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## Promoting gender equity in the elementary learning environment

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## Promoting gender equity in the elementary learning environment

### Abstract

This research review discusses the importance of teaching in a gender equitable manner. It examines the negative interactions teachers have with their students, many times without being aware of it. The effects of each of these negative teacher behaviors are explained and practical strategies and interventions are suggested to reduce the negative interactions.

Many of these strategies can be teacher directed, but strategies involving students, colleagues, and parents are also presented. The interventions are beneficial not only to female students but to male students as well. The Gender Expectations and Student Achievement (GESA) teacher training program is discussed and many teacher training handbooks dealing with gender equity are mentioned. Finally, the review offers insight into the implementation of the strategies in the author's personal practice.

PROMOTING GENDER EQUITY IN THE  
ELEMENTARY LEARNING ENVIRONMENT

A Graduate Research Paper  
Submitted to the  
College of Education  
Department of Curriculum and Instruction  
in Partial Fulfillment  
of the Requirements for the Degree  
Master of Arts in Education  
UNIVERSITY OF NORTHERN IOWA

by

Amy Elizabeth Roberts

July 1997



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## CHAPTER 1

Background

Much research has already been done which indicates that female students in America are not receiving the quality of education that boys are receiving (Sadker, M. & Sadker, D., 1994; Bryan, K., American Association of University Women [AAUW] 1991; Pipher, M., 1994 ). The 1992 AAUW Report, *How Schools Shortchange Girls*, reveals that girls and boys enter school with very similar measured abilities and continue to perform similarly until about seventh grade. By twelfth grade, the female students have fallen behind males in self-esteem. Female students also fall behind boys when it comes to interest in higher level mathematics and performance in higher level mathematics (AAUW, 1992). "The report documents the ways in which the public school system shortchanges girls. It is based on research on the accomplishments, behaviors, and needs of girls from preschool through high school" (AAUW, 1992, p. 5). Rather than replicating studies which have already been done, I have chosen to review the literature and compile the results.

Problem

Gender equity was made a national requirement through the passage of Title IX of the Educational Amendments Act of 1972 which prohibits sex discrimination in educational programs that receive federal funds (Hilke, E. & Conway-Gerhardt, C.,1994) . However, subtle and often unintentional teacher behaviors which demonstrate bias are still taking place in American schools (Sadker M, & Sadker, D., 1994). In the 1992 AAUW report, it was discovered that in American schools female students receive less active instruction than boys do, both in the quality and quantity of teacher time and attention.

Many teachers do not realize that this is the case, and they don't understand the full impact that this inequitable treatment has on female students (Sadker M. & Sadker, D., 1994).

### Importance of Topic

Gaining some insight into this problem is important because approximately half of the American population, who happen to be female, are not receiving the opportunity to learn to their full potential. "Studies and practice have proven that teacher attention is directly correlated to achievement" (Grayson & Martin, 1988, p. 3). The AAUW report (1992) disclosed that the self-esteem of girls drops by the time they reach early adolescence. Sadker, Sadker, Fox, and Salanta (1994) found that this decline may be due to the negative messages the students receive from teachers and the curriculum. As stated by the Sadkers in their 1994 book, *Failing at Fairness*, "Self-esteem is a connection to academic achievement and a direct link to career goals and hopes for the future" (p. 77).

Girls often lose out by not considering the possible careers dealing with math and science, which are often some of the highest paying careers. "Many young women are still choosing to enter lower-paying occupations; women still tend to self-segregate into clerical and service jobs; despite the science and technological needs of the future, women constitute only 15% of all employed scientists, engineers, and mathematicians (Sinkinson & Walter, AAUW, 1993, p. 16).

According to the 1991 AAUW report, *Stalled Agenda: Gender Equity and the Training of Educators*, "Educators want to provide bias-free education for their students, but in most cases they are not adequately trained to recognize and correct gender-biased educational practices" (p.1). This same report cited Fullerton (1989) who said, "With labor force projections showing that 88.5 percent of new entrants to the work force will be women and minorities by the year 2000, it is clear that equity in education must be achieved for America to compete effectively in the global marketplace of the next century." Schollay stated in her 1994 article, "Neglecting gender bias in schools has long term costs that girls, communities, and society as a whole will find increasingly difficult to pay" (p.46).

### Scope of Review

The resources I read which were used for purposes of this paper date as far back as 1956. However, when gathering information relating to the topic of study, such as inequitable teaching behaviors, the causes of these disparities, and strategies to limit the disparities, I limited the scope of the review to recent years. Almost all of the resources used were published in the 1990's. It seems that very few studies specifically relating to my purpose had been published in 1996.

### Purpose of Study

In order to gain some insight into the problem of unequal time and attention given to girls in American schools, I focused on what teacher behaviors, whether intentional or unintentional, are associated in the literature base with the differential treatment of boys and girls in classrooms.

My goal was to discover what effects these negative teacher behaviors have on girls and what strategies can lead to a change in the behaviors of teachers.

Therefore, the purpose of the study is to review the literature in search of suggested interventions or strategies which can result in a change of the teacher behaviors associated with gender inequity. The following questions need to be answered in order to become familiar with suggested strategies and interventions:

What teacher behaviors are associated with gender inequity?

What effects do these inequitable behaviors have on female students?

What strategies or interventions can lead to a positive change in the inequitable behaviors of teachers?

#### Limitations/Delimitations

Although much research has been done associated with gender inequity, it is very challenging to assess when a reduction in bias has occurred and when suggested strategies are working because gender bias includes such a complex and interactive set of variables. Gender bias can range from intentional teacher behaviors to unintentional behaviors. It can also include bias in textbooks, sports, curriculum, and evaluation. The goals and interactions of gender equity models should be very clear in order to be measured quantitatively. It is easier to measure the achievement of students or compare test scores, teacher behaviors, and perceptions of the students and teachers in relation to gender equity before and after interventions than to try to measure whether gender equity as a whole has been achieved.

It has been very difficult to find studies which prove interventions have resulted in a long-term change of teacher behaviors because nothing can prove a point 100% of the time. For this reason, I have chosen to focus mainly on suggested interventions or strategies for change. Research related to The *Gender/Ethnic Expectations and Students Achievement* (GESA) teacher training program is the closest I have come to finding that long-term changes in the conduct of teachers have occurred.

All of the interventions discussed in this paper may not be shown quantitatively to work over a long span of time, but they are literature based suggestions for change.

#### Application of Results

The compiled results will make a difference in my classroom practice and potentially the classroom practice of other teachers. Those reading the results may become more aware of how they interact not only with their female students, but with their male students as well. Hopefully a reduction in the inequitable treatment of all students will occur as a result of the information shared. The results may also be shared with educators in the form of an in service. I hope to at least bring the importance of gender equity to the attention of readers.

#### Definitions

gender- According to Hilke & Conway-Gerhardt (1994), "Gender encompasses not only the concept of sex, but also the social and cultural meanings attributed to being female or male. Embedded in every social interaction is an underlying sexuality; thus the sex(es) of the persons engaged

in the interaction, even though seeming to have no direct relation to what is going on, actually may be central to the interaction" (p. 8).

gender equity- According to Streitmatter (1994), "Gender equity and related goals can be thought of as working to enhance the aspirations, achievement, talents, and interests of all students independent of their gender" (p. 7). Streitmatter also explains, "Gender equity through an equal framework is concerned with giving all students an equal footing at the start." "Gender equity through an equitable framework has the premise that a certain group historically and habitually has been less advantaged within the system than another group" (p. 8).

gender equity and sex equity are often defined in similar fashions (Hilke, & Conway-Gerhardt, 1994) and will be used interchangeably for purposes of this paper.

gender discrimination- Gender discrimination deals with knowingly treating boys and girls differently because of beliefs that males and females are not as capable as one another in certain areas.

gender bias- Gender bias is not as easy to identify as gender discrimination because bias is more subtle and sometimes unintentional. A 1975 publication by New Pioneers (as cited in Streitmatter, 1994) says, "gender bias can be defined as the underlying network of assumptions and beliefs held by a person that males and females differ in systematic ways other than physical, that is, in talents, behaviors or interests. These beliefs lead a person to make assumptions about others strictly based on gender" (p. 2).

Often teachers have lower expectations of female students than males, and they may not realize it (Bryan, K., AAUW, 1991). "The assumptions made send students very different signals about what they are capable of doing and what is expected of them" (Sinkinson & Walter, AAUW, 1993, p. 29).

gender bias communication- "Gender bias communication includes behaviors which reflect bias or stereotyping, but are not against the law. These behaviors can be divided into nonverbal and verbal communications (Orick, 1993, p.4).

quality- According to the Merriam-Webster's Collegiate Dictionary (1993), quality means the degree of excellence.

quantity- According to the Merriam-Webster's Collegiate Dictionary (1993), quantity means the amount or number of something; frequency.

## CHAPTER 2

For purposes of this paper, Chapter 2 is organized in a very similar fashion to the work of Dolores Grayson (1992), and the Sadkers (1994). Some of the categories were combined, especially in the discussion of interactions between teachers and female students. Various other sources were combined with the information provided by Grayson and the Sadkers. Many of the categories in chapter 2 can overlap or be combined. The categories were separated by specific teacher behaviors in order to easily list the effects and the suggested interventions.

### Overview of Gender Equity

Without looking deeper than on the surface, girls seems to be doing well in school. Most of the time they earn better grades and are punished less than boys. Girls are usually considered to be ideal students by teachers (Sadker, M., & Sadker, D., 1994). If nothing appears to be wrong then it does not need to be fixed. The girls' good behavior allows the teacher to do more work with the sometimes hard to deal with boys (Sadker, M., & Sadker, D., 1994). As stated by the same authors, "The result is that girls receive less time, less help, and fewer challenges. Reinforced to passivity, their independence and self-esteem suffer. As victims of benign neglect, girls are penalized for doing what they should and lose ground as they go through school" ( p. 44).

Other examples of how girls are losing ground as they go through school, as well as later in their adult lives, are illustrated best by Orick (1993).



Compared to males, females are more likely to do the following: score lower on standardized tests, receive less attention at every grade level regardless of whether the teacher is male or female, receive feedback for nonacademic rather than academic work, and receive few difficult questions. Compared to males, females are less likely to do the following: be admitted to the college of their choice, have opportunities for academic enrichment programs in college, have jobs in math and science fields, and have higher salaries (p.3).

Sadker, M., & Sadker, D., (1994), stated that, " In elementary school, receiving attention from the teacher is enormously important for a student's achievement and self-esteem. Later in life, in the working world, the salary received is important, and the salary levels parallel the classroom" ( p. 50).

Orick, (1993), comments, "Gender is one of the most important variables that determine the expectations of teachers" ( p. 3). Educators must be trained in gender equity issues in order to promote successful learning for all students. The professional skills of teachers are very powerful when assisting students' successful learning. What is more powerful than the highly desirable professional skills is the ability of teachers to encourage and facilitate students' academic, social, emotional, and physical achievement (Hunter, M., 1994). Training in gender equity issues provides teachers with the skills and methods to do this. The capability of turning out students who will be successful lifelong learners with a continuing enthusiasm for learning is also very important (Hunter, M., 1994).

There are programs that deal specifically with gender equity issues. The GESA program is effective in training teachers to eliminate disparities in teaching. This benefits all students as teachers are trained to confront issues of gender, race, and ethnic bias in their own interactions with students. After eight years of collecting and comparing data and effective strategies related to gender-bias classroom interactions, the GESA program was developed (Grayson, & Martin, 1984).

This program seeks to produce equal interest and achievement in mathematics, reading, and language arts in boys and girls in classrooms of teachers receiving GESA training. It seeks to reduce the gender stereotyping by these teachers, to increase non-stereotypical interaction with students, and to equalize the frequency of interactions with girls and boys. The methods used are teacher workshops, classroom observations by participants of one another's teaching techniques, feedback to support teachers and to have them report changes they are observing in their classrooms, and pre -and post-tests in mathematics, reading, and language arts. Students also respond to a gender-based questionnaire before and after the treatment. (Grayson & Martin, 1984, p. 3).

A 1988 publication by Grayson & Martin reported (as cited in Flinders, 1995) that after teachers receiving GESA training, test scores go up for all students.

In order to have an understanding of the term gender equity, it is beneficial to look at it in two different ways. A 1975 publication by New Pioneers (as cited in Streitmatter, 1994) pointed out the following:

Gender equity and related goals can be thought of as working to enhance the aspirations, achievement, talents, and interests of all students independent of their gender. When one begins to consider how gender equity is operationalized, it becomes clear that there are two ways to conceptualize it: within a framework of equal (or equality when the term is used a noun) or within a framework of equitable ( p. 7).

Working through an equal framework, a teacher would be sure all students have the same material and participate the same number of times. The teacher would see that all students have the same access to parts of the curriculum and make sure that all materials in the curriculum have female and male characteristics or models that are equivalent (Streitmatter, 1994). Streitmatter (1994), describes that, "The idea is that with an equal beginning, students will proceed according to their individual capabilities" (p. 8).

The same author points out that gender equity through an equitable framework has the assumption that a certain group has consistently been less advantaged in the past within the school than another group. Teachers working through this framework recognize that one group will potentially not achieve as well as another group. Educators working through an equitable framework may push female students more than males in science or math if they believe females are not achieving as well as males. When a teacher uses the framework of equitable teaching, the final outcomes are the concern, not the beginning as is the case with the equal framework. Streitmatter (1994), said, "Teaching in a gender equitable manner suggests that without more effort or consideration a certain group will not have the same opportunity to finish at the same level as the other group" ( p. 9).

## Interactions, Effects of Interactions, and Strategies for Change

### Opportunities to respond: interactions.

"Opportunities to respond include asking students to answer questions, contribute to discussions, state opinions, write on the board, present something to the class, etc" (Grayson, 1992, p. 8). "Male students control classroom conversation. They ask and answer more questions" (Sadker M., & Sadker, D., 1994, p. 42). Many teachers use the rule of raising your hand if you want to speak. This often happens in classrooms, but when the discussion increases, the rule is often forgotten by teachers and students. The result is that boys tend to call out answers and teachers respond more to their comments or questions (Sadker, M., & Sadker, D., 1994). Research by the Sadkers (1994), showed that boys call out far more than girls. When girls call out they are often told by teachers to raise their hands. Myra and David Sadker (1994), point out that, "Even when teachers remember to apply the rules consistently, boys are still the ones who get noticed. When girls raise their hands, it is often at a right angle, arm bent at the elbow, a cautious, tentative, almost insecure gesture. In contrast, when boys raise their hands, they fling them wildly in the air, up and down, up and down, again and again" (p.44).

### Opportunities to respond: effects.

After girls are told to raise their hands many times while boys are allowed to call out answers, they learn that they will be reprimanded for calling out answers while boys won't. Sometimes girls become uneager to answer questions, or they even become silent all together (Sadker, M., & Sadker, D., 1994). Female students who learn their responses aren't valued by the teacher

can become less aggressive when it comes to participation in the classroom. Instructors can end up giving the message that some students are seen as more important than others (Grayson & Martin, [GESA Teacher Handbook], 1984).

By the time girls reach middle school, many of them begin remarks by saying, "I know this is stupid, but... , or I am probably wrong, but..... " (Sadker, M., & Sadker, D., 1994). These self putdowns may be a result of the conditioning they have learned throughout elementary school. When students believe that their confusion is a result of lack of talent and intelligence, they do not see how persevering through confusion will actually make them better learners (Girls Count I Did It! An Educator's Guide to Developing Mastery-Oriented Learners, 1995).

#### Opportunities to respond: strategies.

The following strategies can be implemented to provide gender equitable opportunities to respond.

- It is important to make an effort to call on all students. Depending on volunteers to contribute in class discussions is not enough. Teachers should make a conscious decision to call on female students who do not participate in class. In the United States, people need to participate in order to succeed (Sadkers, 1994). Even though these students may be timid about sharing their ideas, they just need some encouragement from the teacher. A 1982 publication by Myra and David Sadker pointed out that eventually these students will realize that they are valued members of the class, and they will feel more comfortable.

- One way an educator can make sure that all students are called on is to have students use answer cards. Each child is expected to answer at least one question in designated class periods and participation is part of her or his class grade. At the beginning of the class each student places a fluorescent pink card in the corner of his or her desk. When a question is answered by a student, she or he puts the card into the desk. At the end of the class period, the instructor can look around to see who still has not answered a question. This also keeps teachers from calling on the same students over and over again.

- Girls who take charge of a situation, volunteer or assume a leadership role, defend ones self, and ask questions should be encouraged. They should be encouraged not for blaming failure on themselves, but for focusing energy on solving a problem (Girls Count Inservice on Gender Equity, 1995).

- Encourage girls who do not participate by making sure they take part in cooperative learning situations. In cooperative learning, students are expected to participate and this will enhance their learning (Sadker, M., & Sadker D., 1982). When students are working in cooperative groups they are expected to take on certain roles for a time, such as leader, recorder, reporter, etc. Girls who usually do not respond verbally in the classroom are put into the position of having to participate and may eventually grow more comfortable doing so.

- Have a colleague record response opportunities number or response opportunities for each child. This is done when the following happens: when a teacher calls on a student to answer a question, when the teacher accepts the answer of a student who calls out a response, and when the teacher calls on a

student to participate in class in another way besides answering a question (Grayson & Martin, 1984; Grayson & Martin, 1990). Recording these opportunities can give the instructor a tool for evaluating equity.

### Feedback: interactions.

Feedback consists of the number of times teachers respond and the ways in which teachers respond to the performance of students, whether the responses are verbal or nonverbal and express approval or disapproval. "Communication theory emphasizes the importance of feedback in modifying our behavior so that the consequences of our behavior come closer to our intentions (Grayson, & Martin, 1990, p. 16). Studies have shown that there are four categories of teacher responses when they are providing feedback to students (Sadker M., & Sadker D., 1994). The categories include the following; praising, remediation, criticizing, and acceptance. Included in these four categories can be verbal and nonverbal communication by the teacher (Orick, 1993).

Teacher responses under the category of praising may include, "Great answer!" "I can tell that you thought about the problem carefully" (Sadker, M., & Sadker D., 1994). Nonverbal praising can consist of nodding, smiling, and listening attentively (Orick, 1993).

Many times teachers will use remediation in the classroom. When a student is having difficulty answering a question the teacher may respond with encouragement or probing by saying, "I can see where your coming from, have you ever thought about it this way?" "Check over your answer, are you sure you

were supposed to multiply?" (Sadker, M., & Sadker, D., 1994). Nonverbal remediation can include patting a student on the back, nodding, or making direct eye contact (Orick, 1993).

Criticizing of students also takes place and is another teacher response. This means giving a very clear statement that something is wrong. A teacher may say, "You need to redo this assignment." "You did not follow the directions." "This work does not reflect what you are capable of doing" (Sadker M., & Sadker D., 1994). Making direct eye contact with a student when she or he is out of line or shaking the head no are examples of nonverbal criticizing (Orick, 1993).

Teachers will also show acceptance of what their students say or do. This includes very simple, short recognition that an answer is correct with no other feedback. A teacher may say, "Yes." "Uh-huh." "Right." "Okay." "Sure" (Sadker M., & Sadker D., 1994). A teacher may just nod his or her head in response to a right answer (Orick, 1993).

"Boys tend to receive feedback related to task, content, or thought process. Girls are more likely to receive feedback based on the appearance of their work" (Sinkinson & Walter, AAUW, 1993, p. 35). Girls are not given negative feedback as often as boys are at school. "Teachers are more likely to tell boys that their failing are due to lack of effort, while they are more likely to imply that girls who have failed have done their best" (Flinders, 1995, p. 27). Many times when girls are praised it is based on their appearance, and when boys are praised it is directed at intellectual content (Sadker M., & Sadker D., 1994, & Flinders, 1995). Teachers are more likely to answer a question for a girl instead of using remediation techniques.



### Feedback: effects.

As stated by Grayson and Martin (1990), "A student's learning is not advanced by a response opportunity, unless feedback about the quality of the performance is provided" ( p. 17). "If girls don't know when they are wrong, if they don't learn strategies to get it right, then they will never correct their mistakes. And if they rarely receive negative feedback in school, they will be shocked when they are confronted with it in the workplace" (Sadker M., & Sadker, D., 1994, p. 55). Feedback is related to the achievement of students and their self-esteem (Sadker M., & Sadker D., 1994).

### Feedback: strategies.

The following strategies can be implemented to provide gender equitable opportunities for feedback.

- Make an effort to lean away from using only acceptance responses when girls contribute during class. Use remediation instead of answering a question for girls. Make sure girls are criticized for the quality of their work if it is poorly done, not just for papers which are done sloppily.

- Myra and David Sadker (1994), suggested using coding to keep track of student and teacher interactions. Consider asking a colleague to come into your classroom and code the interactions. Every time a teacher interacts with a student, the interaction is coded as P (for praise), A (for acceptance), R (for remediation), and C (for criticism). The students can not only be categorized by gender to look for a pattern, but they can also be grouped by other categories such as race or socioeconomic status on a sheet.

This coding and evaluation can help improve the climate of the classroom and give teachers a better understanding of any bias they have as well as the number of times they call on particular students.

- Keep track of the number of times students respond by having students monitor one another. A system has been developed where students have one partner for a week. They make a tally mark for each other each time a response is made or a question is asked. They also monitor whether their partners are speaking loud enough for everyone in the class to hear. If someone in class cannot hear another person, the signal is to put one thumb up. If a partner sees this signal, the partner tells the person being monitored to speak up. At the end of the day, the teacher has a clear indication of who is participating in class. This strategy increases participation, discussion, questioning, and the loudness of voices for all students in the classroom.

- Teach students that they should expect confusion and to make mistakes while learning. Make them aware of the fact that mistakes are all right to make and that they show learning is taking place. When students do make errors, focus their attention on applying effort to the problem instead of dwelling on the fact that a mistake was made (Girls Count I Did It! An Educator's Guide to Developing Mastery- Oriented Learners, 1995).

- Make it very clear that students in the classroom are not to compare themselves with others. Teach students about multiple intelligences and the fact that every student has talents in certain areas. Students will begin to see that it does not make sense to base their successes and temporary failures on what others have done or are doing.

### Wait time/listening: interactions.

Wait time deals with the amount of time that has passed between the time a student has been given the chance to respond and the time the student's chance is over (Grayson, 1992). "The average time a teacher waits for a student to respond to a question is approximately 2.6 seconds. The teacher waits an average of 5.0 seconds if a correct response is anticipated and curtails the wait time to less than 1.0 second if the student is expected to give an incorrect answer or to not respond at all" (Grayson, 1992, p. 8). Wait time was recognized as having the most influence on the quality of students' responses and increasing the participation of students who were previously thought of as quiet and unseen in the classroom (Grayson & Martin, 1990).

"Less assertive in class and more likely to think about their answers, and how to respond, girls may need more time to think. In the real world of the classroom, they receive less" (Sadker, M., & Sadker, D., 1994, p. 58). No students have enough time in the classroom to think about how they will answer a question. Myra and David Sadker (1994), suggest that no students have enough time to answer in the classroom, but boys have more time than girls.

Wait time can also mean the amount of time a teacher waits before responding to an answer. "Research shows that the time between a student's answer and a teacher's response is only a split second" (Girls Count Educator Inservice on Gender Equity, 1995, p. 111).

### Wait time/listening: effects.

Grayson states in a 1990 publication (as cited Grayson, 1992) "In the United States and in many cultures around the world, females are taught to be listeners and males are encouraged to speak. Consequently, females

generally have more difficulty than males in getting attention when they wish to say something. This process circles back to denigrate the importance of what females say.”

The effects of not having enough time to answer a question can include hesitation, faltering, and even failure on the part of girls. The quality of responses and interaction between teacher and student can be affected if there is not enough time to respond to a question or students feel they are not being listened to (Sadker, M., & Sadker, D., 1994; & Grayson, 1992).

#### Wait time/listening: strategies

The following strategies can be implemented to provide gender equitable wait time.

- Teachers should increase the amount time between when they ask a question and call on a student to respond to at least 5 seconds. This gives girls as well as the other students a better chance to take part. Increasing wait time also increases the chance that a student will answer correctly and more creatively (Girls Count Educator Inservice on Gender Equity, 1995) .

- Do not allow students to blurt out the answer when another student is called on to answer a question or contribute in class in other ways. Often times a child may feel uncomfortable when her or his peer is struggling to answer a question. As a result, the child calls out the answer to “save” the other student.

- Increasing the amount of time between when a student answers and a teacher responds can increase the chance that the teacher will respond in a more quality like manner (Sadker, M. & Sadker, D., 1982).

- Have a colleague observe in your classroom and record each time a student is given five seconds of silence to think before the teacher says something. This also includes the times when a teacher asks a question of the entire class before calling on one student. By doing so, the teacher can get a better idea of how much thinking time is provided for students.

Physical closeness: interactions.

As stated by Grayson (1992), "Physical closeness means that the student and teacher are conducting their classroom activities near each other, meaning within an arm's reach or within the same quadrant of the room" (p. 9). Grayson (1992), points out that some teachers may unconsciously keep students from being physically close to them and that being physically close to the teacher can mean getting the most teacher attention.

Physical closeness: effects.

By not varying the organization of the classroom and students in it, girls can end up not being physically close to the teacher, which affects the amount of teacher quality and quantity teacher attention given to female students. Student participation with the teacher and each other can be negatively affected if frequent movement is not taking place (Grayson & Martin, 1990).

Physical closeness: strategies.

The following strategies can be implemented to vary the organization of the classroom.

- The instructor should be aware of her or his physical location in terms of closeness and attention for all students (Sinkinson & Walter, AAUW, 1993).

- When students are given the chance to decide where they will work in the classroom, they can have an effect on their own participation or lack of participation in the classroom.

- Grayson and Martin (1990), suggested that a teacher can correct the uneven distribution of physical closeness by trying to be near each student in the room for a short amount of time. If the arrangement of the room makes this difficult, the teacher can move the students on a regular basis or suggest that they move.

"A combination of teacher and student movement in a variety of groupings appears to be most effective" (Grayson, & Martin, 1990, p. 47). The movement increases student participation with the teacher and with one another and influences the mood of the class (Grayson & Martin, 1990).

- "Do not segregate by sex in seating patterns, games, or activities except for compelling reasons such as privacy for locker rooms and lavatories" (Sinkinson & Walter, AAUW, 1993, p. 48).

#### Probing: interactions.

According to Grayson (1992), "If a student cannot answer a question, the teacher may supply the answer, call on another student, or stay with the student who could not answer, probing for a response. Probing may involve paraphrasing the question, providing clues, providing additional information, suggesting an appropriate thought process for getting to the answer, or reminding the student of related information already known" (p. 10). Teachers are not as likely to invite a girl to take a risk or elaborate on a response and they often give more verbal praise to boys for the intellectual quality of their work (Grayson, 1992).

### Probing: effects.

The self-concept and success felt by female students may not be enhanced if they are not encouraged by teachers through probing (Grayson, 1992). If the teacher accepts it when students say they don't know without probing, the children learn to stay away from risk taking in the classroom. Children also learn that the instructor believes probing would probably not even end in an answer (Grayson & Martin, 1990). Probing can get the student to focus on meaningful aspects, and it can leave the student with the feeling of being capable instead of dependent on the teacher (Hunter, 1994).

The way teachers help students can have a great impact on students' self-esteem and feelings of competency (Hunter, 1994). Publications by AAUW, 1990; Bridgman, 1984; Oreinstein, F., 1993; & Sadker & Sadker, 1994 (as cited in LeVine & Oreinstein, 1994) suggest that "Teachers will often solve a problem for her if the girl responds with the wrong answer, yet encourage a boy to solve it for himself or expound on his answer. This prevents girls from becoming autonomous and independent learners who can employ critical thinking skills to solve problems" (p. 6). The AAUW 1992 report clearly showed the connection between self-concept and achievement of female students.

### Probing: strategies.

The following strategies can be implemented to provide gender equitable probing.

- A 1993 report by Wheeler (as cited in Girls Count Educator Inservice on Gender Equity, 1995) suggested that teachers should "Support both girls and boys in the learning process. For example, if students are struggling to find answers to questions that require precise answers (eg. math problems), ask

students guiding questions to prompt their thinking without giving them the answers. When students make mistakes in public, help them see that mistakes are a natural part of the learning process and that the important thing is to learn from the process" (p. 113).

- Give more meaningful feedback to students by asking investigative questions when they respond (Girls Count Educator Inservice on Gender Equity, 1995).

- Have a colleague record the probing that is taking place in the classroom. " The observer records probing when the teacher provides assistance to a student who is having difficulty responding. There is no mark for the original question (Grayson, & Martin, 1990, p. 87).

#### Higher level questioning: interactions.

Higher level questions can include having students participate in the cognitive processes of analysis, synthesis, and evaluation (Bloom's Taxonomy of Educational Objectives). Questions can include having students take part in the creative processes of fluency, flexibility, elaboration, and originality (based on the work of Alex Osborne and Paul Torrance) and the affective processes of valuing, organizing, and characterizing (based on Krathwohl's Taxonomy of affective Objectives) (Krathwohl, D., Bloom, B., & Bertram, B., 1956).

Often teachers ask students questions which require only that the student recall something from a reading assignment or previous instruction. This type of question is often useful and appropriate, but the questions which move the learning along and challenge the students to think are those which require more complex mental processes than simple recall. Although inconsistencies appear in the literature, studies



generally seem to suggest that males are given more opportunities to respond to higher level questions ... If a teacher falls into the habit of asking simple recall questions of some students and reserving the higher level questions for a select group of students, an inequitable situation exists. (Grayson, 1992, p. 10 & 11).

Higher level questioning: effects.

If female students are receiving fewer higher level questions from teachers than males are, they will not be put into the situation to use and develop their thinking skills to their full potential. Some students are receiving a lower quality of education than others when higher level questions are not asked. These students are also less likely to be in effective learning situations because they are just listening to the exchange between another student and the teacher (Grayson, & Martin, 1990).

Higher level questioning: strategies.

The following strategies can be implemented to provide gender equitable questioning.

- "When concentrating on higher level questioning there are more opportunities for analytical feedback. Students' responses to higher level questions offer more opportunities to explain the strengths and weaknesses of the response than simple recall questions. Analytical feedback gives a reason for acceptance, praise, rejection, or correction. It explains why the student's response is satisfactory or unsatisfactory" (Grayson, 1992, p. 11).

- Ask open-ended questions instead of questions which have a right or wrong answer.

- Make sure to ask higher level questions of all students, not just those who are gifted or who can think in more complex ways.

- The instructor can require students to express opinions and give reasons for their opinions, summarize what has been learned, and predict outcomes and consequences (Grayson, & Martin, 1990). Students should also be asked to compare and contrast information, organize and categorize information, make generalizations and, arrange, plan, and develop. Students should be provided with the opportunity to decide, recommend, criticize, evaluate information, and determine what may happen.

- Ask students why and how they arrived at their answers (Grayson, & Martin, 1990).

- Ask a colleague to record higher-level questioning. "The observer records a higher level question when the teacher asks any question which requires a more complex mental process than simple recall. If a teacher poses a higher level question to the entire class, then begins to call on students, a mark is tallied for each student provided with an opportunity to respond" (Grayson, & Martin, 1990, p. 105).

#### Reproof: interactions.

It has been suggested that educators spend more time disciplining boys. Even when female and male students are misbehaving equally, the males get the harsher reprimands most of the time (Sadker, M., & Sadker, D., 1982).

"When males and females misbehaved in the same way, males received more blame and were disciplined more strongly than females. Females were spoken to personally and more gently and typically received less punishment (Grayson, & Martin, 1990. p. 68).

Reproof: effects.

What this means for cooperative girls is that they are receiving less quality attention from the teacher (Sadker, M., & Sadker, D., 1994). This also reinforces the belief that females are docile while males are aggressive (Grayson & Martin, 1990). Feldhusen and Willard-Holt (1993), pointed out that "Girls are reinforced for conforming, docile behaviors-exactly the opposite of the behaviors required for success in professional situations" (p. 355).

Reproof: strategies.

The following strategies can be implemented to provide gender equitable reproof for students.

- Teachers can put some behavior management strategies in place which recognize and reward those students who are cooperating and following the rules (Sadker, M., & Sadker D., 1982).

- Educators should reprimand all students equally when they violate school or classroom rules (Sinkinson & Walter, AAUW, 1993).

- Do not permit harassment of any kind at school, especially harassment dealing with gender or sexual harassment (Sinkinson & Walter, AAUW, 1993).

- Challenge and discuss stereotyped attitudes, jokes, and sexist put-downs by students and adults (Sinkinson & Walter, AAUW, 1993).

- "Separate instructional techniques from classroom management techniques so that students who act up or call out are not getting a disproportionate amount of time and attention" (Sinkinson & Walter, AAUW, 1993, p. 52).

-Have a colleague record reproof in your classroom. A tally mark is given to each student when the teacher does the following: "calmly, unemotionally, and respectfully attempts to interrupt, stop, or change unacceptable behavior. The student may or may not change the behavior. If the teacher later repeats the same request, a second reproof is recorded" (Grayson & Martin, 1990, p. 70). Reproof may be verbal or nonverbal.

### Methodology

To identify teacher behaviors associated with gender inequity and what interventions are recommended, it was necessary to begin collecting resources in April of 1996. After discovering the organizations which could provide information on sex equity (AAUW, Girls Count, National Coalition for Sex Equity in Education, EQUALS, GrayMill Consulting [GESA], Phi Delta Kappa Educational Foundation) and inservicing relating to gender equity, these organizations and persons were written, called, and/or contacted through the Internet to obtain the knowledge needed.

As the information was being sent through the mail, books which were available in the University of Northern Iowa Library were checked out and read. Many resources were identified through the use of ERIC at the UNI library. The ERIC repository was then contacted by phone and many documents were ordered. Books relating to the topic of sex equity in education were also purchased from the local bookstore and read. An author, Tim Flinders, was contacted by phone at least three times, and Dolores Grayson, head of GESA, was contacted by phone to obtain permission to quote from her material. The rough draft of the paper was written and expanded as more materials became available.

It is estimated that close to four hundred dollars was spent to obtain all the information needed. The manuals and in service resources needed to be purchased as no one in the area had these materials available. Although many of the ERIC documents could have been copied at the UNI library, it was more convenient to order them already printed and bound.

To organize the information, it was decided that the overview to the issue of gender equity relating to teacher interactions, as well as definitions, would be summarized. The categories of teacher relations with students were then grouped and defined. Once these categories were organized, the effects of the interactions and strategies for change were written. It is estimated that the time spent selecting sources, obtaining them, reading, organizing, writing, and revising took many hours over a period of about one year.

### Analysis of Sources

Criteria were needed in order to separate which sources would be useful from those that would not. One thing I looked for in evaluating sources was the amount of depth the author or authors went into concerning inequitable teaching behaviors. Most teachers are aware that they should not ask only boys to carry something heavy or only girls to help clean the classroom. Inequitable teaching behaviors go far beyond and far deeper than blatant stereotypical behaviors that educators sometimes display. I wanted to find those behaviors that teachers were displaying without always being aware of them. I needed to know the effects of these behaviors, and again I was searching for information beyond what is commonly recognized. Finally, the strategies and solutions discussed in the literature needed to be practical and easy enough for teachers to understand without having to attend many

workshops. Although the GESA training program is highly recommended, I wanted readers to have strategies they can use in their classrooms right away.

## CHAPTER 3

### Discussion/Conclusions/Recommendations

Gender equity is discounted and denied by many people. Many of those who work with students do not even realize that they are treating boys and girls differently and do not have knowledge of the underlying issues. They do not know that they possibly have different expectations for males and females in the classroom. This unawareness leads to a difference in the educations boys and girls receive. Many teachers deny the fact that this is happening because they think gender inequity blatant and outright discrimination. Gender equity deals with much more than making sure girls and boys are called on to do jobs in the classroom in a manner that is not discriminatory.

### Implications for Teacher Education

In order for teachers to make a sincere and consistent effort to recognize and eliminate gender biased classroom practices, training must start as early as possible in the education of teachers. It does not make sense to wait until teachers have already been in the classroom to recognize the need for education in gender related issues. Courses in gender equity should be offered and required in undergraduate education. Universities and colleges do a great job of making sure their students know how to teach certain subjects, but they do not always do the same for making sure teachers know how to teach students.

There are many young teachers entering classrooms who do not know about the different expectations they have for male and female students. Potential teachers must be trained first in the importance and need for gender equity. They also need to be able to recognize gender inequity in their own

teaching and the teaching of others. Student teachers must also be educated to recognize and not imitate the gender biased practices of their supervising teachers. Finally, practical strategies such as the ones offered in this paper must be offered so the teachers can use them in their own classrooms.

Training in gender equity should continue after the teachers have graduated from college. It should be required by law that educators receive continuing education in this matter. It can be done during inservice by bringing in a consultant or through universities or education agencies.

### Applying Knowledge in Practice

Of all the training manuals I have read, the GESA program seems to be the most impressive. Not only are strategies taught for how to confront and deal with issues surrounding gender equity, but strategies are also provided to encourage equity regarding race and ethnicity. This is the type of program which assures that teachers are practicing what they have learned since they are observed and feedback is given long after they have attended the training sessions.

It is during in service training or even undergraduate training that practicing teachers can be taught how to monitor one another for perpetuating and sometimes unconscious gender differences in teaching. It may be more effective to have a colleague observe in the classroom than a principal to get a true representation of what types of teacher-student interactions are taking place. It is known that some teachers change their teaching styles and practices when being observed by a principal because the teacher may view



the observation as a formal one. If observations by colleagues are not possible, a video tape recorder could be used so that teachers can look for both positive and negative behaviors in their own teaching.

### Parental Role

Parents should be made aware of the importance of gender equity and how to recognize gender bias. This may be a point where many people would disagree because at times this can cause unnecessary criticism of teachers by parents. The more people who are aware of the issues the more likely it is that teachers will keep gender equity as one of their priorities. Parents also need to be aware that they may be fostering gender bias and discrimination in their own children. It is very likely that most parents do not realize what a negative impact their gender related expectations and beliefs have on their children.

### Student Awareness

Besides the training of teachers and parents, there is nothing quite as important as bringing the issue to the attention of the students we teach. They are in the classrooms with us observing and hearing almost everything we do and say. Our students can be taught not only to recognize gender inequity, but to call it to our attention. The disparities may occur on the part of teachers, other students, members of administration, staff, or school volunteers who are usually unintentionally showing their gender-related expectations when dealing with students.

### Implementation in Personal Practice

Since I began reading about gender equity, I made the decision to change my own classroom practices. Although I did not believe that I was consciously treating boys and girls differently, I realized that I too may

unconsciously have had different expectations for the boys and girls in my classroom. As I became more aware of the issues and strategies which could be used, I applied the strategies and developed some of my own for use in my classroom. I also made my fifth grade students aware of the issue.

I used every strategy suggested in this paper in my classroom. I focused on how to increase response opportunities, wait time, probing, higher level questioning, remediation, recognition, positive and negative feedback, and praising. There was one method which was most effective in making sure I was focusing on all of the areas I was reading and writing about. I was able to work on all of these areas by developing a system whereby the students monitor one another for participation, tell each other to speak up if a response cannot be heard, and use different colored cards to indicate whether the child wants to ask a question or answer a question. I was able to keep track of who was participating through the use of the cards and the monitoring system. Students knew they were expected to answer or ask at least one question during a class period. Not only did this help the less assertive girls in my classroom but also the boys.

All of the students in my classroom benefited from the strategies which were used even though I originally focused on increasing the quality and quantity of education for the females in my room. There are many changes that I noticed taking place in all of the students in my classroom over the period of time. Although I cannot prove why these changes have taken place or that an increase in self esteem and feelings of competency have occurred, I can make valid assumptions based on the behaviors of my students.

The most noticeable changes in my students included the following: increased participation and quality of responses, increased leadership, increased willingness to take a risk which then turned into increased self-esteem, increased asking of questions and curiosity, and increased volume and clarity when speaking. Students are now more willing to help one another, encourage one another, and ask each other for clarification when they do not understand what the another student means. Girls and boys are now more willing to work with one another.

I have also recognized more debating, and when the students think that I have made a mistake, many of them bring it to my attention without being afraid that I will be upset with them. Students have been more willing to accept academic challenges since they know they are capable of being pushed farther. They have become better able to self monitor and correct mistakes on their own. I have become aware that many students seem to be less dependent on me and are able to proceed on their own without being afraid of making a mistake. Many of the students seem to have more pride in their work and are anxious to share it.

As far as I can tell the academic, social, and emotional achievement of my students has been enhanced. The change seems to be a result of the strategies I have used relating to gender equity. If people have doubts about whether there is a need for gender equity and its benefits for all students, I urge them to try some of the suggestions presented in this paper. The outcomes will be positive for all students. As far as continuing to have gender equity in the classroom a priority, it would be very hard and detrimental to the students if an educator went back to previous educational

practices which did not keep gender equity in mind. Effective strategies for modeling and encouraging gender equity in the classroom and school are not difficult to do and do not take much time. The potential benefits for students are enormous.

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