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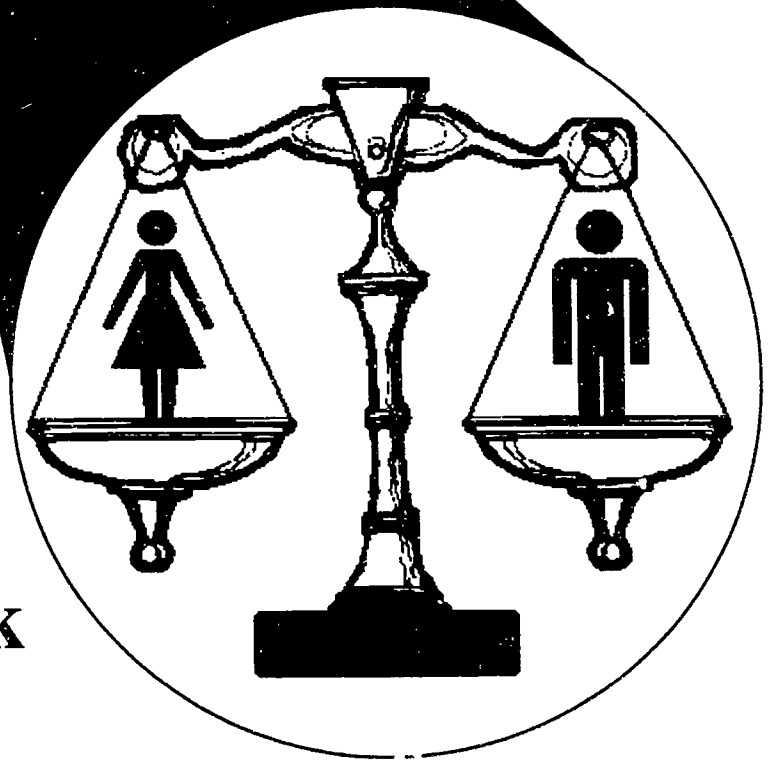
ABSTRACT

A study was conducted to identify those behaviors and practices of Texas secondary school teachers that perpetuate gender bias and stereotyping. A panel of 26 experts identified, selected, and prioritized sex bias and stereotyping issues prevalent in Texas through a two-round Delphi procedure. Together with information gathered from historical research on teacher attitudes and behaviors, the Delphi study results were used to develop a videotape and study guide to increase teachers' awareness of sex bias and stereotyping in their speech/actions. The video featured three segments (titled "Gender Stereotyping," "What Teachers Say," and "What Teachers Do and Allow Students to Do") portraying students and teachers in three common teacher-student encounters: a teacher advising a student for upcoming registration, a rehearsal for a one-act play, and a typical day in an agriscience classroom and shop. Recommendations for gender-fair teaching practices were also incorporated into each video. (This document includes 41 references, excerpts from one of the scripts, and a guidesheet for using the project-developed study guide and video to conduct a sex equity training session for teachers. Appended are the advisory committee workshop agenda, survey instruments, and issues related to each of the three video segments.) (MN)

Achieving Equity in the Secondary Schools of Texas



... A Closer Look

Instructor's Supplement

Achieving Equity in Texas Schools ...A Closer Look

The study guide and video were designed to be used together during in-service programs. This instructor's supplement includes a thesis which provides a complete description of the study and its findings. The thesis includes in-depth discussion supporting the information presented in the study guide and video. The following is a description of the materials and suggestions to assist you in preparation for a training session.

The study guide includes a Pre Test on page 1 that should be administered at the beginning of the session. Keep in mind, the intent of this material is to increase the level of awareness among educators. The Pre Test is an important tool in determining the educators' level of awareness regarding gender equity issues. The answers to the Pre Test may be found in Appendix A of the study guide.

The video should be introduced after presenting the answers to the Pre Test. A video summary is provided on page 2-3 of the study guide.

The video lasts approximately 24 minutes. It is divided into the following three segments: **(1) Gender Stereotyping, (2) What Teachers Say**, and **(3) What Teachers Do & Allow**. A title screen appears at the beginning of each segment so the video may be stopped for discussion. The study guide includes three divisions representing the same three categories in the video with corresponding information. Prior to each segment, the gender equity statements should be presented to educators so they will be more likely to identify gender stereotyping and gender biased behaviors while viewing the scenerios. These introductory statements can be found on pages 5, 9, and 13. Immediately following each segment, the video includes a brief review and recommendations for overcoming such subtle biased behaviors. Corresponding discussion can be found on pages 6, 10, and 14 of the study guide. In addition, the study guide includes a Post Test for each segment. The Post Tests may be given separately throughout the training session while the video is stopped, or they may be administered after viewing the entire video. Answers to the Post Tests may be found in Appendix B of the study guide.

We hope these materials will be beneficial as you encourage educators to take "a closer look" with the goal of achieving equity in Texas schools in mind.

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CHAPTER I

INTRODUCTION

Subtle gender bias has detrimental effects on the careers of both females and males (Sadker & Sadker, 1982). According to Jane Ayer, associate dean of education and professor of counseling psychology at the University of Wisconsin, Madison, students take what they learn about themselves in the classroom with them into the workplace. For example, females are not taught to be risk takers and tend to be less autonomous than their male counterparts (Epperson, 1988). Males often create high career expectations while in school that can later lead to disappointment and frustration (Sadker & Sadker, 1982). According to Sadker and Sadker, teachers can make gender equity a reality to children in schools so they might not suffer from the limitations of gender bias in their lives.

Setting for the Study

The unhealthy state of the national economy has brought attention to the inadequacies of our educational system and work force. America must produce a skilled labor force in order to be competitive with other countries and to avoid becoming a nation of under educated, low skilled and poorly paid workers. Texas is not an exception to this national trend as one-third of its students drop out of high school (Staff B, 1991). It is important for students to develop marketable employment and social skills while pursuing a public school education. The Texas Education Agency recognizes vocational training programs in the following areas: Agriculture Education, Business and Office Occupations, Consumer and Homemaking Education, Health Occupations, Industrial Arts Education, Marketing and Distributive Education, Occupational Home Economics, Occupational Orientation, Technical Education, and Trade and Industrial Education (Harris, 1988).

Although many who complete vocational education programs choose to continue their education beyond the secondary level, vocational education provides instruction for occupations that do not necessarily require a bachelor's degree or higher level of education (Hoyt, 1981). Under current laws, students should receive equitable learning experiences. However, Sadker and Sadker (1985) reported that classrooms at all levels are characterized by a general environment of inequity between female and male students.

Selecting a profession or vocation can be difficult for high school students. Teachers and counselors play an influential role in the decision a student makes concerning future career goals (Grayson, 1990). The United States Department of Labor projects that by the year 2000, women will compose 47 percent of the work force (Nash, 1991). With the significant number of women earning wages, it is important that their options not be limited. Only nine percent of the women in the United States work in non-traditional occupations (Staff D, 1991). Males and females continue to seek traditional vocational courses which lead to traditional occupations. Most school systems contribute to the problem of gender inequity by allowing biased behavior such as stereotyping which arbitrarily leads to students pursuing traditional occupations. This situation not only presents possible limits to students' earning power, but also limits their career potential because they often fail to apply their talents and capabilities in areas where strengths may exist.

Myra and David Sadker (1982) reported in an article titled: "Sexism in the Classroom: From Grade School to Graduate School" that by high school, boys commonly out-score girls on standardized tests such as the Scholastic Aptitude Test (SAT). However, females tended to perform as well or better than males on standardized tests given in early grades. According to Sadker and Sadker, boys and girls experience different learning environments which contribute to the inequities between the sexes.

Another indication that boys and girls do not receive equal instruction is the declining of self-esteem among adolescent girls. A study commissioned by the American Association of University Women (AAUW) and released in 1991, focused on the lowering self-esteem levels of adolescents. The study revealed that although boys and girls both experience declining levels of self-esteem, the loss is more significant for females because it is dramatic and long lasting. This is especially true in the areas of mathematics and science. In elementary education, 81 percent of girls and 84 percent of boys demonstrated an interest in mathematics, but by high school those percentages drop where only 61 percent of the girls and 72 percent of the boys indicated an interest in mathematics. The above data indicates a phenomenon occurs in school systems to discourage females in the area of mathematics. The report from 1991 AAUW report states: "Math and science have the strongest relationship on self-esteem for young women, and as they 'learn' that they are not good at these topics their sense of self-worth and aspirations for themselves deteriorate (1991, p. 12)." This study also revealed the difference in attitudes that boys and girls have toward their future careers. Boys tend to believe their career aspirations will come true while girls tend to underestimate their potential and set lower career expectations for themselves.

The point made by the Sadker and Sadker that boys and girls begin school at the same level but experience different learning environments is reinforced by the fact that a gap exists which separates their academic performance, confidence and expectations by the time students reach high school. Achieving a gender-fair learning environment is a difficult challenge because sex bias is a behavior that can be so subtle it occurs unrecognized. Most teachers unintentionally make comments and allow behavior in their classrooms that perpetuate sex bias or sex role stereotyping (Carelli, 1988).

Purpose

If students in Texas are to receive a gender-fair education leading to a future with more vocational and professional options, it is necessary to create an awareness of behaviors which occur in the educational setting that contribute to inequities between males and females. The primary purpose of this project was to identify the behaviors and practices of teachers in the secondary schools of Texas which perpetuate gender bias and stereotyping. The secondary purpose of this study was to develop a video tape and study guide to be used as a tool for achieving awareness of sex bias and stereotyping among educators.

Objectives

Answers to the following questions were sought as a means of accomplishing the purpose of the study:

1. Which sex biased and stereotyping behaviors are prevalent and in need of change in the secondary schools of Texas?
2. What examples can be identified which demonstrate sex bias and stereotyping in the secondary schools of Texas?
3. What information should be included in a video cassette and study guide for teachers to increase their level of awareness regarding subtle gender bias and stereotyping practices in the classroom?

Definition of Terms

Many terms are related to gender equity that are similar and may be confusing. The following glossary of terms is presented to clarify any misunderstandings or pre-conceived ideas.

Equity - moving beyond discrimination; equalizing, reforming and improving; based on the concepts of fairness, justice, and freedom from favoritism.

Gender/sex bias - behavior resulting from the assumption that one sex is superior to the other.

Gender/sex discrimination - any action which limits or denies a person opportunities, privileges, roles, or rewards on the basis of their sex.

Gender/sex equity - fair and just treatment of individuals, which allows them to: choose educational programs and careers; enter programs and careers according to their needs, informed interests and abilities, and; participate fully in, and benefit from, those programs without regard to their gender.

Gender/sex-fair - policies, practices, behaviors and attitudes that reflect equality among female and male students.

Gender/sex-role stereotyping - the assumption that females or males, solely because of their sex, share common abilities, interests, values and/or roles.

Non-traditional occupations/vocational areas for females - those areas that are occupied by 75 percent or more males.

Non-traditional occupations/vocational areas for males - those areas that are occupied by 75 percent or more females.

CHAPTER II

REVIEW OF LITERATURE

Changes in the Work Force from a Historical Perspective

The work place has changed drastically over the last century as more women have assumed non-traditional jobs outside the home. Understanding the transformations that have occurred will provide insight to the development of gender equity issues.

Early 1900's

Prior to the United States' entrance into World War I, only 24 percent of the females over the age of 16 earned wages, and most of these were single women who left their jobs once they married (Greenwald, 1990). However, America's involvement in World War I created new circumstances that accelerated changes in the work force. Many women assumed the duties left behind as men had to vacate their domestic jobs to join the military overseas. According to Greenwald, never before had women been exposed to so many opportunities to work for higher wages, and as a result of these job changes the expectations among women grew. Greenwald stated: "Married women's admittance to 'men's' jobs during the war ignited community wide conflict over the family wage idea and married women's right to work regardless of economic need" (1990, xiii).

People began to raise questions because more women earning wages not only altered the composition of the work force but also introduced changes in the lifestyles to the husbands and children of these working women (Greenwald, 1990).

Mid 1900's

After World War II began, more women entered the working world. In March of 1940, there were 13,840,000 females in the labor force, and by March of 1961, that number grew to 24,199,000 (Gregory, 1974). By the mid 1900's women were wanting more as they experienced more independence than any generation of women preceding them. Gregory (1974) states:

> Such an observation might indicate that in the lower levels there seemed to be a fuller acceptance of women on an equalitarian basis than in the higher levels. And in fact, the hundreds of thousands of women who were employed in defense production during World War II tended to serve in the lower levels of labor. But the extensive use of women in many levels paved the way for the broader acceptance of women as equals in almost every area of American society. (p. 194)

Late 1900's

According to Nash (1991), roles within the family continue to change. For example, in the last decade, women accounted for 60 percent of the increase in the civilian labor force. Many families have both parents in the work force rather than living on a single income. Eighty-six percent of couples with children of any age will both be in the work force at the same time during the 1990's. Divorce is also a possible threat to nearly 50% of all married couples, and many women face raising children alone which requires greater financial responsibilities (Staff A, 1991). Eighty percent of all working women are employed in low paying, low status traditional jobs. The term "feminization of poverty" has developed since the United States Department of Labor estimated that two-thirds of the nation's poor will be women by the turn of the century (Staff D, 1991). It is projected that by the year 2000, between 25-30% of high school seniors will have received welfare before they are adults (Staff C, 1991).

To further complicate the situation, women generally earn only 70 percent of what men earn (Staff D, 1991). Traditional jobs for women pay much less than traditional jobs for men. One way for females to overcome the disparity in income is to seek employment in occupations that are traditionally filled by males because those in non-traditional jobs earn 20% to 30% more that females in traditional occupations. For example, the weekly pay for a secretary is approximately $312 while the weekly pay for a mechanic is approximately $392 (Nash, 1991).

Over the past few years, women have started moving into non-traditional jobs pursuing higher pay. However, the greatest increase of women in non-traditional occupations exists in the professional areas. For example, over the five year period from 1983 to 1988, the number of female lawyers increased by 4.1% while the number of female machinists increased by .7% (Nash, 1991). These findings suggest that women with more education are more confident and assertive toward their careers. Those who do not go to college must learn job skills through vocational courses. Historically males and females tended to select traditional vocational courses in high school. As females continue to pursue traditional occupations they sacrifice the opportunity to earn higher wages, and the problem of women facing financial crisis or poverty perpetuates. Nevertheless, according to Sadker and Sadker (1982), gender stereotyping and bias is detrimental to males and females.

Legislation Supporting Sex Equity

The argument for equity in the United States dates back to the writing of the 14th Amendment of the U.S. Constitution in 1868, when the rights of citizens were addressed and protected by the Office for Civil Rights (Carelli, 1988). Numerous laws have been passed supporting the rights of women; however, none have been passed supporting men's rights. One of the reasons there are more laws supporting women is because the roles

women assume at home and in the work place have changed drastically over the past 100 years while men's roles have not changed as drastically. As a result of more women entering the work force, there has been a need for laws to protect females and other minority groups from being treated unequally in an environment historically dominated by males.

The first piece of legislation concerning sex discrimination was the Equal Pay Act of 1963. This law required employers to pay men and women equally if they were performing the same duties. This law is enforced by the United States Department of Labor (Carelli, 1988).

The next piece of significant legislation passed concerning equity was the Civil Rights Act of 1964 which includes Title VII. Title VII prohibits private employers, labor unions, employment agencies, state and local governments and employees of educational institutions to discriminate on the basis of race, color, religion, sex, or national origin. This includes discrimination in the following areas: (1) recruitment, hiring, firing, layoff, recall; (2) wages, conditions or privileges of employment; (3) classification, assignment or promotion; (4) use of facilities; (5) apprenticeship training or retraining; (6) application of referral procedures; (7) sick leave and pay; (8) overtime work and pay; (9) insurance coverage; (10) retirement privileges; (11) printing, publishing, or circulating advertisement relating to employment; and (12) promotion opportunities (Nash, 1991). The guidelines issued on November 10, 1980, stated that harassment on the basis of sex is also a violation of Title VI.

Until the 1970's, most legislation concerning women's rights was written to protect those in the work force. In 1972, a pivotal piece of legislation (Title IX of the Education Amendment Act) was enacted to protect and promote the rights of students and employees from sex discrimination. This law states: "No person in the United States shall on the basis of sex be excluded from participation in, be denied the benefits of or be subjected to

discrimination under any education program or activity receiving Federal financial assistance. . . " However, the following were exceptions to this law: (1) U.S. military and religious schools; (2) single sex organizations such as Girl Scouts or Boy Scouts; (3) social fraternities and sororities (4) Boys/Girls State; and (5) father-son or mother-daughter activities. After Title IX was enacted, the regulations were enforced requiring educational institutions to assign local coordinators to plan and comply with the grievances of the law, conduct remedial programs to stop sex discrimination and periodically report to the United States Office for Civil Rights (Nash, 1991).

Nash reported that in 1974, the Women's Educational Equity Act was passed which provides for grants to be authorized to agencies and organizations to fulfill the purposes of the law (to provide educational equity for women) at all educational levels. As a result, instructional materials, textbooks, in-service programs and other curriculum was developed to increase awareness of sex equity in the educational setting. The United States Office of Education is responsible for administering the provisions of this legislation.

One of the most important pieces of legislation regarding the issue of sex equity was the Carl D. Perkins Vocational Education Act of 1984. It strengthened the Vocational Education Act (VEA) of 1976 which mandated each state to hire at least one coordinator to conduct sex equity awareness programs in all vocational education systems. The Carl D. Perkins Vocational Education Act reinforced and further developed the VEA by providing funds and requiring the following two issues to be addressed in special projects through grants: (1) Single Parents and Homemakers, and (2) Young Women and Sex Equity Programs. The goal of this legislation was to build opportunities for females where inequity is still a problem. Educational institutions may apply for the Carl Perkins project funds to develop material to help eliminate sex discrimination and bias (Nash, 1991).

The Carl D. Perkins Vocational and Applied Technology Education Act Amendments were authorized in 1990. This legislation provided for improving the quality

of educational programs and expanding services for populations with special needs including: (1) educationally and economically disadvantaged students; (2) disabled students; (3) students with limited English proficiency; (4) students in correctional institutions; and (5) those participating in programs designed to eliminate sex bias (Staff C, 1991).

Status of Sex Equity in the Secondary Vocational Programs of Texas

According to Nash, a vocational area is considered traditional if 75 percent of its enrollment is dominated by either males or females. A recent study was conducted to review the status of sex equity in vocational programs in the secondary schools of Texas. The findings of the report (Harris, 1988) indicate that although some traditional areas of vocational training have demonstrated a move toward non-traditional enrollment, a great margin for improvement remains.

Those areas of vocational training that were considered traditional for males are Agricultural Education, Industrial Arts Education, and Trade and Industrial Education. Of these three areas, Agricultural Education has increased its female enrollment the most in recent years. In 1984, the enrollment in Agricultural Education was 17 percent female, but in four years it experienced a slight increase to 19 percent. Industrial Arts Education was also male dominated as only 20 percent of its enrollment was female, and no percentage change occured in enrollment from the period 1984 to 1988. The traditionally male area of Trade and Industrial Education enrollment was static as revealed by the 1984 female enrollment of 15 percent versus 16 percent in 1988.

Females dominate the vocational area of Business and Office Occupations as the male enrollment in 1984 was 16 percent and in 1988 it was 19 percent (Harris, 1988). The Health Occupations program has been considered traditional for females in the past, but in

recent years male enrollment increased enough to classify it as a non-traditional vocational area. The 1984 enrollment of males was 23 percent, and it increased to 25 percent by 1988 (Harris, 1988).

Summary

The role of females in the work force has changed drastically over the past century. Laws passed over the past fifty years have helped women attain job positions in areas that they might not have otherwise been able to enter without support from legislation. An example is Executive Order 11246 which provided for more opportunities for women to obtain positions in non-traditional construction jobs. Title IX is very significant as it prohibits discrimination on the basis of sex in the educational environment. Title IX ensures that boys and girls are allowed the same opportunities in school; however, students continue to enroll in vocational courses that have historically been deemed appropriate on the basis of their gender. Presently more career opportunities exist for students than ever before, so it is important that students be encouraged to select courses or vocational programs best suited for their interests and talents without regard to whether they are female or male. Although Title IX has helped eliminate deliberate and obvious sex discrimination, there are still traces of subtle gender bias and gender stereotyping that have a detrimental effect on students as they make decisions that will affect not only their careers but the quality of their lives as well. These barriers may be reduced by increasing the level of awareness and understanding of gender equity among educators.

CHAPTER III

PROCEDURES

This study was initiated by conducting historical research. An in-depth review of literature was conducted to collect information from other gender equity research findings, conclusions and recommendations. Information regarding gender equity issues in the classroom obtained from historical research was consolidated in order to obtain a pool of information from which the primary instrument was developed.

Delphi was the principle procedure used to conduct this study. A panel of twenty-six experts comprised an advisory committee which was utilized to identify, select and prioritize sex bias and stereotyping issues that were prevalent in Texas. The Delphi technique was slightly modified to allow for feedback from the advisory committee through discussion at meetings. Additional information was gathered from mailed questionnaires. There were two rounds of gathering information from the advisory committee in the modified Delphi process to determine what issues of gender equity were most important in Texas. Figure 3-1 further illustrates this process. According to Brooks (1972), a researcher using the Delphi process may determine the number of rounds prior to the study or allow for additional rounds as needed for the group to reach a consensus.

At the initial stage of this project, a presentation was delivered in Austin, Texas, on September 9, 1991, to the state vocational equity specialists. The three purposes of this meeting were: (1) to introduce the advisory committee to the purpose and objectives of this project, (2) to accept nominations for the five remaining positions on the advisory committee, (3) to collect information and resources that might should been included in the review of literature.

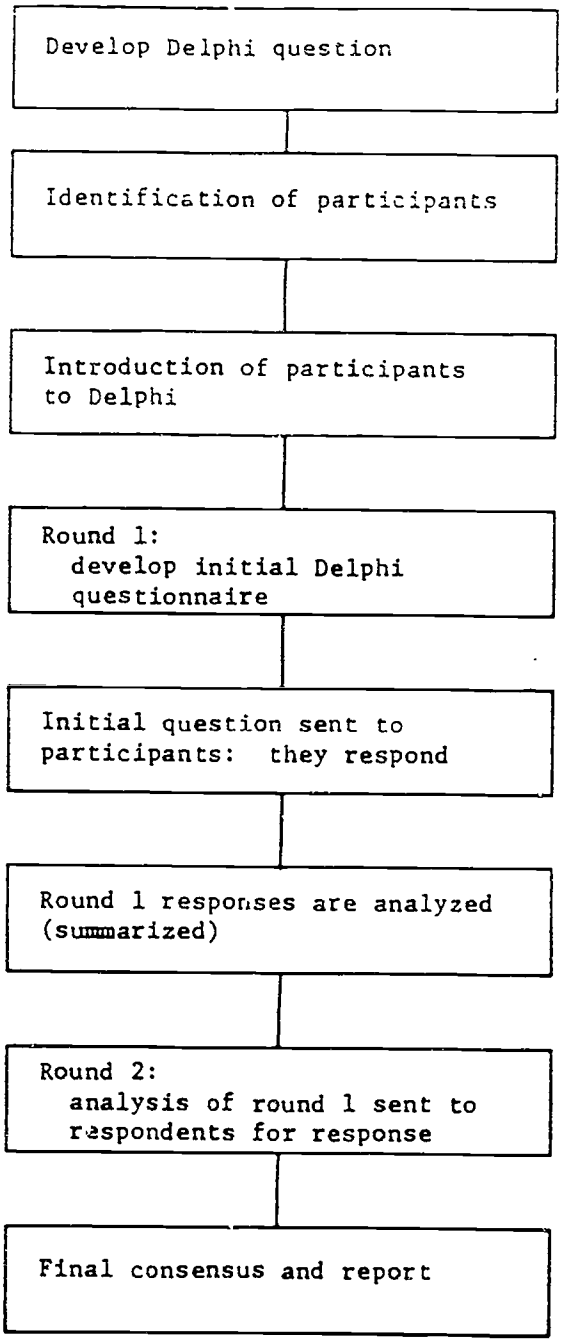

Figure 3-1. A typical overview of the Delphi Process.

Source: F. L. Ulschack, Human Resource Development: The Theory and Practice of Need Assessment, 1983.

After the advisory committee reached a consensus regarding which issues were most important in the secondary schools of Texas, the project staff began developing the script for the video and pretest/posttest for the study guide. A work session (see Appendix A) was conducted on January 16-17, 1992, in Lubbock, Texas. Twenty of the twenty-six advisory committee members attended. The four objectives accomplished at this meeting were: (1) development of video segments demonstrating examples of gender bias and stereotyping, (2) evaluation of the narrative of the video script, (3) development of film commentaries by advisory committees members to include in the video, and (4) field testing of the pretest and posttest to be included in the study guide.

Following the workshop, the project staff completed a comprehensive script for the video. The administration from a local high school agreed to provide student and adult talent, props and facilities necessary for developing the three segments of the video. The three segments were created and video taped on April 21, 1992. Two professionals,were employed to read the voice-over segments of the video script.

Selection of the Advisory Committee

Anderson and Jones (1986) reported that respondents involved in research should: (1) believe they are personally involved in the problem of concern to the research, (2) have pertinent information to share, (3) are motivated to see the process through and (4) value the type of information produced from the research project. These factors were considered in selecting advisory committee members. The advisory committee consisted of the twenty vocational equity specialists representing each region in Texas. In addition to the twenty vocational equity specialists, the committee also included: (1) two vocational counselors, (2) two vocational directors, (3) one professional in a non-traditional career, and (4) the state wide consultant in charge of communications and activities to eliminate sex bias and stereotyping. According to Anderson and Jones (1986), those on a panel of experts can be

selected by a nomination process in which key people in the target group nominate others who would be able to share necessary input. At a state-wide equity conference in September 1991, the vocational equity specialists were asked to submit nominations for the positions of the two vocational counselors, two vocational directors and the one non-traditional professional. The project staff selected the individuals based on strength of recommendations and stratified representation to fill those positions from the nominations provided by the advisory committee. The final advisory committee consisted of twenty-six experts throughout the state.

Instrument Development

The primary instrument used in this study was developed from a review of the literature and information provided by the advisory committee. The issues included on the questionnaire were reviewed for content validity by a panel of faculty in the Department of Agricultural Education, Communications and Systems Management at Texas Tech University. The instrument was then pilot tested by a select group of agricultural education graduate students. After minor revisions were incorporated, the instrument was administered to the advisory committee in round one to measure the importance of each gender equity issue presented.

Data Collection

Round One

Information from the advisory committee and the review of literature were incorporated into a master list of equity issues. The project staff carefully analyzed the issues to develop an instrument (see Appendix B) including those issues which prevailed in the literature. The purpose of this questionnaire was to measure the importance of the

equity statements in relation to the status of gender equity in the secondary schools of Texas. This instrument was administered to the advisory committee during October of 1991. A 100 percent response was achieved in round one.

Round Two

Once the information from round one was collected and tabulated, a summary (see Appendix C) was developed. The purpose of round two was to achieve group consensus regarding the rank order and priority of the gender equity issues presented in round one. In order to accomplish this, a summary approval form was developed presenting the following: (1) an item number assigned to each statement, (2) the ranking of each statement, (3) the mean value of each statement, (4) the gender equity statement, (5) space to place a check mark to indicate agreement with the findings, and (6) writing space to express disagreement of the findings.

Another factor that was taken into consideration was the length of the video. Because an excessive number of issues could not be effectively addressed in a 12-15 minute video presentation, a target limit of 15 items was established by the project staff. Those items numbered 1-15 were to be included in the video, and those items numbered 16-23 were not to be included in the video. To indicate this, a line was drawn on the summary between item numbers 15 and 16. The advisory committee also expressed unanimous approval of the video content limit determined by the project staff.

CHAPTER IV

FINDINGS

Results from the Modified Delphi Study

Round One

Once the questionnaires were collected, mean values were determined for each equity issue. A Likert Scale, as described below, was used to separate the statements by the degree of importance into one of the following four categories: (1) very important to include in video [mean value 1.50 or less], (2) somewhat important to include in video [mean value 1.51 - 2.50], (3) not important to include in video [mean value 2.51 - 3.50], and (4) discard from consideration [3.51 or above]. A rank order value was also assigned to each equity issue, and this ranking was determined by the sequence of the mean values.

Four statements with mean values ranging from 1.35 to 1.50 were within the very important category to include in the video as illustrated in Table 4-1. Eighteen statements were determined as somewhat important to include in the video with mean values ranging from 1.58 to 2.34. These issues are listed in Table 4-2. Only one gender equity issue was categorized as not important to include in the video, and it is listed in Table 4-3. All of the issues presented on the instrument in round one received a mean value below 3.51, so none were discarded from consideration.

Round two

The advisory committee provided a 100 percent response to the information presented in round two. A summary of the results was developed as shown in Table 4-4. After analyzing the summary, the project staff determined that the group had reached a consensus regarding which gender equity issues were prevalent in Texas. A significant

Table 4-1: These issues were identified as "very important to include in the video" by the advisory committee.

Item	Mean Value	Gender Equity Statement
1	1.35	Teachers and counselors tend to guide females toward vocational courses in home economics, health, and business and office education. Likewise, males are encouraged to enroll in courses in industrial technology, and agriculture and agribusiness.
2	1.42	Teachers perpetuate stereotyping by the language they use and comments they make to students.
3	1.50	Teachers' expectations are related to students' performance. When teachers expect more from girls in reading they do better than boys. Likewise, boys tend to excel more in the areas of mathematics and science as teachers expect them to perform better in these areas than girls.
4	1.50	Instructional materials showcase males in most of the stories, illustrations, occupations and biographies. Bulletin boards and visual aids can also reinforce stereotyping and sex bias.

Table 4-2: These issues were identified as "somewhat important to include in the video" by the advisory committee.

Item	Mean Value	Gender Equity Statement
5	1.57	Boys create more response opportunities for themselves. Boys are more likely than girls to disrupt the teacher to get attention in class. Girls are discouraged from being assertive while boys are rewarded for such behavior.
6	1.73	Males are called upon to perform tasks that require manual skills; while females are called upon to conduct housekeeping chores and perform secretarial tasks.
7	1.80	Teachers interact more with males, and they provide them more opportunities to respond in class. Males are asked higher level questions than females.
8	1.80	Females tend to receive more praise for following directions and completing assignments neatly, while males tend to receive criticism in these areas. Likewise, males tend to receive praise for the intellectual quality of their work while females are criticized for the intellectual inadequacy of their work.
9	1.80	Males receive 8-10 times as many prohibitory control messages as their female classmates. Teachers also send more males than females to the principal's office for disciplinary reasons.
10	1.80	The interaction patterns remain the same regardless of whether the teacher is a man or a woman.
11	1.88	Teachers call on males more frequently and allow them to dominate in discussions, in problem-solving experiences and sometimes in the useof classroom materials.
12	1.96	Feedback given to boys and girls by teachers can result in a greater tendency in girls to perceive negative feedback as a reflection of their inabilities.
13	1.96	Females tend to initiate their ideas with less confident statements such as "I'm not sure this is right, but. . .," thereby justifying their answers.

Table 4-2: Continued.

Item	Mean Value	Gender Equity Statement
14	1.96	Teachers are likely to give male students directions on how to do a task, but they have a tendency to perform tasks for females.
15	1.96	A male student with special academic needs is more likely to be identified than a female with special academic needs.
16	2.00	Girls are less persistent at solving problems and more likely than boys to exhibit learned helplessness. Girls are more likely to blame poor performance on lack of ability rather than a lack of effort.
17	2.00	Females are praised for their effort rather than their intelligence. Males receive more praise for correct answers than females, but they also receive more criticism for incorrect answers.
18	2.04	Teachers make more academic contacts with and give more cognitive time to females in reading classes and males in mathematics classes.
19	2.04	Teachers are more likely to identify a gifted male student than a gifted female student in mathematics and science.
20	2.27	Teachers tend to call on girls only if they sit near the front of the classroom, but they call on boys regardless of where they are sitting.
21	2.30	Although teachers are less apt to call on females in class, they are more patient with females who have difficulty in responding than with males.
22	2.38	Teachers reward the creative behavior of males more than females.

Table 4-3: This issue was identified as "not important to include in the video" by the advisory committee.

Item	Mean Value	Gender Equity Statement
23	2.60	When responding to students' questions, teachers tend to give males shorter responses than females.

proportion (19 percent) of the advisory committee indicated that item number sixteen should be included in the video, so the project staff elected to include a sixteenth gender equity issue in the video.

Table 4-4: Summary of responses from the Project Advisory Committee (PAC) members in round two.

Item	Number of PAC Members In Agreement	In Disagreement/Comments	
1	26		
2	24	2	Cluster 2,3,7,8 together
3	24	2	Cluster 2,3,7,8 together
4	26		
5	25	1	no comment
6	26		
7	24	1 1	Cluster 2,3,7,8 together "this doesn't hold as much merit as the others"
8	25	1	Cluster 2,3,7,8 together
9	25	1	"not important. . ."
10	24	1 1	"this doesn't hold as much merit as the others" no comment
11	25	1	no comment
12	22	1 1 1 1	"?" Unsure about issue "already implied in #3 and #7" "should be stated with research" "unsure about this issue"
13	24	1 1	"?" Unsure about issue no comment
14	25	1	no comment
15	24	1 1	"?" Unsure about issue "Drop, not as important as #16"
16	21	4 1	"move up to include in video" "seems interrelated to #14"
17	25	1	"move up"

Table 4-4: Continued.

Item	Number of PAC members In Agreement	In Disagreement	Comments
18	23	2	"Could be used as an example of item #3" "They do this because of the expectation in no.3 could easily be combined with no.3"
		1	"move up"
19	24	2	"important to include in video"
20	25	1	"move up"
21	25	1	"important to include in video"
22	25	1	"move up"
23	26		

Discussion of the Descriptive and Historical Research Findings

In order to simplify the presentation of these findings, the project staff organized the gender equity statements into the following three categories: (1) gender stereotyping (Appendix D), (2) what teachers say (Appendix E), and (3) what teachers do and allow students to do (Appendix F). These same categories were maintained in the video featuring three scenarios in which educators and students demonstrated these gender equity issues.

Gender Stereotyping

Students receive stereotyping messages and other signals indicating expectations of traditional sex-roles from educators and instructional materials. In addition, gender stereotyping is further reinforced as students receive different treatment from teachers because of expectations formulated long before students enter the classroom.

Signals from educators

Gender stereotyping messages are reinforced in secondary schools as teachers and counselors tend to guide females toward vocational courses in home economics, health, and business and office education. Likewise, males are encouraged to enroll in courses in industrial technology or agriculture science and technology (Grayson, 1990). This type of behavior is detrimental because rather than exposing students to opportunities appropriate to their talents and desires, students are limited and denied alternative learning opportunities on the basis of their gender.

Facts indicate that the sex-role stereotyping messages students receive affect the decisions they make in school. Sadker and Sadker (1982) stated: "Fortunately, our educational and social system is flexible enough to allow people to try out and succeed in non-traditional paths" (p. 10). According to Mindy Bingham, keynote speaker at the 1992

Texas Vocational Equity Dissemination Conference, Austin, Texas, by approaching each student as an individual rather than a male or female, educators are more effective in helping students select courses that benefit them as they make decisions affecting their lifestyles and careers.

Signals from instructional materials

Textbooks, bulletin boards and visual aids often contribute to gender stereotyping by showcasing males in most of the stories, illustrations, occupations and biographies (Sadker & Sadker, 1982). Instructional materials are involved in approximately 90 percent of students' learning time in schools. Following are findings that were reported (Scott & Schau, 1985) on research of print and non-print materials: (1) exposure to sexist materials may increase sex-typed attitudes, especially among young children, (2) exposure to sex-equitable materials and to same-sex characters results in decreased sex-typed attitudes in students from three to at least twenty-two years of age, (3) attitude change toward equity increases with increased exposure. Scott and Schau (1985) stated:

> These generalizations apply to both female and male students. Thus, it is very clear that the use of sex-equitable materials in schools helps students develop more flexible sex-role attitudes, which allow them to make educational and career choices based on their own interests rather than on notions of what is "right" for a female or male. (p. 221)

Examples of messages conveyed in biased materials include facts that boys exhibit active mastery and are discouraged from showing their feelings, and girls are shown as passive, dependent and narrow in their range of social and occupational roles. Many achievement tests also contain sex-role stereotypes that convey the message that many professions are not open to women (Dunne & Rose, 1989).

However, Hamlin (1982) reported that many modern text books demonstrate a new awareness of women's widening roles and present more realistic pictures of girls as positive, active participants and protagonists in a wide range activities.

According to Dunne and Rose (1989), teacher educators should guide their students' exposure to text materials containing sex stereotypes. Student teachers should also be informed of sexist language so they become aware of the messages conveyed by the school environment and can supplement present text books or choose new material more judiciously. Stitt (1988) reports that selection of educational materials is critical for effective and equitable instruction. The following four general criteria are agreed upon by publishers, researchers, teachers and students regarding the selection of instructional materials: (1) desirability, (2) practicability, (3) intrinsic quality, and (4) product development.

Different expectations for male and female students

Another belief contributing to gender bias is that females are better suited for reading while males are better at solving mathematical and science problems. Downing, May and Ollila (1982) reported that as North Americans mature (age 6 to adult), their outlook regarding reading changes. Most North Americans demonstrate an increasing tendency to relate to books and reading as female objects and activities. In addition, they reported that although it might be easy to generalize that this might be a universal phenomenon, that worldwide, the findings on a person's sex in relationship to his or her reading readiness, achievement, and attitudes about reading are somewhat mixed. For example, boys in Nigeria, India, Germany and Finland are found to have superior reading skills.

Teachers' expectations are related to students' performance. When teachers expect more from girls in reading, they do better than boys. Likewise, boys tend to excel more in areas of mathematics and science as teachers expect them to perform better in these areas than girls (Sadker & Sadker, 1982).

Gender stereotypes are often reinforced as males are called upon to perform tasks that require manual skills while females are called upon to conduct housekeeping chores and perform secretarial tasks (Grayson, 1990). The differences in assignments indicate that traditional responsibilities are expected for males and females. Although this is a very subtle form of stereotyping, it contributes to the sexism cycle by providing differential treatment to females and males (Sadker & Sadker, 1982).

What Teachers Say

Teachers often unintentionally treat female and male students differently by what they say. Language usage, teacher-student interactions and discipline patterns can contribute to gender bias in the classroom.

Language usage

Language plays a major role in socialization because it aids in teaching children the roles that are expected of them (Nilsen, et al., 1977). Teachers perpetuate stereotyping by the language they use and the comments they make to students (Carelli, 1988). Nilsen et al. (1977) stated:

> Thought and action are reflected in words, and words in turn condition how a person thinks and acts. Eliminating sexist language will not eliminate sexist conduct, but the language is liberated from sexist usages and assumptions women and men will begin to share more equal, caring roles. (p. 182)

The National Council of Teachers of English (NCTE) have identified the general problems of the English language and provided recommendations for sex-fair language usage (Nilsen et al., 1977). Publishers such as Genn and Company; Holt, Rinehart and Winston School Department; Macmillan Publishing Company; and Scott, Foresman and Company have established guidelines to help their writers be fairer in language usage

(Nilsen et al, 1980). The general problems include the following categories: (1) omission of women, (2) demeaning women and (3) sex-role stereotyping.

Omission of Women

Donna Prideaux (1989), director of the Germanna Regional Center for Single Parents, Homemakers and Displaced Homemakers stated that language can limit peoples' options by limiting their vision. The use of "man" or any suffix suggesting a particular gender to describe an occupation that could be held by a male or female should be avoided. For example businessman, fireman and mailman all include the word "man." Gender-fair alternatives include: business executive or manager, fire fighter and mail carrier. According to Nilsen et al. (1977), the use of "man" in a generic sense such as "mankind," "man-made," or "common man" should also be avoided.

The English language has no generic singular pronoun, therefore, "he" is commonly used to personify titles given to people such as "the judge", "the executive", "the author," etc. The use of the pronoun "he" subtly conditions people against the idea of a female judge, executive, author or other traditionally male roles (Nilsen, 1977). Empirical investigations studying whether traditional generic pronouns actually refer to women and men equally or whether their use encourages male bias conclude that male-bias does exist (Pearson, 1991).

Demeaning Women

The NCTE has addressed and provided examples of two ways in which the language can be demeaning to women (Nilsen et al., 1977). First, men and women should be treated in a parallel manner, whether the description involves jobs, appearance, marital status or titles. For example if a female is an attorney, she should be referred to as a "lawyer" rather than a "lady lawyer." Second, terms or adjectives that patronize or trivialize women or girls should be avoided, as should sexist suffixes and adjectives

dependent on stereotyped masculine or feminine markers. For example the phrase "I'll have my girl do it" should be avoided and replaced with "I'll have my secretary do it."

Sex-Role Stereotyping

Pearson (1991) stated: "Language which refers to women and men deserves our consideration because language has a significant influence on the way we perceive the world" (p. 80). Language perpetuating sex-role stereotyping was deemed a problem by the NCTE, and they made the following recommendations regarding such language. First, generic terms such as "doctor" or "nurse" should be assumed to include both men and women. Therefore, terms such as "male nurse" and "woman doctor" should be avoided to ensure fairness. Second, women should be shown as participating equally with men; they should not be omitted or treated as subordinate to men. Following is an example where the author or speaker has stereotyped writer as male: "Writers become so involved with their work that they neglect their wives and children." Sometimes language usage emphasizes that men are superior to women. This pattern is depicted in the following sentence: "Sally's husband lets her teach part-time." In order to show women participating equally with men the sentence should read: "Sally teaches part-time."

Teacher-student interactions

In an article titled: "Sexism in the Schoolrooms of the '80s," Sadker and Sadker (1985) reported that the teachers in their study demonstrated an interaction pattern that they refer to as a "mind set." That is, after calling on a student, teachers tended to keep calling on students of the same gender. Although this pattern applied to both boys and girls, it was far more pronounced among boys; thus the males were allowed more discussion time than females.

Grayson (1990) reported that teachers talk (ask questions, give directions, comment and respond) mostly to male students. In addition, high achieving males received more

academic interaction from teachers than high achieving females. Sadker and Sadker (1985) suggested that one reason for this pattern could be in part because of the way students are seated. Sometimes teachers separate students and seat them in groups according to gender, but most often the students separate themselves. The tendency for teachers to follow the "mind set" may be a matter of where each sex sits. Sadker and Sadker (1982) gave the following example:

> ...a teacher calls on a female student, looks around the same area and then continues questioning the students around the girl, all of whom are female. When the teacher refocuses to a section of the classroom where boys are seated, boys receive the series of questions. And, because boys are more assertive, the teacher may interact with them longer. (p. 342)

Grayson (1990) reported that students who sat in the front of the classroom were rated more favorably by teachers than those who sat in the back of the classroom. In order to ensure equal interaction with students, Grayson suggests teachers do the following: (1) move about the room with the intention of being near each student or (2) routinely rearrange students. Grayson (1990) states: "Movement increases student participation with the teacher and each other and has a direct impact on the climate of the class, which tends to carry over into less formal and unstructured aspects of the student's lives." (p.47)

Aside from interacting more with male students, teachers also tend to ask them higher-level questions (Grayson, 1990). Therefore, if a teacher fails to ask all students the same type of questions, an inequitable situation exists. Grayson stated that in most cases, it appears the students in need of higher order skill development are the least likely to receive it. Through observation and recording techniques, teachers may become aware of their unequal questioning patterns and work toward more equitable questioning.

According to Grayson (1990) as teachers concentrate on higher level questions, they have a tendency to provide more analytical feedback. Regardless of the students' performance, teachers' feedback can benefit the learning process provided that it is positive and informative. However, when there is a difference in the feedback given to the students

it can create disparity in the classroom. The 1989 AAUW report states: "When teachers criticize boys, they often tell them that their failings are due to lack of effort. Girls are not given this message, the absence of which implies effort would not improve their results" (p. 3). This statement reflects the effects of an important gender equity issue which is that, feedback given to boys and girls by teachers can result in a greater tendency in girls to perceive negative feedback as a reflection of their inabilities (Sadker & Sadker, 1982). For example, males and females perceive feedback and achievement differently. Females more often attribute success in math to luck rather than skill (Grayson, 1990). Girls interpret their problems with math as personal failures while boys tend to project it more as a problem with the subject matter itself. As females interpret problems in mathematics as personal failures, it has a negative effect on their self-esteem (AAUW, 1990). This subtle gender bias has two major effects on students: (1) it creates disparity in the levels of confidence and self-esteem, and (2) females tend to avoid areas of mathematics and science.

Ostling (1992) made the following statement in a *Time* magazine article:

> In a 1990 survey, 3,000 youngsters were asked such questions as whether they were 'happy the way I am.' Predictably, everyone's self confidence declined during adolescence, but the self-esteem of girls suffered deeper wounds. The pivotal factor in low self-esteem and performance, and the most intriguing aspect of the research, is what actually occurs in the classroom. (p. 62)

The following information supports the idea that feedback from teachers influence disparity in students' self-esteem and enrollment in mathematics and science courses. A student's persistence in mathematics is affected by the encouragement from the teacher. Studies indicate that educators have the potential to influence students' confidence in mathematics (Beauvias, Mickelson & Pokey, 1985).

The fact is that 81 percent of elementary girls and 84 percent of elementary boys like mathematics. However, something is influencing students because by high school,

only 61 percent of the girls and 72 percent of the boys say they like mathematics (Holliman, 1991). According to the 1992 AAUW report, females experience a drop in self-confidence in the area of mathematics before their interests in the subject declines. Girls who view mathematics as "something men do" perform poorer than girls that do not have this perception (AAUW, 1992). Teacher interaction plays a major role in this trend because teachers spend more time with males in mathematics classes (AAUW, 1989). The differences between boys and girls in mathematics achievement are small and declining. However, girls are still less likely to enroll in advanced courses and be in the top scoring mathematics groups (AAUW, 1992).

However, the gender gap in science not only exists, but it may be increasing (AAUW, 1992). Grayson (1990) reported that self-perception and self-confidence is associated with interest in enrolling in science. Females' self-confidence is a barrier to participating in science because females are less likely than boys to think of themselves as self confident. According to DeBoer (1984), high school women felt they worked harder, and they rated their ability lower even though their actual performance was generally better than that of young men.

The number of elementary girls indicating they like science is 75 percent; however, by the time they reach secondary school this number drops to 63 percent. The number of elementary boys that like science is 82 percent, and by high school 75 percent report they still enjoy science (AAUW, 1990). It is clear that disparity exists between males and females in the areas of mathematics and science. Girls get better grades and are more likely to go on to college; however, even successful girls have less confidence in their abilities than boys, and have higher expectations of failure and more modest aspirations. The result is that girls are less likely to reach their potential than boys (Houston, Kantrowitz & Wingert, 1992). By instilling confidence to shape female students' interests and

aspirations, educators can influence the self-esteem of their female students (AAUW, 1990).

Knowing that feedback has an effect on students, it is important to understand how feedback might be biased. Sadker and Sadker (1982) reported that females tend to receive more praise for following directions and completing assignments neatly, while males tend to receive criticism in these areas. Likewise, males tend to receive praise for the intellectual quality of their work while females are criticized for the intellectual inadequacy of their work.

Sadker and Sadker (1982) suggested that teachers generally have a different set of expectations for evaluating students' performance. Teachers use the following criteria to evaluate students' work: (1) intellectual quality and (2) appearance of the work which includes neatness and compliance with directions. Male students receive 90 percent of praise based on the intellectual quality of their work while females receive 80 percent of praise in this areas. Males receive 10 percent of praise for following the rules of form while 20 percent of the praise given to females is in this area. Sadker and Sadker suggest that teachers generally expect and reward higher quality of work from males and greater neatness of work from females. In order for students to receive an equitable education, teachers must have the same expectations from all students and praise them equally.

Studies indicate that criticism, as well as praise, also differs for female and male students. A significant gap exists between the sexes regarding criticism based on intellectual inadequacy. Males receive approximately 50 percent and females receive approximately 90 percent of criticism in this area. The extent to which students are criticized for not following the rules of form is also uneven. Males receive approximately 50 percent of criticism while females receive approximately 10 percent of criticism in this area (Sadker & Sadker, 1982). Grayson (1990) reported that males received more evaluative feedback regarding their performance than females whether the feedback

expressed approval or disapproval. In addition, teachers said they rewarded the creative behavior of males three times as often as females. Conroy (1988) wrote that boys benefit in the classroom because they get more encouragement and more opportunities to improve. He added that they also learn to handle criticism. Beauvais, Mickelson & Pokay (1985) stated: "Classrooms where students are treated differently by sex are most beneficial to bright boys and least beneficial to bright girls. ...When girls are treated equally, girls' classroom instructions increase and they receive more praise and criticism" (p. 7).

Discipline

What teachers say can also create disparity between males and females in the area of discipline. A sex-fair environment would require boys and girls to receive the same degree of discipline for misbehavior; however, the reality is that boys tend to receive more discipline. Males receive eight to 10 times as many prohibitory control messages as their female classmates (Grayson, 1990). Grayson stated that teachers usually establish behavior standards in the classroom, and that these standards may differ among teachers. The tendency for males to receive more discipline reflects and reinforces the stereotype of females as docile and males as aggressive. Sadker and Sadker (1982) also suggest that a teacher's expectations of behavior affects his or her discipline pattern. Figure 4-1 lists adjectives describing good female and male students that were provided by a group of junior high teachers. The adjectives such as "calm" for females and "active" for males reflects traditional gender stereotyped expectations. According to Sadker and Sadker (1982), those students who do not fit the stereotypes may receive negative feedback from teachers.

Not only do teachers discipline boys and girls for different reasons, the severity of the punishment they administer is different between the sexes (Grayson, 1990). In 1979, it was reported that males were more apt to experience physical forms of discipline while

females were more apt to be verbally reprimanded. Even when students behaved the same, the males were disciplined more and sent to the school administration to receive punishment.

Good Female Students	Good Male Students
appreciative	active
calm	energetic
conscientious	adventurous
poised	enterprising
dependable	frank
sensitive	aggressive
efficient	curious
considerate	independent
cooperative	inventive

Figure 4-1: Adjectives describing expected behavior of females and males in junior high school that were collected from a study of junior high school teachers

Source: Sadker & Sadker, Sex Equity Handbook for Schools, 1982.

According to Grayson (1990), this type of gender bias may have the following negative effects: (1) it further reinforces existing gender stereotypes, (2) students may perceive the females as receiving preferential treatment from teachers, (3) may create hostility between the genders, (4) because some teachers may be afraid of male students, sending them to someone else to receive discipline may reduce the teachers' authority and stature in the classroom, (5) students observing their peers not receiving discipline may become less responsible for their own actions, and (6) teachers may avoid punishing females for fear they will become upset and cry. The disruptive behavior of one student affects the learning of all students (Grayson, 1990). Sadker and Sadker (n.d.) reported that the issue of discipline is ironic because some students perceive public discipline as a reward rather than punishment. They suggest that some students misbehave in order to get

attention from their teachers and gain status from their peers. Therefore, it is important for teachers to apply classroom management and discipline strategies that are fair and equitable to all students.

What Teachers Do and Allow

The manner in which a teacher manages the classroom and interacts with students can contribute to sex-tole stereotyping and bias. According to Brophy and Good (1974), there does not appear to be much difference whether it is a man or woman who stands behind the teacher's desk, because the interaction patterns remain very similar. This section further examines gender biased teaching patterns and how they can affect students. In addition, it covers what teachers might allow the students to do in the classroom that can also foster gender bias.

Gender biased teaching patterns

Teachers often incorporate application strategies to ensure that their students receive practical learning experiences. However, such exercises can create disparity between the sexes if teachers unconsciously limit students because of bias. For example, teachers are likely to give male students directions on how to do a task, but they have a tendency to perform tasks for females (Grayson, 1990). The result of this type of bias is that males develop independence as they solve problems for themselves while females become dependent on others to assist them. Girls are less persistent at solving problems and more likely than boys to exhibit learned helplessness. However, high achieving boys receive more teacher approval and active instruction than low achieving boys. Nevertheless, studies reveal that high achieving boys receive more active instruction than other students in classroom interactions (Sadker & Sadker, 1982).

It is important for teachers to recognize gender differences in assertiveness, non-assertiveness and aggressiveness in order to maintain equity among students. Pearson (1991) reported that men are frequently more aggressive than females. Stereotypically, males are perceived to be assertive. Since females are perceived as unassertive, displays of assertiveness by females may be presumed as isolated events rather than general behavior patterns. Studies show that males are more assertive than females in decision-making; however, females demonstrate assertiveness when they feel self-confident. Pearson (1991) stated: "...women may be unassertive in problem-solving because they do not have high regard for their own ability to perform or to contribute to the specific topic under discussion; however, when they have confidence in their ability to contribute or add to the discussion, they demonstrate assertiveness" (p. 183).

A teacher demonstrates subtle sex bias if he or she responds to students' assertiveness differently. Boys create more response opportunities for themselves in the classroom. For example, boys are more likely to disrupt the teacher to get attention in class (Grayson, 1990). Findings on research of interruption patterns and gender are not consistent. Pearson (1991) reported that some studies indicate that males interrupt others more than females do, and other studies indicate there is no difference in interruption patterns between the sexes. However, Hawkins (1988) found that listeners expect men to interrupt more often than women. As discussed previously, Sadker and Sadker (1982) report that teachers hold different expectations of appropriate behavior for females and males. Grayson (1990) stated that girls are discouraged from being assertive while boys are rewarded for such behavior.

Males and females enter school with roughly equal abilities, but by the time the students graduate, a gap exists between the sexes. Females tend to lag behind in key areas such as mathematics, and this is an indicator that schools are not meeting the needs of females (AAUW, 1992). Historical research revealed additional sex biased tendencies that

also reinforce disparity between female and male students. First, girls suffering from learning disabilities are less likely to be identified or to participate in special education programs. And second, girls who are gifted in mathematics are far less likely to be identified than are gifted boys. Those girls who are identified as gifted are far less likely to participate in special or accelerated mathematics courses to develop this talent. According to Sadker and Sadker (1982), teachers initiate and engage in more academic contact with boys, so they are more attentive to the academic needs of male students. Grayson (1990) stated: "Most teachers do not consciously treat students unfairly, yet differential treatment often happens. In subtle but important ways, teachers communicate that some students are more valued than others" (p. 14).

Gender biased behavior allowed by teachers

Teachers call on males more frequently and allow them to dominate in discussions, in problem-solving experiences and sometimes in the use of classroom materials (Grayson, 1990). This is especially true in the areas of mathematics and science where teachers often allow males to perform more successfully than females. According to Singer and Stake (1986), males' self-esteem and feeling of competence in a general sense are related to mathematics participation and self-perceived mathematical ability. Meanwhile, females continue to view mathematics as an activity for males.

Teachers also unconsciously permit sex bias by allowing females to use qualifying statements. Sadker and Sadker (1984) reported that females tend to initiate their ideas with less confident statements such as "I'm not sure this is right. . ." This is an example of what is known as a disclaimer. Pearson (1991) reports that disclaimers are used to weaken or disparage the speaker's statement or request. There are mixed research findings regarding gender differences in usage of these type of statements. However, research does

indicate that women use more intensifiers than men. These are adjectives and adverbs such as "so," "quite," and "awfully" that intensify the noun and verb being used.

Incorporation of the Delphi Study Results into a Video and Study Guide

The video featured three segments portraying students and teachers during an average day in the classroom where subtle gender bias and stereotyping practices were demonstrated. The first segment, "Gender Stereotyping," was demonstrated in a standard classroom as the counselor advises students for upcoming registration. The second segment, "What Teachers Say," focuses on teacher-student interactions during a rehearsal for the one-act-play. The final segment is divided into two parts. An agri-science classroom and shop create the setting for the third segment titled "What Teachers Do and Allow Students to Do." Each segment was followed by a voice-over and video footage that identified the gender equity issues enacted during the appropriate segment. Recommendations for gender-fair teaching practices were also included throughout the video. Statements by members of the advisory committee were utilized as transitions between different portions of the script. The following excerptions were taken from the actual video script.

Introduction

The narrative that follows is read by a female and a male voice-over and appropriate video footage illustrates the ideas conveyed in the script.

"You are about to mentally participate in a video experience as a person who impacts students' lives each day. Sometimes our intentions, identified by our actions, are obvious. More often when considering questions of stereotyping and gender-equity our actions are subtle, and unintentional."

"Perhaps you've read or heard reports from the media revealing that female and male students receive different treatment in the classroom. This is not a myth created by reporters -- it is reality. So -- what can we do as educators to remedy this? Let's explore together; seeking to heighten our awareness levels as we mold and change the minds and attitudes of those we come into contact with each day."

"Students historically have not been encouraged to cross non-traditional boundaries. Facts indicate boys and girls experience different learning environments while sitting in the same classroom. It is common for teachers to give very subtle suggestions which can encourage males in areas of mathematics and science while encouraging females in reading."

"There are more career opportunities for students now than ever before; however, they continue to enroll in traditional gender based courses. Females traditionally enroll in Home Economics Education, Health Occupations Education, or Vocational Office Education and Cosmetology while males are likely to enroll in Agricultural Science and Technology, Industrial Technology Education or Trade and Industrial Education. Achieving equity in Texas schools and schools throughout the United States means students must be encouraged to pursue courses best suited for them -- regardless of their gender. A closer look will uncover some of the things teachers do unintentionally that create an unequal climate for students."

"Becoming aware of sex bias is the first step in achieving equity in Texas schools... It is important that we are able to recognize gender stereotyping. Gender stereotyping is the assumption that a particular gender possesses traditional and often rigid roles or attributes."

First Transition by an Advisory Committee Member

"Gender stereotyping creates expectations for young men and women which makes it difficult for them or others to be accepted in non-traditional areas. One example of gender

stereotyping is the practice of assigning tasks according to gender. Males are often called upon to perform tasks that require manual skills while females are called upon to conduct housekeeping or secretarial duties."

Second Transition by an Advisory Committee Member

"Teachers often promote stereotyping unintentionally by establishing different expectations for young men and women in different subject areas. As a result , females often perform better in reading while males often perform better in mathematics and science. An example of gender stereotyping is emphasized when teachers and counselors tend to guide students toward traditional gender-based vocational courses. The segments that follow have both mild and exaggerated examples of stereotyping. Identify the more subtle and sometimes non-verbal examples of stereotyping."

Segment #1 -- Gender Stereotyping

Cast: Counselor, Mrs. Jones
Teacher
Students: Craig Rosa
Katie Joey
10 other students (including one student in a wheelchair)

Setting: Standard Classroom

Counselor: "I'm Mrs. Jones, your counselor, and I'm here to talk about scheduling. Here Joey-- come pass out these heavy schedule books. Katie, would you start a sign in sheet for me. (eye contact to boys) You need to take time to seriously consider what you want to do after high school & plan vocational or academic courses that will help you reach your goals. (eye contact to all) As you look in your student manuals you will see there have been some schedule changes. Okay, for you girls, Typing I is going to be second period and Drafting I for the guys is also second period."

Rosa:	(She raises her hand before speaking.) "Can I take drafting?"
Teacher:	"Just a minute, Rosa -- we'll discuss that later."
Craig:	"What period is calculus?"
Counselor:	"Third period, and yes Craig, you really need to take that--"
Rosa:	"Do you think maybe I should take calculus?"
Counselor:	(crosses her arms) "Oh--it's a demanding class. Take it only if you think you're up to it."
Rosa:	"Well, what about drafting?"

Third Transition by an Advisory Committee Member

"Stereotyping is different than bias. Stereotyping implies that females and males are best suited for different types of responsibilities. On the other hand, sex bias suggests that one gender dominates the other. Both male and female teachers can unintentionally promote sex bias by what they say. In the segment that follows, identify patterns that create this bias."

Segment #2 -- What Teachers Say

Cast:	Teacher			
	Students:	Craig	Rosa	Fred
		Tom	Johnny	Suzy
		9 other students		

Setting: Theatre Arts Classroom -- One week prior to U.I.L. contest.

Teacher:	"Hold it! Hold it!" (to the stage) "Boys. . stop that horseplay!" (to the crew in the corner) "We're trying to conduct practice!" (turns back to stage) "Rosa, you're being way too aggressive, the husband is the

head of the household -- you're just the housewife! Let's try again from the top of scene three."

Teacher: (Teacher is now on the stage with stud..ts. She approaches Craig who is playing the role of the father in the play.) "Craig. . .Let's think about this scene. What is your interpretation of the husband's role in this situation?"

Craig: "Well -- I think the man is having a hard time making a decision. He's torn between the emotion surrounding this conflict ...

Teacher: "Beautiful! You really have in-sight and know your character." (Teacher turns to Rosa who is playing the role of the mother.) "Rosa -- you're just emoting up here. UIL contest is next week! You need to think about your character --"

Rosa: (turn aside and sighs to herself) "I never do anything right."

Teacher: Teacher gets down from stage and looks to the back of the room at the stage crew. "Okay stage crew -- you boys settle down!" (She sees the table at the back of the room and looks at Fred.) "I see the table is ready. Fred, could you go get that (pointing at the table) and put it on the stage" (pointing to the stage then turns to the stage and concentrates on the actors).

Fred: (tries to lift table then sets it down) "It's too heavy. I need some help."

Tom: (to Fred) "You wimp, pick it up -- even a girl could carry that."

Teacher: (turns back to the crew) "Knock off the talking over there ---" (As she turns toward the stage, she sees Johnny sleeping and walks over to him and grabs his arm firmly.) "Johnny! You know we don't have time to sleep in here -- go to the office!" (walks over to Suzy and places her hand on Suzy's shoulder) "Suzy, are you not feeling well?" (patting Suzy on the back) "Do you need to go to the nurse?"

"Okay, our time is about up. . everyone come down here." (she motions to the students and they move to the floor near center stage) (to stage crew) "Now, if you stage crew guys would stop messing around, our props will be ready on time. (to girls working on costumes) Girls, your costumes are really looking

great. . .thanks for doing what I asked. (addresses all of the students) "Guys, go ahead and put the props away and girls, get the stage area cleaned up."

Fourth Transition by an Advisory Committee Member

"After absorbing and internalizing feedback, students begin to recognize that different boundaries exist between boys and girls. But these biased impressions are further reinforced by what a teacher does or allows in the classroom. One of the results is that girls tend to initiate their ideas with less confident statements such as 'I'm not sure this is right. . ..' During the next segment see if you recognize student-teacher interactions that encourage gender bias."

Segment #2 -- What Teachers Do and Allow Students to Do

Cast: Teacher, Mr. Smith

Students:			
	Craig	Rosa	Matt
	Dee Dee	Toby	Sharla
	David	Steve	Tony
	Emilio	Jeff	Jan

Setting: Ag. Classroom/Shop

CLASSROOM---

Teacher: "Today I want to review some of the material we've discussed before going into the shop to work on our small gas engine projects. First, most of you are about to begin the reassembly of your engine. What must we be certain to do before inserting the piston and bolting the connecting rod? What do you think, Dee Dee?

Dee Dee: Well...I'm not sure but does it have something to do with being sure the parts are clean?

Teacher: (short wait time by teacher) Uh-Okay. Toby, would you like to answer? Now assume the parts have been properly cleaned. (longer wait time -- Toby is not sure of the answer.)

Teacher:	(prompts student) Remember us talking about lubrication systems last class period?
Toby:	Yes! As parts needing lubrication are being reassembled be certain to apply 30 weight oil. In this case, to the piston, rings and cylinder; connecting rod, bearing and crank shaft.
Teacher:	Excellent. (eye contact to boys) The greatest amount of wear on an engine is encountered when the engine is started and before all parts subject of friction wear are properly lubricated.
Jan:	(She raises her hand and waits for the teacher to recognize her before she speaks.) Maybe I should know this, but I noticed my engine has a metal piece bolted to the connecting rod which is used as the oil splasher and Sharla's engine had a gear slinger. Is one better than the other?
Teacher:	No. It depends on the engine model, horse power, and design. The high r.p.m. and and splashing action resulting from either part provides enough oil on the cylinder wall to prevent excessive wear. Does anyone have anything to add? (Again, he looks at the boys.)
David:	--And engines in larger agricultural power units and automobiles have oil pumps instead of splashers.
Teacher:	That's an excellent point! Why do you think that is needed?
David:	Because of the pressure needed to force a sheet of oil between the bearings and crankshift and other moving parts to reduce friction--which also cuts down on heat and wear. Also, it requires pressure to move the oil through the oil galleys.
Teacher:	Good. As you encounter problems or need further instruction during assembly, I will call you together in the lab to explain in more detail. Any questions before we move from the classroom to the lab?
Craig:	(Craig is president of FFA.) "Mr. Smith, wait a minute. I need to make a short announcement regarding FFA activities. First, Rosa has a list for you to sign-up on for bringing refreshments to the next meeting. Also, all sausage sales were to be turned in to Rosa." (He turns to Rosa.)

	Rosa:	"Well...not everyone has turned in their --" (She is hesitant to assert who has turned in sales.)
	Craig:	"Turn your sales in to Rosa!"
LAB--		
	Teacher:	"Okay, lets get to our lab assignments, now. Any questions?" (Sharla & Rose raise their hands)
	Matt:	(to Dee Dee and Jan) "You girls step back, you don't need to get greasy." (He takes the tools away from them.)
	Steve:	"Do I need to oil the parts I'm working on!?!"
		(Sharla continues to wave her hand.)
	Teacher:	(Turns to Matt) "Go ahead Matt, I'm keeping an eye on what you're doing." (to Steve) "Yes, Steve. I'll get with you on those parts." (to Sharla) "Sharla, you had your hand up! Oh, by the way--I'm putting Craig with you so you'll have some help today. . . "
		(Dee Dee & Jan watch as Tony & Emilio work on the engine.)
	Rosa:	"Mr. Smith, I may be able to do this with some help. How do I turn this bolt? Is this right?
	Sharla:	"I can't do this! (She turns from her small engine project to Mr. Smith.)
	Steve:	(turns to Sharla) "You can't do anything in this class -- How do you make all A's?
		(Rosa tries to get the teacher's attention.)
	Teacher:	(to Sharla) "Here, let me show you how -- " (He picks up the tool and does the job for her.)
	Rosa:	"Mr. Smith, you still haven't answered my question. . . " (She is still holding the bolt up in the air.)
	Teacher:	"Steve, you need to finish working on that carburetor."

Fifth Transition by an Advisory Committee Member

"Reflecting back on the scenarios, it is clearer that learning environments may vary for students of differing genders. What teachers say, do and allow is important, but sometimes other factors contribute to gender bias. For example, instructional materials often showcase males in most stories, illustrations, occupations and biographies. Bulletin boards and visual aides can also reinforce gender stereotyping and bias. It is important to be aware of sex bias in the materials you use."

Sixth Transition by Advisory Committee Member

"Achieving equity in our schools is a challenge. Often, our well-intentioned behaviors that promote gender bias are so subtle that most of us are unaware of them. But, with training sessions such as this we can all begin to consciously modify our behavior patterns that limit males and females. The end result will be career and life success for all students in the twentieth and twenty-first centuries."

Closing

The narrative that follows is read by a female and a male voice-over and appropriate video footage illustrates the ideas conveyed in the script.

"Students may look forward to growing opportunities in all fields regardless of whether they are male or female. We've seen progress over the past decades, but we must strive for equity in order for students to reach their potential in whatever occupations are most appropriate for them. You've taken a closer look at the subtle and unintentional behaviors that contribute to sex bias. Your participation in this video experience is a step forward in achieving equity in our public schools."

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Based upon the historical and descriptive research and the video product described herein, the following conclusions and recommendations are offered.

1. Through the use of the modified delphi technique, the members of the advisory committee were able to reach a consensus regarding which gender equity issues prevail in the secondary schools of Texas.

2. Educators often unintentionally perpetuate gender bias and stereotyping by what they say, do and allow in the classroom.

3. Students also receive gender stereotyping messages from instructional materials such as textbooks and visual aids.

4. A need exists for a greater level of awareness among educators in Texas regarding gender bias and stereotyping practices.

5. An equitable learning environment is necessary for males and females to formulate life and career decisions based on facts rather than myths and traditional expectations.

Recommendations

Following are recommendations based on the findings of this study:

1. Educators need to be informed of how gender bias and stereotyping behaviors affect students.

2. Educators need to be made aware of gender bias and stereotyping teaching patterns. In addition they should be provided the following guidelines to help them overcome such patterns:

a. Guide students toward courses best suited for their interests and talents without regard to gender.

b. Maintain the same expectations for boys and girls in all subject areas.

c. Avoid assigning tasks on the basis of gender.

d. Interact with students, both females and males equally.

e. Provide females and males the same opportunities to respond in discussion.

f. Ask all students higher level questions.

g. Expect neatness from all students, not just the girls.

h. Expect intellectual quality from all students, not just the boys.

i. Try to praise and criticize students equally.

j. Discipline girls as well as boys for misbehavior in class.

h. Discipline students on the basis of their misconduct rather than their gender.

i. Use non-sexist language.

k. Increase response wait time to 3-5 seconds.

l. Provide equal instruction to females and males.

m. Eliminate self "put-downs" by recognizing and addressing these patterns among students.

n. Desegregate students.

o. Provide and ensure all students have equal access to learning materials and problem-solving experiences.

p. Provide equal assistance to females and males.

q. Be aware of and address the talents of both boys and girls in all areas (especially mathematics and science).

r. Be attentive to the academic needs of both boys and girls in all subject areas.

3. Educators should monitor instructional materials such as bulletin boards, textbooks, slides, videos and other resource material for evidence of gender bias and stereotyping.

4. If possible, educators should have an expert evaluate them as they teach to identify specific gender biased patterns. Once educators are aware of their individual gender biased tendencies, they should work to overcome these patterns.

5. Educators should present non-traditional role models to students whenever possible.

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APPENDIX A
ADVISORY COMMITTEE WORKSHOP AGENDA

TEA – Capacity Building Project
Advisory Committee Meeting
January 16-17, 1992
Region XVII Education Service Center

AGENDA

Thursday, January 16

1:00	Welcome/Introductions Agenda/Goals	
1:20	Presentation - "Achieving Equity in Texas Schools-A Balancing Act"	
1:40	Working Groups (Preliminary Segment Development)	
2:45	Break	
3:00	Working Groups (Write & refine segment narratives)	
5:15	Adjourn	
5:45	Relaxation and Dinner	

Friday, January 17

7:45	Shuttle Service to the Education Service Center	
8:00	Pre-test/post-test and teachers guide	Video Filming
9:00	Final work session on segment narratives	
9:30	Final report - draft for video segments	
10:30	Evaluate and Approve Video Script	
11:30	What's Ahead – Future Activity of the Committee Adjourn	
11:45	Shuttle Service to Lubbock Inn	

APPENDIX B
QUESTIONNAIRE -- ROUND ONE

Following are statements of equity issues in secondary schools revealed in the literature. The purpose of this questionnaire is to identify the issues that are most important in Texas schools. Keep in mind the video will be brief (approximately 12-15 minutes), therefore only 5-7 issues can be covered well in this amount of time.

Please read the statements carefully and circle the number that corresponds with your opinion.

1 Very important to include in video
2 Somewhat important to include in video
3 Not important to include in video
4 Discard from consideration

Males are called upon to perform tasks that require manual skills; while females are called upon to conduct housekeeping chores and perform secretarial tasks.	1	2	3	4
Teachers and counselors tend to guide females toward vocational courses in home economics, health, and business and office education. Likewise, males are encouraged to enroll in courses in industrial technology, and agriculture and agribusiness.	1	2	3	4
Girls are less persistent at solving problems and more likely than boys to exhibit learned helplessness. Girls are more likely to blame poor performance on lack of ability rather than a lack of effort.	1	2	3	4
Feedback given to boys and girls by teachers can result in a greater tendency in girls to perceive negative feedback as a reflection of their inabilities.	1	2	3	4
Females tend to initiate their ideas with less confident statements such as "I'm not sure this is right...", thereby justifying their answers.	1	2	3	4
Teachers' expectations are related to students' performance. When teachers expect more from girls in reading they do better than boys. Likewise, boys tend to excel more in the areas of mathematics and science as teachers expect them to perform better in these areas than girls.	1	2	3	4

1	Very important to include in video
2	Somewhat important to include in video
3	Not important to include in video
4	Discard from consideration

Teachers interact more with males, and they provide them more opportunities to respond in class. Males are asked higher level questions than females.	1	2	3	4
Teachers are likely to give male students directions on how to do a task, but they have a tendancy to perform tasks for females.	1	2	3	4
Females tend to receive more praise for following directions and completing assignments neatly, while males tend to receive criticism in these areas. Likewise, males tend to receive praise for the intellectual quality of their work while females are criticized for the intellectual inadequacy of their work.	1	2	3	4
Females are praised for their effort rather than their intelligence. Males receive more praise for correct answers than females, but they also receive more criticism for incorrect answers.	1	2	3	4
Although teachers are less apt to call on females in class, they are more patient with females who have difficulty in responding than with males.	1	2	3	4
When responding to students' questions, teachers tend to give males shorter responses than females.	1	2	3	4
Teachers reward the creative behavior of males more than females.	1	2	3	4
Teachers perpetuate stereotyping by the language they use and comments they make to students.	1	2	3	4
Teachers make more academic contacts with and give more cognitive time to females in reading classes and males in mathematics classes.	1	2	3	4

1	Very important to include in video
2	Somewhat important to include in video
3	Not important to include in video
4	Discard from consideration

Males receive 8-10 times as many prohibitory control messages as their female classmates. Teachers also send more males than females to the principal's office for disciplinary reasons.	1	2	3	4
Teachers tend to call on girls only if they sit near the front of the classroom, but they call on boys regardless of where they are sitting.	1	2	3	4
Boys create more response opportunities for themselves. Boys are more likely than girls to disrupt the teacher to get attention in class. Girls are discouraged from being assertive while boys are rewarded for such behavior.	1	2	3	4
Teachers call on males more frequently and allow them to dominate in discussions, in problem-solving experiences and sometimes in the use of classroom materials.	1	2	3	4
Instructional materials showcase males in most of the stories, illustrations, occupations and biographies. Bulletin boards and visual aids can also reinforce stereotyping and sex bias.	1	2	3	4
Teachers are more likely to identify a gifted male student than a gifted female student in mathematics and science.	1	2	3	4
A male student with special academic needs is more likely to be identified than a female with special academic needs.	1	2	3	4
The interaction patterns remain the same regardless of whether the teacher is a man or a woman.	1	2	3	4

APPENDIX C
INSTRUMENT -- ROUND TWO

Results -- Questionnaire #1

Item	Rank	Equity Issue	Mean Value	If in agreement Please check (✓).	If not in agreement, please indicate why. (Attach an additional sheet if necessary).
		(To Be Included in Video Production)			
1	1	Teachers and counselors tend to guide females toward vocational courses in home economics, health, and business and office education. Likewise, males are encouraged to enroll in courses in industrial technology, and agriculture and agribusiness.	1.3461	_____	_____ _____
2	2	Teachers perpetuate stereotyping by the language they use and comments they make to students.	1.4230	_____	_____ _____
3	3	Teachers' expectations are related to students' performance. When teachers expect more from girls in reading they do better than boys. Likewise, boys tend to excel more in the areas of mathematics and science as teachers expect them to perform better in these areas than girls.	1.5	_____	_____ _____
4	3	Instructional materials showcase males in most of the stories, illustrations, occupations and biographies. Bulletin boards and visual aids can also reinforce stereotyping and sex bias.	1.5	_____	_____ _____
5	5	Boys create more response opportunities for themselves. Boys are more likely than girls to disrupt the teacher to get attention in class. Girls are discouraged from being assertive while boys are rewarded for such behavior.	1.5769	_____	_____ _____

Item	Rank	Equity Issue	Mean Value	If in agreement Please check (✔).	If not in agreement, please indicate why. (Attach an additional sheet if necessary).
6	6	Males are called upon to perform tasks that require manual skills; while females are called upon to conduct housekeeping chores and perform secretarial tasks.	1.7307		
7	7	Teachers interact more with males, and they provide them more opportunities to respond in class. Males are asked higher level questions than females.	1.8076		
8	7	Females tend to receive more praise for following directions and completing assignments neatly, while males tend to receive criticism in these areas. Likewise, males tend to receive praise for the intellectual quality of their work while females are criticized for the intellectual inadequacy of their work.	1.8076		
9	7	Males receive 8-10 times as many prohibitory control messages as their female classmates. Teachers also send more males than females to the principal's office for disciplinary reasons.	1.8076		
10	7	The interaction patterns remain the same regardless of whether the teacher is a man or a woman.	1.8076		
11	11	Teachers call on males more frequently and allow them to dominate in discussions, in problem-solving experiences and sometimes in the use of classroom materials.	1.8846		

Item	Rank	Equity Issue	Mean Value	If in agreement Please check (✓).	If not in agreement, please indicate why. (Attach an additional sheet if necessary).
12	12	Feedback given to boys and g..ls by teachers can result in a greater tendency in girls to perceive negative feedback as a reflection of their inabilities.	1.9615	_____	_____ _____
13	12	Females tend to initiate their ideas with less confident statements such as "I'm not sure this is right. . .," thereby justifying their answers.	1.9615	_____	_____ _____
14	12	Teachers are likely to give male students directions on how to do a task, but they have a tendency to perform tasks for females.	1.9615	_____	_____ _____
15	12	A male student with special academic needs is more likely to be identified than a female with special academic needs.	1.9615	_____	_____ _____
		(To Be Eliminated From Video Production)			
16	16	Girls are less persistent at solving problems and more likely than boys to exhibit learned helplessness. Girls are more likely to blame poor performance on lack of ability rather than a lack of effort.	2.0	_____	_____ _____

Item	Rank	Equity Issue	Mean Value	If in agreement Please check (✓).	If not in agreement, please indicate why. (Attach an additional sheet if necessary).
17	16	Females are praised for their effort rather than their intelligence. Males receive more praise for correct answers than females, but they also receive more criticism for incorrect answers.	2.0	_____	_____ _____
18	18	Teachers make more academic contacts with and give more cognitive time to females in reading classes and males in mathematics classes.	2.0384	_____	_____ _____
19	18	Teachers are more likely to identify a gifted male student than a gifted female student in mathematics and science.	2.0384	_____	_____ _____
20	20	Teachers tend to call on girls only if they sit near the front of the classroom, but they call on boys regardless of where they are sitting.	2.2692	_____	_____ _____
21	21	Although teachers are less apt to call on females in class, they are more patient with females who have difficulty in responding than with males.	2.3076	_____	_____ _____
22	22	Teachers reward the creative behavior of males more than females.	2.3846	_____	_____ _____
23	23	When responding to students' questions, teachers tend to give males shorter responses than females.	2.60	_____	_____ _____

APPENDIX D
ISSUES ADDRESSED IN THE FIRST VIDEO SEGMENT

Segment #1
Gender Stereotyping

Item	Issue
1	Teachers and counselors tend to guide females toward vocational courses in home economics, health, and business and office education. Likewise, males are encouraged to enroll in courses in industrial technology, and agriculture and agribusiness.
3	Teachers' expectations are related to students' performance. When teachers expect more from girls in reading they do better than boys. Likewise, boys tend to excel more in the areas of mathematics and science as teachers expect them to perform better in these areas than girls.
4	Instructional materials showcase males in most of the stories, illustrations, occupations and biographies. Bulletin boards and visual aids can also reinforce stereotyping and sex bias.
6	Males are called upon to perform tasks that require manual skills; while females are called upon to conduct housekeeping chores and perform secretarial tasks.

APPENDIX E
ISSUES ADDRESSED IN THE SECOND VIDEO SEGMENT

Segment #2
What Teachers Say

Item	Issue
2	Teachers perpetuate stereotyping by the language they use and comments they make to students.
7	Teachers interact more with males and they provide them more opportunities to respond in class. Males are asked higher level questions than females.
8	Females tend to receive more praise for following directions and completing assignments neatly, while males tend to receive criticism in these areas. Likewise, males tend to receive praise for the intellectual quality of their work while females are criticized for the intellectual inadequacy of their work.
9	Males receive 8-10 times as many prohibitory control messages as their female classmates. Teachers also send more males than females to the principal's office for disciplinary reasons.
12	Feedback given to boys and girls by teachers can result in a greater tendency in girls to perceive negative feedback as a reflection of their inabilities.

APPENDIX F
ISSUES ADDRESSED IN THE THIRD VIDEO SEGMENT

Segment #3
What Teachers Do or Allow Students to Do

Item	Issue
5	Boys create more response opportunities for themselves. Boys are more likely than girls to disrupt the teacher to get attention in class. Girls are discouraged from being assertive while boys are rewarded for such behavior.
11	Teachers call on males more frequently and allow them to dominate in discussions, in problem solving experiences and sometimes in the use of classroom materials.
13	Females tend to initiate their ideas with less confident statements such as "I'm not sure this is right. . .," thereby justifying their answers.
14	Teachers are likely to give male students directions on how to do a task, but they have a tendency to perform the task for females.
15	A male student with special academic needs is more likely to be identified than a female with special academic needs.
16	Girls are less persistent at solving problems and more likely than boys to exhibit learned helplessness. Girls are more likely to blame poor performance on lack of ability rather than lack of effort.

If time permits include:

19	Teachers are more likely to identify a gifted male student than a gifted female student in mathematics and science.