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ABSTRACT

This learning unit is designed to sensitize educators to gender differences in learning styles, to help identify specific needs and issues for women adult learners, to help educators to identify their own gender biases, and to help teachers to develop strategies for eliminating gender bias from their own classrooms. The unit is divided into three sections: (1) gender differences in learning styles, (2) adult learners, and (3) gender fair instructional techniques and classroom interactions. Each section includes didactic materials, experiential learning activities, student worksheets, and transparency templates. A bibliography lists 46 references. (KC)

LEARNING AND GENDER FAIR TEACHING

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UNIT II: Learning and Gender Fair Teaching

This learning unit is designed to sensitize educators to gender differences in learning styles, to help identify specific needs and issues for women adult learners, to help educators to identify their own gender biases, and to help develop strategies for eliminating gender bias from their own classrooms.

This unit is divided into three sections:

1. Section A: Gender Differences in Learning Styles
2. Section B: Adult Learners
3. Section C: Gender Fair Instructional Techniques and Classroom Interactions

Each section includes didactic materials, experiential learning activities, student worksheets and transparency templates

SECTION A: GENDER DIFFERENCES IN LEARNING

Objectives:

To sensitize educators to gender differences in learning

To teach educators to use learning styles to improve teaching

To promote an understanding of gender differences in learning styles and needs

To develop teacher abilities that address differences in style

Resources and Materials:

Lecture: Evidence of Sex Differences

TRANSPARENCY A-1: Mythical Sex Differences

TRANSPARENCY A-2: Messages Which Emerge Repeatedly from Research on Gender and Schooling

Lecture: Different Ways of Knowing

RESEARCH NOTES: Why are girls underrepresented in Math?

RESEARCH NOTES: Computers and the Gender Gap

SUMMARY: Academic Costs due to Sex Bias in Schools

SUMMARY: Psychological and Physical Costs due to Sex Bias in Schools

SUMMARY: Career and Family Relationship Costs due to Sex Bias in Schools

Student Worksheet: Turning the Tables

TRANSPARENCY A-3: Ways of Knowing: Separate and Connected

TRANSPARENCY A-4: Specific Instructional Techniques that Facilitate Connected and Separate Learning.

TRANSPARENCY A-5: Gender Friendly Computer Guide

Bibliography

Instructional Activities:

1. Give each student several 3 X 5 cards. Tell them to make no identifying marks on the cards. The cards will be collected. On one side of the card ask them to write gender stereotypes or incorrect statements they learned about the other sex when they were growing up. On the other side of the card, have them write four pieces of information: 1) the age they were when they learned the information, 2) the age of the person who imparted the information, 3) the gender of the person who gave the information, and 4) the feelings the information illicited. What patterns did you discover with respect to age, gender and feelings?

2. Review the learning objectives and distribute the Glossary. Be sure that students understand the basic terminology.

3. Deliver the lecture on evidence of gender differences.

4. Show TRANSPARENCY A-1: Mythical Sex Differences Corrected.

5. Present Lecture on Learning Styles

6. Present TRANSPARENCY A-3: Ways of Knowing: Connected and Separate

7. Ask students to remember a positive learning experience and describe the components of this experience. Ask students to recall a negative learning experience and describe the component of this experience. Help students become more aware of their learning style and their needs as learners.

8. Do the TURNING THE TABLES Exercise. The exercise is designed to increase students awareness of how they might create learning situations that meet their needs.

9. Ask students to get in small groups and generate two lists of learning activities, one which draws on separate knowing and one which draws on connected knowing.

10. Show TRANSPARENCY A-4: Instructional Techniques Facilitating Connected and Separate Learning.

11. Present Summary Lectures: Academic costs, psychological and physical costs, career and family relationships costs.

12. Hetherington and Parke (1986) note "The kinds of passive and dependent behaviors that teachers accept and encourage in girls may, in the long run, be detrimental for later academic success. Intellectual achievement is negatively related to dependency. Independence, assertiveness, and nonconformity are more likely to lead to creative problem solving and high levels of achievement in both boys and girls (p. 652)." Discuss the implications of this statement and what interventions would you prescribe to remedy the situation.

13. Recent work on how the type of teacher feedback is related to sex differences in response to failure indicts the sexism of teachers. When girls have difficulty on a task, they are more likely to attribute their failure to lack of ability, whereas boys attribute failure to external factors (e.g. lousy teacher) or lack of motivation (e.g. the stuff just doesn't interest me). In response to these differential attributions, girls are more likely than boys to show decreased persistence or poor performance under failure or increasing task difficulty. Dweck and Elliot (1983), Dweck, Goetz, and Strauss (1980) and Hetherington and Parke (1986) suggest that teacher behavior makes a substantial contribution to these differences in response to failure. Teachers' negative criticism of boys is more often for conduct and nonintellectual aspects of work such as neatness, sloppy writing, or lack of motivation. In contrast, teachers grade girls more often on the accuracy and intellectual quality of their work. It is proposed that boys see that teachers' responses are unrelated to their intellectual performance and begin to discount them, attribute them to external circumstances, and become less concerned about feedback from teachers and adults. Girls, in con-

trast, feel that the evaluation is a valid indicator of their intellectual ability and become more distressed and disrupted by failure. Discuss these findings and identify the implications of such teacher behavior.

14. Have each student interview one man and one woman of approximately the same age. Ask the following questions: How would you describe yourself as a student? In what ways are you different from the way you were in the past? How did this self-concept as a student limit or direct#.our vocational choice? How do you see yourself changing in the future?

    Share the findings in the class in small groups or the whole class. Look for patterns in what individuals know about themselves as learners. Look for patterns in how they talk about themselves. See if there are gender related differences in how men and women describe themselves as students.

15. Present Research Note: Why are females underrepresented in mathematics?. Discuss as a class.

16. Have class discuss their early math experiences. Note the gender patterns.

17. Present RESEARCH NOTES: The computer and the gender gap. Discuss ways to get women interested in the computer.

18. Present TRANSPARENCY A-5: Gender Friendly Computer Guide.

GLOSSARY

SEPARATE KNOWING: emphasizes objectivity, detachment, rational thinking.

CONNECTED KNOWING: emphasizes subjectivity, involvement and intuition.

MORAL DEVELOPMENT: a concept which describes the way we perceive the world, make decisions, and act on these decisions.

LEARNING STYLES: how individuals learn.

ETHIC OF RIGHTS: moral view of protecting the rights of others, doing what is fair, concerned with sins of commission.

ETHIC OF RESPONSIBILITY: moral view of caring for others-- a sense of empathy and responsibility for others, concerned with sins of omission.

INTERPERSONAL COMPETITIVENESS: the desire to do better than others, the desire to win interpersonal situations.

GOAL COMPETITIVENESS: the desire to excel, the desire to obtain a goal, the desire to be the best one can.

LECTURE: EVIDENCE OF GENDER DIFFERENCES

There is no question that males and females differ in more than their physical structure and biological function. Just what these differences are however, and the origins of these differences are still open to debate. Research has presented conflicting evidence. Is it really a true gender difference or is it an environmental" gender difference created by the way males and females are valued and treated in our culture?

Before we begin our discussion of differences, however, it is necessary to explain some of the difficulties involved in determining the ways that males and females differ.

1. Studies that find sex differences are more likely to be published than those that do not, because evidence of differences is considered more newsworthy by psychological journals. While differences found in one study may be peculiar to the subjects of that study alone they may not hold for the rest of the population. Thus, differences may receive an undo emphasis.

2. There is the problem of definitions. If sociability is defined as making friends or seeking out the company of others, then we would conclude that males are more sociable (Whiting and Edwards, 1973), but if we define sociability as enjoying the company of a few best friends rather than a large group of peers, then girls would be considered more sociable (Waldrop, cited in Macoby and Jacklin, 1974, 609-610). To get an accurate picture of sex differences in the general population, we need to consider a great many studies. The work of Macoby and Jacklin (1974)-- an examination of over 2000 books and articles -- still remains the most extensive review of literature on sex differences to date. Reviews of this magnitude discover fewer differences than less exhaustive reviews.

3. Sex differences are often related to age. A difference apparent in the preschool years may disappear during middle childhood but reappear in adulthood, or differences may appear for the first time in adolescence or adulthood.

If, after taking these above precautions in mind, we still find sex differences, we must keep one more very important precaution in mind when interpreting sex differences. The differences found are <u>often small,</u> which means that <u>girls and boys are quite similar in most respects.</u> Individual males or females may <u>not</u> fit the general pattern of sex differences. The fact that <u>group differences exist does not mean that all members</u> of one sex are better in some areas than all members of the other sex.

It is critical that the educator understand that what s/he is experiencing may not be a real difference between males and females but (1) a difference that has been learned by male and female students through cumulative social interactions in the American School systems or (2) a difference that is apparent because of teacher's own value system.

<u>A Developmental Reminder</u>

Perhaps the most critical time for acquiring "environmental" gender differences is the period from age 6 to age 12-- a period which corresponds to Erikson's fourth stage of psychosocial development, the stage of industry vs. inferiority.

It is during this time period that children develop a view of themselves as workers, as people who make significant things happen which have a value in the culture at large, and in the classroom in particular. It is during this age period that children in all cultures receive instruction in the ways of the world. In more industrial-technological cultures such as ours, children learn the type of work demanded by the society. To the extent that they are able to apply their skills and experience their competency as workers, they are willing to learn skills and value particular fields of learning.

Learning during these years thus has a critical impact on the person's self-concept as a worker and learner in adult life. The adult learner who sits before you is a person whose early developmental years had a substantial impact on his/her ability to learn, his/her learning choices and career choices.

TRANSPARENCY A-1: MYTHICAL SEX DIFFERENCES

The statements have been empirically supported. They are true.

1. Boys are not less social than girls. Boys and girls spend as much time with others and are equally responsive to others.

2. Girls are not more suggestible. Girls are not more likely to conform to standards of a peer group or to imitate the responses of others.

3. Girls are not better at rote learning and simple repetitive tasks. Boys are not better at tasks involving the inhibition of previously learned responses or complex cognitive tasks.

4. Boys are not more responsive to visual stimuli and girls are not more responsive to auditory stimuli.

5. Boys do not have more achievement motivation than do girls. Differences in achievement motivation and behavior vary with the type of task and conditions involved. Under neutral conditions girls are often more achievement oriented than boys. However, competition is more likely to increase the achievement motivation of boys than of girls.

6. Girls do not have lower self-esteem than boys.

7. There are few sex differences in self-satisfaction. However, girls rate themselves as more competent in social skills, and boys view themselves as strong and powerful.

Hetherington, E. M. and R. D. Parke. 1986. Child Psychology: a Contemporary Viewpoint. New York: McGraw-Hill.

TRANSPARENCY A-2: MESSAGES WHICH EMERGE REPEATEDLY FROM RESEARCH ON GENDER AND SCHOOLING

1. What is good for males is not necessarily good for females.
2. If a choice must be made the educational establishment will base policy and instruction on that which is good for males.
3. Most of the time educators are unaware that a choice is being made and even less aware they are choosing to perpetuate male model of schooling.
4. Schools were created to serve public purposes of males lives, not private purposes of female lives.

REFERENCE: Shakeshaft, C. Gender at Risk. Phi Delta Kappan. March, 1986, 499-503.

LECTURE: DIFFERENT WAYS OF KNOWING

While gender differences in cognitive abilities are questionable-- there do appear to be some gender preferences with regard to learning styles, and instructional environments.

Most institutions of learning were designed by men, for male students, and continue to be run by men. The structure, the curriculum, and instructional practices of these institutions are geared to the male student. Present research calls into question the effect male normed education has on women.

The fact that girls enter the educational system ahead in reading, writing, and even in math and 12 years later find themselves behind suggest that educational systems are failing women. Researchers have implicated gender differences in learning styles, and educational climates which are not user friendly for women as a possible cause for this failure!

Gender Differences in Learning Style

Research on gender differences in learning styles has drawn on the work of Carol Gilligan in her book, A Different Voice, describes the moral development of women. (Moral development is a concept which describes the way we perceive the world, make decisions, and act on these decisions.

Gilligan speculates that a different moral voice develops as a result of early childhood experiences. The voice is not gender specific but experience specific and in our society experiences are gender specific. Gilligan suggests that males develop a morality of rights--based upon their experiences of separation, autonomy and individuation. Female morality is identified with a sense of responsibility to the world and is based on the experience of attachment and in connection in the human life cycle. Women's moral development focuses on caring, empathy, and a sense of interdependence in the web of life.

Gilligan cites the research of Janet Lever (1976) to support her theory. Lever observed the play of boys and girls and noticed these differences. Boys, when playing a game where some dispute emerges, will work out the problem based on rules, while girls may change the rules or end the game if a relationship is at risk. Thus boys in their play are seen as more legalistic, and for girls the relationship is more important than the activity. Girls prefer cooperative activities rather than competitive activities. Gilligan suggests that girls acknowledge that something must be rotten when someone must lose in order for one to win.

Additional research on competition delineates two kinds of competition, interpersonal competition (Helmreich and Spence, 1978) and goal competitiveness. Interpersonal competition is defined as the desire to do better than others, to win. Goal competition is the desire to obtain a goal, the desire to excel.

Studies using interpersonal competition have found sex-linked differences with men scoring higher than women. Studies on goal competitiveness have not found gender differences (Stockdale, Galejs, and Wolins, 1983). Gilligan's work suggest women avoid interpersonal competitiveness for fear it will fracture human relation-

ships. The importance of relationships to women results in interpersonal competition provoking anxiety and avoidance.

Gilligan's message is that men and women may have different moral voices or different world views. Both voices are necessary to sustain life. Her charge is that we value both voices and educate both moral perspectives.

Gilligan's work has many implications about the learning styles of females and the optimal learning environments. Girls prefer to learn through relationships and cooperative activities. Girls value the ethic of caring, empathy, and connectedness. Most schools operate on the ethic of rights.

Belenky et. al. (1986) built on Carol Gilligan's work. They described gender related differences in learning styles using the concept of separate knowing and connected knowing. Separate knowing emphasizes objectively detachment, and rational thinking. Connected knowing emphasizes subjectivity involvement and intuition. Separate knowing is dominant in the educational system and connected knowing is devalued in the educational system. Persons who rely on separate knowing emphasize doubting and skepticism. Connected knowing individuals are more orientated to empathy, to finding aspects of an idea that are true and then building on them. More men seem to rely on separate knowing while more women rely on connected knowing. These modes are not gender-specific. Rather they are gender related with males and females using both modes. Teaching practices are needed which honor both styles of learning.

Belenky et. al. (1986) believe educators can best help women develop when they emphasize connection over separation, understanding and acceptance over assessment, and collaboration over debate. Additionally, females learn best when the focus begins with their knowledge and experience rather than the teachers knowledge. Additionally, females learning is enhanced when girls are encouraged to develop their own patterns of work based on problems that they have identified as opposed to imposing teacher expectations an arbitrary requirements on the students.

Gilligan demonstrated that a moral voice of responsibility and caring was more common for women than a morality of rights. Belenky et. al. suggest that connected knowing is more congruent with women's learning style than separate knowing. These researchers are concerned with the inclusion and valuing of the "female" identified learning style. The goal is not to replace a "male" identified learning but rather to educate using both perspectives.

TRANSPARENCY A-3: WAYS OF KNOWING:
SEPARATE AND CONNECTED

CONNECTED KNOWING is based on.....

personal experience
empathy
believing
understanding
listening
involvement
intuition
nonjudgement
experiential logic

SEPARATE KNOWING is based on.....

formal instruction
judgement
objective
detached
rational
doubting
critical discourse
competition
impersonal

TRANSPARENCY A-4: SPECIFIC INSTRUCTIONAL TECHNIQUES THAT FACILITATE CONNECTED AND SEPARATE LEARNING.

Learning Activities Facilitative of Connected Learning

Class Discussion
Journal Writing
Role Plays
Interactive Class.

Learning Activities Facilitative of Separate Learning

Debates
Critical Analytic Papers
Multiple Choice Tests
Lecture

STUDENT WORKSHEET: TURNING THE TABLES

There is strong evidence that student control is not limited to their classmates; students can control their teachers as well. By applying the same operant principles that teachers use to control their students, students can modify their teacher's behavior. In an ingenious study by Gray, Graubard, and Rosenberg (1974), students were taught to reward positive behavior by smiling, making eye contact, and sitting up straight. Concurrently they were taught to discourage negative teacher behavior with statements like "It's hard for me to do good work when you are angry at me" or "When you make jokes about women, I find it hard to listen to anything else you say" or "When the boys always get picked first, I feel less important." The results were striking: over a five week period, there was a fourfold increase in positive teacher behavior, while negative teacher behavior was completely eliminated by the end of the intervention period. When these student behavior engineers discontinued reinforcing their teachers, the rate of positive behavior dropped. Another example of an excellent study confirming these results is by Bates (1975).

Now think about common classroom situations which may have happened to you or someone you know where a negative teacher behavior interfered with the ability to learn. List the negative behavior. List what you might have done in these situations by two more lists. The first list should contain actions to reward or reinforce positive teacher behavior. List two should contain actions or statements that would discourage the interfering behavior.

I: Interfering Teacher Behavior	II. Rewarding and Reinforcing Actions	III. Discouraging. and eliminating Actions

SUMMARY: ACADEMIC COSTS DUE TO SEX BIAS IN THE SCHOOLS

Girls start out ahead of boys in speaking, reading, and counting. In the early grades, their academic performance is equal to boys in math and science. However, as they progress through school, their achievement test scores show significant decline. The scores of boys, on the other hand, continue to rise and eventually surpass those of their female counterparts, particularly in the areas of math and science.

Macoby, E. & Jacklin, C. (1974). Sex differences in intellectual functioning. In E. Macoby (Ed) The Psychology of sex Differences Stanford: Stanford University Press.

In spite of performance decline on standardized achievement tests, girls frequently receive better grades in school. This may be one of the rewards they get for being more quiet and docile in the classroom. However, this may be at the cost of independence and self-reliance.

Macoby, E. & Jacklin, C. (1974). Sex differences in intellectual functioning. In E. Macoby (Ed) The Psychology of sex Differences Stanford: Stanford University Press.

Mullis, I. (1975). Educational Achievement and Sex Discrimination. Denver: National Assessment of Educational Progress.

Girls are more likely to be invisible members of classrooms. They receive fewer academic contacts, less praise, fewer complex and abstract questions, and less instruction on how to do things for themselves.

T. J. Wirtenberg. (1979). Expanding Girls' Occupational Potential: A Case Study of the Implementation of Title IX's Anti-Segregation Provision in Seventh Grade Practical Arts. Unpublished doctoral dissertation, University of California.

Serbin, L. & O'Leary, D. (1975). How nursery schools teach girls to shut up, Psychology Today, 1975.

Leinhardt, G. Seewald, A. & Engel, M. Learning what's taught: sex differences in instruction, Journal of Education Psychology, 71.

Felsenthal, H. (1970). Sex differences in expressive thought of gifted children in the classroom. American Educational Research Association, ERIC, Ed. 039-106, 1970.

Girls who are gifted in mathematics are far less likely to be identified than are gifted boys. Those girls are identified as gifted, are far less likely to participate in special or accelerated math classes to develop this special talent.

Fox, L. H. (1977). The effects of sex role socialization on mathematics participation and achievement. In Fox, L.H., Fennema, E. & Sherman, J. Women and Mathematics: Research Perspectives for Change, Washington, D.C.: National Institute of Education.

Girls who suffer from learning disabilities are also less likely to be identified or to participate in special education programs than are learning disabled boys.

Caplan, P. (1977). Sex, age, behavior, and school subject as determinants of report of learning problems. Journal of Learning Disabilities, 10.

Lietz, J. & Gregory, M. (1978). Pupil race and sex determinants of office and exceptional education referrals. Education Research Quarterly, 12.

Boys are more likely to be scolded and reprimanded in classrooms, even when the observed conduct and behavior of boys and girls does not differ. Also, boys are more likely to be referred to school authorities for disciplinary action than are girls.

Duke, D.L. (1976). Who misbehaves? a high school studies its discipline problems. Educational Administration Quarterly 12.

Boys are far more likely to be identified as exhibiting learning disabilities, reading problems, and mental retardation.

Gillespie, P and Fink, A. H (1978). The influence of sexim on the education of handicapped children, Exceptional Children, 41.

Not only are boys identified as having greater learning and reading disabilities, they also receive lower grades, are more likely to be grade repeaters, and are less likely to complete high school.

Brophy, J. & Good, T. (1973). Feminization of American elementary schools, Phi Delta Kappan, 54.

SUMMARY: PSYCHOLOGICAL AND PHYSICAL COSTS DUE TO SEX BIAS IN THE SCHOOLS

Although women achieve better grades than men, they are less likely to believe that they can do college work. In fact, of the brightest high school graduates who do not go to college, seventy to ninety percent are women.

Facts about women in education, WEAL, Washington, D.C. 1976.

Learned helplessness exists when failure is perceived as insurmountable. Girls are more likely than boys to exhibit this pattern. They attribute failure to internal factors, such as ability, rather than to external factors, such as luck or effort. Girls who exhibit learned helplessness avoid failure situations -- they stop trying. Research indicates that teacher interaction patterns may contribute to the learned helplessness exhibited by female students.

Dweck, C. & Gilliard, D. (1975). Expectancy statements as determinants of reactions to failure: sex differences in persistence and expectancy change. Journal of Personality and Social Psychology, 32.

Dweck, C. & Reppucci, N. (1973). Learned helplessness and reinforcement responsibility in children. Journal of Personality and Social Psychology, 25.

By high school, young women demonstrate a decline in career commitment. This decline is related to their feeling that boys disapprove of a woman using her intelligence.

Hawley, P. (1971). What women think men think. Journal of Counseling Psychology, 18.

Tests reveal that the majority of female and male college students report that the characteristics traditionally associated with masculinity are more valuable and more socially desirable than those characteristics associated with femininity.

Broverman, I.K., Vogel, S.R. Broverman, D.M., Clarkson, E.E. & Rosenkranz. (1979). Sex-role stereotypes: a current appraisal. Journal of Social Issues, 28.

In athletics, females also suffer from sex bias. For example, women's athletic budgets in the nations colleges are equal to approximately 18 percent of the men's budgets.

AIAW School Year Summary, 1978-79. (1979). The Association for Intercollegiate Athletics for Women, Washington, D.C.

Society socializes boys into an active, independent and aggressive role. But such behavior is incongruent with school norms and rituals that stress quiet behavior and docility. This results in a pattern of role conflict for boys, particularly during the elementary years.

Frazier, N. & Sadker, M. (1973). Sexism in School and Society. New York: Harper and Row.

Hyperactivity is estimated to be nine times more prevalent in boys than in girls. Boys are more likely to be identified as having emotional problems, and statistics indicate a higher male suicide rate.

Bentzen, F. (1966). Sex ratios in learning and behavior disorders. The National Elementary Principal, 46.

McGuiness, D. (1979). How schools discriminate against boys, Human Nature.

Boys are taught stereotyped behaviors earlier and more harshly than girls; there is a twenty percent greater probability that such stereotyped behavior will stay with them for life.

Hartley, R. (1979). Sex role pressures and the socialization of the male child. Psychological Reports 5.

Fling, S. & Manosevitz, M. (1972). Sex typing in nursery school children's play interests, Developmental Psychology, 31.

Conforming to the male sex role stereotype takes a psychological toll. Boys who score high on sex-appropriate behavior tests also score highest on anxiety tests.

Waldron, I. (1976). Why do women live longer than men? Journal of Human Stress, 2.

Bem, S.L. (1975). Sex role adaptability: one consequence of psychological androgyny. Journal of Personality and Social Psychology, 31.

Males are less likely than females to be close friends with one another. When asked, most males identify females as their closest friends.

Komarovsky, M. (1974). Patterns of self-disclosure of male undergraduates Journal of Marriage and the Family, 36.

Pleck, J. Male-male friendship: is brotherhood possible? in M. Glazer, M. (Ed) Old Family/New Family: Interpersonal Relationship. New York: Van Nostrand Reinhold.

The strain and anxiety associated with conforming to the male sex stereotype also affects males physically. Males are more likely to succumb to serious disease and to be victims of accidents or violence. The average life expectancy of men is eight years shorter than women.

Waldron, "Why do Women Live Longer than men.

SUMMARY: CAREER AND FAMILY RELATIONSHIP COSTS DUE TO SEX BIAS IN THE SCHOOLS

When elementary school girls are asked to describe what they want to do when they grow up, they are able to identify only a limited number of career options, and even these fit stereotypic patterns. The majority identify only two careers, teaching and nursing. Boys, on the other hand, are able to identify many more potential occupations.

Looft, Sex differences in the expression of vocational aspirations by elementary school children, Developmental Psychology, 5.

The majority of girls enter college without completing four years of high school mathematics. This lack of preparation in mat serves as a "critical filter,: inhibiting of preventing girls from many science, math and technologically related careers.

Sells, L. (1973). High school mathematics as the critical filter in the job market. In Developing Opportunities for Minorities in Graduate Education, Proceedings of the Conference on Minority Graduate Education at the University of California, Berkeley.

The preparation and counseling girls receive in school contribute to the economic penalties that they encounter in the workplace. Although over ninety percent of the girls in our classrooms will work in the paid labor force for all or part of their lives, the following statistics reveal the cost of the bias that they encounter.

More than a third of the families headed by women live below the poverty level.

A woman with a degree will typically earn less than a male who is a high school dropout.

The typical working woman will earn 59 cents for every dollar earned by a male worker.

Minority women earn less than white women, averaging fifty percent of the wages earned by white males.

Women are 79 percent of all clerical workers, but only 5 percent of all craft workers.

Women must work nine days to earn what men get paid for five days of work.

In contrast to the popular belief that things are getting better for female workers, since 1954 the gap between the wages earned by men and women has not gotten smaller.

A majority of women work not for "extra" cash, but because of economic necessity. Nearly two-thirds of all women in the labor force are single, widowed, divorced, or separated, or are married to spouses earning less than $10,000 a year.

Statistics compiled from: The Earnings Gap Between Men and Women, (1979). U.S. Department of Labor, Women's Bureau, BPO (1979).

Twenty Facts on Working Women. (1978). U.S. Department of Labor, Women's Bureau.

Teachers and counselors advise boys to enter sex stereotyped careers and limit their potential in occupations like kindergarten teacher, nurse or secretary.

Pleck, J. & Brannon, R. (1978). Male roles and the male experience. Journal of Social Issues, 34.

Many boys build career expectations that are higher than their abilities. This results in later compromise, disappointment, and frustration.

Pleck, J. & Brannon, R. (1978). Male roles and the male experience. Journal of Social Issues, 34.

Both at home and at school, boys are taught to hide or suppress their emotions, as men they may find it difficult or impossible to show feelings toward their family and friends.

Komarovsky, M. (1976). Dilemmas of Masculinity: A Study of College Youth. New York: Norton.

Goldberg, H. (1976). The Hazards of Being Male New York: Nash.

Boys are actively discouraged from playing with dolls (except those that play sports or wage war). Few schools provide programs that encourage boys to learn about the skills of parenting. Many men, through absence and apathy, become not so much parents as "transparents." In fact, the typical father spends only twenty minutes a day interacting with his children.

Stone, P. (1972). Child care in twelve counties. In The Use of Time. Szalia. A. (ed). The Hague, the Netherlands: Mouton.

Men and women differ in their beliefs of the important aspects of a father's role. Men emphasize the need for the father to earn a good income and to provide solutions to family problems. Women, on the other hand, stress the need for fathers to assist in caring for children and responding to the emotional needs of the family. These differing perceptions of fatherhood lead to family strain and anxiety.

Eversoil, D. (1979). The changing father role: implications for parent education programs for today's youth. Adolescence, 14.

RESEARCH NOTE: WHY ARE WOMEN UNDERREPRESENTED IN MATHEMATICS?

This underrepresentation of women in math related areas is reflected in enrollments in school courses, selection of college major, vocational education, and adult career choices. Women receive only 6 percent of the degrees in engineering, 23 percent in architecture, and 26 percent in computer science. In contrast, 73 percent of the degrees in education, 76 percent of the degrees in languages, and 88 percent in library science (Eccles, 1985).

Why are women underrepresented in mathematics related endeavors?

1. Do males receive more encouragement for their mathematical pursuits?
2. Do males perceive themselves as more competent in learning mathematics than do females?
3. Is mathematics viewed by women as a male achievement domain, which makes math study inconsistent with their sex-role identity?

In a study of 668 children from the fifth through the twelfth grade, Eccles (1985) asked children about their attitudes about mathematics and English. Males and females differed in a variety of ways.

1. Boys rated their mathematics ability higher than girls
2. Boys felt they had to exert less effort to do well in mathematics than girls.
3. Boys expected to do better in future mathematics courses than girls
4. Both boys and girls rated mathematics as more useful for boys than for girls.
5. In spite of the above differences, there were no sex differences in mathematics performance.
6. Across grades 5 through twelve, females liked mathematics less and enjoyed English more, while boys' attitudes remained fairly stable over time.
7. More females than males were likely to drop mathematics prior to high school graduation.

In another work examining why girls tended to drop mathematics and boys tended to continue with mathematics, Eccles and Hoffman (1984) found that for girls, the best predictor of continuing in mathematics courses was the value they attached to mathematics. For girls discontinuing was associated with seeing math as less important, less enjoyable, and less useful to them in the future. Boys , on the other hand, were less influenced by these factors in making their course choices. Males enrollment decisions were influenced primarily by their performance history; boys continue to do what they have done well in the past. However girls avoidance of mathematics courses and careers is not inevitable. Other studies have found that the value students attach to various school subjects can be changed with appropriate role models, information, school programs, and career guidance.

RESEARCH NOTES: COMPUTERS AND THE GENDER GAP

As computers become more common place in the classroom, it is critical to ask the question,"Do boys and girls equally benefit?." Recent research by Mark Lepper has found that large gender differences exist in children's participation in optional computer activities of many kinds--elective courses, summer camps, after-school clubs, and home use. There are as many as 5 to 10 boys for each girl in these programs. Moreover, the difference in participation rates becomes larger as participation becomes more costly and more effortful. In California, boys outnumber girls 2 to 1 in introductory courses. In advanced courses the ration is 10 or 15 boys to 1 girl.

Why is there a gender gap? First, since the computer field is dominated by males, there are few female role models. Second, parents are more likely to buy a computer for their sons than their daughters. Lepper found that families with only boy children were twice as likely to own a computer as families with only girl children.

Computer labs in schools are often competitive, noisy, and high activity environments in which boys may feel more comfortable than girls. Moreover, programs that introduce students to computers seem to have been written for boys. The two most common themes that introduce computers are male oriented-- war or violence and male sex-typed sports . Even the titles of the games may turn off girls: Alien Addition, Division Demolition, Spelling Baseball, Reading Riots. Finally, although computers have varied uses-- such as graphic design and word processing-- schools typically present computers as mathematical instruments. As Lepper notes, "Such an identification -- of course-- feeds into the historically widespread attitudinal and attributional influences that have served in the past to keep girls away from careers in math and science" (1985, p. 17).

Clearly, computers can be effective learning aids, but the early indications suggest boys may benefit more than girls. Computers may contribute to widening the gender gap. Furthermore, preliminary evidence suggests that computers seem to promote rather than reduce social interaction. Both elementary school and high school students talked more and interacted more --verbally and physically-- when they worked with computers than when engaged in non computer activities (Hawkins, Sheingold, Gearhart, and Berger, 1982).

TRANSPARENCY: A-5: GENDER FRIENDLY COMPUTER GUIDE

Start computer training with a holistic explanation of the system.

Promote understanding of the large picture, i.e. contextual learning and then teach specific roles.

Target girls to work on the computer. Convey the message that computers are gender appropriate.

Use a signup sheet to insure all girls have allotted time on the computer.

Design computer activities around girls existing interest.

Provide collaborative team activities on the computer.

Allow students to work in pairs or alone on the computer.

Set up a mentor system between older girls with more computer experience and younger ones who are learning.

SECTION B: THE ADULT LEARNER

Objectives:

To understand the concept of adult learner

To identify specific needs and issues for female adult learners

To identify barriers which impede the adult learner

To understand types of learning and educational environments which facilitate adult learning.

Resources and Materials:

1. Glossary
2. Lecture: Adult Learners
3. Bibliography

Instructional Activities:

1. Review the learning objectives and distribute the glossary. Be sure students understand the basic terminology.
2. Present the lecture material on the adult learner.
3. Ask students to interview two non-traditional students. Explore
   a. their decision to return to school.
   b. their experiences as a student.
   c. Frustrations with the institution.
   d. Feelings about their self-concept as a student.
4. Write a resume identifying the skills, technical proficiencies, and managerial competencies needed for women who manage homes and families. The resume should present an explanation of how these skills mimic administrative skills in the paid workforce. The real question is "Could the President of Chrysler Motors manage a home?"
5. Role play the following scenario. You are a 45 year old woman, mother of 3 children ages 19, 12, and 7. You have not been employed outside the home for 21 years. You have a college education but your cumulative grade point average was 1.9. You graduated with a degree in English. You would like to return to school to gain teaching credentials. The minimum cumulative grade point average for entrance is 3.0. You are at an interview with the admissions director. Have one student be the applicant and the other be the admissions director.
6. Your are a 37 year old mother of 4 children. It is your first job interview. You have never been employed outside of the home. You have just completed a training program. The employer asks you to describe the skills and competencies you would bring to the position. Have two women students take the roles of applicant and employer.

As a variation on this role play, have the employer be a man. Videotape this interview and the above interview. Compare the two interviews. What were the differences? What were the similarities? Compare the two interviews.

7. A 57 year old widow having raised 5 children enrolled in a vocational training program. When asked to introduce herself during the first class period, she states "I've reached a point in my life where I am not sure I have any worth as a person. My children have grown, my husband is dead. I'm not sure who I am and what I have to offer. I once had an identity as a mother. I think I was good at it, but I've completed that part of my life. Now what am I going to do? I feel so uncertain and unprepared to face this part of my life?" As the class to discuss this case. How would they respond to this woman?

GLOSSARY

ADULT LEARNER: An individual over age 25 engaged in educational opportunities.

CRYSTALLIZED INTELLIGENCE: Accumulation of social and cultural experience.

DISPLACED HOMEMAKER: describes an adult woman who needs and/or desires to work outside the home in addition to her work within the home. This term is usually used to refer to a woman who's life circumstances have changed necessitating the woman to take on additional financial responsibility for herself, and often family. These women include the recently widowed, divorced.

FLUID INTELLIGENCE: Ability to organize and process new information speedily and effectively

HOMEMAKER: An individual who holds the primary responsibility for managing all aspects of home life. This management time usually has no formalized pay scale, no set hours, and no specific benefits package, and no retirement and vacation package.

RE-ENTRY WOMAN: A woman resuming continued formal education after a hiatus, usually involving home making.

LECTURE: ADULT LEARNERS

The adult learner is defined as an individual over 25 years of age, who is pursuing educational experiences with a focus of re-entering the work force (i.e. work outside of the home) or changing jobs. The adult female learner is a diverse population, however, several main subgroupings are apparent-- 1) re-entry women, 2) displaced homemakers, 3) employed women, and 4) older/retired women. These groupings may overlap as there is great diversity of life experience within these groups.

The needs and complexion of the adult woman learner appears to be changing. Data from the University of Michigan's Continuing Education for Women Program (1980) suggest the percentage of married women participants declined from 81 percent in 1964 to 35 percent in 1980. A significant change was in the representation of women who are single. In this study, 42 percent of the students were single women. The average age of the participants had dropped from 37.5 years of age in the 1960's to 30 years of age. Approximately, 50 percent of the participants in the 1980 study had no children, compared to only 12 percent in 1965. An additional change reported in this study was the proportion of women employed. In 1965, 25 percent of the students were employed. In the 1980 data, 56 percent were employed. It appears that employed women are returning to school with the goals of greater job satisfaction and career advancement. Obviously these changes in the population will necessitate programmatic changes.

Some program changes which have been suggested in the literature (Ekstrom, Marvel, Swenson, 19??) include:

1. more emphasis on educational programs for employed women,
2. more educational programs provided in the workplace,
3. programs which aim at expanding career options and stress the transfer of skills from one occupation to another,
4. programs which focus on updating skills and learning to work with advances in technology,
5. support programs which teach individuals to handle multiple roles and skills for life transitions,
6. more programs for the older and retired worker as this group is a growing population.

<u>Needs of the Adult and Non-traditional Student</u>

Adult learners have many special needs, or more accurately needs which differ from traditional learners. A primary need for the adult learner is the scheduling of classes at times when s/he can take advantage of them. Courses need to be set at convenient times and locations which enhance the opportunity for adult learners to participate. Frequently, adults need evening or weekend classes located near home an/or job.

Issues for the Adult Non-Traditional Learner.

Accessibility Issues.

Transportation

Location of programs

Physical Accessibility for individuals with handicaps

Day care

Day and Evening Courses

Flexible registration

Part-time and full-time enrollment options

Flexible times for academic advising

Financial aid packages

Counseling Staff

Counselors who volunteer to work with non-traditional students

Trained counselors available evenings and days

Peer counselors

Group counseling and support groups

Study skills groups

Entry Level Assessment

Pre-assessment profile of incoming students

rigorous prescriptive academic planning to insure success of students

counseling aimed at enhancing self-esteem

remedial courses required where needed

assessment of prior learning experiences specifically non-credit course learning from unpaid work in the community and home

efforts to insure providing the right kind of instruction for each individual

Instruction -- Basic Skills

performance based objectives

criterion referenced evaluation procedures

alternative modules for students with different learning styles

employment of competency based techniques

Student Development -- Ongoing Learning

individualized learning

experiential learning

motivational aspects built into course instruction

progress goals set and employed as a motivational tool

non-competitive learning environment

study skills offered on a continuing basis

counseling built into course of study

peer tutors

support groups and a supportive institutional system available

Retention

school retention committee

program for determining retention rate

self-stu ·y to determine success of institution

staff development related to retention on non-traditional students

Cognitive Development as Related to the Adult Learner

The question of cognitive development and aging has been researched, discussed, and debated quite extensively. While some research suggests cognitive ability declines with age, other studies deny the decline in intellectual performance with age. The clearest perspective on cognition and age comes from a more detailed description of specific abilities. John Horn (1979) describes the course of mental abilities across the life span by suggesting that some areas are strengthened while others decline. Horn describes two kinds of thinking, crystallized intelligence and fluid intelligence. Crystallized intelligence is the ability to use knowledge accumulated through past learning into appropriate situations. Fluid intelligence is the ability to impose organization on new information in a speedy and effective manner. Crystallized intelligence is a consequence of life experience and increases with age. Fluid intelligence, imposing organization on new information, may decline with age. Thus, adult learners, who have spent time resolving the problems in the world using their accumulated knowledge of social and cultural experiences are more practical in their learning style. The adult learner, therefore, seeks to apply knowledge to life experiences. The traditional lecture model of teaching is less effective with this population. Adult and non- traditional students learn best in experiential, active, and applied learning environments.

Cognitive/Affective Needs of the Adult Learner

The adult learner may request refresher courses in math and vocabulary skills. Additional needs may include academic improvement courses such as study skills courses, note taking and test taking instruction. The adult women generally express a need for a supportive learning environment. A supportive environment has been identified as a key element in a successful educational outcome (Berman, Gelsco, Greenfeig and Hirsch, 1977). Supportive environments include personal counseling services, career counseling, and access to instructors and school personnel. An environment that offers encouragement and reassurance has been identified as facilitating the learning of adult women.

Affective Needs

The adult non-traditional learner may have a variety of ambivalent feelings about returning to school. She may have sex role conflicts, questions about her ability to succeed and self-esteem issues with regard to traditionally male defined tasks.

The adult women from a lower socioeconomic status and the older adult learner are more likely to have a poorer self-concept (Turner, 1977). Women tend to fear failure particularly in fields which are dominated by men. Frequently women fearing failure will restrict their educational and/or career choices to a narrow and traditional range of programs. Effective programs for the non-traditional learner need to address both the cognitive and affective needs of the population.

SECTION C: GENDER FAIR INSTRUCTIONAL TECHNIQUES

Objectives:

To help educators assess their own level of gender bias

To help educators identify the effects of gender bias on students and society

To help educators identify gender bias in their classrooms

To help educators to develop strategies for eliminating gender bias from their classroom

Resources and materials:

Glossary

Lecture: Sex Fair Instructional Techniques and Classroom Interaction

Lecture: Observation Categories to Promote Gender Free Teaching

Student Handout: The Classroom Climate: A Chilly one for Women?

TRANSPARENCY C-1: Competency Checklist for Persons providing Gender Fair Instruction

TRANSPARENCY C-2: Guidelines for Gender Fair Teaching

TRANSPARENCY C-3: How Fair is Your Language?

Student Worksheet: Self-Assessment: Are Your Teaching Behaviors Sexist?

Discussion Guide: Common Verbal Sexist Behaviors by Faculty that Denigrate Women.

TRANSPARENCY C-4: Nonverbal Sexist Behaviors of Faculty

TRANSPARENCY C-5: Verbal Gender Differences in Cross sex Groups

TRANSPARENCY C-6: Gender Differences in Speech Patterns

Student Worksheet: Student-Faculty Communication Checklist

TRANSPARENCY C-7: Observation Guide I

TRANSPARENCY C-8: Nonverbal Observation Sheet II

TRANSPARENCY C-9: TV Monitoring Rating Form

TRANSPARENCY C-10: TV Rating Form for Sex Role Stereotyping in Advertising

Bibliography

Instructional Activities:

1. Review learning objectives and glossary terms.

2. Think back to your early years. When was the first time you knew there was a difference between expectations for boys and girls? Describe the incident. What did you learn from that incident. How did it or did it change your behavior?

3. Look back over your school experiences. Identify one or two teachers made a difference in your life. Remember the feelings you had for those teachers. Try to identify what there was about these teachers that made a difference. Take a minute to reflect on these memories and identify all you can about those interactions. Discuss in dyads or share with the class.

4. Review TRANSPARENCY C-1: Competency Checklist for Persons providing Gender Fair Instruction. Have class discuss where they see themselves as needing the most work. Which competency do they have the most difficulty with now? Which competency is the most important to you as a person? As the class members share, do you notice any patterns by gender?

5. Deliver the lecture: Sex Fair Instructional Techniques.

6. Present TRANSPARENCY: Guidelines for gender fair teaching. Use the lecture expansion material to assist in the presentation. Ask students to think about their elementary school years, their high school years. Make a report card for that experience. Discuss your report card with the class. You might want to handout a report card similar to the one below.

   a. Gender fair teaching should be continuous and integral to daily instruction.
      Grade _____ Comments:

   b. Gender fair teaching must direct attention to the stereotypes and problems that affect boys as well as girls.
      Grade _____ Comments:

   c. Gender fair teaching must be concerned with discrimination on the basis of race-ethnicity, religion, class, age and disability.
      Grade _____ Comments:

   d. Gender fair teaching should be a partnership among teachers, parents and community members.
      Grade _____ Comments:

   e. Gender fair teaching is a total process. It should involve all aspects of the classroom environment.
      Grade _____ Comments:

   f. Gender fair teaching is good teaching.
      Grade _____ Comments:

   g. Gender fair teaching must include both the affective and cognitive domains.
      Grade _____ Comments:

   h. Gender fair teaching is active and affirmative.
      Grade _____ Comments:

   i. Overall evaluation of () Elementary or () High school years.
      Final Grade _____ Comments:

7. Present TRANSPARENCY: How fair is your language? Discuss the use of gender fair language as a facilitator of social change.

8. Set up a "micro-teaching" workshop to help faculty identify and change differential patterns of interaction with women and men students. Have each teacher present a brief lesson and conduct a five minute discussion with two men and two women. The interaction is recorded on videotape and a trained observer suggests changes. The teacher can then conduct the session again, paying particular attention to differential treatment.

9. Create a questionnaire and administer the questionnaire to your students. The questions should determine whether women and men students find the climate of your classroom equally hospitable, and measure men's and women's perception of sex-based differences in classroom interaction.

10. Distribute the self-assessment worksheet on teaching behaviors. Have each student evaluate his/her results. Ask them to present the two areas where they have to work the hardest to be gender fair. As you review the 16 questions, with which question do you think men and women teachers would have the greatest discrepancy?

11. Review Discussion Guide: Common Verbal Sexist Behaviors and TRANSPARENCY: Nonverbal Sexist Behavior of Faculty. As you review these transparencies, speak to the following issues:

    a. In your life, which have been most detrimental to your growth as a student: verbal or nonverbal sexist behavior(s)? Why?

    b. As a vocational education teacher, how will you discourage verbal sexist remarks?

    c. How will you discourage nonverbal sexist remarks?

    d. Brainstorm ways to find gentle reminders for your students when they make either a verbal or nonverbal sexist remark.

12. Review TRANSPARENCIES C-4 and C-5. Speak to the issue of gender differences in speech patterns.

13. Present Student Worksheet: Student Faculty Communication Checklist. While all of these behaviors are sexist, sometimes people describe these behaviors as "helpful." Describe and practice telling well meaning colleagues that their behavior on one level is helpful, while on another level it is hurtful. Have class members discuss the "hurtful" helping behaviors that they see as most salient for the vocational education teacher.

14. Members of a New Guinea tribe studied by Margaret Mead in the early 1930's believed that only babies born with their umbilical cord wrapped around their neck would grow up to be artists. This belief proved to be true in this culture. No other children, no matter how hard they tried became artists. The social expectations of children in this tribe clearly predicted and determined adult achievement. How does our society limit and direct adult achievement? What expectations were placed on you in your early development? What gender expectations do you still hold for yourself?

15. Much research suggests most of the teacher's time is given to boys. To determine whether you are giving equal time to boys and girls have an observer simply count the number of times you interact with each gender, or use video or audio tape equipment and assess your own interaction. Because any class may have an imbalanced sex ratio you can get an accurate proportion by dividing each total by the number of boys and girls in the room.

You will need to calculate the average number of interactions for each gender.

Average number of interactions per boy = Total number of teacher interactions with boys _____ Total number of boys in class

Average number of interactions per girl = Total number of teacher interactions with girl _____ Total number of girls in class

In the following classroom there are 13 boys and 12 girls. Our observers count 48 teacher interactions with the boys and 22 teacher interactions with the girls. When we divide the total number of teacher interactions with the boys (48) by the total number of boys (13), we see the average number of interactions per boy is 3.7. When we divide the total number of teacher interactions with the girls (22) by the total number of girls (12), we see the average number of interactions per girls is 1.8. This rough indicator of teacher attention suggests that the teacher gives boys twice as many interactions as girls.

Stitt, B. 1988. Building Gender Fairness in Schools Carbondale Illinois: Southern Illinois University Press.

16. Present Lecture on observation categories to promote gender free teaching. Have several students observe the present class and give feedback at the next class meeting. Have students who are presently teaching have an evaluation done of their own classroom interactions. Observation may be done by a colleague or through a video/audio tape and a self rating. Have some observers use both Observation Guide I and the Nonverbal Observation Guide.

17. To enhance awareness of the prevalence of stereotyped expectations and their hurtful effects, have students keep a log for the week of all sex stereotyped assumptions, statements, and jokes they encounter while listening to colleagues, students and family members. At the end of the week provide five for class discussion and feedback. Ask students about the effects these statements had on them.

18. To encourage students enhance their awareness of their own issues around sex stereotyping ask students to anonymously submit a belief, question or statement about gender roles and gender expectations that they have. Collect the statements and have students choose in a lottery fashion one statement. Use these statements to promote class discussion around the identified issues.

19. To understand the pervasive impact of stereotyping, ask students to go to the toy department in a local store and make a list of the types of educational toys available to boys and girls and those displayed for both boys and girls. Have students discuss their findings. What messages do these toys imply about the roles of girls and boys? What skills would a child learn from using these toys? What implications might these toys have for adult career choice?

20. To increase students awareness of the extent of sexism in television and advertising, have students view and keep logs on television programs and advertisements for at least two hours (including at least 6 advertisements and parts of at least 4 programs). Have class members take responsibility for different times of programming, i.e. prime time, afterschool, and morning TV. Use the TV observation guide provided and ask students to discuss results. What messages are given about what it means to be a man or a woman in this society. What physical and personality traits are considered desirable for men and women as portrayed by these programs.

TRANSPARENCY C-1: COMPETENCIES CHECKLIST FOR PERSONS PROVIDING GENDER FAIR INSTRUCTION

1. Develop an Awareness of Gender Bias
2. Identify Personal Gender Biases
3. Use gender fair verbal interactions with students
4. Use gender fair non-verbal interactions with students
5. Identify gender fair curriculum materials
6. Encourage students to broaden their educational and choices.
7. Plan activities to recruit and retain non-traditional students
8. Develop strategies to achieve schoolwide support for gender-fairness.

SOURCE: Stitt, B. 1988. Building Gender Fairness in Schools. Carbondale, Illinois: Southern Illinois University Press.

GLOSSARY

GENDER IDENTITY: one's self identification as male or female

SEX EQUITABLE: refers to materials which are both sex fair and sex affirmative

SEX ROLES: constellations of characteristics that various culture attribute to individuals according to biological sex. Attributes include expectations about behavior, job choices, personality characteristics, feelings and attitudes.

SEX ROLE STEREOTYPES: rigid beliefs in and applications of sex roles to almost all females and males in all cultures-- the belief that sex roles are universally true and "biologically natural"

SEX ROLE DEVELOPMENT: The process in which people learn to accept and display characteristics assigned to a given sex role.

SEX ROLE KNOWLEDGE: The content of people's knowledge about cultural sex role stereotypes.

SEX ROLE ATTITUDES: Norms, standards, prescriptions, and judgements about how and what sex roles should be and how or if they may be changed.

SEX ROLE SELF-CONCEPT: Individual feelings about their own functioning as measured against their sex role attitudes

SEX ROLE REVERSED: Role portrayal of individuals who exhibit traits and behaviors that are culturally sex stereotyped for the other sex.

SEX AFFIRMATIVE: Situations an materials which emphasize role reversals and also explain the benefits and problems associated with role reversal.

SEX FAIR: Materials that show males and females both in stereotyped and nonsterotyped roles.

LECTURE: Sex Fair Instructional Techniques and Classroom Interaction.

Schools and classrooms are microcosms of our society. In the confines of the classroom, the sex inequities common to the larger society are replicated (Bourdieu & Passeron, 1977). The most common inequities identified are:

1. sex segregation
2. male dominance/female invisibility
3. interpersonal interactions which reinforce sex differences and sex stereotyping
4. and linguistic bias

"A sex equitable environment is one in which both the overt and the hidden curriculum treat boys and girls equitably so they receive equal benefits from instruction. (Lockheed and Klein, 1977, page)." The categories of treatment include role models, teacher student interaction, peer interaction, school rules, and physical location and resources. A sex equitable classroom is one in which teachers interact in the same way with males and females. Role models are presented in teaching materials which represent the full choice of occupations and behaviors available to both genders. School rules are equitable i.e. males and females are disciplined in a similar manner for similar offenses. The physical location and resources are available to both males and females.

Students may enter the classroom with sex stereotyped behavior and attitudes. A sex equitable classroom environment provides one level of intervention with the goal of promoting conditions and opportunities for gender equity to develop.

Classroom inequities

Sex segregation

Sex segregation is found in preschool and elementary classes and continues in junior high. Frequently sex segregation is voluntarily initiated by children and may be reinforced by adults, or desegregation may not be encouraged. Segregation can be seen in student friendship choices, peer interactions, seating patterns, work partner preferences, and play.

Frequently children enter school with well defined sex role stereotypes about appropriate female and male behavior (Weintraub and Leite, 1977). Stereotypes are best refuted by reality, that is by interactions which demonstrate the inaccuracy of the stereotypes. Interactions with cross-sex classmates would provide opportunities for students to test out their stereotyped assumptions and diminish these assumptions. Frequently the classroom environment does not provide students with these opportunities.

Fragmentation/Isolation.

Additionally, many classroom teachers promote sex segregation by practices which arbitrarily separate boys and girls. Examples of these practices include:

lining up boys and girls separately, formation of work groups, and the organization of recreation groups. At times bulletin board displays are used to separate male and female contributions. Female contributions may be presented as less significant than male contributions. Purposeless segregation serves as a divisive influence, it detracts from the goal of equity and impedes cross sex cooperation.

Inequities in Teacher-Student Interaction

There is very little evidence of academic differences between girls and boys. There is evidence of some behavioral differences between males and females. Thus the research on gender biased teacher behavior needs to be interpreted in view of the differential student behaviors. That is to say if a male and female student behave differently the teacher's response may have more to do with the type of student behavior than the teacher sex biased attitudes. Thus, Klein and Lockheed suggest that the research on sex biased teacher behavior can only be validly assessed when the student behavior is held constant.

Research which has focused on the teacher behavior (Sadker and Sadker , 298; Wirtenberg, 1979) suggested that boys received more praise and more criticism than girls did. Morrison (1979) found that boys received more direct teacher questions than did girls and that ideas of boys were more often used in the classroom discussions. Klein and Lockheed are cautious in interpreting these data since student initiated interaction was not analyzed. These studies found greater activity on the part of boys relative to girls.

Hill (1982) summarized teacher behaviors which communicate sex differentiated expectations. The include: devaluation of work of female students; solving problems posed by girls while explaining to boys how to solve the problem, teachers calling on and making eye contact with male students more frequently than with female, and female students are more frequently victims of sexual harassment.

The research is consistent that teachers on the whole treat their male and female students differently The differential treatment may be a response to sex differences in student initiated behavior.

Male Dominance/Female Invisibility

A review of the research done on mixed-sex discussion groups drew generalizations about behavior in these groups (Lockheed and Hall, 1976).

1. Men are more verbally active than women, the average man initiates more verbal acts than the average woman.
2. Men exert more influence than women, a woman is more likely to yield to a man's opinion.
3. Men initiate a higher proportion of their acts than women in task oriented categories of behavior.
4. Women initiate a high proportion of their acts in social-emotional categories.

These sex differences are associated with stereotyped expectations regarding relative abilities of men and women. It is important to note when the conditions of the group were changed so that women were expected to be competent at the task, men no longer emerged as the most influential.

The role of stereotyped expectations can be seen to dominate the coeducational experience. Thus, females often form a quiet background to the more active role played by males. The greater activity by males, coupled with sexist assumptions on the part of some teachers, creates a situation where males dominate in the class room and females fade to a less visible status.

Sex inequities in Peer Interaction

The research on cross-sex interaction indicates a lack of cooperation and the existence of male dominated behavior. Studies suggest a lack of cross-sex helping behaviors, with females responding to cross sex and same sex requests for help and males only responding to same sex requests for help (Webb, 1982). Halls review of the literature on classrooom interaction in the higher education setting appears to be negative for women. Women students may be ignored by male classmates, may have their contributions discounted, and may be subject to stereotyped language and expectations on the part of other students (Hall, 1982).

Linguistic Bias

The same forms of language bias which exist in the written word can emerge in the language of the classroom. Sex biased words which render woman invisible such as mankind, chairman, policemen, the reliance on the male pronoun "he" to refer to both males and females, are examples of sexist patterns that devalue women. Language can exclude woman and render them invisible and convey stereotyped and negative images.

Strategies:

The following strategies are suggested by Lockheed and Klein for reducing sex biased teaching and classroom climates.

1. Learn about patterns of sex inequities and their effects
2. Improve student-teacher interaction, monitor one's own behavior, become aware of biased attitudes and practices. Learn to communicate similar expectations to males and females, praise and reward equally and punish and reprimand both sexes in a similar manner.
3. Restructure the classroom to set the stage physically and psychologically for equity to develop. Utilize cooperative cross-sex learning discussion groups.
4. Solicit the participation of students in desegregating their classes, creating equal status peer interactions and adapting nonstereotyped behaviors.

TRANSPARENCY C-2:
GUIDELINES FOR GENDER FAIR TEACHING

1. Gender fair teaching should be continuous and integral to daily instruction.

2. Gender fair teaching must direct attention to the stereotypes and problems that affect boys as well as girls.

3. Gender fair teaching must be concerned with discrimination on the basis of race-ethnicity, religion, class, age and disability.

4. Gender fair teaching should be a partnership among teachers, parents and community members.

5. Gender fair teaching is a total process. It should involve all aspects of the classroom environment.

6. Gender fair teaching is good teaching.

7. Gender fair teaching must include both the affective and cognitive domains.

8. Gender fair teaching is active and affirmative.

ADAPTED FROM Sadker, M. and D. Sadker. 1982. Sex Equity Handbook for Schools, Longman, Inc.

TRANSPARENCY C-3:
HOW FAIR IS YOUR LANGUAGE?

Biased	Unbiased
businessman	business manager or executive
chairman	chairperson, leader
cleaning lady	housekeeper, custodian
congressman	congressional representative
craftsman	artisan
craftsmanship	artisanship
fireman	fire fighter
foreman	supervisor, manager
freshman	first year student
gal Friday	assistant
housewife	homemaker
ladylike	well-mannered
middleman	middle person, intermediary
mailman	letter carrier
man-hour	staff hour, work hour
mankind	humanity
man-made	synthetic, artificial
man power	skilled labor, labor force
man-size job	big or enormous job
policeman, policewoman	police officer
repairman	repairer
spokesman	spokesperson, speaker
sportsmanship	sense of fair play
stewardess, steward	flight attendant
workman	worker
workman's compensation	worker's compensation

Lecture Expansion on Transparency
Guidelines for Gender Fair Teaching.

1. Gender fair teaching should be continuous and integral to daily interactions.

   Research supports the positive effects of a variety of interventions to promote nonstereotyped thinking and behavior. However, the interventions must be continuous or there may be a return to the original stereotyped behavior and attitudes. To truly open options for students teachers need to incorporate gender fair materials on an ongoing basis.

2. Gender fair teaching must direct attention to the stereotypes and problems that affect boys and girls.

   Experience with non-sexist teaching has shown than boys may become resistant to learning and changing attitudes when the material appears to benefit girls only. Boys will need help in understanding the negative effects that stereotyping has for males.

3. Gender fair teaching must also be concerned with discrimination on the basis of race, ethnicity, religion, class and disability.

   All prejudices are related. The oppression of minorities of any kind have similar roots. Gender fair teaching is oriented toward philosophical principal of equity with the goal of embracing diversity. Thus, gender fair teaching includes instruction about and recognition of racial-ethnicity, and religious minorities as well as individuals who are disabled.

4. Gender Fair Teaching is a partnership.

   For gender fair teaching to be effective there needs to be a cooperative effort between parents, teachers and the community. This may require some education of parents and community members to the advantages of gender free teachers. Explanations of the purpose and possible benefits which could include increased scores on achievement tests and broader career options for students.

5. Gender fair teaching is a total process. It should involve all aspects of the classroom environment.

   Gender fair teaching involves the physical arrangement and organization of the classroom, verbal and nonverbal classroom interaction, selection and use of books, media, and all aspects of the content of curriculum. Consistent gender fair teaching would include bulletin board displays, social studies lessons, and science lessons which identify important contributions of women,an work groups that are comprised of cross-sex membership.

6. Gender fair teaching is good teaching.

   Highly skilled enthusiastic teachers are the most effective advocates for gender fair teaching.

7. Gender fair teaching must include both the affective and cognitive domain.

Sex role's and sex role stereotypes are topics which have a strong affective component. Gender free instruction must provide cognitive information on sex roles as well. As values clarification work, and affective educational activities are aimed at identifying the emotional component of sex role assignment, students may need some emotional support as they develop a less rigid more open way of viewing gender roles.

8. Gender fair teaching is active and affirmative.

Students are continually exposed to sexist thinking and messages. Gender fair teaching must be active to capture the student's attention and it must be consistent to maintain and impact in cultural environment which is actively sexist.

STUDENT WORKSHEET: SELF-ASSESSMENT: ARE YOUR TEACHING BEHAVIORS SEXIST?

1. Are you less likely to call directly on women students than men students?
2. Do you tend to ask men and women different kinds of questions?
3. Do you encourage women as much as men to think for themselves?
4. Do you praise, give informal feedback, and encouragement to women as often as men for their academic efforts?
5. Do you interrupt women more often than men during class discussion?
6. Do you think women's questions are less serious than men's questions?
7. Do you tend to make more eye contact with men than women?
8. Do you assume that women students are more uncertain because of the way that they ask questions?
9. Are you more likely to remember the names of men students than those of women?
10. Are you as likely to choose women as men for student assistants?
11. Are you likely to give different responsibilities to men and women?
12. Do you tend to discourage women from enrolling in traditionally "masculine" majors or from "harder" subspecialties?
13. Are you more likely to contact men students when publication, research, and other professional opportunities arise?
14. Do you use sexist humor to "spice up a dull subject?"
15. Do you make disparaging comments about men or women as a group?
16. Do you use she/he or his/her instead of the generic "he?"

For each yes answer to questions 1, 2, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, Give yourself 1 point for being and promoting sex bias in your classroom. For each no answer to questions 3, 4, 10, 16, give yourself 1 point for being and promoting sex bias in your classroom. The higher your score the more biased you are-- the more damaging a role model you are. There is no acceptable score for this scale other than O.

TRANSPARENCY C-3: COMMON VERBAL SEXIST BEHAVIORS BY FACULTY THAT DENIGRATE WOMEN

1. COMMENTS THAT DISPARAGE WOMEN IN GENERAL "busy-body, middle-aged women," statements like "women are no good at anything."

2. COMMENTS THAT DISPARAGE WOMEN'S INTELLECTUAL ABILITY, such as belittling women's competencies in spatial concepts, math, etc. Making statements like "well, you girls don't understand."

3. COMMENTS THAT DISPARAGE WOMEN'S SERIOUSNESS AND/OR ACADEMIC COMMITMENT, "I know you are bright and competent, but you are so cute I can't see you as a professor or anything."

4. COMMENTS THAT DIVERT DISCUSSION OF A WOMAN STUDENT'S WORK TOWARD A DISCUSSION OF HER PHYSICAL ATTRIBUTES OR APPEARANCE, such as cutting a student off in midsentence to praise her attractiveness.

5. COMMENTS ABOUT WOMEN FACULTY THAT DEFINE THEM IN TERMS OF THEIR SEX RATHER THAN THEIR PROFESSIONAL STATUS (e.g. It must be that time of the month. All she needs is a good_____).

6. COMMENTS THAT REFER TO MALES AS "MEN" AND FEMALES AS "GIRLS," "GALS," ETC. RATHER THAN "WOMEN." This nonparallel terminology implies that women are viewed as similar to children and thus less serious or capable than men.

7. COMMENTS THAT RELY ON SEXIST HUMOR AS A CLASSROOM DEVICE, either "innocently" to "spice up a dull subject."

8. COMMENTS THAT DISPARAGE SCHOLARSHIP ABOUT WOMEN, OR THAT RIDICULE SPECIFIC WORKS BECAUSE THEY DEAL WITH WOMEN'S PERCEPTIONS AND FEELINGS. Such comments can reinforce students' perceptions that what men think, feel and do is important, while women's roles, actions, and feelings are not worth learning about.

TRANSPARENCY C-5:
NONVERBAL SEXIST BEHAVIORS OF TEACHERS

1. Making eye contact more often with men than with women.
2. Nodding and gesturing more often in response to men's questions and comments than to women's.
3. Modulating tone.
4. Assuming a posture of attentiveness when men speak, but the opposite when women make comments.
5. Habitually choosing a location near men students.
6. Excluding women from course-related activities, such as field trips, or attempting to discourage their participation because women are "too much trouble."
7. Grouping students according to sex, especially in a way which implies that women students are not as competent as or do not have status equal to men.
8. Favoring men in choosing student assistants.
9. Giving men detailed instructions in how o complete a particular problem or lab assignment in the expectation they will eventually succeed on their own, but doing the assignment for women-- or allowing them to fail with less instruction.
10. Allowing women to be physically "squeezed out" from viewing a laboratory assignment or a demonstration.
11. Making direct sexual overtures.

TRANSPARENCY C-4:
VERBAL GENDER DIFFERENCES IN CROSS SEX GROUPS

1. Despite the popular notion that women talk more than men, studies show that in formal groups containing men and women.

   a. Men talk more than women.

   b. Men talk for longer periods.

   c. Men take more speaking turns than women.

   d. Men interrupt women much more frequently than women interrupt men.

   e. Men's interruptions of women more often introduce trivial or inappropriately personal comments that bring the woman's discussion to an end or change its focus.

TRANSPARENCY C-5:
GENDER DIFFERENCES IN SPEECH PATTERNS

a. The valued patterns of speech in educational settings are more often found among men than among women speakers. These include:

   1) Highly assertive speech

   2) Impersonal and abstract styles

   3) Competitive, "devil's advocate" interchanges.

b. Features which usually occur more often in the speech of women than of men and also by individuals and groups with low status and little power.

   1) Hesitation and false starts (I think... I was wondering....)

   2) High pitch

   3) "Tag" questions (This is really important, don't you think?")

   4) A questioning intonation in making a statement ("The theoretical construct was presented inaccurately?)

   5) Excessive use of qualifiers (Don't you think that maybe sometimes)

   6) Other speech forms that are excessively polite and deferential (This is probably not important, but ...).

STUDENT WORKSHEET:
STUDENT-FACULTY COMMUNICATION CHECKLIST

It may be difficult for an instructor to be consciously aware of interactional dynamics in the classroom, while at the same time transmitting the content of the lecture or guiding a discussion. For this reason, the following techniques are suggested to help faculty with an analysis of the interaction in their classes.

a. Classroom Observation

Have a friend, colleague, or teaching assistant observe some of your classes on a random basis can be helpful. Classroom observation can be used to answer questions such as:

1) What is the number of males versus females called on to answer questions?

2) Which students (male or female) participate in class more frequently through answering questions or making comments? Is the number disproportional enough that you should encourage some students to participate more frequently?

3) Do interruptions occur when an individual is talking" If so, who does the interrupting?

4) Is your verbal response to students positive? aversive? encouraging? Is it the same for all students? If not, what is the reason? (Valid reasons occur from time to time for reacting or responding to a particular student in a highly specific manner.)

5) Do you tend to face or address one section of the classroom more than others? Do you establish eye contact with certain students more than others? Do you establish eye contact with certain students more than others? What are the gestures, postures, or facial expressions used and are they different for men, women or minority students?

b. Audio Taping of Class Section

A student could tape record some of your class sessions. Self- analysis of the tapes could provide answers to questions such as

1) Which students do you call by name?

2) What language patterns are you using? Is there a regular use of male referencing? or the generic "he?" or the universal "man?" Are stereotypical assumptions about men and women revealed in your classroom dialogue?

3) Are examples and anecdotes drawn from men's lives only?

4) Can differential patterns of reinforcement be detected from the tapes.

REPRINTED from Sex and Gender in the Social Sciences: Reassessing the Introductory Course.

LECTURE: OBSERVATION CATEGORIES TO PROMOTE GENDER FAIR TEACHING

a. Attention: Number of interactions with students tallied by sender.

b. Praise

1) Academic: Rewards and reinforcement given for intellectual quality of work.

examples: interesting report, excellent job

2) Nonacademic: Rewards and reinforcements not directed to intellectual quality.

examples: You are well-behaved today. That is an attractive outfit. This is neatly done. You seem all smiles today.

c. Academic Criticism

1) Intellectual Quality: Critical remarks directed at the intellectual quality of the work

examples: You don't seem to understand the material. These concepts appear too difficult for you. This material is beyond your abilities.

2) Effort: Comments which attribute academic failure to a lack of effort.

examples: You need to work harder. Let us see a little more effort.

d. Non-Academic Criticism

1) Mild: negative comments for violation of rules or norms.

Examples: Quiet down. Get back in line.

2) Harsh: Negative scenes which attract attention, louder and stronger language used.

examples: Get back in your seat. I've had it with you today. You are to have 2 hours detention for your rude and unruly behavior.

e. Questions

1) Low level: Questions that require memory only.

examples: Who was the first woman to run for the United States presidency? Who was first woman vice-presidential candidate?

2) High level: Questions which require thinking and analysis of information examples: Analyze the cause of the denial of women's right to vote and the effects of gaining the right to vote? Present an analysis of the

political power structure in America, what factors make it a hostile or uninviting environment for women?

f. Academic Interventions:

1) Facilitative Behaviors that promote learning by providing suggestions, hints, and cues to encourage and enable the student to complete the task.

examples: Think about the formula and the discussion yesterday. Check your work over and see if you can correct the error.

2) Disruptive Behaviors that prevent or impede success.

examples: Doing the task for the student. Providing the answer instead of teaching.

ADAPTED FROM Stitt, B. 1988. Building Gender Fairness in Schools. Southern Illinois University Press.

TRANSPARENCY C-7: OBSERVATION GUIDE I

ACTIVITY	TIME	TEACHER COMMENTS DIRECTED AT	
		BOYS TOTAL	GIRLS TOTAL

a. Attention

b. Praise

   1) Academic

   2) Nonacademic

c. Academic Criticism

   1) Intellectual Quality

   2) Effort

d. Non-Academic Criticism

   1) Mild

   2) Harsh

e. Questions

   1) Low level

   2) High Level

f. Academic Interventions:

   1) Facilitative

   2) Disruptive

Source: Stitts, B. 1988. Building Gender Fairness in Schools. Southern Illinois University Press.

TRANSPARENCY C-8: NONVERBAL BEHAVIORAL OBSERVATION GUIDE II

BEHAVIOR	EXAMPLES
a. Eye Contact	
b. Positioning of teacher with regard to student	
c. Nonverbal Reinforcement behaviors (i.e, head nodding, moving closer, leaning etc.)	
d. Wait time	
e. Gender fair seating arrangements	
f. Gender Fair task assignments (i.e computer use, lunch money, caring for classroom environment)	

ADAPTED FROM; Stitt, B. 1988. Building Gender Fairness in School Southern Illinois University Press.

TRANSPARENCY C-9: TV MONITORING RATING SHEET

Name of TV Program _____

List of main characters and two adjectives to describe each character.

	MEN	WOMEN
Occupations		
Aggressors		
Victims		
Heros/Heroines		
Who seemed to need help?		
Who was (were) the helper(s)?		
Who is rewarded?		
Who was (were) the decisionmakers?		
Who initiates conflict?		
Who resolves conflict?		

What message is given about women?

What message is given about men?

TRANSPARENCY C-10: TV RATING FORM FOR SEX-ROLE STEREOTYPING IN ADVERTISEMENTS

Product Advertisement _____

Speaking Roles:

Number for men:

Number for women:

Occupations:

Occupations for men:

Occupations for women:

Target Population:

COVERT message:

OVERT message:

UNIT EVALUATION

Please indicate your appraisal of this unit on the scales provided.

a. Was this unit interesting to you?
VERY INTERESTING 1 2 3 4 5 6 7 NOT AT ALL INTEREST-ING

b. Would your recommend this unit to others?
VERY MUCH 1 2 3 4 5 6 7 NOT AT ALL

c. Was the material you learned in this unit valuable to you?
VERY VALUABLE 1 2 3 4 5 6 7 NOT AT ALL VALUABLE

d. Will you share any of your new knowledge with others?
WILL SHARE 1 2 3 4 5 6 7 WILL NOT SHARE

e. Will your behavior change in the future because of what you learned in this course?
WILL SEE BIG CHANGE 1 2 3 4 5 6 7 WILL SEE NO CHANGE

f. Has your attitude toward what it means to learn changed?
BIG CHANGE 1 2 3 4 5 6 7 NO CHANGE AT ALL

g. Has your attitude toward the adult learners changed?
BIG CHANGE 1 2 3 4 5 6 7 NO CHANGE AT ALL

Please include in the space below any comments about how the unit may be improved.

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