

Does Grouping Based on Gender Affect a Child's Sight  
Word Recognition Ability and Their Affective Domain?

THESIS

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Tracy L. Watts

State University of New York  
College at Brockport  
Brockport, New York

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Submitted By:

Mary L. Watts

Signature

8/97

Date

Approved By:

James Z. Bezy

Thesis Advisor

8/4/97

Date

Arthur E. Smith

8/4/97

Second Faculty Reader

Date

Patricia E. Baker

8/4/97

Director of Graduate Studies

Date

## Abstract

The purpose of this study was to see if gender grouping could affect a student's ability to increase his or her sight word recognition and to examine its connection to the affective domain. The subjects of this study received reading instruction in both single and dual sex groups. The subjects responded to a questionnaire regarding the affective domain.

The findings of the study implies that the treatment used did not solely affect the recognition of sight words. Both groups showed an increase in the recognition of sight words. The findings of this study do indicate that there was an effect on the student's affective domain.

Table of Contents

	Page
Chapter I	2
Chapter II	7
Chapter III	21
Chapter IV	25
Chapter V	33
Appendix A	40
Appendix B	41
Appendix C	42
References	45

## CHAPTER I

### Statement of the Problem

In most classrooms across the country, girls are outperforming boys in reading at the elementary level. Teaching reading is a very complex process. Teachers must first assess their students and then find an appropriate reading program to fit their needs. Deciding on which grouping style to use is another component that must be decided. Many teachers use an ability grouping method while others use whole group. Alternative grouping should be an option in today's classrooms. Boys have a more difficult time at reading, and grouping based on gender may be the best learning environment for them.

### Definition of Terms

In this study, the following terms are defined as:

Single gender grouping- Students receiving reading instruction in a grouping based on gender.

Dual gender grouping- Students receiving reading instruction in a mixed grouping consisting of males and females.

Affective domain- The feelings and emotions associated with thoughts and actions.

Sight words- Words that readers recognize instantly.

### Purpose

The purpose of this study was to see if gender grouping would affect a student's ability to increase his or her sight word recognition and to examine its connection to the affective domain.

### Questions to be Answered

Does grouping based on gender have an effect on a child's sight word recognition? Secondly, what is the impact on a child's affect when placed in either a single gender or dual gender grouping?

### Need for the Study

Many studies have been conducted on gender grouping at the secondary level. Very few studies have been researched at the elementary level.

Boys are at a greater risk for reading failure than girls. Therefore, alternative methods of teaching reading to boys should be explored and published for educators. Studies have shown that girls can improve their math skills in single sex grouping. It is imperative to see if the same results could happen with boys in the area of reading.

The affective domain needs to be explored also. How does gender grouping affect children's self esteem? Do they like being separated by gender?

Also, how do they relate with each other outside the classroom? Children's affective domain does have an effect on their learning abilities.

## CHAPTER II

### Purpose

The purpose of this study was to see if gender grouping would affect a student's ability to increase his or her sight word recognition and to examine its connection to the affective domain.

### Review of Literature

Gender differences in reading ability have spawned several theories. The most prominent theories deal with: rate of maturation, reader content, negative treatment of boys by female teachers and cultural expectations for the male sex role (Dwyer, 1973).

Girls are considered to be more advanced developmentally than boys and therefore ready to learn to read (Dwyer, 1973). Studies reveal that elementary school girls in the United States are superior readers compared with boys at all levels. The girls read earlier, have fewer reading problems and respond more quickly to instruction (Allred, 1990). As a consequence, approximately four out of five students referred for remedial reading have been boys (Sheridan, 1976; Stanchfield, 1973).

Although it is apparent that there are substantial neuromuscular and maturational differences between boys and girls, no relationship has been demonstrated between these physical differences and reading achievement. Maccoby (1966) states that the rate of intellectual growth is unrelated to the rate of physiological growth if one scores both in terms of the percent of mature growth attained. Hence, it does not appear that there is any single developmental timetable controlling both physical and mental growth.

Many studies confirm the fact that girls are outperforming boys in reading at the elementary level. At the end of kindergarten, girls outperformed boys on several subtests of the Metropolitan Readiness Test (Gullo & Clements, 1984).

Patterson, Kupersmidt and Vaden (1990) found that gender was a good predictor of achievement, conduct and peer relations. In a study by Scott (1987) the findings were similar. Third grade females had higher scores than males in all eleven academic areas of the California Achievement Test. Dietz and Wilson (1985) reported differences in reading achievement between boys and girls in second and fourth grades with boys scoring lower than girls in reading and composite scores.

Rate of maturation was the most accepted and logical theory, until researchers began to look for other reasons. Studies conducted cross-culturally evolved into the theory of cultural expectations. A cross-cultural study by Preston (1962) found that fourth and sixth grade German boys outperformed girls on a reading

comprehension and speed test. Studies conducted in Nigeria and England also show boys outperforming girls in reading. A reversal was seen in the United States and in Canada. Second, fourth and fifth grade girls outperformed their male counterparts (Johnson, 1973).

In the early school years the reading ability of boys is more highly valued in Nigeria and England than in Canada and the United States. An explanation for these cultural differences may be that reading in Nigeria, a predominantly Muslim area is considered a more valuable skill for males than females. Reading is considered by many to be a "male" activity. In England success in schooling is considered equally important for boys and girls. Unfortunately, many adults in America still consider reading a feminine pastime for young children (Johnson, 1973).

A third theory to account for sex differences in reading is the teacher variable: Boys often find it difficult to identify with female elementary teachers, by far the majority, and this has an adverse effect on their motivation. Female teachers often find it hard to relate to their male pupils and can be therefore, more critical and punitive towards them (Dwyer, 1973). McNeil (1964) used an auto-instructional program to teach reading to 132 kindergarten pupils. After four months of the programmed instruction, the boys were found to have significantly higher scores than the girls on a criterion word recognition test. The explanation for these results was due to the fact that the boys were not being exposed to inequitable treatment from female teachers.

A fourth theory is reader content. The content of basal reader stories is sometimes considered to have differential effects on boys' and girls' motivation to learn to read.

Heilman (1967) states that the sterile, repetitious "look, oh, look, see baby play" vocabulary and the rigid conformist mood, tone, and atmosphere contained in and conveyed by the preprimers, primers, and early readers are considerably less challenging to boys - than to girls. Dykstra and Tinney (1969) summarized data from the Cooperative Research project and noted that sex differences in reading achievement in favor of girls are consistent regardless of the method or materials employed.

A large amount of research confirms higher verbal ability in normal achieving females and high visual-spatial mathematical abilities in males (Vogel, 1990). In a study by Brown (1991), twenty-five second graders were tested in reading and math three times a year. The total time spent learning reading and math was recorded and data were translated into learning curves. The learning curves showed that the boys learned more mathematics than girls and the girls improved their reading skills more than boys by a significant amount. By puberty, males begin to excel in mathematical reasoning ability (Benbow & Stanley, 1980). Threadgill-Sowder, Sowder J., Moyer L., and Moyer M., (1985) reported male superiority in solving problems even in third graders.

However in one aspect of math, namely computational ability, females have been found to excel (Fennema & Carpenter, 1981; Marshall, 1984).

Research has also examined the cognitive processing abilities between the sexes. In a study by Barron (1979) nine and ten year old boys took more time than girls to read lists comprised of adjacent words with inconsistent spelling-sound relationships. Results indicated that the boys' performance was inhibited by a greater reliance on their knowledge of spelling-sound correspondences. Three studies were conducted to examine individual differences among 87 seven year olds, in the extent of using alternative cognitive processes for word reading.

The results of this study showed that boys of the same reading attainment level as girls, tend to rely more than girls on access to phonological segments of words (Johnson, 1987).

### Vocabulary Development

Johnson (1984) believes that reading instruction would be easier for children if they were familiar with the words the author uses.

When children are first beginning to learn to read they learn "sight words." The knowledge of high frequency sight words are essential to a successful reader (Johnson, 1984).

Sight words are not the most interesting words in our English language but they are the glue words of language that cement meaningful communication (Johnson, 1984).

According to Johnson (1984), sight words should be introduced in the primary grades and learned on a continuous basis. In order to develop reading comprehension, a continuous steady vocabulary growth is essential (Johnson, 1984).

A study by Bridge (1993) consisted of using predictable material as opposed to preprimers to teach beginning sight words to slow learners. The control group used a preprimer. The experimental group was instructed with six patterned books and dictated language experienced stories.

Both groups were pretested and posttested on forty-five sight vocabulary words. The experimental group learned significantly more vocabulary words than the students in the preprimer group. The study concluded that the teacher who used the predictable material as a resource for reading and writing activities helped beginning readers learn more sight words.

#### Affective Domain

"It's not that I don't want to be with boys, I just think school will be better with all girls." That quote comes from a 12 year old girl who attends Young Women's Leadership School, a girls only public school in East Harlem, New York.

Studies show that girls learn better in girls only classrooms. Girls who attend single-sex schools have more confidence, take harder courses and do better on tests than girls who go to school with boys (Hancock & Kalb, 1996).

A group of teachers in Manassas, Virginia divided girls and boys into separate academic classes. The Eighth grade girls preferred doing physics experiments without boys around. The boys would rather recite Shakespeare without girls around to make them feel "like geeks" (Hancock & Kalb, 1996). After one semester of receiving instruction in single sex classrooms, the boys raised their averages in language arts. The girls raised their science averages by .4 of a point. The teachers involved in this experiment realized that single sex classes let their kids think with something besides hormones.

Impressing the opposite sex is often a teen's reason for being. If that pressure is taken away, academic miracles can happen (Hancock & Kalb, 1996).

## CHAPTER III

### Design of the Study

#### Purpose

The purpose of this study was to determine if gender grouping would affect a student's ability to increase his or her sight word recognition and to examine its connection to the affective domain.

#### Methodology

##### Subjects

The subjects for this study were twenty second-graders from an urban school district in Western New York. The subjects academic abilities ranged from above to below average.

### Instruments/Procedures

The subjects were pretested on levels one through three of the Dolch sight word list. The missed words were developed into two word bank lists to use for teaching and post-testing purposes. Each list had an equal number of phonically-predictable and outlaw words. Subjects received reading instruction for three weeks in dual gender grouping. All sight words from the first word bank lists were taught in isolation as well as in context. After the initial three weeks, the subjects were given a post-test to see if any significant improvements were made on their ability to recognize sight words:

For the next three weeks the subjects were divided into reading groups according to gender. Sight words from the second word bank were taught in isolation as well as in context. A posttest was given at the end of three weeks to see if any significant improvements were made.

At the end of the six weeks, each subject responded to a questionnaire regarding the affective domain.

### Analysis of Data

After completing post-testing, the researcher compared quantitatively the dual sex grouping results to single sex grouping to see if any significant gains were made by either grouping. A related  $t$  test was run.

The students' responses to the questionnaire was analyzed qualitatively to see how the affective domain was affected after receiving instruction in two different groupings.

### Summary

This study examined whether there was a significant difference in recognizing sight words in a dual gender group or in a single sex gender group. The affective domain was also examined to see if there was a connection between a specific learning environment and how that situation affects a child's emotions.

## CHAPTER IV

### Purpose

The purpose of this study was to determine if gender grouping would affect a student's ability to increase his or her sight word recognition and to examine its connection to the affective domain.

### Analysis of Data

Upon completion of posttesting, the researcher compared quantitatively the dual sex grouping results to single sex grouping to see if any significant gains were made by either grouping, using a t test for related

samples. The student responses to the questionnaire were analyzed to see how their affective domain was affected after receiving instruction in two different groupings.

### Findings and Interpretations

The null hypothesis investigated in this study stated that there is no statistically significant difference between the mean posttest sight vocabulary scores of the students who received reading instruction in a dual sex grouping and the mean posttest scores of the students in a single sex grouping.

Table 1 Posttest Groups  $x_1 = \text{dual sex}$   $x_2 = \text{single sex}$

Student	$x_1$	$x_2$	Diff	$D^2$			
A	39	37	-2	4	t-Test: Two-Sample Assuming Equal Variances		
B	41	41	0	0			
C	41	39	-2	4		Variable 1	Variable 2
D	38	41	3	9	Mean	38.11111	38.33333
E	37	36	-1	1	Variance	50.69281	45.88235
F	39	41	2	4	Observations	18	18
G	40	41	1	1	Pooled Variance	48.28758	
H	38	37	-1	1	Hypothesized Mean Difference	0	
I	41	41	0	0	df	34	
J	41	41	0	0	t Stat	-0.09594	
K	40	40	0	0	P(T<=t) one-tail	0.462067	
L	40	39	-1	1	t Critical one-tail	1.690923	
M	40	41	1	1	P(T<=t) two-tail	0.924133	
N	41	41	0	0	t Critical two-tail	2.032243	
O	10	12	2	4			
P	41	41	0	0			
Q	39	41	2	4			
R	40	40	0	0			
Mean	38.111	38.333					
Sums	686	690	4	34			

Table 1 presents the mean scores of the posttest groups, a two-tailed  $t$  test was used ( $t$  value = -0.09, critical value for  $t = 2.11$ ,  $df = 17$ ,  $\alpha = 0.05$ ). The data failed to reject the null hypothesis. There was no significant difference between the posttest scores of the two groups.

The student responses to the questionnaire led to some interesting conclusions. All of the students liked single sex grouping better than dual sex grouping. Many students stated that they learned better in single sex grouping. One male student did state that he would prefer reading instruction in a dual sex group because the other boys distract him in single sex grouping.

Table 2 shows the ranking of other academic subjects that the students would like to receive instruction in single sex grouping.

Table 2 Preferential Ranking of Academic Subjects

<u>Subject</u>	<u>Ranking</u>
math	1
specials (gym, art, music)	2
science	3
social studies	4

Table 3 shows what the students enjoyed most about gender grouping.

Table 3 Girls' Responses to Questionnaire

<u>Response</u>	<u>Ranking</u>
Being with girls	1
Felt more comfortable asking and answering questions	2
Smaller group size	3

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Table 3 Boy's Response to Questionnaire

<u>Response</u>	<u>Ranking</u>
Felt more comfortable asking and answering questions	1
Smaller group size	2
Being with boys	3

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### Summary

A comparison was made by using a two-tailed related t test to compare the posttest scores of the two groups in this study. The analysis resulted in failure to reject the null hypothesis.

From the questionnaire the researcher concludes that at the seven and eight age level the students liked being separated by gender for reading instruction. They enjoyed learning, playing and socializing with their own gender.

## CHAPTER V

### Purpose

The purpose of this study was to determine if gender grouping would affect a student's ability to increase his or her sight word recognition and to examine its connection to the affective domain.

### Conclusions and Implications

This study investigated the effect that gender grouping had on sight word recognition and the affective domain.

Results of the study failed to reject the null hypothesis, which stated that there is no statistically significant difference between

the mean posttest sight vocabulary scores of the students who received reading instruction in a dual sex grouping and the posttest of the students in a single sex grouping.

The findings of the study implies that the treatment used did not solely affect the recognition of sight words. Both groups showed an increase in the recognition of sight words. The findings of this study do indicate that there was an effect on the students' affective domain. The students liked single sex grouping better than dual sex grouping.

A longer duration than three weeks or a longitudinal study of the effects gender grouping for sight vocabulary may show a significant difference.

### Implications for the Classroom

Although no significant difference was found when gender grouping was used as a treatment to teach sight words, there was no indication that it was harmful either.

Educators need to continue to search for the best methods to teach and develop the recognition of sight words. Many studies have been conducted on gender grouping at the secondary level. Very few have been researched at the elementary level.

Boys are at a greater risk for reading failure than girls. Therefore, alternative methods of teaching reading to boys should be explored and published for educators. Studies have shown that girls can improve their math skills in single sex grouping. It is imperative

to see if the same results could happen with boys in the area of reading.

Over the three week period, the students enjoyed receiving reading instruction in a single sex grouping. The children expressed a strong interest in having gender grouping for other academic subjects. Second graders are still at an age where they want to be with their own gender. This was exhibited in and out of the classroom. According to the questionnaire, the most enjoyable part of the study for female students was simply being with each other. The male students stated that they felt more comfortable asking and answering questions among each other.

The researcher felt that gender grouping has positive effects on a student's affective domain and on sight word recognition.

### Implication for Research

From the findings of this study it is evident that a need exists for more research on the effects of gender grouping in the classroom.

Future research at the elementary level should place an emphasis on how gender grouping affects a student's attitude toward learning.

Although no significant difference was found in the treatment tested in the present study, factors for further research were revealed.

In attempting further research using gender grouping for reading instruction, the researcher suggest replication of the present study at the first and second grade level for a longer duration of time A very small sample of second

graders were used. Since first grade is traditionally known as the grade of novice readers, the results may show a significant difference with the recognition of sight vocabulary.

The long term effects of the study have not been determined. Therefore, in depth, longitudinal studies on gender grouping in the classroom for reading instruction may be beneficial.

### Summary

Although the study of the effect of gender grouping on sight word vocabulary did not show any significant difference, there was no indication that it was a hindrance, either.

The affective domain was important to this study. The students enjoyed gender grouping, they felt comfortable among their own gender and they wanted to continue learning in gender groups.

Further investigation, such as longitudinal study may show a different outcome to this type of study.

Appendix ADual Sex Vocabulary Sight Words

1. of	14. open	27. right	40. today
2. know	15. any	28. fast	41. grow
3. when	16. put	29. clean	
4. just	17. old	30. bring	
5. as	18. both	31. shall	
6. could	19. tell	32. drink	
7. her	20. very	33. hold	
8. were	21. sit	34. myself	
9. every	22. cold	35. start	
10. round	23. because	36. try	
11. give	24. wash	37. carry	
12. them	25. always	38. hurt	
13. eight	26. light	39. only	

Appendix BSingle Sex Vocabulary Sight Words

1. going	14. don't	27. far	40. keep
2. how	15. these	28. laugh	41. if
3. may	16. your	29. done	
4. let	17. some	30. fall	
5. walk	18. then	31. kind	
6. think	19. does	32. small	
7. been	20. would	33. together	
8. around	21. their	34. better	
9. off	22. first	35. draw	
10. found	23. why	36. full	
11. use	24. buy	37. long	
12. wish	25. but	38. warm	
13. write	26. cut	39. hold	

Appendix CQuestionnaire for Affective Domain

1. Did you like having reading without the boys?

\_\_\_\_\_ yes                    \_\_\_\_\_ no

Did you like having reading without the girls?

\_\_\_\_\_ yes                    \_\_\_\_\_ no

2. Do you think you were able to learn more  
when you were with your own gender?

\_\_\_\_\_ yes                    \_\_\_\_\_ no

3. Would you like same gender classrooms?

\_\_\_\_\_ yes                    \_\_\_\_\_ no

4. Which do you like best?

\_\_\_\_\_ dual gender grouping

\_\_\_\_\_ single gender grouping

5. For what other subjects/activities would you like single gender grouping?

\_\_\_\_\_ math \_\_\_\_\_ science

\_\_\_\_\_ social studies \_\_\_\_\_ specials

6. What did you enjoy most about working with your own gender?

Girls:

\_\_\_\_\_ being with other girls

\_\_\_\_\_ I felt more comfortable asking and answering questions

\_\_\_\_\_ smaller group size

Boys:

\_\_\_ being with other boys

\_\_\_ I felt more comfortable asking and  
answering questions

\_\_\_ smaller group size

7. Are most of your friends in school boys  
or girls?

\_\_\_ boys            \_\_\_ girls

8. When you are at a special or at lunch, who  
do you usually

talk to: \_\_\_ boys or \_\_\_ girls

work with: \_\_\_ boys or \_\_\_ girls

sit with: \_\_\_ boys or \_\_\_ girls

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