of students need to be considered in forming an effective classroom environment.

Several studies have shown that women learn differently than men; therefore, the classroom environment needs to be conducive for learning for them also (Brady & Eisler, 1995; Feldhusen & Willard-Holt, 1993; Gledhill & Van der Merwe, 1989; Harpin & Sandler, 1979; Hickson & Baltimore, 1996; Lawrenz, 1987; Magolda, 1989; Nadler &

Nadler, 1990; O'Brien, 1991). Several studies have also shown that maximum learning is more likely to occur when the actual classroom environment most closely matches the students' preferred classroom environment (Cheng, 1994; DeYoung, 1977; Fraser & Fisher, 1982, 1983; Harpin & Sandler, 1979; Rentoul & Fraser, 1980; Waxman, 1991; Winston et al., 1994).

Therefore in order to provide optimum learning for college men and women today, identification of preferences is necessary. Hopefully then professors can incorporate some of the students' preferences into their classroom environments and generate even more learning.

Chapter III

Methods

Participants

Participants were recruited from a small, liberal arts college and a state university in Middle Tennessee. One hundred and thirty-four students (31 men and 103 women) 18 years of age and older were included in the study. Some of the students received extra credit in their psychology classes.

Materials

The current study used The Ideal College Classroom Environment Scale which was developed from the College Classroom Environment Scale (CCES; Winston et al., 1989) with permission from the author (see Appendix A). The 62 items are answered using a Likert-type scale ranging from 1 = never or almost never true, 2 = seldom true, 3 = occasionally true, 4 = often true, to 5 = always or almost always true.

The CCES is subdivided into six scales with separate functions. The first scale is the Cathetic Learning Climate (CLC). The CLC evaluates the type of academic atmosphere found in the classroom. ("This class seems to go fast." "Students are enthusiastic about participating in class activities.") Professional Concern (PC) is the second scale. It evaluates the student's perspective of the instructor's concern about the individual student. ("The professor is willing to assist students after class." "The professor spends time talking informally with students before and/or after class.") The

third scale is the Inimical Ambiance (IA) scale. This scale is used to evaluate whether the classroom environment is perceived as a friendly place to learn or is perceived as a hostile, highly competitive environment. ("Students do not feel comfortable volunteering ideas or opinions in this class." "In order to get good grades in this class it's important to appear to agree with the professor.") Academic Rigor (AG) is the fourth scale which measures the student's perception of the classroom as intellectually challenging. ("The professor has set high standards that the students must meet in order to get good grades." "Students in this class are challenged to think for themselves.") Affiliation (AF), the fifth scale, describes whether the class is student driven and contains informal interactions.

("Relationships established among students in this class carry over outside the classroom."

"Students often help each other with assignments or in understanding difficult material.")

The final scale is Structure (ST) and it evaluates the student's perceptions of how precisely the instructor follows the syllabus and gives instructions. ("There are firm deadlines when things are due." "The professor follows the syllabus very closely.")

Procedure

The researcher told the participants that they would be answering a questionnaire to help determine what an ideal classroom environment should include. Participants were told that their participation was voluntary and that a penalty for lack of participation would not be implemented. The researcher also explained that if the participants turned in a completed questionnaire, they would be giving consent to use the data found within. The questionnaire was then administered and required approximately 15 to 20 minutes to

complete. Demographic information was collected along with the Ideal College Classroom Environment Scale. Data was separated into two groups: men and women college students.

Chapter IV

Results

SYSTAT 7.0 was used to examine the data collected from the Ideal College Classroom Environment Scales questionnaires. Statistical analysis using a MANOVA was performed to determine if there was a significant difference between the two groups, men and women across the six scales on the preferred form of the CCES. Results showed an overall significant difference with $F(1, 132) = 372.4; p < .001$. The significant difference suggests that men and women college students have differences in their preferences of an ideal classroom environment.

In order to determine specific differences between preferred classroom environments between men and women, Univariate Post-hoc analyses were conducted. Results displayed that only subscale 3, Inimical Ambiance (IA), had a significant difference with $p = .002$ (see Table 1). Men scored higher on IA than did women (see Table 2 and Figure 1).

Table 1

Mean, Standard Deviations, t, and p Values for Each Subscale

	<u>Men</u>		<u>Women</u>			
<u>Subscale</u>	<u>Mean &SD</u>		<u>Mean & SD</u>		<u>t</u>	<u>p</u>
CLC (90)*	67.10	12.29	71.77	12.04	0.336	0.737
PC (60)	46.47	9.94	50.46	8.71	1.540	0.126
IA (45)	18.57	6.40	15.33	6.49	3.221	0.002
AR (40)	28.94	3.91	29.10	4.33	0.475	0.636
AF (30)	21.23	4.76	23.37	4.77	0.391	0.697
ST (40)	31.77	5.06	33.04	7.32	0.873	0.384

Note: * Maximum possible score

Internal consistency of the ICCES was analyzed using Cronbach's Alpha. This analysis is a general form of Kuder Richardson 20 formula that can be used when items are not scored dichotomously. The first subscale, CLC had 18 variables with an internal consistency of .93. PC the second subscale had an internal consistency of .93 with 12 variables. There were 9 variables in the IA subscale with an internal consistency of .78. AR had 8 variables and an internal consistency of .63. AF had an internal consistency of .86 with 6 variable. The final subscale, ST, showed an internal consistency of .54 with 8 variables.

Chapter V

Discussion

Conclusions

The current study examined the preferences of men and women in their ideal classroom environment. The alternate hypothesis that men and women differ in their preferences of an ideal classroom environment was supported. An overall gender difference in preferences for an ideal classroom environment was obtained. Further analyses revealed that men and women differed significantly on the subscale of Inimical Ambiance (IA). The results suggest that men and women do differ in what they want in a college classroom environment, specifically in the degree in which they prefer the classroom to be hostile, structured, and competitive.

Inimical Ambiance Scale

Men and women significantly differed on the Inimical Ambiance (IA) subscale. Men scored significantly higher than women on the IA subscale. The higher score for men on the IA subscale suggests that men want a more competitive, hostile, and structured environment. The women's lower score suggests that women prefer professors who are more personal and less aggressive. Women also prefer to be more involved in the classroom, to have an impact on the classroom, and to feel comfortable participating in the classroom. Women also prefer that expectations and evaluation standards are very clear.

Findings from the current study supports previous research by Byrne, et al. (1986) who found that boys preferred more friction and competitiveness in the classroom. This suggests that competitiveness may be a gender characteristic that significantly affects our preferences both as younger students and as college adults. The findings that suggest that boys prefer more friction and competitiveness than girls appears to generalize to the population of college men and women.

However, these findings contradict those of Kline (1995) who reported no significant gender differences on the characteristic of competitiveness. His findings showed that men scored higher for preferred competitiveness but the findings were not significant. So, it appears that the current findings agree with past research in that men prefer more competitiveness in the classroom environment.

Nonsignificant Scales

Results for the subscales of CLC, PC, AR, AF, and ST were not significant. One of the reasons that significance was not reached may be because as students mature, their preferences in a classroom environment begin to become more similar. This may be because the students who attend college are students who can adapt to the conventional structure of college classrooms. The college student population becomes more homogeneous because only those who can conform to how the classroom environment is currently organized can survive in college.

The CLC subscale, which measured the preference for a stimulating environment and active participation by students, was not significant. The current findings do not

necessarily oppose existing literature. Previous work (Byrne, et al., 1986; Hayes, 1990) has found that girls and women verbally participate more in the classroom and have a greater preference to participate in the classroom. The ICCES used in the current study does not ask if the participant prefers to be involved in classroom discussions. Alternatively, it asks if the participant prefers students to participate. It may be that women prefer to participate, but men also can benefit from students other than themselves participating in class discussions. The men may not prefer to contribute to the discussion, but may prefer that classroom discussions involving other students are incorporated into the class structure.

The lack of significance on the AR scale, which measures the amount of difficulty desired in the class, strengthens conclusions from preceding research. Feldhusen and Willard-Holt (1993) found that boys and girls do not significantly differ in the amount of effort they wish to exert in their academic work. Byrne, et al. (1986) also found that boys and girls had similar preferences for the amount of difficulty present in the classroom environment. The current findings that men and women do not differ significantly on the extent in which they would prefer the classroom to be intellectually challenging and demanding is concurrent with past research.

In the current study, the collection of data from only social science and humanities classes may have affected the significance of the AF subscale. As Beer and Darkenwald suggested in 1989, both men and women perceived more affiliation in social science and humanities classes. If greater affiliation was already perceived by both men and women, it would be more difficult to find significant differences in the genders in the area of

affiliation. Perhaps if the sample included students who were in math and science classes the results would have varied because the increased perception of affiliation may not have been present.

Cooperativeness is another characteristic that influences affiliation. Kline (1995) found that men and women do not differ on the characteristic of cooperativeness. Again, the current findings are in agreement with previous studies (Beer & Darkenwald, 1989; Byrne, et al., 1986; Feldhusen & Willard-Holt, 1993; Hayes, 1990; Kline, 1995).

Overall, it seems that men prefer more competition which is consistent with previous research (Byrne, et al., 1986). Men also were found to prefer a classroom that is more hostile with the professor being more aggressive and the students having less involvement. These results may also help explain the greater number of men in the more competitive, individual majors such chemistry, biology, and mathematics.

Instructional Implications

College professors may want to be aware of this information and aim their teaching methods at what would best fit men and women. DeYoung (1977) found that classrooms which most closely matched the preferences of the students provided the greatest opportunity for optimal learning. Fraser and Fisher (1982, 1983) also stated that the classroom environment influences the students' learning outcomes. They continue on to say that for the influence to be positive and thus provide for the most learning, the actual classroom environment should be as close to the students' preferred classroom environment as possible.

For example, men may perform better doing more competitive individual work while women may do better while working in cooperative groups. When interacting with women, the professors may want to consider becoming more personal and less arbitrary or aggressive (Byrne, et al., 1989; Hayes, 1990). Less group work may be assigned with men than with women. Women may prefer more cooperative work with more opportunities to make a difference in how the class operates. Professors may not make evaluation criteria very specific for men students; however, for women students the professors may want to individually help clarify the standards and criteria needed to complete the class.

Limitations and Future Research

The results of the current study warrant cautious interpretations. The sample of participants included only 31 men. In future studies, more men should be included to determine if the increased sample size of men would have an effect on the results. Future studies may also want to investigate whether high school seniors' or freshmen's preferences differ from college upperclassmen's preferences because they have not yet conformed entirely to the college classroom environment. If gender differences in preferences for an ideal classroom environment are present when a student enters college and then assimilates in order to continue college, then studies that investigate preferences of freshmen compared to preferences held by upperclassmen may reveal different results. If preferences of freshmen are indeed different, the struggle to assimilate to the college classroom environment may be an additional challenge freshmen encounter.

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APPENDIX

	Never or almost never true	Seldom true	Occasionally true	Often true	Always or almost true
1. I am a person who is very sensitive to the feelings of others.	A	B	C	D	E
2. I am a person who is very sensitive to the feelings of others.	A	B	C	D	E
3. I am a person who is very sensitive to the feelings of others.	A	B	C	D	E
4. I am a person who is very sensitive to the feelings of others.	A	B	C	D	E
5. I am a person who is very sensitive to the feelings of others.	A	B	C	D	E
6. I am a person who is very sensitive to the feelings of others.	A	B	C	D	E
7. I am a person who is very sensitive to the feelings of others.	A	B	C	D	E
8. I am a person who is very sensitive to the feelings of others.	A	B	C	D	E
9. I am a person who is very sensitive to the feelings of others.	A	B	C	D	E
10. I am a person who is very sensitive to the feelings of others.	A	B	C	D	E
11. I am a person who is very sensitive to the feelings of others.	A	B	C	D	E
12. I am a person who is very sensitive to the feelings of others.	A	B	C	D	E
13. I am a person who is very sensitive to the feelings of others.	A	B	C	D	E
14. I am a person who is very sensitive to the feelings of others.	A	B	C	D	E
15. I am a person who is very sensitive to the feelings of others.	A	B	C	D	E
16. I am a person who is very sensitive to the feelings of others.	A	B	C	D	E
17. I am a person who is very sensitive to the feelings of others.	A	B	C	D	E
18. I am a person who is very sensitive to the feelings of others.	A	B	C	D	E
19. I am a person who is very sensitive to the feelings of others.	A	B	C	D	E
20. I am a person who is very sensitive to the feelings of others.	A	B	C	D	E

RETURNING THIS FORM IMPLIES CONSENT TO USE THE DATA FOUND
WITHIN.

IDEAL COLLEGE CLASSROOM ENVIRONMENT SCALES

Adapted from the College Classroom Environment Scales
(Winston, R. B., Jr., Vahala, M. E., Nichols, E. C., & Gillis, M. E., 1989)

Please indicate how frequently each of the following statements would be true in terms of your idea of an ideal classroom environment. Consider your responses carefully; respond as you honestly feel ideal classroom should be. Do not spend a great deal of time pondering any particular statement. Please complete the following questions in their entirety including the background information at the end of the questions.

Use the scale below to record your answers. Please do not omit any items.

A=Never or almost never true in an ideal classroom environment
B=Seldom true in an ideal classroom environment
C=Occasionally true in an ideal classroom environment
D=Often true in an ideal classroom environment
E=Always or almost always true in an ideal classroom environment

Circle the response which seems most appropriate for:

	Never or almost never true	Seldom true	Occasion- ally true	Often true	Always or almost true
1. Other students bring up good points in class that had never occurred to me.	A	B	C	D	E
2. The professor is willing to assist students outside of class.	A	B	C	D	E
3. The professor is not specific about deadlines.	A	B	C	D	E
4. The professor sets high standards that students must meet in order to get good grades.	A	B	C	D	E
5. The professor tries to let the class know her or him as a person.	A	B	C	D	E
6. The class seems to go very fast.	A	B	C	D	E
7. Students seem to want to show each other up in class.	A	B	C	D	E
8. The assignments for class require a substantial amount of time outside of class	A	B	C	D	E
9. There are people in class with whom I would like to be friends.	A	B	C	D	E
10. On examinations students are called on to take what	A	B	C	D	E

they read and heard in class and produce original answers or creative solutions.

- | | | | | | |
|---|---|---|---|---|---|
| 11. Students make contributions in class which make it a better learning experience for everyone. | A | B | C | D | E |
| 12. There are firm deadlines when things are due. | A | B | C | D | E |
| 13. The professor recognizes students by name outside of class. | A | B | C | D | E |
| 14. The professor follows the syllabus very closely. | A | B | C | D | E |
| 15. Students often continue to talk about some of the ideas brought out in the class even after it is over. | A | B | C | D | E |
| 16. It is very clear what students need to do in order to make good grades in class. | A | B | C | D | E |
| 17. Students often help each other with assignments or in understanding difficult material. | A | B | C | D | E |
| 18. Class lectures hold the students' interest. | A | B | C | D | E |
| 19. The professor expects students to be creative in solving problems or satisfying requirements. | A | B | C | D | E |
| 20. The content of a course must be well arranged and logically presented. | A | B | C | D | E |
| 21. Students feel uncomfortable talking with the professor in class. | A | B | C | D | E |
| 22. Students take pride in their work in class. | A | B | C | D | E |
| 23. Relationships established among students in class carry over outside of the classroom. | A | B | C | D | E |
| 24. Students are enthusiastic about participating in class activities. | A | B | C | D | E |
| 25. Class expectations are clearly spelled out. | A | B | C | D | E |
| 26. My presence in class makes no difference. | A | B | C | D | E |
| 27. Students work together on assignments and projects for class. | A | B | C | D | E |
| 28. Students express opinions or beliefs (related to the course content) that contradict each other. | A | B | C | D | E |

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| 29. Students do not feel comfortable volunteering ideas or opinions in class. | A | B | C | D | E |
| 30. To do well in class a student must be able to think critically | A | B | C | D | E |
| 31. Students in class have gotten to know each other well. | A | B | C | D | E |
| 32. Students seem eager to leave as soon as the class ends. | A | B | C | D | E |
| 33. Students take a lot of notes in class. | A | B | C | D | E |
| 34. Students get excited about some of the things they learn in class. | A | B | C | D | E |
| 35. The professor shows a genuine interest in students' performance in the class. | A | B | C | D | E |
| 36. Students in class treat each other as mature adults. | A | B | C | D | E |
| 37. Students are quick to volunteer ideas or information in class | A | B | C | D | E |
| 38. The professor spends time talking informally with students before and/or after class. | A | B | C | D | E |
| 39. The professor is impatient when someone says something "stupid" or asks "dumb questions." | A | B | C | D | E |
| 40. Students feel comfortable approaching the professor with problems they are having with class. | A | B | C | D | E |
| 41. If students were to miss several classes in a row, they would have a hard time getting caught up. | A | B | C | D | E |
| 42. Students' ideas and opinions are appreciated in class. | A | B | C | D | E |
| 43. Students daydream, write letters, or read the newspaper during class. | A | B | C | D | E |
| 44. Differing opinions and points of view are encouraged in class. | A | B | C | D | E |
| 45. The guidelines for evaluation in class are clearly outlined. | A | B | C | D | E |
| 46. The professor embarrasses students who don't know the answers to her or his questions. | A | B | C | D | E |

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| 47. If students don't stay up with the readings and/or homework, they will be in trouble in class. | A | B | C | D | E |
| 48. Contributions of classmates add significantly to the course content. | A | B | C | D | E |
| 49. The professor is authoritative in his or her presentations. | A | B | C | D | E |
| 50. The class requires students to understand and make judgments on issues about which the "experts" disagree. | A | B | C | D | E |
| 51. The professor goes out of her or his way to help students who request it. | A | B | C | D | E |
| 52. Students show enthusiasm about learning the subject matter of the course. | A | B | C | D | E |
| 53. The professor seems to be understanding about students' personal problems and concerns. | A | B | C | D | E |
| 54. In order to get good grades in the class it's important to appear to agree with the professor. | A | B | C | D | E |
| 55. Students spend time outside of class discussing relevant course topics with classmates. | A | B | C | D | E |
| 56. The professor shows respect for students' opinions and points of view. | A | B | C | D | E |
| 57. Students participate in lively debates or discussions in the class. | A | B | C | D | E |
| 58. Students are encouraged to visit the professor in his or her office. | A | B | C | D | E |
| 59. Students are challenged to think for themselves. | A | B | C | D | E |
| 60. Assignments in the class leave room to pursue students' personal interests. | A | B | C | D | E |
| 61. Students use class discussions or presentations to test some of their own ideas. | A | B | C | D | E |
| 62. There are opportunities to contribute during class. | A | B | C | D | E |

BACKGROUND INFORMATION Please answer the following questions.

A. Male _____ Female _____

B. Age _____

C. What is your current class standing?

Freshman _____ Sophomore _____ Junior _____ Senior _____

D. What is your major area of study? _____

E. Marital Status? Married _____ Single _____ Divorced _____ Widowed _____

F. Number of children at home? _____

G. Employment status? Full-time _____ Part-time _____ Unemployed _____

Other _____

VITA

Lisa Barnett Sisk was born in Crofton, Kentucky on September 24, 1975. She attended elementary, middle, and high school in the Christian County school district. She graduated from Christian County High School in May 1993. The following August she entered Eastern Kentucky University in Richmond, Kentucky. She graduated from Eastern Kentucky University in May 1996 with a Bachelor of Science in Psychology. She entered Austin Peay State University in Clarksville, Tennessee in August 1996. She will receive a Master of Art degree in School Psychology in May 1998.