A study of the relationship between reading attitude and gender in fourth grade children

Crisalinda C. Byro
Rowan University

Follow this and additional works at: https://rdw.rowan.edu/etd

Part of the Elementary Education and Teaching Commons

Let us know how access to this document benefits you - share your thoughts on our feedback form.

Recommended Citation
https://rdw.rowan.edu/etd/1640
A STUDY OF THE RELATIONSHIP BETWEEN
READING ATTITUDE AND GENDER IN
THE FOURTH GRADE CHILDREN

by
Crinalinda C. Byro

A Thesis
Submitted in partial fulfillment of the requirements of the
Master of Science in Teaching Degree in the
Graduate Division of Rowan University
June, 2000

Approved

Professor

Date Approved
ABSTRACT

Crisalinda C. Byro
A Study of the Relationship between
Reading Attitude and Gender in the Fourth Grade Children
June, 2000
Dr. Randall S. Robinson
Master of Science in Teaching
Rowan University

The purpose of this study was to determine the relationship between reading
attitude and gender, to compare reading attitudes between boys and girls on academic and
recreational reading, and to attempt to show the difference in reading attitudes between
boys and girls in the fourth grade. The seventy-nine (79) subjects who participated in this
study were taken from the total population of the three fourth grade classes in a public
elementary school in a suburban area in southern New Jersey. The Elementary Reading
Attitude Survey (ERAS; McKenna & Kear, 1990) was used to assess reading attitudes.
Mean reading attitude scores and standard deviations were calculated for the total or
overall scale and the recreational and academic subscales. Data were analyzed for the
overall scale and for each subscale using the t-test to reveal significant effects for gender.
The results indicated significant differences by gender in the overall or total scale, and in
the recreational and academic subscales.
MINI-ABSTRACT

Crisalinda C. Byro
A Study of the Relationship between
Reading Attitude and Gender in the Fourth Grade Children
June, 2000
Dr. Randall S. Robinson
Master of Science in Teaching
Rowan University

The purpose of this study was to determine the relationship between reading
attitude and gender and to compare reading attitudes between boys and girls on academic
and recreational reading. The results indicated significant differences by gender in the
overall or total scale, and in the recreational and academic subscales.
ACKNOWLEDGEMENTS

The researcher is indebted to the following individuals who played a very significant role in the completion of this thesis:

Dr. Randall S. Robinson, Thesis Adviser, Rowan University, whose patience, understanding, and guidance has made the successful completion this thesis possible.

Mr. Andrew Ricketts, Principal; Ms. Mary Mack, Cooperating Teacher; Mrs. Suzanne Dahl, Mrs. Donna Tessmer, and Mrs. Jean Watson, Fourth Grade Teachers; Mrs. JoAnn Grabbe, Secretary; and most of all, the fourth grade students, West Deptford Township School District, NJ, whose participation, consideration, flexibility and time were vital to the completion of this study.

David G. Byro, my husband and D. Paul and Michael J., my two sons, whose love, support and patience provided me the encouragement to complete this thesis and the MST program.

Salvacion P. Cansana and Cristito D. Cansana, Sr., my parents, for their unconditional love and support and Anita Provenzano for her excellent typing assistance.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>ii</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>v</td>
</tr>
<tr>
<td>CHAPTER</td>
<td></td>
</tr>
<tr>
<td>I. SCOPE OF THE STUDY</td>
<td>1</td>
</tr>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Purpose of the Study</td>
<td>2</td>
</tr>
<tr>
<td>Statement of the Problem</td>
<td>2</td>
</tr>
<tr>
<td>Hypothesis</td>
<td>3</td>
</tr>
<tr>
<td>Limitations of the Study</td>
<td>3</td>
</tr>
<tr>
<td>Definition of Terms</td>
<td>4</td>
</tr>
<tr>
<td>II. REVIEW OF LITERATURE</td>
<td>6</td>
</tr>
<tr>
<td>Introduction</td>
<td>6</td>
</tr>
<tr>
<td>Reading Development</td>
<td>6</td>
</tr>
<tr>
<td>Reading Attitudes</td>
<td>7</td>
</tr>
<tr>
<td>Reading Attitude Measurement Instruments</td>
<td>10</td>
</tr>
<tr>
<td>Gender Differences in Reading</td>
<td>13</td>
</tr>
<tr>
<td>Summary</td>
<td>15</td>
</tr>
<tr>
<td>III. METHOD</td>
<td>16</td>
</tr>
<tr>
<td>Introduction</td>
<td>16</td>
</tr>
<tr>
<td>Population and Sample</td>
<td>16</td>
</tr>
<tr>
<td>Research and Design Procedure</td>
<td>17</td>
</tr>
<tr>
<td>Description of the Instrument</td>
<td>18</td>
</tr>
</tbody>
</table>
## CHAPTER

<table>
<thead>
<tr>
<th>IV. ANALYSIS OF RESEARCH</th>
<th>.................................................. 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>.................................................. 20</td>
</tr>
<tr>
<td>Analysis for the Fourth Grade Population Reading Populations</td>
<td>20</td>
</tr>
</tbody>
</table>

| V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS | .............. 26 |
| Introduction                                   | .................................................. 26 |
| Summary of the Problem                         | .................................................. 26 |
| Summary of the Hypothesis                      | .................................................. 26 |
| Summary of the Procedure                       | .................................................. 27 |
| Summary of the Findings                        | .................................................. 27 |
| Conclusions                                    | .................................................. 28 |
| Implications and Recommendations               | .................................................. 29 |

| BIBLIOGRAPHY | .................................................. 31 |

| APPENDIX A | .................................................. 36 |
| APPENDIX B. | .................................................. 46 |
| APPENDIX C | .................................................. 50 |
| VITA       | .................................................. 52 |
# LIST OF TABLES AND FIGURES

## Table

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Raw Score Means, Standard Deviations and Ranges for the Total</td>
<td>21</td>
</tr>
<tr>
<td>Fourth Grade Population</td>
<td></td>
</tr>
<tr>
<td>2. Raw Score Means, Standard Deviations, and Ranges of the Reading</td>
<td>22</td>
</tr>
<tr>
<td>Attitude Survey by Gender</td>
<td></td>
</tr>
<tr>
<td>3. t-test (Recreational Subscale Only by Gender)</td>
<td>23</td>
</tr>
<tr>
<td>4. t-test (Academic Subscale Only by Gender)</td>
<td>24</td>
</tr>
<tr>
<td>5. t-test (Overall Reading Attitude by Gender)</td>
<td>25</td>
</tr>
</tbody>
</table>

## Figure

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Reading Attitude Means for 4th Grade by Subscale.</td>
<td>21</td>
</tr>
<tr>
<td>2. Reading Attitude Means for 4th Grade by Subscale and Gender</td>
<td>22</td>
</tr>
</tbody>
</table>
CHAPTER ONE

SCOPE OF THE STUDY

Introduction

The perceived importance of literacy in general and reading in particular is common in societies across the world. Reading is but one aspect of literacy; literacy merely a component of communication and communication is one part of child’s development (Owen and Pumfrey, 1995).

Reading teachers and researchers realize that affective factors such as interest, attitude and motivation for example, play an important role in reading development and success (Cootes and Flynt, 1996). It has also been found that children’s concepts of reading development are associated with their concepts of themselves as readers (Munn, 1995).

Numerous studies have been done which confirm gender differences favoring girls in terms of reading performance. Research done in the United States indicates that reading is considered a feminine activity. Maturation and development theory of gender differences are also related to reading development. However, with the quantity of research being done, no direct casual relationship has been firmly established. (Pottorff, 1996). This clearly indicates a need for additional investigation in this area. The growing concern in developing a better understanding of what affects children’s reading development has encouraged this study. It is the intent of this study to add to that
growing body of knowledge.

This study was designed to investigate the relationship between reading attitude and gender. In addition, gender difference in reading attitude was examined to determine if the findings on negative reading attitudes for boys and positive reading attitude for girls could be replicated in this study.

Purpose of the Study

The purpose of this study was to determine the relationship between reading attitude and gender. This study focussed on reading attitudes between boys and girls on academic reading and recreational reading. It further attempted to show the differences in reading attitudes between boys and girls in the elementary school, specifically in fourth grade.

Statement of the Problem

Several researchers have explored the possibility that boys do not succeed in reading as well as girls because of gender-role perceptions that reading is not a masculine activity (Banks, 1980). However, cross-cultural studies in several countries have not confirmed the female reading superiority reported in both the United States and Canada (Pottorff, 1996). Furthermore, this study was intended to explore the relationship of gender differences and reading attitudes among elementary school children, specifically the fourth grade children.
It attempted to answer the following questions:

1. Is there a significant relationship between student's attitude toward reading and their gender?
2. Do girls have more positive reading attitudes than boys?
3. Do girls have more positive attitudes toward school-based reading and recreational reading?

**Hypothesis**

For this study the following hypotheses were investigated:

1. There is a significant difference between the scores of the boys and the scores of the girls in attitudes toward reading. This means that girls have a significantly higher score than boys on the overall Elementary Reading Attitude Survey (ERAS).

2. There is a significant difference between the scores of the boys and the scores of the girls in academic or school-based reading. This means that girls with significantly higher scores on the overall attitude toward reading will also have significantly higher scores on the academic subscale than boys.

3. There is a significant difference between the scores of the boys and the scores of the girls in recreational based reading. This means that girls who have significantly higher scores on the overall attitude toward reading will also have significantly higher scores on the recreational based reading subscale than boys.

**Limitations of the Study**

There were several limitations to this study. One was the limited number of students participating in the study. The population for this study consisted of the students in three fourth grade classes in a New Jersey public school. The subjects were not randomly
selected because the researcher was limited to these three fourth grade classes. Due to the small number of subjects in the population, the results of this study cannot be inferred to the general population.

There was the question of the number of boys compared to the number of girls in each class. An equal number between boys and girls would have been ideal in order not to skew the results of the study.

Another limitation was related to the interpretation of the questionnaire. The questionnaire items used were subject to the interpretation of individual students. For example, the word “feel” may have been interpreted differently by different students. Also, it was difficult to determine how honestly the participants answered the items in the questionnaire thus affecting their answer choices.

Definition of Terms

Several key terms used in this study should be fully understood and are defined as follows:

**Reading** - refers to the process of constructing meaning through a dynamic interaction between the reader’s existing knowledge, the information suggested by the written language, and the context of the reading situation (Harste, 1989).

**Attitude** - refers to a predisposition to react specifically towards an object, situation, or value which is usually accompanied by feelings and emotions (Good, 1973).

**Gender** - is the significance of being male or female (Popalia, et. al., 1999).

**Academic Reading** - readings assigned by the teacher. This term is also referred to as school-based reading in this study.
Recreational Reading - readings done by students during their free time and not necessarily assigned by the teacher.
CHAPTER TWO
REVIEW OF RELATED LITERATURE

Introduction

Numerous studies have attempted to examine the factors that influence children’s attitudes towards reading. For this study, it was hypothesized that there would be a significant difference between the scores of the boys and the scores of the girls in attitudes toward reading. Secondly, it was hypothesized that there would be a significant difference between the scores of the boys and the scores of the girls in academic or school-based reading. Finally, it was hypothesized that there would be a significant difference between the scores of the boys and the scores of the girls in recreational based reading.

Reading Development

Teachers must encourage the lifetime reading habit at school in independent reading (Sanacore, 1992). The reading habit should be encouraged throughout the school year using methods such as reading aloud, booktalks, pairing young adult literature with traditional literature, and pairing of authors who are similar in their writing styles or themes. Students who are surrounded with books, newspapers, magazines, and other
materials will be tempted to browse and to read from these sources. This positive experience with reading builds independence and self-esteem, both of which are important for creating lifelong readers. This line of thought is further supported by a study performed to investigate the effects of time spent reading at school and at home on intermediate grade students’ reading achievement. One hundred and ninety-five students in grades 5 and 6 kept daily reading logs for four months. The results indicated that the amount of time spent on reading during the reading period contributed significantly to gains in students’ reading achievement. These findings support the idea that time engaged in silent reading at school is beneficial (Taylor, 1990).

Recreational reading programs have been shown to increase the quality and quantity of voluntary reading. Children learn to read by reading, and learn to love to read when pleasure is the purpose of reading (Pillar, 1983). In a 1984 study, G. Manning and Manning compared recreational reading programs regarding their impact on attitudes toward reading. They found that programs including verbal peer or teacher interactions had higher reading attitude scores suggesting that verbal interaction may develop better reading attitudes.

**Reading Attitudes**

Students attitudes and perceptions of what makes a good reader have also been studied extensively. The development of positive attitudes toward reading has been
associated with sustained reading throughout the lifespan (Cullinan, 1987). Although students' attitudes toward reading are commonly identified by teachers as important (Quinn & Jadav, 1987), little time is spent developing positive reading attitudes in public schools (Greaney, 1991; Heathington & Alexander, 1984). In addition, teacher ratings of student attitudes toward reading do not always match attitudes actually held by their students and are often influenced more by how well the student reads (Swanson, 1985).

Studies also show that good readers generally possess more positive attitudes toward reading than poor readers do (Wigfield & Asher, 1984). Not all poor readers dislike reading, however, and many maintain positive reading attitudes despite limited skills and continuing frustration (Russ, 1989). Empirical studies have also found that girls tend to have more favorable reading attitudes than do boys (Downing & Che, 1982). It has also been shown that preschoolers have positive attitudes toward reading but that negative attitudes toward reading develop in the primary grades (Shapiro, 1979). One of the reasons may be the fact that primary-grade teachers spend little class time attempting to develop positive attitudes toward reading (Heathington & Alexander, 1984).

The causal relationship between reading attitude and achievement is unclear, particularly at the early stages of reading instruction. Measures of reading attitude and achievement yield only moderate correlations, typically ranging from .20 to .40 (Deck & Barnette, 1976; Roettger, Szymczuk, & Millard, 1979; Swanson, 1982). While many researchers hypothesize that positive student attitudes toward reading contribute to higher reading achievement (Bettelheim & Zelan, 1981), others argue that the causal relationship flows in the opposite direction; from achievement to attitude (Quinn & Jadav, 1987). This
debate is not unique to reading; similar arguments concerning the attitude-achievement relationship occur for mathematics (Reynolds & Walberg, 1992a) and science (Reynolds & Walberg, 1992b). Although both positions possess some merit, it is probably more tenable to consider attitude and achievement as exerting a bidirectional influence. This view is exemplified by Stanovich's (1986) theory of reciprocal causation, which weaves cognitive and affective components together to better conceptualize the development of individual differences in reading ability over time.

Results of one study confirms many of the findings noted above and supports a model of reading attitude in which social factors and expectations gradually shape attitudes over time (McKenna, 1995). Findings included the following. First, recreational and academic reading attitudes, on average, were observed to become more negative gradually, but steadily, throughout the elementary school years, beginning at a relatively positive point and ending in relative indifference. Second, the trend toward more negative recreational attitudes was clearly related to ability and was steepest for least able readers. The attitudinal gap among ability levels widened with age, though for academic reading attitude the negative trend was similar regardless of ability. Third, girls as a group possessed more favorable attitudes than boys at all grade levels, toward both recreational and academic reading. In the case of recreational attitude, this gap widened with age, while in the case of academic attitude, it remained relatively constant. These gender differences appeared to be unrelated to ability.

Another recent study investigated the indicators that upper elementary-aged children use to make good reader determinations in transitional literacy contexts (Henk, 1998).
The participants were 18 fourth-grade, 19 fifth-grade, and 19 sixth-grade elementary school students from two districts. Results showed that the children regarded the public performance and fluency category groupings of reading (word recognition, word analysis, and reading rate) as most salient in making ability judgments and were sensitive to selected teacher practices (verbal praise and call upon patterns), indicators of affect (amount of reading, enjoyment of reading, and recreational reading), and classroom achievement (task/test performance and grades). Another study was performed to determine if students' definitions of reading and self-perceptions/attitudes as readers are related to word recognition and comprehension performances (Howe, 1997). The study also examined if students' definitions of reading were related to a tendency to exhibit learning difficulties. Findings suggest that subjects': (1) definitions of reading were related to comprehension performance as measured by an informal reading assessment; (2) definitions of reading and self-perceptions have little effect on word recognition performance; (3) comprehension was not related to self-perceptions as readers; (4) self-perceptions as readers were related to the tendency to exhibit learning difficulties; and (5) self-perceptions as readers were not related to definitions of reading.

**Reading Attitude Measurement Instruments**

Reading teachers and researchers realize that attitudes play a key but difficult to measure role in reading success (Cooter, 1996). An example is a student who collects and studies insects. Her informal studies and interests cause her to learn a great deal. When
the student is exposed to reading materials on insects, even if it is difficult reading
considered to be well above her reading level, the student will almost surely succeed
because of her positive attitude regarding the subject. Conversely, a student who feels
weak in a subject, even if his ability in the subject is quite adequate, will tend to do
poorly on assignments in that area, a kind of self-fulfilling prophecy. In both of these
cases, if the teacher is aware of these affective factors, then classroom interventions can
be planned that can help students succeed to their maximum potential. Following are
interest and attitude assessment instruments that have proven to be effective.

Many authorities suggest administering an interest inventory (sometimes referred to
as an attitude survey) as a beginning point in assessing student attitudes, interests, and
self-perceptions (Heathington & Alexander, 1984; Vacca & Vacca, 1993). An interest
inventory usually surveys both general reading attitudes and daily encounters with texts
and specific knowledge and practices of the student as they relate to the content subject
being taught. The procedure is simple. For most middle and high school students,
students simply complete a general interest inventory during the first week of class and
specific surveys before beginning a new unit of instruction.

Another is the Reader Self-Perception Scale which measures how children feel about
themselves as readers (Henk, 1995). It consists of 1 general item and 32 subsequent
items that represent four scales: progress, observational comparison, social feedback, and
physiological states. Children read and rate each item using a five-point Likert scale. The
instrument, which takes approximately 15-20 minutes to complete, is scored by summing
the raw scores for each of the four scales, and the scores can then be compared with
norming data.

Yet another tool, the Elementary Reading Attitude Survey was developed as a public-domain instrument to enable teachers to estimate attitude levels efficiently and reliably (McKenna, 1995). This instrument was tested on a stratified national sample of 18,185 U.S. children in Grades 1 through 6. Students responded to a group pictorial rating scale, comprising two subscales devoted to attitude toward reading for recreational and for academic purposes. Scores were analyzed on the basis of gender, grade level, ethnicity, reading ability, and the use of basal readers. Results supported a model of reading attitude in which social factors and expectations gradually shape attitudes over time. In another study, the Elementary Reading Attitude Survey was administered twice to one hundred eighty-nine students in Grades 1-4 over a 3-year interval (Kush, 1996). Initially, reading attitudes were relatively positive and comparable to the standardization sample for both the recreational and academic subscales of the instrument. Following the 3 years, however, reading attitudes dropped significantly for both recreational and academic scores. Nonsignificant grade differences were observed, but girls consistently expressed more positive attitudes toward recreational reading than did boys. Similarly, girls also demonstrated greater stability in reading attitudes than boys, based on higher correlations between first and second administrations of the Elementary Reading Attitude Survey.
Gender Differences in Reading

The consistent problem of an inordinate number of boys failing in reading development is a critical area for further research (Scroggins, 1993). Research for nearly a century in both the United States and Canada has confirmed that gender differences favoring females exist in reading performance (Pottorff, 1996), particularly in the lower grades (Dechant, 1977; Herman, 1975; Johnson, 1973-1974; Kagan, 1964; Lehr, 1982). Studies and research reviews have consistently shown that boys significantly outnumber girls in corrective and remedial reading programs (Brophy & Good, 1973; Durrell, 1940; Gunderson, 1976; Shaywitz et al., 1990); in programs for the learning disabled (Clarizio & Phillips, 1986; Naiden, 1976); emotionally impaired and speech and language impaired (Harmon, 1992). In addition, boys are far more likely to be retained at grade level (Byrd & Weitzman, 1994).

The causes for differences in early reading performance have been attributed to a number of factors including biological differences, slower maturational rate, negative responses and expectations by female teachers towards boys, content of reading materials, and socio-cultural factors. Yet with the quantity of research accomplished, no direct causal relationship has firmly been established (Pottorff, 1996).

Teacher expectations and responses in the elementary grades where teachers are predominately female have been studied to determine if a relationship exists with respect to student gender and reading instruction. The findings are somewhat mixed. Sweet and Guthrie (1994) examined teachers' perceptions of students' motivation to read and the
relationship between those perceptions and their reading achievement. They found a high correlation between teacher perceptions and report card grades; however, those perceptions did not differ by gender. This is in contrast to the findings of Shaywitz, et al. (1990) who reported that teachers perceive boys as achieving lower than girls in reading and as more inclined to exhibit inappropriate classroom behaviors. They concluded that these perceptions strongly influenced the ratio of four boys to each girl enrolled in remedial reading programs they investigated. This achievement disparity was not substantiated by standard tests. Their findings were in agreement with Bennet, Gottesman, et al. (1993) who found perceptions constitute a significant component teachers' scholastic judgement, especially for boys.

The differences between gender perceptions of elementary and middle school students about reading and writing were further investigated by Pottorff (1996). Students were asked to respond to questions about who is better at reading books, reading to younger children, & writing stories. Analyses of results indicated that students believed that girls are better able to perform these activities. Students were then asked to respond to whether mothers or fathers are more likely to read books, magazines, or newspapers, and read books to children. Results revealed that mothers are seen as more likely to read books and magazines and to read to young children, and fathers are seen as more likely to read newspapers.

When McKenna (1995) tested the Elementary Reading Attitude Survey she found that girls as a group possessed more favorable attitudes than boys at all grade levels, toward both recreational and academic reading. In the case of recreational attitude, this gap
widened with age, while in the case of academic attitude, it remained relatively constant.

These gender differences appeared to be unrelated to ability. In another study, the Elementary Reading Attitude Survey was administered by Kush (1996). Nonsignificant grade differences were observed, but girls consistently expressed more positive attitudes toward recreational reading than did boys. Similarly, girls also demonstrated greater stability in reading attitudes than boys, based on higher correlations between first and second administrations of the survey.

**Summary**

Positive experiences with reading builds independence and self-esteem, both of which are important for creating lifelong readers and learners. Time spent on reading relates significantly to gains in students’ reading achievement. Studies show that good readers generally possess more positive attitudes toward reading than poor readers do. Recently, a number of research instruments have been developed and proven effective for measuring elementary student reading interests and attitudes. Findings from these assessments have confirmed what studies occurring over the last century have shown. Gender differences favoring females exist in reading performance particularly in the lower grades. This consistent problem of an inordinate number of boys failing in reading development is a critical area for further research. Research should investigate why boys typically need extra assistance in reading. The results would provide remedies for correction that classroom teachers could use.
CHAPTER THREE

METHOD

Introduction

This study was designed to determine if there was a correlation between attitude toward reading and gender among fourth grade students. It was hypothesized that there would be a significant difference between the scores of the boys and the girls on attitudes toward reading. Secondly, it was hypothesized that the data would reveal a significant difference between the scores for the boys and the girls for the school-based reading. Finally, it was hypothesized that there would be a significant difference between scores for the boys and the girls for recreational based reading.

Population And Sample

The population for this study consisted of the students in three (3) fourth grade classrooms in a southern New Jersey suburban public elementary school. There was no need for randomization since the total population of the three (3) fourth grade classes from the school were researched. Initially, there was a total of eighty-three (83) students who were to participate in this study. However, during the administration of the survey, four (4) students were not able to participate. One did not get permission and three were
absent. Therefore, the total number of students who participated in the actual survey was only seventy-nine (79).

Out of the seventy-nine (79) students who were surveyed, fifty-four percent (54.43%) were girls and around forty-six percent (45.56%) were boys. Approximately ninety-six percent (96.20%) were Caucasian and around four percent (3.79%) were African-American. Only thirteen percent (13%) received free lunch and thirteen percent (13%) received reduced lunch. In terms of reading ability and overall academic performance, the teachers rated their students to be on the average level. However, thirteen (13) students, which was about seventeen percent (16.95%), were classified as needing help with basic reading skills and comprehension.

Research and Design Procedure

The Elementary Reading Attitude Survey (ERAS; McKenna & Kear, 1990) was used to assess reading attitudes (see appendix A). The ERAS contains a total of twenty items, ten items for each subscale. Each item presents a brief, simply worded statement about reading followed by four pictures of the comic strip character Garfield the cat in varying pictorial poses. The ERAS is intended for grades 1-6 and has an adequate internal consistency reliability of the scale (.74-.89) (Allen, Cipielewski & Stanovich, 1992). Factor analysis of the normative sample provides evidence supportive of two discrete subscales of reading attitude. Convergent and divergent validity with other measures of reading attitude, book reading, activity preference, and television viewing has been
demonstrated as well (Kush, Watkins & Marley, 1996).

Before the researcher could fully implement the study, getting the approval from the superintendent of school, the board of education, school principal, and the fourth grade teachers was necessary. Letters were sent to the aforementioned people (see appendix B). The researcher also prepared a letter for the parents or guardians of the students (see appendix C). This letter explained the importance or significance of the study to the learning and education of their children. The letter also included an explanation of the role of the researcher as a student teacher and graduate student. The permission slip attached to the letter had to be signed by the parent(s) or guardian(s). A deadline for a response was provided.

Once permission was granted by the parents, the Elementary Reading Attitude was conducted. The administration of the survey followed the guidelines set by McKenna and Kear (see appendix A) and took approximately 10 minutes.

Items were read aloud during each administration. The completed ERAS forms were scored according to the standardized instructions provided by McKenna and Kear (1990). Raw scores were used in all data analyses.

**Description of the Instrument**

The Elementary Reading Attitude Survey (ERAS, McKenna & Kear, 1990) is a 20-item questionnaire that asks students to rate their attitudes toward reading. Each item presents a brief, simply worded statement about reading followed by four pictures of the
comic strip character, Garfield the Cat in varying pictorial poses. Percentile ranks can be obtained for two component subscales: recreational reading attitude and academic reading attitude. Recreation items focus on reading for fun outside the school setting, and the academic subscale examines the school environment, and reading schoolbooks. A total reading attitude percentile rank can also be computed as an additive composite of the recreational and academic scores (Kush & Watkins, 1996).
CHAPTER FOUR
ANALYSIS OF RESEARCH

Introduction

This study was designed to determine the relationship between reading attitude and gender and to compare the reading attitudes between boys and girls in academic and recreational reading. It was hypothesized that there would be a significant difference between the scores of the boys and girls in attitudes toward reading. Secondly, it was hypothesized that the data would reveal a significant difference between the scores for the boys and the girls in the school-based reading. Finally, it was hypothesized that there would be a significant difference between the scores for the boys and the girls in recreational based reading.

Analysis for the Fourth Grade Population Reading Attitudes

The fourth grade mean reading scores and standard deviation were calculated for each subscale. The differences between the subscale scores and the overall total scores are apparent in tables 1 to 5 and figures 1 and 2.

Scores for the total sample are reported in table 1. Means for all scales were sixty-three (63.36) and standard deviation ten (10.28). Score ranges were twenty-two (22) on
the minimum and eighty (80) on the maximum.

**Table 1**

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recreational</td>
<td>31.94</td>
<td>5.70</td>
<td>10</td>
<td>40</td>
</tr>
<tr>
<td>Academic</td>
<td>31.41</td>
<td>5.36</td>
<td>12</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td>63.36</td>
<td>10.28</td>
<td>22</td>
<td>80</td>
</tr>
</tbody>
</table>

The same results are displayed in figure 1.

**Figure 1**

Reading Attitude Means for 4th Grade by Subscale

Ranges and standard deviations were significantly different when scores were analyzed by gender. Results are displayed in table 2. There was a significant difference between the boys and girls for both the recreational and academic scales as well as the overall scale.
table 2

Raw Score Means, Standard Deviations, and Ranges of the Reading Attitude Survey by Gender

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recreational</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>29.09</td>
<td>6.37</td>
<td>10</td>
<td>40</td>
</tr>
<tr>
<td>Girls</td>
<td>34.00</td>
<td>4.14</td>
<td>18</td>
<td>40</td>
</tr>
<tr>
<td>Academic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>29.93</td>
<td>5.94</td>
<td>12</td>
<td>40</td>
</tr>
<tr>
<td>Girls</td>
<td>32.47</td>
<td>4.69</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>58.90</td>
<td>11.64</td>
<td>22</td>
<td>80</td>
</tr>
<tr>
<td>Girls</td>
<td>66.56</td>
<td>7.85</td>
<td>40</td>
<td>80</td>
</tr>
</tbody>
</table>

The same results are displayed in figure 2.

figure 2

[Reading Attitude Means for 4th Grade by Subscale and Gender diagram]

22
The t-test was used for the recreational subscale to assess whether significant effects for gender existed. Results are displayed in table 3. The t-test examined the possible differences in reading attitudes between the boys and the girls in recreational reading subscale. The results of the analysis suggested significant differences in reading attitudes between the boys and the girls (Recreational t = 4.15 > 1.99, p < .05).

\begin{table}
\centering
\caption{t-test Recreational Subscale Only by Gender}
\begin{tabular}{|l|c|}
\hline
\textbf{STATISTIC} & \textbf{VALUES} \\
\hline
No. of Scores (Girl) & 46 \\
Sum of Scores (Girl) & 1564.00 \\
Mean (Girl) & 34.00 \\
Sum of Square Scores (Girl) & 53950.00 \\
SS (Girl) & 774.00 \\
No. of Scores (Boy) & 33 \\
Sum of Scores & 960.00 \\
Mean (Boy) & 29.09 \\
Sum of Squared Scores (Boy) & 29228.00 \\
SS (Boy) & 1300.73 \\
t - Value & 4.15 \\
Degrees of Freedom & 77 \\
\hline
\end{tabular}
\end{table}

Likewise, the results of the t-test for the academic subscale are displayed in table 4. The results of the analysis suggested significant differences in reading attitudes between
the boys and the girls (Academic $t = 2.12 > 1.99, p < .05$).

### Table 4

<table>
<thead>
<tr>
<th>STATISTIC</th>
<th>VALUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Scores (Girl)</td>
<td>46</td>
</tr>
<tr>
<td>Sum of Scores (Girl)</td>
<td>1494.00</td>
</tr>
<tr>
<td>Mean (Girl)</td>
<td>32.48</td>
</tr>
<tr>
<td>Sum of Squared Scores (Girl)</td>
<td>49516.00</td>
</tr>
<tr>
<td>SS (Girl)</td>
<td>993.48</td>
</tr>
<tr>
<td>No. of Scores (Boy)</td>
<td>33</td>
</tr>
<tr>
<td>Sum of Scores (Boy)</td>
<td>988.00</td>
</tr>
<tr>
<td>Mean (Boy)</td>
<td>29.94</td>
</tr>
<tr>
<td>Sum of Squared Scores (Boy)</td>
<td>30710.00</td>
</tr>
<tr>
<td>SS (Boy)</td>
<td>1129.88</td>
</tr>
<tr>
<td>$t$ - Value</td>
<td>2.12</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>77</td>
</tr>
</tbody>
</table>

Finally, the $t$-test for the overall reading scale was utilized to assess the differences between the boys and the girls. The results are displayed in table 5. The results of the analysis suggested significant differences in reading attitudes between the boys and the girls (Total $t = 3.49 > 1.99, p < .05$).
### table 5

**t-test for Overall Reading Attitude by Gender**

<table>
<thead>
<tr>
<th>STATISTIC</th>
<th>VALUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Scores (Girl)</td>
<td>46</td>
</tr>
<tr>
<td>Sum of Scores (Girl)</td>
<td>3062.00</td>
</tr>
<tr>
<td>Mean (Girl)</td>
<td>66.57</td>
</tr>
<tr>
<td>Sum of Squared Scores (Girl)</td>
<td>206598.00</td>
</tr>
<tr>
<td>SS (Girl)</td>
<td>2776.30</td>
</tr>
<tr>
<td>No. of Scores (Boy)</td>
<td>33</td>
</tr>
<tr>
<td>Sum of Scores (Boy)</td>
<td>1944.00</td>
</tr>
<tr>
<td>Mean (Boy)</td>
<td>58.91</td>
</tr>
<tr>
<td>Sum of Squared Scores (Boy)</td>
<td>118862.00</td>
</tr>
<tr>
<td>SS (Boy)</td>
<td>4342.73</td>
</tr>
<tr>
<td>t - Value</td>
<td>3.49</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>77</td>
</tr>
</tbody>
</table>
CHAPTER FIVE
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

The purpose of this study was to determine the relationship between reading attitude and gender. The study focused on reading attitudes between boys and girls on academic reading and recreational reading. It further attempted to show the differences in reading attitudes between boys and girls in the fourth grade.

Summary of the Problem

Gender-role perceptions among students play an important part in determining their attitude toward reading. Is there a significant relationship between students' attitude toward reading and their gender? Do girls have more positive reading attitudes than boys? Do girls have more positive attitudes toward school-based reading and recreational reading?

Summary of the Hypothesis

For this study it was hypothesized that there would be a significant difference
between the scores of the boys and the girls in attitudes toward reading. Secondly, it was hypothesized that there would be a significant difference between the scores for the boys and the girls in the school-based reading. Finally, it was hypothesized that there would be a significant between the scores for the boys and the girls in recreational based reading.

**Summary of the Procedure**

The Elementary Reading Attitude Survey (ERAS; McKenna & Kear, 1990) was used to assess reading attitudes (see appendix A) of the fourth grade students. The ERAS was administered in the fourth grade classrooms by following the guidelines set by McKenna and Kear (see appendix A) and took approximately 10 minutes. Raw scores were used in all data analyses.

**Summary of the Findings**

Results of the t-tests were as follows. For the boys versus girls scores, significant t-values were generated for the overall or total reading attitude scale and the reading attitude subscales. Significant t-values were also discovered for boys and girls in the recreational and academic subscales as well as the total scale.

Based on the results, it was found that the girls who score high on the overall or total reading attitude scale also score high in the academic reading and the recreational reading subscales, respectively. Therefore, girls have a more positive reading attitude than boys.
Conclusions

It was first hypothesized that there would be a significant difference between the scores of the boys and the scores of the girls in attitudes toward reading. Since significant t-values were generated, this hypothesis was supported. The results of this study are consistent with other studies indicating that girls tend to have more favorable attitudes toward reading than boys do (Greaney & Hegarty, 1987; McKenna & Kear, 1995; Kush, 1996).

Secondly, it was hypothesized that there would be a significant difference between the scores of the boys and the scores of the girls in academic reading. The significant t-value found supported this hypothesis. These findings are consistent with the research conducted by Greaney & Hegarty (1987), McKenna & Kear (1995), and Kush (1996).

Finally, it was hypothesized that there would be a significant difference between the scores of the boys and the scores of the girls in recreational based reading. The results indicated a significant difference. Therefore, this hypothesis was supported. These findings are supported with those of Kush (1996).

Based on the results of this study, it was therefore concluded that the girls have a more positive attitude toward reading than the boys. It was demonstrated in the overall reading attitude results as well as the academic based reading and recreational based reading subscales.
Implications and Recommendations

In this study the fourth grade student’s attitude toward reading provided a consistent implication that girls have a more positive attitude towards reading than boys. This was suggested in the results of this study. The results also suggested that the fourth grade students’ attitude toward reading is highly related with their gender. The results were consistent with studies and research reviewed that confirmed gender differences favoring girls in terms of positive reading attitudes. In order for boys to improve and develop a much better reading attitude, additional attention should be directed toward boys who begin school with poorer attitude toward reading. If neglected, the boys might progress in school without showing any improvement. Although girls may show positive attitude toward reading, they also need continued support in order to maintain their positive attitudes toward reading over time. It is, therefore, the responsibility of the teachers and educators for this matter, to consider specific classroom activities and instructional methods in improving students’ attitude toward reading. Furthermore, schools should encourage parental involvement along this line to achieve maximal positive effects. This would ensure sustained motivation to read outside the school. School and parental coordination in the efforts of improving reading attitudes among the students is critical for its success in improving and developing reading attitudes.

Although results of this study are consistent with previous research, results can not be generalized to all fourth grade students since this study took place in one elementary
school only. Further study may be done utilizing two or more elementary schools.

Another study can also be done comparing two different school districts. This study can be further replicated by studying a much larger and more diverse sample such as different grade levels and should be done at the beginning of the school year and at the fourth marking period. This would look at the possible change in attitude overtime.


contexts. Reading Research and Instruction, 38, 57-80.


Pillar, A. M. (1983). Literature and the language arts for middle grade students. In U. Hardt (Ed.), *Teaching Reading with the Other Language Arts*. International Reading Association, (pp. 117-134), Newark, DE.


Using Literature and Poetry Effectively (pp 2-7); International Reading Association, Newark, DE.


Sweet, A. P. & Guthrie, J. T. Teacher perceptions of students’ motivation to read. Reading Research Report No. 29., National Reading Research Center, Athens, GA; National Reading Research Center, College Park, MD.


Elementary Reading Attitude Survey

Directions for Use

The Elementary Reading Attitude Survey provides a quick indication of student attitudes toward reading. It consists of 20 items and can be administered to an entire classroom in about 10 minutes. Each item presents a brief, simply-worded statement about reading, followed by four pictures of Garfield. Each pose is designed to depict a different emotional state, ranging from very positive to very negative.

Administration

Begin by telling students that you wish to find out how they feel about reading. Emphasize that this is not a test and that there are no "right" answers. Encourage sincerity.

Distribute the survey forms and, if you wish to monitor the attitudes of specific students, ask them to write their names in the space at the top. Hold up a copy of the survey so that the students can see the first page. Point to the picture of Garfield at the far left of the first item. Ask the students to look at this same picture on their own survey form. Discuss with them the mood Garfield seems to be in (very happy). Then move to the next picture and again discuss Garfield's mood (this time, a little happy). In the same way, move to the third and fourth pictures and talk about Garfield's moods----a little upset and very upset. It is helpful to point out the position of Garfield's mouth, especially in the middle two...
figures.

Explain that together you will read some statements about reading and that the students should think about how they feel about each statement. They should then circle the picture of Garfield that is closest to their own feelings. (Emphasize that the students should respond according to their own feelings, not as Garfield might respond!) Read each item aloud slowly and distinctly; then read it a second time while students are thinking. Be sure to read the item numbers and to remind students of page numbers when new pages are reached.

### Scoring

To score the survey, count four points for each leftmost (happiest) Garfield circled, three for each slightly smiling Garfield, two for each mildly upset Garfield, and one point for each very upset (rightmost) Garfield. Three scores for each student can be obtained: the total for the first 10 items, the total for the second 10, and a composite total. The first half of the survey relates to attitude toward recreational reading; the second half relates to attitude toward academic aspects of reading.

### Interpretation

You can interpret scores in two ways. One is to note informally where the score falls in regard to the four nodes of the scale. A total score of 50, for example, would fall about mid-way on the scale, between the slightly happy and slightly upset figures, therefore indicating a relatively indifferent overall attitude toward reading. The other approach is
more formal. It involves converting the raw scores into percentile ranks by means of Table 1. Be sure to use the norms for the right grade level and to note the column headings (Rec = recreational reading, Aca = academic reading, Tot = total score). If you wish to determine the average percentile rank for your class, average the raw scores first; then use the table to locate the percentile rank corresponding to the raw score mean. Percentile ranks cannot be averaged directly.
1. How do you feel when you read a book on a rainy Saturday?

2. How do you feel when you read a book in school during free time?

3. How do you feel about reading for fun at home?

4. How do you feel about getting a book for a present?
5. How do you feel about spending free time reading?

6. How do you feel about starting a new book?

7. How do you feel about reading during summer vacation?

8. How do you feel about reading instead of playing?
9. How do you feel about going to a bookstore?

10. How do you feel about reading different kinds of books?

11. How do you feel when the teacher asks you questions about what you read?

12. How do you feel about doing reading workbook pages and worksheets?
13. How do you feel about reading in school?

14. How do you feel about reading your school books?

15. How do you feel about learning from a book?

16. How do you feel when it's time for reading class?
17. How do you feel about the stories you read in reading class?

18. How do you feel when you read out loud in class?

19. How do you feel about using a dictionary?

20. How do you feel about taking a reading test?
Elementary Reading Attitude Survey
Scoring sheet

Student name ____________________________

Teacher ________________________________

Grade __________________ Administration date __________________

<table>
<thead>
<tr>
<th>Scoring guide</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 points</td>
</tr>
<tr>
<td>3 points</td>
</tr>
<tr>
<td>2 points</td>
</tr>
<tr>
<td>1 point</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recreational reading</th>
<th>Academic reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>11.</td>
</tr>
<tr>
<td>2.</td>
<td>12.</td>
</tr>
<tr>
<td>3.</td>
<td>13.</td>
</tr>
<tr>
<td>5.</td>
<td>15.</td>
</tr>
<tr>
<td>6.</td>
<td>16.</td>
</tr>
<tr>
<td>7.</td>
<td>17.</td>
</tr>
<tr>
<td>8.</td>
<td>18.</td>
</tr>
<tr>
<td>9.</td>
<td>19.</td>
</tr>
<tr>
<td>10.</td>
<td>20.</td>
</tr>
</tbody>
</table>

Raw score: __________________  Raw score: __________________

Full scale raw score (Recreational + Academic): __________________

Percentile ranks

<table>
<thead>
<tr>
<th>Recreational</th>
<th>Academic</th>
<th>Full scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
February 16, 2000

Mr. Andrew Ricketts, Principal
Oakview Elementary School
305 Dubois Street
Woodbury, NJ 08096

Dear Mr. Ricketts:

As a graduate student in the Masters of Science in Teaching program at Rowan University, I am required to perform thesis research. My study seeks to add one more link to the knowledge base on reading development. Specifically, it will determine whether there is a relationship between gender and reading attitudes. I will accomplish this by administering an Elementary Reading Attitude Survey, requiring about 30 minutes of class time in each of the fourth grade classes at Oakview. Individual results will be kept strictly confidential.

Enclosed is a sample of the student survey and parental permission request letter, with permission slip attached. These will be utilized to perform my graduate thesis research and are provided for your review and approval.

Your timely consideration of this matter is requested. Upon your approval, I will need to send the permission letters to the parents prior to the actual administration of the surveys. Please let me know if you have any questions.

Sincerely,

Crisalinda C. Byro
Graduate Student,
Rowan University

Enclosure (2)
cc: Donna Tessmer, Fourth grade teacher
Jean Watson, Fourth grade teacher
Suzanne Dahl, Fourth grade teacher
February 16, 2000

Mr. George P. Faunce, Superintendent of Schools  
100 Grove Road, Suite 104  
West Deptford, NJ 08066

Dear Mr. Faunce:

As a graduate student in the Masters of Science in Teaching program at Rowan University, I am required to perform thesis research. My study seeks to add one more link to the knowledge base on reading development. Specifically, it will determine whether there is a relationship between gender and reading attitudes. I will accomplish this by administering an Elementary Reading Attitude Survey, requiring about 30 minutes of class time in each of the fourth grade classes at Oakview. Individual results will be kept strictly confidential.

Enclosed is a sample of the student survey and parental permission request letter, with permission slip attached. These will be utilized to perform my graduate thesis research and are provided for your review and approval.

Your timely consideration of this matter is requested. Upon your approval, I will need to send the permission letters to the parents prior to the actual administration of the surveys. Please let me know if you have any questions.

Sincerely,

Crisalinda C. Byro  
Graduate Student,  
Rowan University

Enclosure (2)

cc: Donna Tessmer, Fourth grade teacher  
Jean Watson, Fourth grade teacher  
Suzanne Dahl, Fourth grade teacher
Dear Mr. Gismondi:

As a graduate student in the Masters of Science in Teaching program at Rowan University, I am required to perform thesis research. My study seeks to add one more link to the knowledge base on reading development. Specifically, it will determine whether there is a relationship between gender and reading attitudes. I will accomplish this by administering an Elementary Reading Attitude Survey, requiring about 30 minutes of class time in each of the fourth grade classes at Oakview. Individual results will be kept strictly confidential.

Enclosed is a sample of the student survey and parental permission request letter, with permission slip attached. These will be utilized to perform my graduate thesis research and are provided for your review and approval.

Your timely consideration of this matter is requested. Upon your approval, I will need to send the permission letters to the parents prior to the actual administration of the surveys. Please let me know if you have any questions.

Sincerely,

Crisalinda C. Byro
Graduate Student,
Rowan University

Enclosure (2)

cc: Donna Tessmer, Fourth grade teacher
    Jean Watson, Fourth grade teacher
    Suzanne Dahl, Fourth grade teacher
APPENDIX C
Feb. 16, 2000

Dear Fourth Grade Parent:

I am presently a student teacher from the Rowan University Masters of Science in Teaching program. I am assigned in Ms. Mack's second grade class at Oakview. One of the requirements of my masters program is to perform thesis research. The thesis research seeks to determine whether there is a relationship between gender and reading attitudes. This type of study is very important because it will expand our knowledge on reading attitudes of elementary students and may help us improve the reading development of elementary students. I will accomplish this by administering a survey to all the students in Oakview’s fourth grade classes. The survey will take about 30 minutes of class time and has been approved by Mr. Faunce, Mr. Ricketts and the Board of Education. Individual results will be kept strictly confidential.

The purpose of this letter is to request your permission to allow your child’s participation in a short survey regarding their attitudes towards reading. I ask that you please sign the attached permission slip and have your child return it to my class.

I am hoping for your timely consideration. Please sign the permission slip and have your child return it to their teacher as soon as possible.

Sincerely,

Crisalinda C. Byro
Graduate Student, Rowan University

Approved by:
Donna Tessmer, Fourth grade teacher
Jean Watson, Fourth grade teacher
Suzanne Dahl, Fourth grade teacher

Student Reading Attitude Survey Permission Slip

is allowed to participate in the Reading Attitude student survey.

Print Student's First and Last Name

Parent or Guardian’s Signature
<table>
<thead>
<tr>
<th><strong>VITA</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name:</strong> Crisalinda C. Byro</td>
</tr>
<tr>
<td><strong>Date and Place of Birth:</strong> July 9, 1956</td>
</tr>
<tr>
<td><strong>Dumaguete City, Philippines</strong></td>
</tr>
<tr>
<td><strong>Elementary School:</strong> Foundation University</td>
</tr>
<tr>
<td><strong>Dumaguete City, Philippines</strong></td>
</tr>
<tr>
<td><strong>High School:</strong> Foundation University</td>
</tr>
<tr>
<td><strong>Dumaguete City, Philippines</strong></td>
</tr>
<tr>
<td><strong>College:</strong> Silliman University</td>
</tr>
<tr>
<td><strong>Dumaguete City, Philippines</strong></td>
</tr>
<tr>
<td><strong>B.S. Social Work, 1976</strong></td>
</tr>
<tr>
<td><strong>Graduate:</strong> University of the Philippines</td>
</tr>
<tr>
<td><strong>Diliman, Quezon City, Philippines</strong></td>
</tr>
<tr>
<td><strong>Master in Community Development, 1982</strong></td>
</tr>
<tr>
<td><strong>Rowan University</strong></td>
</tr>
<tr>
<td><strong>Glassboro, New Jersey</strong></td>
</tr>
<tr>
<td><strong>M.S.T. Elementary Education, 2000</strong></td>
</tr>
</tbody>
</table>