A study attempted to determine if exposing sixth-grade middle school students to sex-equitable literature followed by discussion would show any significant changes in gender-bias attitudes expressed by the students. Subjects, 26 sixth grade students at a suburban middle school in Middletown, New Jersey, completed a pretest to determine gender-bias attitudes of both male and female students. These sixth grade students were exposed to a series of sex-equitable reading materials in which the main character was portrayed in a non-sexist manner. These stories were followed by both discussion and written reactions to what was read. After a 6-week period, students were administered the posttest. Results showed that exposing sixth-grade students to sex-equitable literature followed by discussions does not significantly change gender-bias attitudes. However, there was some improvement, even if that improvement was statistically insignificant; had the length of this study been longer, a more significant change might have been recorded. (Contains 29 references, 3 tables of data, and 3 appendixes.) (Author/TB)
Effect of Sex-Equitable Material on Gender Stereotyping

by

Carole DiSalvo

In partial fulfillment of the requirements for the Master of Arts
Kean College of New Jersey

ED 380 799

EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

This document has been reproduced as
received from the person or organization
originating it.

Minor changes have been made to
improve reproduction quality.

Points of view or opinions stated in this
document do not necessarily represent
official OERI position or policy.

BEST COPY AVAILABLE

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

C DiSalvo"

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)"
ABSTRACT

The purpose of this study was to determine if exposing sixth grade middle school students to sex-equitable literature followed by discussion would show any significant changes in gender-bias attitudes expressed by the students. Twenty-six sixth grade students at a suburban middle school completed a pre-test to determine gender-bias attitudes of both male and female students. These sixth grade students were exposed to a series of sex-equitable reading materials in which the main character was portrayed in a non-sexist manner. These stories were followed by both discussion and written reactions to what was read. After a six week period, students were administered the post-test.

It was concluded that exposing sixth grade students to sex-equitable literature followed by discussions does not significantly change gender-bias attitudes.
ACKNOWLEDGEMENTS

My deepest gratitude and appreciation is extended to my husband Patrick for all his love, inspiration and help throughout this educational endeavor. His help and loving encouragement has been my source of strengthen during many difficult moments. To my daughters Lisa and Laura my deepest source of inspiration and love, thank-you for giving me the motivation and incentive to continue my education. Your unconditional love is a precious gift that has given me the incentive to succeed.

Also, I wish to express my deepest gratitude and love to my mother Doris who has always encouraged me to meet all my goals. I wish to thank my special friend Judith Kelly for all her help and encouragement on this educational journey. A special thanks goes to Mr. Steve Mamchak an outstanding educator and author for all his help and direction. To my sixth grade students for all their help and cooperation in completing this study. I would also like to thank Dr. Mazurkiewicz and Dr. Joan Kastner for their professional help and inspiration.
Table of Contents

I. Abstract ii

II. Acknowledgement iii

III. List of Tables v

IV. Gender-Bias in Related Literature
   Introduction 1
   Hypothesis 6
   Procedures 6
   Results 7
   Conclusions 10

V. Gender Bias: Related Literature 14

VI. References 39

VII. Appendices 43
   Appendix A 44
   Appendix B 45
   Appendix C 46
**List of Tables**

I. Means, Standard Deviation as of $t$ of Pre and Post Test Results  
II. Means, Standard Deviation as of $t$ Between Sexes in the Pre-test  
III. Means, Standard Deviation as of $t$ Between Sexes in the Post-test
For the past two decades educators and psychologists have studied the effects of gender-stereotyping on both female and male students. Schau and Scott (1984) conducted a meta-analysis of forty research studies and concluded that sex-equitable reading materials "produce fewer sex-typed responses about occupations, roles and personality traits than sex-bias materials." During the pre-adolescent years (middle-school population), positive gender identity is of critical importance. For example, in a study using students in grade four, seven and eleven (Scott, 1986) it was found that fourth graders tended to be more flexible than eleventh graders when asked "who can" perform a certain sex-stereotyped activity as well as "who should" perform a certain sex-stereotype activity.

Mem Fox (1994), a popular children's author points out that gender stereotypes in literature prevent the fullness of female human potential from being realized by depriving girls of a range of strong, alternative role models. She states that male human potential is also stunted by such material. She points out that we who teach through literature, need to be sure we are opening the doors to full human potential, not closing them. We have the power to change "gender-appropriate" behavior and attitudes, yet many of us seem blind to the opportunity.

Many middle schools have adopted literature based reading programs. These programs are built on literature based texts, a series of novels, short stories or
non-fiction books. These materials may span a wide time frame (1900-1994). Therefore, these middle school students may experience, through the reading of this literature, a wide variety of gender-stereotyping.

Mem Fox (1994) points out that literature is only part of the cultural media available to our children, but because they learn to read in close relationships with adults, teachers, parents, and writers these adults have the opportunity to discuss their constructed world with them through what they read.

Embedded in the traditional rhymes and stories boys and girls hear in childhood are messages about their expected roles and behaviors in society. Many stories convey the message that girls are to be sweet, conforming, and dependent, whereas the message that boys have received is that they are to strong, adventurous, and independent (Simpson and Masland, 1993). It is widely acknowledged that many materials currently used in schools contain stereotypes in their illustrations, language, and story content (Hitchcock & Tompkins, 1987; Wellesley College Center for Research on Women, 1992). Female story characters typically attain their goals because they are helped by others, but males achieve as a result of their own efforts (Simpson & Masland, 1993).

The language arts classroom is rich with additional opportunities for teachers to learn about students' perception of girls and boys: it is also filled with varied,
everyday activities in which students can learn about stereotyping, its harmful effects, and possible alternatives to it (Simpson & Masland, 1993).

With gender inequity being a prevalent part of our society, teachers have a special role to play in being able to help their students identify where it exists in the classroom and school environment. The language arts program is filled with opportunities to discover the nature of each student's attitudes towards boys and girls, men and women, and then to provide a variety of ongoing experiences in which students are encouraged to explore alternatives (Simpson & Masland, 1993).

Researchers in recent years have gone beyond the simple accounting of gender differences in achievement. While some continue to document enduring and consistent patterns of gender differences in achievement in academic areas across all grade levels (Becker & Forsyth, 1990), others have sought to understand these differences. Weis (1990) points out that, in the United States in particular, we believe that schooling offers opportunities for social mobility. Through schooling, a child can obtain the abilities and skills necessary for success regardless of race, social class or gender, according to this ideology.

Classroom researchers are beginning to uncover many of the complexities of gender construction in the classroom that explain why efforts based on unitary, decontextualized experiences are bound to fail (Purcell-Gates, 1993). For
example, Many and Anderson (1992), in a study of response to 
"sex-equitable" literature by 154 third graders, found many 
of the children who focused on the gender aspect of a book 
(a story about a boy who wanted a doll) recognized the 
"possibly" of such a happening but would not choose that 
role for themselves because of their gender. Some even 
denied that the nontraditional role was even possible in the 
real world. "Real life experiences" seemed to be the key to 
whether or not the children allowed for the possibly or 
accepted the nontraditional role. The authors concluded 
that children need to be exposed to non-sexist role models 
for flexible gender attitudes to develop.

Collins, Ingoldsy, and Dellman (1984) did an assessment 
of sex role stereotyping in Caldecott Award winning books. 
Using a variety of criteria, they found that female authors 
were responsible for writing more sexists books than male 
authors. The study found that there were fewer female 
writers than male writers compared to an earlier study 
(Weitzman, Eifler, Hodaks, & Ross, 1972), and that there 
were fewer books written that were considered sexist. The 
authors concluded that it appears authors are making a 
conscious effort to eliminate sex role stereotyping from 
their books.

Goldberg (1994), in a study, examined whether exposing 
children via reading and discussing books, in which the main 
characters are depicted in a non-sexist manner, would have 
any effect upon the degree of gender stereotyping expressed
by the children. Findings of this study suggest that exposing children via reading and discussing stories in which the characters are portrayed in a non-sexist manner does not result in a significant change in attitude. However, Goldberg pointed out that if the study had been extended over a longer period of time the results may have differed.

Olivares and Rosenthal (1992) reviewed research that demonstrates how gender inequity is not only learned and accepted in the socialization process that starts at home, but is also present in the schools environment from very early years, consciously or unconsciously, reinforcing sex stereotypes. Findings were examined in three areas: (1) interactions in the classroom that are both teacher-to-student and student-to-student; (2) instruction related features involving relations between classroom activities and gender of the students assigned to perform these activities; (3) the perception of gender roles through teacher's modeling of sex stereotypes in the classroom. This review reveals fundamental elements of the school environment still develop and reinforce inequity: teachers are unaware of their gender bias; there is a lack of school textbooks and other instructional materials that are bias free; and children interact according to strongly stereotyped gender schemes. The report concludes by stating that non-sexist curricula have been shown to make a difference in children's gender equity values.
The results of these studies and others have prompted educational researchers to continue the investigation of non-sexist literature and the effect it would have on eliminating gender stereotyping. To add to the body of information an examination of whether the choice of non-sexist characters in stories and the discussion of these stories will have an effect on sex-stereotyped attitudes expressed by middle school students was undertaken. As research indicates, the lessening of sexual stereotypes will promote a more realistic and productive learning environment for all students.

**HYPOTHESIS:**

Male and female students who are in grade six will not show any significant changes in sex-stereotyped attitudes after reading and discussing sex-equitable reading materials.

**PROCEDURES:**

A sixth grade heterogeneous class consisting of 26 students at Thompson Middle School, Middletown, New Jersey were the subjects of this study. These students were administered the SIQ-R test to determine the sixth graders' knowledge of gender issues and their influence on literacy education. The students were asked to answer yes or no to questions that dealt with gender issues and their impact on reading process. Also included in this survey were
questions about sex-stereotyped attitudes found in literature.

For the purpose of scoring, each correct answer was given a one and each incorrect answer given a score of zero. In this SIQ-R test, a higher score by a subject should reflect a better understanding of sex-bias attitudes in literature.

A series of six lessons were presented to this sixth grade class. These lessons consisted of reading a story with non-sexist characters followed by two forty minute discussion periods. Each lesson was presented over a week long period. At the completion of these lessons, each student took the SIQ-adaptation again. This was used to determine any significant difference in the students' understanding of gender bias in literature in which the protagonist is portrayed in a non-sexist manner and discussion groups followed the readings.

**RESULTS:**

As indicated in Table I, there was a mean difference in the pre and post test responses following a six week time period. This difference was not significant as shown by a t of -1.17.
Table I

Means, Standard Deviation as of the Pre and Post Test Results

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>S.D.</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>12.42</td>
<td>2.10</td>
<td>-1.17</td>
<td>N.S.</td>
</tr>
<tr>
<td>Post-test</td>
<td>13.19</td>
<td>2.57</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Tables II and III show an analysis of gender responses (female and male) to the pre and post tests given to measure sex-stereotypical attitudes.

As indicated in Table II, females showed a slightly

Table II

Means, Standard Deviation as of t Between Sexes in the Pre-test

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>S.D.</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>12.84</td>
<td>1.8</td>
<td>1.16</td>
<td>N.S.</td>
</tr>
<tr>
<td>Male</td>
<td>11.92</td>
<td>2.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
better understanding of sex-stereotypical attitudes than males in the pre-test. Although this difference was not significant as shown by the $t$ score of 1.16.

As indicated by the means in Table III, when compared

**Table III**

**Means, Standard Deviation as of $t$ Between Sexes in the Post-test.**

<table>
<thead>
<tr>
<th></th>
<th>Means</th>
<th>S.D.</th>
<th>$t$</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>13.31</td>
<td>2.72</td>
<td>.82</td>
<td>N.S.</td>
</tr>
<tr>
<td>Male</td>
<td>13.08</td>
<td>2.53</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

to the results in Table II males showed a greater increase in their understanding of gender-bias attitudes than females; these mean differences were not statistically significant.
CONCLUSIONS

At the inception of this study, it was hypothesized that sixth grade middle school students would not show any significant changes in sex-stereotyped attitudes after reading and discussing sex-equitable reading materials. The hypothesis of this study was found acceptable because the results of this study were deemed to be statistically not significant. On the other hand, if this study had been conducted over a longer period of time the results may have been more positively skewed as there were important changes in the understanding of gender bias in the male segment of the population and educators seem to agree that sixth graders operate in Piaget's concrete stage of intellectual development. Sixth grade students seem to focus on the here and now and they learn by doing, trying out new ideas, and sharing thoughts and ideas with peers and adults.

However, in a parallel study conducted by Mrs. Judith Kelly using identical protocol with seventh grade middle school students, slightly different results were reached. In this study, females in the seventh grade scored higher in both the pre and post test indicating that perhaps at seventh grade level females have a better understanding of gender-bias attitudes (or it could be just the sample used) than the seventh grade males who had lower scores both on the pre and post tests. In addition, males showed little
growth in gender attitudes from pre and post testing in this study.

The seventh grade females outperformed the males both on the pre and post test. On the other hand, in the sixth grade sample that was tested the males showed the most improvement in gender attitudes. It must be pointed out that the findings in both these studies are not statistically significant.

During the course of this study, sixth grade students were asked to read a number of non-sexist literature selections followed by discussions and writing assignments. Many of these writing assignments consisted of "gender provocative" questions. For example, "How would your life be different if you woke up tomorrow as the opposite sex? Explain and give examples." According to a study done by Wright, Shroyer, Borchers and Smith (1991-1992) they found that males would view this change negatively and females would view this change positively or no differently. In the sixth grade class used in this study, both males and females viewed this change in a negative manner. This result contradicts the finding of the researchers listed above. This finding might be explained by the fact that in this study, students not only read non-sexist literature but had the opportunity to write about and discuss their opinions and biases concerning gender attitudes. Hence, this might account for the small change in gender-bias attitudes that took place in the post test.
As education moves into the twenty-first century, research must concern itself with the issue of gender-bias and its effects on the learning of both male and female students. Educators need to be aware of the far reaching effects this bias has on all students reaching their maximum learning potential. Although we as educators do not want to change personal opinions of our students, we want to make all students aware of the detrimental effects of bias. Students need to be made aware of these attitudes both in the written and spoken word. The results of this study imply that the reading of non-sexist literature followed by discussion and writing is not sufficient to change gender attitudes in a significant manner. Future research conducted over a longer time period still needs to examine whether students exposed to non-sexist literature followed by discussion and writing samples might show a greater decline in gender-bias attitudes. All students regardless of race, creed, color or sex should be given an education free of all bias and prejudices.
During the last two decades, considerable emphasis has been placed on generating an awareness of instructional inequities and on creating instructional environments for female students that are as supportive as those provided for males. Many educators and parents have come to believe that inequities in classroom instruction have been eliminated.

Although this may seem to be a logical conclusion, an extensive body of research disputes it. A study done by Myra Sadker and David Sadker (1986) concluded that male students receive more attention from teachers and are given more time to talk in classrooms and that educators are generally unaware of the presence or impact of this bias. This study also points out that at all three grade levels studied the male students received more attention from the teacher and males were involved in more interactions with the teacher than female students. Teacher interactions involving precise feedback were directed to male students. Research (Sadker & Sadker, 1986) shows that boys in elementary and secondary schools are eight times as likely as girls to call out and demand a teacher's attention. However, teachers behave differently depending on whether the student calling out is a boy or girl. When boys call out, teachers tend to accept their answers. When girls call out, teachers remediate their behavior and advise them to raise their hands. This study points out that boys are being trained to be assertive; girls are being trained to be
passive - spectators relegated to the sidelines of classroom discussions.

As discussed in this study, national measures of academic progress support the thesis that girls and boys are experiencing different educational environments. In early grades, girls' scores on standardized tests are generally equal to or better than boys' scores. However, by the end of high school, boys are scoring higher on such measures as the National Assessment Of Educational Progress and The Scholastic Aptitude Test (Sadker & Sadker, 1986).

Sadker and Sadker (1986) state in their research that the most valuable resource in a classroom is the teachers' attention. If the teacher is giving that valuable resource to one group it comes as no surprise that that group shows greater educational gains.

An important aspect of this research by Sadker and Sadker, is the finding that a brief but focused training can reduce or eliminate sex bias from classroom interaction. In their study, sixty teachers received four days of training to establish equity in classroom interactions. These trained teachers were successful in eliminating classroom bias. Classes taught by the teachers in this study had a higher level of intellectual discussion and contained more effective and precise teacher response for all students.

The education program for teachers that both the Sadkers proposed was called Non-Sexist Teacher Education Program (NSTEP). This program, as mentioned in the above
paragraph, was very effective in helping teachers create unbiased learning environments.

Despite this study, two messages emerge repeatedly from the research on gender and schooling. First, what is good for males is not necessarily good for females. Second, if a choice must be made, the educational establishment will base policy on that which is good for the males (Shakeshaft, 1986).

Carol Gillingham (1982) states in her research that the "I win you lose" philosophy which is reinforced in the classroom is not the best learning environment for girls. Gillingham found that boys gravitate towards competition while girls prefer connection. If educators were to base instruction on Gillingham's research, they would use cooperative approaches to learning.

Olivares and Rosenthal (1992) state in their research that gender inequity is not only learned and accepted in the socialization process that starts at home but is present in the school environment from very early years, consciously or unconsciously, reinforcing sex-stereotypes. Their findings were examined in three areas: (1) interactions in the classroom that are both teacher-to-student and student-to-student; (2) instruction related features involving relations between classroom activities and the gender of the students assigned to perform these activities; (3) the perceptions of gender roles through the teachers' modeling of sex stereotypes in the classroom. This study revealed
that the fundamental elements of school environment still develop and reinforce inequity: teachers are unaware of their gender bias; there are a lack of school textbooks and other instructional material that are nonsexist; and children interacted according to strongly stereotyped gender schemes. This research stated that nonsexist curricula has been shown to make a difference in children's gender equity values.

The A.A.U.W. Report: "How Schools Shortchange Girls", released in February 1992, supports the research cited above. This report states the gains as well as the continuing pattern of gender-biased practices in elementary and secondary schools - a pattern that robs girls and young women of the opportunity to achieve their full potential. This AAUW Report documented the inequities that persist in teaching practices, standards for peer interaction, and curriculum design. The report stated that teachers often inadvertently treat girls differently than boys. They tend to give girls less attention calling on them less often and praising them less for their intellectual work than for qualities such as neatness. Also, educators and parents tolerated a high degree of sexual harassment between students, even though this behavior is illegal under Title IX. Finally, curriculum design and materials continued to exhibit both overt and subtle bias against women. The report concludes by stating that the future depends on the ability to reshape the educational system so that all
children can achieve their full potential. In this last decade before the 21st century, the United States must move forward to create schools that are fair to all students.

Some studies indicate that boys have a tougher time in school than do girls. Martin (1972) and Brophy & Good (1970) both found that teachers direct more interactions toward boys than towards girls; it was mostly accounted for by the fact that boys are involved in more procedural interactions than girls. Similarly, Sikes's study (1971) of 16 classrooms (ages 12-13) revealed that males have more verbal contacts with teachers than do girls around issues of criticism and misbehavior. Other studies confirm that boys are more often scolded than girls and that both male and female teachers show a tendency to be more critical of boys (Lippitt & Gold, 1959; Etaugh & Harlow, 1971; Huston, 1983).

More recent evidence disputes the studies discussed in the proceeding paragraph. A large number of studies exploring the quality and quantity of teacher interactions with students in North American elementary school classrooms shows rather consistently that teachers give more attention of all kinds, including instructional emphasis to boys than to girls (Berk & Lewis, 1977; Blumenthal et al, 1979; Etaugh & Hughes, 1975; Fennema, 1980; Minuchin & Shapior, 1983). There have been findings of no difference (Dart & Clark, 1988) or studies reporting the opposite (Biber, 1979; Fagot, 1973). The majority of studies suggest that boys interact
much more with teachers than girls do (Fine, 1981) and girls have many more days in which they do not interact at all with the teacher (Reyes & Fennema, 1982).

Marianne LaFrance (1992) states in her research paper that perhaps some would argue that sex discrimination in educational setting is on the wane. Her research conducted, in a North American, setting will contend, however, that the announcement of its demise is premature. This research shows that gender inequality in the classroom continues and is manifested in and maintained by a variety of overlearned, non-conscious, verbal and non-verbal messages initiated in interactions between teachers and students. These subtle gender messages as described in this study are particularly disruptive to the goal of sex equality in education, because, they are generally overlooked or if recognized played down as being unintended.

These subtle gender messages, as described in LaFrance's study, play an important role in understanding children's achievement-related beliefs (e.g. academic self-concepts, causal attributions, and perceptions of teacher feedback). These beliefs influence children's subsequent efforts and performances (Dweck & Elliott, 1983; Felson, 1984).

Researchers have reported sex differences in achievement beliefs. For example, girls often enter intellectual achievement situations with lower expectations of success than boys do; and girls' lower expectations are
unrealistic in light of children’s actual performance (Crandall, 1969; Dweck, Goetz & Strauss, 1980; Parsons & Ruble, 1977). Also, sex differences are found in children's causal attributions. Girls are more likely than boys to attribute their failures to insufficient ability (Dweck et al., 1980; Fry & Ruble, 1987; Nicholls, 1979; Phillips, 1984) and are less likely than boys to attribute their successes to high ability (Nicholls, 1980; Wolleat, Pedro, Backer & Fennema, 1980). Meece, Parsons, Kaczala, Goff, and Futterman (1982) also found sex differences on some self-concept of ability measures, with girls reporting lower self-concepts.

Studies have shown that girls and boys also differ in their achievement behaviors. For example, when children receive negative feedback about their performances (when scored by a female adult or machine), girls are less likely than boys to respond by increasing their efforts. (Dweck & Bush, 1976; Nicholls, 1975). However, girls lower self-confidence emerges primarily when there is uncertainty of success, for instance, when tasks are unfamiliar or difficult, and when past performance feedback has been infrequent or ambiguous (Crandall, 1969; Lenny, 1977; Nicholls, 1975; Parsons, Meece, Adler & Kaczala, 1982; Miller, 1986). Yet, girls express as much confidence as boys when tasks are familiar and when they have received clear feedback about their previous performances.
A study done by Licht, Stader and Swenson (1989) reinforces the findings of the studies quoted in the preceding paragraph. They found in their research that the pattern of sex differences that was found was consistent with previous research which has shown greater vulnerability on the part of girls than boys (Dweck, Nicholls, 1975). Girls' attributions allow failure to have a more detrimental effect on their self-concepts of abilities than boys. Boys, not girls, view their successes as more indicative of their abilities than their failures. In elementary school, girls' greater vulnerability may exist for all academic areas. However, this vulnerability results in lower evaluations of their abilities only when success is uncertain (e.g. feedback is infrequent, and ambiguous, material is difficult, etc.) (Lenny, 1977).

Research continues to confirm the subtle gender-bias that surfaces in most educational settings. Russ (1983) argued in his research that active bigotry toward women writers is fairly rare. In classrooms, as well, it is unusual to find blatant examples of sexism. It is not necessary to be actively sexist. It is "....only necessary to act in the customary, ordinary, usual and even polite manner." (Russ, 1983). Research points out that girls have the floor in classrooms significantly less than boys do. To the extent that teachers respond to verbal contributions by girls by attending less or dismissing more (Hall & Sandler, 1982).
Another method of feedback employed by good teachers is touching. A touch can convey a range of meanings (Henley, 1973, 1977; Major, 1981). In their study, Perdue & Connor (1978) coded not only the frequency of touch directed by male and female preschool teachers to their male and female pupils, they also categorized the type of touch conveyed. Four categories of touch were coded: friendly, helpful, attentional, and incidental. The results showed that, particularly in the case of male teachers, girls were the recipient of more helpful touches than any other kind: boys received more friendly contact. The researchers interpreted the results of this study to be what is ostensibly a behavior with benevolent intent may lead to more entrapping results.

Currently, research is exploring how teachers actually communicate their expectancies to students. These expectations with verbal and non-verbal behaviors may be grouped based and is the basis of a study done by Taylor (1979). In this research, Taylor (1979) observed the verbal and non verbal behavior of female undergraduates in teacher training presenting lessons to "phantom" students. The students were described as varying in sex, race and ability. Regarding gender effects, teachers of white students were found to give less positive feedback to females than to males upon receipt of correct answers and to emit more" helpful slips" to the white male than to white female. The results of Taylor's study (1979) showed that
high ability females and low ability males received significantly less praise and feedback following correct answers than low ability females and high ability males.

Perhaps another important aspect to examine is which sex gets what kind of feedback for what kinds of activities. The trend in a number of academic spheres shows increasing sex differences. By the end of high school boys have higher scores in reading and math and are more likely to take math and science courses. On the other hand, girls come to believe that they are incapable of pursuing these subjects in college and are more likely to attribute failure to lack of ability and to develop less commitment to careers even with comparable achievement (Sadker & Sadker 1985).

Commensurately, Bartunek (1981) indicated that men generally attribute their successes to internal or ability causes, whereas women attribute their successes to external causes, such as luck. In addition, internal attributions for success are associated with higher levels of self-esteem.

Research has proven that the most successful way to remediate these gender inequalities is through teacher training either at the college or in-service level. Teachers need to be made aware of gender-bias in the school environment and how to change this disturbing pattern. As mentioned in a preceding paragraph, Myra and David Sadker (1986) have devised an instrument known as the INTERSECT observation system. This helps to make teachers
aware of their own bias patterns, giving them a basis for changing behaviors.

Another way to build a more equal learning environment for both sexes, might be through non-sexist educational material and language. As Charol Shakeshaft (1986) emphasized in her study that male exclusive language in the classroom relentlessly chips away at female self esteem. She points out that in a study done by Myra Sadker and David Sadker (1982) when children were asked to draw a picture of a caveman, they drew pictures of a man. When asked to draw cave people, they included women and children.

During the 1970's, researchers and educators began to study sexism in the basal reader. These basal texts were the foundations of reading programs during the fifties, sixties, seventies and early eighties. Researchers focused on the role of women in these texts. This research proved that many of the basal contained numerous gender stereotypes. For example, a study done by Graebner (1972) found males were the main character in 75% of the stories examined and five years later Britton and Lumpkin (1977) found that 61% of the main characters were male. Male characters continues to dominate throughout the 1970's (Frasher and Walker, 1972; Marten and Matlin, 1976; Rupley, Garcia; and Longnion, 1981).

In the basal readers published before 1980, main characters were often stereotyped. For example main female characters were portrayed as teachers, nurses, stewardesses and cooks, while males were doctors, science teachers,
mayors and writers. In the older stories, mothers were in the kitchen baking cookies waiting for their children to come home from school. Although there was nothing culturally wrong with that image, it sent a message to young females of that era that perhaps their main role in life is to be a nurturer rather than the provider.

Publishing companies began to acknowledge the extent of sex-stereotyping in basal readers which lead companies to develop guidelines meant to address the problems of hidden sex bias in textbooks. It was not until 1975 that textbook publishers, including McGraw-Hill; Scott Foresman and Company; and MacMillan required nonsexist language from their writers and editors (Cleaning up Sexist Language, 1980, p. 16). Up to that point textbooks were written with the inclusive "he".

During the latter half of the 1980's Hitchcock and Tompkins (1987) conducted a study of more recent basal readers. They examined six basal reading series: Economy Reading Series (1986), Ginn Reading Series (1985), Heath American Readers (1986), Holt Basic Reading (1986), Houghton Mifflin Reading (1986), and Riverside Reading Program (1986). This study revealed that publishers had reduced the sexism in basal reading stories since the last study Rupley (1981). In the basals examined, males were the main characters in 18% of the stories and females in 17% of the the stories. The number of male and female characters were
virtually equal, while more than three times as many stories were categorized as "other" (neutral characters).

In comparing this study with Britton and Lumpkin (1977), significant changes were found in the sexism in basal reader stories. The percentage of male main characters dropped from 61% to 18%, while the percentage of female characters remained the same. The "other" category showed the most dramatic change increasing from 23% to 65%.

Hitchcock and Tompkins (1987), also, examined the occupations of female main characters. These main characters portrayed thirty-seven occupations. They found that female characters were most often children, students, authors, and grandmothers. These thirty-seven occupations showed a large increase for female characters. In Graebner's study (cited in a preceding paragraph) (1972), the researcher found that female main characters portrayed only five occupations in the 1962-1963 readers and twenty-three occupations in the 1969-1971 readers. This study revealed that female roles are more varied in the 1986 basal series.

This study pointed out that reading textbook publishers appear to be avoiding questions of sexism by creating neutral and neutered characters in textbooks. Instead of adding more female main characters, publishers are portraying females in shared main roles or they have created neutered characters, such as a talking tree or animals without sex roles (Hitchcock and Tromping, 1986). This
study concluded that the ultimate responsibility still lies with the classroom teacher to monitor and neutralize the effects of sexism. Tibbets (1978) contends that students gain attitudes as well as knowledge from reading basal stories and these students can develop sexist attitudes and most important girls can feel they are of little worth from reading sexist basals. In this study, Hitchcock and Tompkins (1987) stated that the classroom teacher can make the difference in how children relate to basal reader stories.

Another study that investigated the portrayal of the female and male roles in basal reading series, is a replication of the 1972 study "Dick and Jane as Victims" (Women on Words and Images) this research was completed by Pucell, Piper and Stewart (1989). These researchers found that there still were differences in the rate of portrayals for male and females and there was also a difference in the variety of the roles assigned to each but they emphasized that these differences were not as pronounced as they were in the 1972 studies. They further stated that it appeared that the depiction of females in basal readers had mirrored changes in society. On the other hand, girls have been shown to have a more active role in these basal reader stories, but they still needed rescue in many more instances than boys. Girls need a wider variety of working role models (Purcell, Piper and Stewart, 1989 p. 184).
A study done by Kingston and Lovelace (1977) questioned the assumption of traditional roles as stereotypes. They stated that the portrayal of females in children's literature is not a representation of a stereotype but rather a true reflection of society. They raised the question as to whether children's literature should present the ideal world view or a more realistic picture of actual role models.

Research seems to support the fact that publishers of basal readers have exhibited an awareness of the importance of non-sexist stories in their text book series and during the latter part of the eighties have been working toward an equalitarian goal in their texts, but as fate may have it many school districts are currently moving away from the use of basal readers to a whole language or literature-based philosophy. So, educators and researchers have become concerned about some of the gender messages sent through the vehicle of literature. Mem Fox (1993) states that gender stereotypes in literature prevents the fullness of female human potential from being realized by depriving girls of a range of strong, alternative role models. Male potential is also stunted by such material. Mem Fox states that "We who write children's books, and we who would teach through literature, need to be sure we are opening the doors to full human potential, not closing them. We have the power to change gender-appropriate behavior and attitudes, yet may seem blind to the opportunity." (pg. 84)
In the whole language and literature-based curriculum many trade books and other types of educational materials are used. Researchers began examining gender-bias in these types of materials. For example, several studies have been conducted on the Caldecott and Honor Book winners and it discovered that males dominated in these books.

Since these books are highly visible and frequently selected for use with young children. They may have a stronger socializing influence than any other identifiable group of books

Nilsen (1971, 1978) was one of the first researchers to analyze the Caldecott winners and Honor Books. Her original study examined the winners from 1951 through 1970. Later she added a five year update-1971 through 1975. She found that male dominance in the number of characters increased greatly during those twenty-five years (Nilsen, 1978). Engel replicating Nilsen's study for the next five year interval 1976 through 1980, found less male dominance than during the preceding decade, but the change was slight (Engel, 1981). Engel and Dougherty (1985) in a later analysis of winners from 1981 through 1985 shows a dramatic change toward sex equality in number of characters. The Engel (1981) update included a count of how often a young reader would encounter an image of male and female characters, since "the total number of male and female images a child receives from a book may be more of an influence on the child's developing concepts of sex roles
than just the number of different characters" (1981, P.648). The results of Engel's (1981) study for images (1976-1980) was 73% male and 27% female. In the study done by Dougherty and Engel (1981-1985) for images in the Caldecott Medal and Honor Books the results were 63% for male and 37% for female. Although the movement toward sex-equality is still apparent in the image count, it is less dramatic than in character count.

Segel (1982) gave a critical interpretation of Nilsen's and Weitman's studies of the sex roles in picture books. Segel (1982) found a disturbing tendency in both studies to assume that any illustrated figure of unspecified gender as male. On the other hand, Segel (1982) does give credit to Nilsen's work which prompted parents and professionals "to seek books that broke away from rigidly defined gender roles."

The study by Dougherty and Engel (1985) cited above concluded the need for careful selection when planning to share literature with young children. The Caldecott winners and Honor Books of the 80's, as a group, represent a shift, toward sex equality and these books, as a group, provide some, changing sex characteristics and roles.

The results of the above study emphasize the trend of writers to produce books that give both male and female characters nontraditional characteristics, and these, characters also have nontraditional roles. This is very important because in the past two decades, society and its norms have changed. In the Western world, one of the
fastest changing social norms is that of which the father goes off to work and the mother is at home (Kinman & Henderson, 1985). Therefore, studies typically conclude that nonsexist literature is essential for children growing up today (Brooks-Gunn and Matthews, 1979; Flux, Fidler, and Rogers, 1976; Madsen and Wickersham, 1980; Pogrebin, 1980). Children must see lifestyles like their own in the literature they read, since this is one way to validate their own lifestyles (Kinman & Henderson, 1985).

This type of non-sexist literature is important because studies have found that the written word is one of the most powerful ways to transmit ideas and information. Children as young as five years old are positively affected by the use of egalitarian books and filmstrips (Flux, Fidler, and Rogers, 1976), and the use of nonsexist literature causes a measurable positive change in attitude in children as young as four (Berg-Cross and Berg-Cross, 1978). A child's "earliest learnings regarding sex stereotypes occur during pre-school period, and ...these are further refined by experiences occurring during the first year or two in school" (Williams, Bennett, and Best, 1975). These findings highlight the fact that nonsexist reading material is needed during those years when a child is establishing a sense of identity and social order. In an analysis of sexism in Newbery Medal winners from 1977 to 1984 done by Judith Kinman and Darwin Henderson (1985), they found that in comparison to a 1971 study, the number of books with girls
or women as the main characters has increased. In the 1977-84 books there were 18 females and 12 male main characters compared with an earlier ratio of 1:3. Eighteen books presented positive images of females while only six presented negative images. Kinman and Henderson (1985) concluded in their analysis that authors are considering the society children live in today when writing books but there are still some exceptions. Both Kinman and Henderson (1985) point out in their study that the awards committee of the Children's Service Division of the American Library Association, whether consciously or not, have chosen more egalitarian literature in the years 1977 through 1984 than in previous years.

A study done by Kortenhaus & Damarest (1993) seemed to reinforce the findings of the study cited above. The results of the study completed by Kortenhaus and Damarest (1993) were that prior to 1970, children's literature contained almost four times as many boys as girls in titles, more than twice as many boys in central roles, almost twice as many boys in pictures and nearly four times as many male animals as female animals. The concluded that children's literature published after 1970 showed a more equitable distribution of male and female characters in all categories. This was true for both Caldecott winners and nonaward books. This study also determined that males are still depicted in titles nearly 50% more often than females.
in nonaward books and male animals are still represented twice as often as female animals in both types of books.

Many educators and researchers are concerned about gender stereotyping in literature and its far reaching effect on the psyche of both the male and female student. Mem Fox (1993) puts forth for consideration these questions concerning gender stereotypes in literature: "Could children's literature be partly to blame for the fact that we grown up girls have been denied in our womanhood the excitement and power so ready available to boys and grown-up boys? Could children's literature be partly to blame for entrapping males in a frightful emotional prison and demanding intolerable social expectations of them?" Mem Fox states that both genders have to be allowed to be as real in literature as they are in life.

Recent research has pointed to the importance of the language arts classroom as a place where teachers and students can identify and explore the impact of gender discrimination. Teachers can help move students toward a more gender-fair classroom environment by using specific instructional settings.

Use of non-sexist reading materials would be one component of an instructional setting that would be free of gender-bias. These books offer an opportunity for teachers to learn about students' perceptions of girls and boys, but most importantly these books give students the opportunity to learn about stereotyping and its harmful effects as well
as positive alternatives to it. Lee Barton (1984) researched children's literature that presented a sensitive and emotional male characters. One of these books was William's Doll (1972) by Charlotte Zolotow, this book offers the argument that William should have a doll so that he will know how to take care of a baby when he is a father. Another book that deals with the same issue is Dudley Pippin's Summer by Philip Ressner (1979) the author makes playing with doll more an age issue rather than a gender issue. As Pat Riggs (1985) highlighted in her research there are many "spunky" girls in literature. She points out that these "spunky" girls are smart and they take the initiative. Some of the literature that Pat Riggs recommends for highlighting "spunky" girls combines both classic and contemporary heroines. Dorothy in L. Frank Baum's The Wizard of Oz (1900) courageously leads three friends to see the great wizard, whom Dorothy discovers to be a fake, and she tells him so. Pippi Longstocking, a character created by Astrid Lindgren in 1950 in a book called Pippi Longstocking, reveals courage, perseverance, intelligence and ingenuity in all the episodes written about her escapades. In essence, although literature supports that fact that males and females are portrayed in literature in stereotyped roles, one can find wonderful literature that portrays multi-dimensional female and male main characters.
Although this sex equitable literature exists, one must consider the complexities of gender construction when presenting this type of material to students. For example, Many and Anderson (1992), completed a study of response to "sex-equitable" literature by 154 third grade students. They found that many of the students who focused on the gender aspect of the book (a story about a boy who wanted a doll) recognized the "possibility" of such a happening but would not choose that role for themselves because of their gender. "Real life experiences" seemed to be the key to whether or not children allowed for the possibly or accepted the nontraditional role. The authors concluded that children need to be exposed to nonsexist role models for flexible gender attitudes to develop.

Simpson and Masland (1993) proposed using literature study groups where attention and discussion of gender issues would be appropriate. Teachers can provide a choice of novels for these literature study groups that present well developed male and female characters in a variety of situations. They also suggest using literature logs so students can record their reactions to male and female characters. Another aspect of this research is the importance of the identification of story stereotypes when appropriate, because students must be able to find stereotypes before they can determine their impact.

Yet, it is important not to consider censorship of gender-bias literature. Research has indicated that the use
of reading techniques such as "reading against the grain" as proposed by Charles Temple (1993) would be a more effective way of dealing with gender stereotyping in literature.

Likewise, Sister Regina Alfonso (1968) states in her research that it is the teacher's responsibility to raise the consciousness of the student to the sexism they may be absorbing in the literature that they read. She notes that teachers must provide criteria for judging books, and there must be time for discussions concerning themes and characters.

The research examined has shown an interest by researchers, educators and parents in the presence of gender-bias in the classroom. This gender-bias has been proven to have negative effects on the learning environment for all students, although research has shown some progress in this area in certain educational settings.

Moreover, researchers have investigated the role literature played in forming and confirming gender-bias within the student population. Quite disturbing results were found during the fifties, sixties, seventies and early eighties. Gender stereotyping seemed to abound during this time period. Although, researchers have noted a more positive trend in the literature used by students in the latter part of the eighties and nineties, students are still harboring gender-bias ideas. Perhaps it is not enough that just literature change, but perhaps teachers must become more aware of the role they play in the teaching of
Studies have been cited in this paper to validate the importance of teacher involvement in creating a learning environment that is free of gender-bias.

Research has shown that the language arts classroom provides opportunities, through literature, for both the teacher and students to explore gender issues and provide students with experiences where they can explore alternatives.

Further research still needs to explore whether children who are exposed to nontraditional stories followed by discussions with the teacher and peers will show a decline in gender-bias concepts. Eliminating gender-bias is a critical issue as we move into the twenty-first century, because all students must be able to compete in an ever changing world of technology. All children regardless of race, sex or religion must be encouraged to face the challenge of tomorrow and none should be held back by conscious or unconscious gender-bias.


### Female

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

### Male

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

**RESULTS OF PRE EXPERIMENT TEST.**

43
<table>
<thead>
<tr>
<th>Females</th>
<th>Males</th>
<th>F</th>
<th>M</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7 8 9 1 1 1 1 1 1 1 1 1 1 1</td>
<td>1 1 1 1 1 1 1 1 1 1 1</td>
<td>13</td>
<td>13</td>
<td>26</td>
</tr>
<tr>
<td>1 1 1 1 1 1 1 1 1 1 1</td>
<td>1 1 1 1 1 1 1 1 1 1 1</td>
<td>13</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td>1 1 1 1 1 0 1 1 1 1 1</td>
<td>1 1 1 1 1 1 1 1 1 1 1</td>
<td>12</td>
<td>12</td>
<td>23</td>
</tr>
<tr>
<td>1 0 0 0 0 1 0 1 0 0 0 1 0 1 0 0 0 0 0 0 1 0</td>
<td>1 4 4 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 1 1 1 1 0 1 1 1 1 1</td>
<td>1 1 1 1 1 1 1 1 1 1 1</td>
<td>9</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>1 1 1 1 1 0 1 1 1 1 1</td>
<td>1 1 1 1 1 1 1 1 1 1 1</td>
<td>13</td>
<td>12</td>
<td>23</td>
</tr>
<tr>
<td>1 1 1 1 1 0 1 1 1 1 1</td>
<td>1 1 1 1 1 1 1 1 1 1 1</td>
<td>12</td>
<td>12</td>
<td>23</td>
</tr>
<tr>
<td>1 1 1 1 1 0 1 1 1 1 1</td>
<td>1 1 1 1 1 1 1 1 1 1 1</td>
<td>13</td>
<td>12</td>
<td>23</td>
</tr>
<tr>
<td>1 1 1 1 1 0 1 1 1 1 1</td>
<td>1 1 1 1 1 1 1 1 1 1 1</td>
<td>18</td>
<td>13</td>
<td>21</td>
</tr>
<tr>
<td>1 0 0 0 0 1 0 1 1 0 0 0 1 0 0 0 1 1 0 0 5 5 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 0 0 0 0 1 0 1 1 0 0 0 1 1 0 0 1 1 0 0 5 5 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 0 0 0 0 1 0 1 1 0 0 0 1 1 0 0 1 1 0 0 5 5 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 0 0 0 0 1 0 1 1 0 0 0 1 1 0 0 1 1 0 0 5 5 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 0 0 0 0 1 0 1 1 0 0 0 1 1 0 0 1 1 0 0 5 5 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 0 0 0 0 1 0 1 1 0 0 0 1 1 0 0 1 1 0 0 5 5 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 0 0 0 0 1 0 1 1 0 0 0 1 1 0 0 1 1 0 0 5 5 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 0 0 0 0 1 0 1 1 0 0 0 1 1 0 0 1 1 0 0 5 5 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 0 0 0 0 1 0 1 1 0 0 0 1 1 0 0 1 1 0 0 5 5 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 0 0 0 0 1 0 1 1 0 0 0 1 1 0 0 1 1 0 0 5 5 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Appendix B

Results of Post Experiment Test.
Students will answer yes or no to the following questions.

1. Teachers are more likely to give higher scores to the written compositions of boys than to the written compositions of girls.

2. Female students at the middle school level tend to have higher grade point averages than their male counterparts.

3. Boys in primary grades are more likely than girls to receive assistance through remedial reading classes.

4. Children perceive certain occupations as appropriate only for males and certain occupations as appropriate only for females.

5. Younger children are more likely than older students to perceive certain activities sex stereotypically.

6. Books that teachers read aloud to elementary students tend to be dominated by male protagonists.

7. One of the reasons boys seem to have more reading problems in elementary school is the number of female teachers at the elementary level.

8. Teachers pay more classroom attention to boys and give them more encouragement than they do girls.

9. Girls read better than boys in both English and non-English speaking countries, which suggests that the difference in reading ability between girls and boys is biological rather than cultural.

10. Female authors of children's literature tend to portray more sex-sterotypical behaviors in their characters than do male authors.

11. Women's increased involvement in the work force is reflected in the current children's literature.

12. The topics primary boys and girls choose to write about are very much the same.

13. Girls in elementary grades have more positive attitudes towards reading than boys do.

14. Words such as "mailman, fireman, businessman, and he" include both men and women.

15. Boys do not like stories in which there is a female as main character.
16. Publishers have reduced the sexism in basal reader stories by creating main characters that are neutral (talking animals).

17. When asked to imagine and describe life as the opposite sex, both males and females perceive this situation negatively.

18. In basal readers published before 1980, female characters were stereotyped and portrayed most often as teachers and nurses, while males were characterized most often as doctors and science teachers.

19. Girls have consistently outscored boys on the verbal selections of the Scholastic Aptitude Test, while boys have consistently outscored girls on the mathematical sections.

20. Sex and its influence on reading is relatively unimportant.