

**BRIDGING THE GAP: REMEDIAL READING FOR MINORITY STUDENTS
AT THE MIDDLE SCHOOL LEVEL**

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**BRIDGING THE GAP: REMEDIAL READING FOR MINORITY STUDENTS
AT THE MIDDLE SCHOOL LEVEL**

A Field Study Thesis

Presented for

**Education Specialist
Degree**

Austin Peay State University

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August 1999


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I am submitting herewith a thesis written by Madeline Myers Haller entitled "Bridging the Gap: Remedial Reading for Minority Students at the Middle School Level." I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Education Specialist, with a major in Administration/Supervision.



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DEDICATION

This thesis is dedicated to my parents,

Frank and Dorothy Myers

who have given me the encouragement and support needed to pursue this degree.

ACKNOWLEDGMENTS

I would to thank my parents, Frank and Dorothy Myers who have given me the encouragement and support needed to pursue this degree. To my friend, Richard Beckler who assisted me in using my new computer and functioning as a courier to APSU. To my committee chairperson, Dr. Ann Harris who facilitated the completion of my degree by setting deadlines to keep me on track.

ABSTRACT

This research determined what effect a middle school reading remedial class would have on decreasing the achievement gap between minority and Caucasian students. Reading achievement of 6th and 7th graders was measured before and after participation in an extra multidimensional reading class and an after-school tutoring program using standardized tests. Review of the test data revealed no significant difference in the mean grade equivalent between pre- and post-test scores.

Insufficient data was collected on the after-school tutorial program to determine any effect it may have had on achievement scores between students in the reading remedial and tutorial program and students only participating in the remedial reading class.

It was concluded that although the 6th grade students' with the lowest pre-test scores showed the most improvement, and 70% of 7th grade students improved .97 grade equivalents, no significant impact was made on the overall reading achievement scores of minority middle school students. Modifications should be made in the reading program of minority students in order to bridge the existing achievement gap.

TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION.....	1
The Problem.....	2
Importance of The Problem.....	2
Relationship of The Investigation to This Problem.....	2
Preview.....	2
Research Questions.....	3
Hypotheses.....	3
Assumptions.....	3
De-limitations.....	4
Limitations.....	4
Definition of Terms.....	4
Summary.....	5
II. REVIEW OF LITERATURE.....	6
Introduction.....	6
Reading Remedial Programs.....	6
Computer-Assisted Instruction.....	16
After-School Tutoring.....	20
Peer Tutoring.....	25
Summary of The Literature Review.....	27
III. METHODOLOGY.....	30
Sample Selection and Characteristics.....	28
Data Collection Instrument.....	29
Quasi-experimental Treatment.....	30
Design and Procedures.....	31
Statistical Procedures and Analysis.....	32
Summary and Importance of The Study.....	33
IV. DATA ANALYSIS.....	37
Sixth Grade Reading Results.....	34
Seventh Grade Reading Results.....	36
After-School Tutoring Program.....	38

V. DISCUSSION.....42

 Results of The Study and Previous Research.....42

 Limitations of Analyses.....44

 Conclusions.....44

 Implications for Further Research.....45

REFERENCES.....47

APPENDIX A.....51

APPENDIX.B.....52

VITA.....53

Chapter I

Introduction

The ethnic educational achievement gap in our country is not new. While this fact is not disputable, there is no clear consensus on the causes or solutions to the disparity. In some ways, the gap has been diminishing. Since the first National Assessment of Educational Progress (NAEP, 1997) assessments in 1971, the differences between African American and Caucasian students in NAEP reading and other measures have been cut in half. Most of these gains however, took place in the 1970s, when major improvements in the education of African-American students were taking place. Since 1980, the gap has slightly increased, with a particularly disturbing drop in the reading performance of African-American and Latino 4th graders in 1994. On the NAEP in 1994, 71% of Caucasian 4th graders scored at or above the basic level in reading (1997). Only 31% of African-American and 36% of Latino students scored that well. This educational gap has serious social, economic, and political consequences.

The purpose of this study was to examine the effects a remedial reading class and after-school tutoring sessions have on achievement scores of at-risk students who are mostly African Americans. Elements of various remedial programs that will be reviewed include: (a) the use of technology, (b) completion of coursework, and (c) utilizing volunteers as tutors. Reading achievement results will be used to compare scores for students only in the remedial reading class (group A), to those in both the reading and tutorial classes (group AB). Following the analysis of the data, conclusions and implications for further study will be formulated.

The Problem

Examination of the targeted middle school's 1997-98 achievement test scores indicates a gap between Caucasians and minority students, in particular African Americans in all academic areas. A strategic plan from the Department of Defense Educational Activity has established goals for schools to decrease this gap by 50 % by the year 2000. At present, schools are unsure of the reasons for this gap and are researching what strategies will best decrease the gap between students.

Importance of The Problem

There is a growing concern in our nation about the achievement gap between Caucasians and minorities, particularly African American students. Minorities represent the fastest growing population of our society; therefore, it is imperative educators examine strategies to decrease the achievement gap in order to provide a skilled workforce for the 21st century.

Relationship of The Investigation to This Problem

A quasi-experimental design study to investigate the effects of an extra subject reading remedial class, and after-school tutoring programs with minority students was conducted. Findings from a systematic study should assist educators in planning programs that will decrease the achievement gap for middle school students in their schools.

Preview

Minority students in 6th and 7th grades will participate in a reading remedial class during school hours. Students were selected based on low reading achievement scores or by teacher recommendation. Students may also enroll in an after-school tutorial session for

all subject areas. The study examined the effects these two programs had on the reading achievement scores. The literature review that follows examines various aspects of remedial reading and after-school programs that have been found to influence reading achievement.

Research Questions

The problem that was investigated was based on the following questions: Will students participating in an extra subject reading remedial class make significant reading achievement gains? In addition, will students participating in both a reading remedial program and an after-school tutoring program make significant reading gains, compared to students only participating in a reading remedial program?

Hypotheses

There will be no significant difference in reading achievement scores, between the pre- and post-tests of middle school minority students in a remedial reading class.

There will be no significant difference in reading achievement between middle school minority students in both the after-school tutorial, and remedial reading classes and those only participating in the remedial reading class.

Assumptions

The following assumptions will be used during the proposed study.

1. The Hawthorne Effect was presumed to be equalized for the experimental group.
2. The dependent variable tests were administered and scored in a consistent manner.

De-limitations

This study was limited to middle school minority military-dependent students, who have low achievement scores in reading. Most of the minorities were African Americans.

Limitations

The remedial reading teacher has had 15 years of teaching experience in a special education resource room. No other specific remedial reading or tutoring training has been provided for the teacher or volunteers.

Students attending the after-school program may do so on a volunteer or as-needs basis which may cause inconsistent participation in the program. In addition, the number of volunteers provided in each tutoring session after-school will vary, causing the amount of individual assistance to change. These two factors may weaken the results of the after-school program.

Definition of Terms

The following terms are used throughout this research.

1. At-risk: students who are educationally disadvantaged as evidenced by low test scores or poor grades.
2. Minority: typically African Americans, but may also include Hispanics and Asians.
3. After-school tutorial: students may receive assistance in all subject areas from teachers and volunteers twice a week.
4. Extra subject reading remedial class: students receive the reading remedial class in addition to all academic subjects, including reading, in the regular classroom during the school day.

Summary

An achievement gap exists between middle school minority students and their Caucasian peers. Since minorities represent the fastest growing population of our society it is absolutely necessary educators explore program alternatives in order to decrease this gap.

The study was designed to explore the alternative programs of a reading remedial class and an after-school tutorial program. The results of this study were related to what has already been investigated in the field.

Chapter II

Review of Literature

Introduction

Despite recent gains in achievement scores, African Americans, Hispanics, and low-income students continue to achieve well below Caucasians, Asians, and high-income students according to Ogle and Alsalam's study, (as cited in Anderson, 1997). Educators' understanding of the factors contributing to the achievement patterns of at-risk students is limited. Therefore, it is necessary to explore strategies that may decrease the ethnic achievement gap facing most minority students.

The major themes of the review of literature include (a) an examination of reading remedial delivery models, (b) the types of reading activities shown to have yielded significant achievement gains, and (c) the use of technology to increase reading achievement scores. In order to examine the additional effects an after-school tutoring program will have on reading achievement, literature concerning the use of volunteers and completion of coursework will also be reviewed.

Reading Remedial Programs

Extra subject reading delivery models. A study by Mac Iver (1991) examined the effects of remedial reading activities on the achievement of middle school students who have fallen behind two or more years in reading. Analysis of the study was done through merging data from the base year surveys of the National Education Longitudinal Study (NELS:88) of 1988 by Ingels, Abraham, Rasinski, Karr, Spencer, and Frankel, and the survey from Hopkins Enhancement Survey of NELS:88 Middle Grades Practices by

Epstein, McPartland, and Mac Iver, (as cited in Mac Iver, 1991). The base year study design used a two-stage procedure to select a nationally-representative sample of schools containing eighth graders and a random sample of eighth graders within each of these schools. A participation rate of 98% was obtained.

For each remedial activity, the reading achievement of targeted students was estimated using an ordinary least squares regression model and a two-level hierarchical linear model. Results indicated that approaches in which students are provided with a substantial extra dose of instruction (i.e. in extra subject periods and summer classes) are particularly effective. Peer tutoring, mentoring, and before or after school programs were not reliably effective in increasing student achievement (Mac Iver, 1991). Some evidence suggested that pull-out programs and tutoring programs are somewhat less effective than the extra-subject period approach to remediation. Finally, schools that offered more than one type of remedial program for a targeted population showed greater gains in reading achievement (Mac Iver, 1991).

An obvious limitation in Mac Iver's study is that data obtained by examining the associations between instructional offerings and students' outcomes may be spurious. In addition, the level of detail obtained from principals was fairly superficial. For instance, distinctions between the different types of extra subject programs were not taken into account. It is unclear what type of remedial reading activities took place during the tutoring or extra subject reading class. The study only indicated what type of delivery model showed the best gains in reading.

A study by Lee and Croninger (1994) using the same sample of poor and middle class eighth graders as MacIver, concluded while non-grouping is positively associated with the equitable distribution of reading achievement, non-grouped class structure was simultaneously negatively associated with school mean achievement. It was recommended by Lee and Croninger that students be placed in heterogeneous groups, but receive extra instruction in addition to and coordinated with their regular classroom when their skills are weak.

In class or pullout remedial reading programs. Bean, Cooley, Eichelberger, Lazar, and Zigmond, (1991) discovered that setting can make a difference in terms of what students experience in remedial education. Observations were noted during a four-month period between the two remedial reading program settings in a study conducted in a large urban school district. Pullout students experienced more direct teaching activities in a group situation, while in-class students experienced more time in a one-on-one tutoring mode. More time was spent in the pullout setting on comprehension skills, during reading activities, and speaking/listening skills. For in-class settings, significantly more time was spent in after-reading activities.

In general, the reading remedial program in the pullout setting used materials and focused on skills that seemed unrelated to the reading instruction received in the regular classroom. Instruction was mostly implemented with the group as a whole and individualized instruction only occurred occasionally. In the in-class setting, there were greater amounts of time in which there was no interaction between the reading specialist

and students. Teachers also functioned more as monitors, as students attempted to complete assignments (Bean, Cooley, Eichelberger, Lazar, & Qigmond, 1991).

Setting can make a difference in terms of what students experience in a reading remedial program (Bean, Cooley, Eichelberger, Lazar, & Qigmond, 1991). But regardless of the setting, the most important measure of any reading remedial program should be the academic gains in reading. This measure of academic gains was omitted from the study. Neither program seemed “alive” with innovative teaching strategies, technology, or activities to engage the learner.

Multidimensional reading delivery model. Anderson, Chan, and Henne, (1995) found, while using collaborative groups of sixth graders, literacy performance improved when strategy instruction in reading and writing was administered. Instruction in this study included: (a) group collaboration, (b) opportunistic teaching, (c) reading and writing as problem solving, (d) flexible strategy use, and (e) self-assessing of students’ existing strategies. Students were encouraged to continually read more challenging texts as a result of viewing reading as a problem-solving process. Learning how to understand text was followed by text analysis in which students determined the kinds of information and the feelings engendered by the text (Anderson et al., 1995).

Sixth grade students were matched on race, gender, and reading comprehension scores, similar to the proposed study. All students were at least two years behind according to teacher judgments and standardized testing. The experimental group engaged in two hours of strategic reading and writing instruction daily for fourteen weeks. Either

the project staff members or two teachers from the school who had received training during the study provided instruction.

However, no specific remedial training in reading had been given to the teacher or volunteers in the study, although the teacher had taught resource for a number of years. While Anderson's study focused mostly on reading comprehension, this field study concentrated on reading comprehension and vocabulary.

Results of the study (Anderson et al., 1995) showed how mean grade-equivalent scores increased from 4.29 to 5.14 for experimental students, compared with the control group's scores increasing from 4.11 to 4.13, on the Stanford Reading Achievement Test. Although the scores obtained indicated that the experimental group made significantly greater gains in reading comprehension than the control group, obvious limitations of the study should be considered.

One limitation was the relatively small sample size of the study. Only 10 experimental and seven control students were analyzed. The length of the study was also short in duration, impeding the ability to generalize the results. Additional study is needed in order to remedy the middle school reading problem.

Another strategies-based program called, "Students Achieving Independent Learning" (SAIL) was developed in the Montgomery County, Maryland, Public Schools System, by educators (Bergman & Schuder, 1993). The program emphasized a meaning-centered reading instruction throughout the whole reading process. Reading strategies were organized and taught by traditional stages of the reading process: (a) getting ready to read, (b) before reading, (c) while reading, and (d) after reading. Within these stages,

Bergman and Schuder grouped the strategies by the kinds of decisions readers need to make. For example, students should ask themselves, what should they do to see how well they met their purpose for reading? For each decision point, a prompt was established to stimulate conscious decision-making.

The SAIL program improved reading comprehension by changing the goal from accurate oral reading to constructing meaning while students read. Teachers monitor students' progress during classroom reading by using four strategies: (a) predict-verify-decide, (b) visualize-verify-decide, (c) summarize-verify-decide, and (d) think aloud. When students have finished reading, the teacher works on any vocabulary or decoding skills that proved to be problems, always returning to the place in the story where these words were used (Bergman & Schuder, 1993).

By using reading strategies throughout the reading process, SAIL launched a direct assault on the passivity that is a primary characteristic of poor readers. The development of literacy in the middle school requires students to interact with text, the teacher, and one another to express or clarify ideas and feelings.

Critical Dialogue, an instructional approach, has shown to promote the development of linguistic and higher order thinking skills by incorporating such interactions in the classroom. Through responsive instructional conversations based on students' background knowledge and experiences, teachers facilitate at-risk students to talk and listen to one another and think through, evaluating, and expressing ideas. Through such "understanding" conversations of selected literary excerpts, teachers were able to: (a) reduce at-risk students' stress toward reading in the classroom, (b) gain and

hold at-risk students' attention, and (c) encourage students to make more thoughtful connections to the work. A writing activity requiring students to apply what they have learned follows (Gentile & McMillan, 1994).

Collaborative discussions were also used in a technique called thinking aloud, used to aid students in comprehending text. Kucan and Beck (1997) reviewed research describing the influence thinking aloud has had as a method of instruction for reading comprehension. It was discovered by Silven and Vaurus when teachers modeled strategic processing for comprehension and students were guided to think aloud as well, students scored significantly higher than other students who had only listened or observed the teacher, (as cited in Kucan & Beck, 1997).

Additionally, in a study by Loxterman, Beck, and McKeown, students were asked to recall and to answer open-ended questions while using thinking aloud techniques (as cited in Kucan & Beck, 1997). Students who used thinking aloud performed significantly better than students who did not and the effect was maintained over a delay of one week.

A study by Alfassi (1998) investigated the effects of strategy instruction compared to traditional methods in remedial reading high school classes. Strategy instruction is based on a cognitive view of reading comprehension versus a skill acquisition that can be broken down into sets of sub-skills. Students using strategy instruction techniques use strategies such as: (a) generating questions, (b) summarizing, (c) clarifying word meanings, and (d) predicting while reading.

Alfassi (1998) used two different tests to measure achievement gains. The experimenter-developed comprehension tests supported Alfassi's (1998) hypothesis that

students exposed to strategy instruction would show greater improvements in reading comprehension than students exposed to traditional methods of remedial reading, while the Gates McGinitie Reading Test did not show significant improvement.

Different test results found by the two tests may be attributed to several factors. First, the experimenter-developed comprehension tests were taken from expository material, similar to what the students used in the intervention; whereas, the standardized test used narrative material with an emphasis on vocabulary knowledge. Second, different tests may place different demands on a student's ability to comprehend. Third, the intervention was only administered for 20 days, which may not have been long enough to show a significant difference on the standardized test.

Reading comprehension and word identification skills significantly increased when struggling readers were given an increased amount of reading practice (Shany & Biemiller, 1995). Two groups of 19, 3rd and 4th graders, were selected by teacher referral and a screening battery for the experimental group, and 10 students in the same grades were in the control group. Treatment included reading practice with teacher assistance or while listening to a tape. Both experimental groups showed similar gains in speed, accuracy, and comprehension.

Possible limitations of the Shany and Biemiller study (1995) are: (a) the control group consisted of a small number of students, (b) material used in the study only consisted of basal readers, (c) and some teacher assistance was given to the tape-assisted experimental group. The study also negates the delusion that low-ability readers be given a decreased amount of work.

Extra subject and multidimensional reading delivery model. At Morse High School in San Diego, the use of a multidimensional approach to reading showed significant gains in achievement. With a student population made up of entirely minorities, 59% of the 351 entering 9th grade were reading below the 50th percentile, as measured by the Abbreviated Stanford Achievement Test (ASAT) (Showers, Joyce, Scanlon, & Schnaubelt, 1998). The school's faculty and administration knew a paradigm shift in the reading curriculum was needed.

The Morse staff had begun administering the Gates McGinitie Reading Test to all entering freshmen and recommended remedial measures for students two or more years below grade level in reading. Despite the faculty's efforts over the past six years, small gains were made using tutoring and computer-assisted programs.

Similar to the recommendation from the Mac Iver study (1991), the Morse team decided to build an extra subject reading course into the secondary curriculum. Students would take this course in lieu of electives. The multidimensional high school course included: (a) strategies that build vocabulary through natural language and reading, both at home and at school; (b) listening skills enhanced by oral reading; (c) instruction in phonetic and structural analysis; and (d) instruction in comprehension.

The district's standardized test, the ASAT, indicated the 32 enrolled 9th grade students improved from a mean 5.34 grade-level equivalent score on the pre-test to a mean post-test of 6.39 during the first semester (Showers et al., 1998) at the $p > .0001$ significance level. During the second semester, the Gates McGinitie Reading Test was

used to indicate a mean gain of 1.32 years, at the $p > .0001$ significance level (Showers et al., 1998).

The Morse High School reading course indicated that intensive reading instruction can greatly accelerate the skill levels of 9th grade students, reading two or more years below grade level. These findings were similar to the conclusions for middle school students for the Mac Iver (1991) and Anderson, Chan, and Henne (1995) studies.

Possible limitations to the study include the lack of a control group to rule out threatening extraneous variables that may have influenced the results. These extraneous variables may have contributed to the fact that the treatment had worked less effectively during the first semester for African American students. However, during the second semester the African American students gained more than the other students.

The Talent Development Model of Middle School Reform includes a "Student Team Literature" (STL) program which has been shown to improve students' reading comprehension (Mac Iver, Plank, & Balfanz, 1997). A study with high minority, low-income 6th, 7th, and 8th graders at a school in Philadelphia showed this increase after one year of implementation. Some pertinent components of the model included: heterogeneous grouping of students for all core academic classes, and elective "extra dose" classes during the regular school day for those needing extra assistance. Other components included: (a) home-school-community partnerships, (b) restructuring teams, (c) career exploration, and (d) advisee-advisor type of instruction.

One limitation of the study which impacted the accuracy of measured gains was the fact that researchers used two different tests for the pre- and post-test. The observed

effect size of .51 in reading comprehension may also be due to other components of the model that were implemented at the same time. In addition, this program may not be the best for at-risk students, since the students who showed the most improvement were those with the strongest prior reading skills.

The STL curricular materials included teacher guides, and student partner discussion guides. Both guides are designed to challenge students with high-level questions about the literature they are reading. Specific activities within the STL included: (a) partner reading, (b) partner discussion, (c) word mastery, (d) pre-test activities, and (e) story-related essay writing (Mac Iver, et al., 1997). Students were assessed each week by their teammates and by their teacher. Cooperative learning and daily direct instruction by the teacher were the primary teaching strategies. Listening-comprehension was also stressed while students listened to the teacher read.

While the computer-assisted instruction was only minimally mentioned in the Anderson et al. (1995) study, the use of technology has shown impressive results in other studies. Technology can play a vital role in the remedial reading class when it is effectively aligned with the reading curriculum goals.

Computer-Assisted Instruction

In the Orange County, Florida Literacy Project, middle school students have improved their reading and writing skills by using computers. The project combines the benefits of (a) computer-assisted technology, (b) sound principles of literacy instruction, (c) an accommodating schedule, and (d) small class sizes to help students develop the skills and confidence they need (Hasselbring, Goin, Taylor, Bottge, & Daley, 1997).

The multimedia Peabody Learning Lab with a virtual tutor guides students through a series of skill-development activities to improve word recognition, reading comprehension, and spelling skills. In addition to working on the computer for 20-30 minutes each day, students watch a video segment that gives the background and mental model of the text passage, prior to reading it.

The average scores of the 376 students on the vocabulary and reading comprehension sub-tests of the Stanford Diagnostic Reading Test improved significantly over the course of the program (Hasselbring et al., 1997). Interviews of students and parents indicated that students' attitudes and study habits had improved.

Melvin, the virtual tutor, assisted students in many commendable ways by (a) pronouncing words, (b) giving definitions, (c) providing feedback on word recognition, (d) correcting spelling and (e) facilitating reading comprehension. Using the video to provide background knowledge for disadvantaged students levels the playing field from which students draw upon to understand new information. A lack of prior knowledge has been long overlooked in reading remedial research for at-risk youth.

Trained teachers in remedial reading approaches may be assisted by computer technology. Students' achievement scores increased as the amount of individual instruction was maximized in the classroom by using the virtual tutor. Melvin, the virtual tutor, did have some limitations, however. Melvin was not able to correct students as they read out loud, or interactively help them sound out words. The computer program can only correct answers the student has given to the questions. Although the results of the

study were significant, the limitations of Melvin can be overcome by personalized instruction from the teacher.

Florida's Literacy Project using Melvin and the Peabody Learning Lab was also described by Blasewitz and Taylor (1999), but credited the improved reading levels to a comprehensive balanced approach in teaching reading in which Melvin was one component. The goal of the project at the middle schools was to address the literacy needs of the lowest readers in their schools by accelerating their progress with high level work, not by remediating their reading with low reading level or skill drill materials. This was accomplished by creating: (a) a literacy rich classroom environment, (b) a two-period block of time for the class, (c) a literacy workshop as described by Allen, (as cited in Blasewitz & Taylor, 1999), (d) a technology support program, and (e) a means for students' assessment through multi-media projects.

The increase in vocabulary and reading comprehension scores, as well as grade point averages by the same group of students as noted by Hasselbring et al. (1997) was also mentioned by Blasewitz and Taylor (1999). But this improvement appears to demonstrate that it takes more than one specific teaching methodology or one specific technology to reach urban learners. The differences noted between the two articles as to the primary contributing factor for the students' improvement, may be a function of the author's place of occupation, whether it be at Peabody or in the Florida school system.

A study was conducted by Schofield, Eruich-Fulcer, and Britt (1994) to explain why students who stated while a teacher provided better help than a computer-based tutor still preferred the computerized tutor when both were offered. The two-year qualitative

study of computer usage was conducted in an urban high school that serves 1,300 students with 60% minorities.

The two major methods of data gathering used were classroom observations and repeated interviews with students and teachers. The treatment group was observed before, during, and after the use of the computerized tutor. The control classrooms did not use the computer.

Results of the study indicated three factors. First, rather than replacing the teacher, the tutor provided an additional resource for students. Second, using the tutors allowed teachers to provide more individualized help. Third, students using the tutors had more control over the kind and amount of help they received from the teacher (Schofield et al., 1994).

Although the use of instructional technology does change the role of the teacher in the classroom, it does not replace the need for personalized instruction as seen in the study by Hasselbring, et al. (1997). Using interviews and observations as the main methods of data collection usually introduces a subjective element to the interpretation of the data. A more beneficial component should have added to the study. Comparing test scores of those utilizing the computerized tutor to those in the control group would verify if students' preferences translated into improved performance.

Success Maker, a computer-assisted program with a reading component, has been used to provide students with more individual attention similar to the use of Melvin in the classroom (Computer Curriculum Corporation, 1999). Students work on the computer approximately 15-20 minutes daily on similar types of reading skills as in the Hasselbring

et al. (1997) study. Success Maker, based on the mastery learning model, uses technology to help teachers collect performance data, deliver instruction adapted to each student, and monitor learning so that student achievement is continually improved.

Several independent evaluations of the program have validated the dramatic success that students have experienced using Success Maker. Results of one such study conducted in 94 classrooms with 97% minority students, in Manhattan, New York indicated schools using Success Maker outperformed the aggregate across the district on the Degrees of Reading Power Test (Computer Curriculum Corporation, 1999).

In 1998, L'Anse Creuse Public Schools in Michigan conducted an independent evaluation by Brush (as cited in Computer Curriculum Corporation, 1999). The study randomly assigned students in 15 classes to three treatment groups for 10 weeks:

(a) exploration courseware only, (b) foundation only, or (c) a combination of both.

According to pre and post-testing results using Iowa Test of Basic Skills, data indicated the students receiving the combination treatment scored significantly better ($p < .02$) on the reading post-test ($M=63.66$) than students in the foundation only ($M=59.51$).

If treatment is extended for the entire school year, where students spend 15 minutes every day on Success Maker, the Computer Curriculum Corporation (1999) documents students will make a 1.5 year gain in reading. Schools using Success Maker over several years also report an increase in reading scores on the Stanford Achievement Tests in grades 3-6 (Computer Curriculum Corporation, 1998). Some of the increases during some years are not as substantial as other years, but nevertheless the scores are moving in the right direction.

Other technologies such as the World Wide Web offers educators a powerful opportunity for teaching students how to read better (Lewin, 1999). The World Wide Web is the exciting part of the Internet with its point-and-click hyperlinks, its sounds, its colorful images, and its animated graphics. Kids love accessing the web. As a teacher in a 6th grade literature and writing class, Lewin (1999) developed electronic graphic organizers on computers to map, cluster, or web the plot's development. Students may use the Web to take a virtual trip to the setting of the story or research necessary background information to increase comprehension. A set of guided questions, or electronic worksheet, was used as they read the information at the Web sites. Additional sources can be explored by students or letters emailed to the author suggesting more than one interpretation (Lewin, 1999).

After-School Tutoring

Wasik (1998) provided a comprehensive review of the current state of knowledge and the effects of various volunteer tutoring programs in reading. Only three of the 17 programs reviewed had an evaluation comparing equivalent treatment and comparison groups to determine the effectiveness of the programs. These three programs were: (a) Howard Street Tutoring, (b) Juel, and (c) the Intergenerational Tutoring Program. The Intergenerational Tutoring Program test results were not completed at the time of the publication of the journal article.

To determine the effectiveness of the Howard Street Tutoring Program, Morris and his colleagues (as cited in Wasik, 1998) gathered data from a treatment and a control group involving 50, 2nd and 3rd graders. In addition, data from case studies and descriptive

data were collected. Students were matched on word recognition scores and randomly assigned to either the control or treatment groups. A skilled supervisor was required to monitor the tutors and to write individual lesson plans for the children. After students received an average of 50 hours of one-to-one instruction in reading, students were post-tested on the same reading and spelling battery that was used as a pre-test. The tutored group compared to the non-tutored group performed substantially better on both sections of the test (Wasik, 1998).

Research findings presented by Juel (as cited in Wasik, 1998) of tutoring at-risk minority first graders by at-risk college students found the tutored group outperformed the mentored group at the end of the 1st grade on the Iowa Test of Basic Skills. Fifteen of the 30 lowest performing students became the treatment group (who received tutoring) while the remaining 15 students were assigned to the mentored group (who received no tutoring in reading). Students in the treatment group were significantly lower performing students initially, compared to the mentored group (Juel, 1996; Wasik, 1998).

Each university student tutored one child for 45 minutes, twice a week. Two types of verbal interactions that had been identified and appeared to be numerous in the successful dyads were scaffolded and modeled. The tutors used scaffolded techniques to enable the child to complete a task that the child couldn't otherwise do (word recognition), by providing a piece of information and/or segmenting the task into smaller, clearer ones (Juel, 1996). Modeling techniques either involved role reversal where the tutor pretended to be the child, or by demonstrating the reading or writing process.

Although the results of the treatment group were positive, the study does have an obvious limitation: the treatment and comparison groups were not comparable. The control group possessed higher pre-test scores than the treatment group and did receive some form of treatment, be it mentoring and not tutoring (Juel, 1996). An additional limitation was that students were not randomly assigned, but assigned based on their initial performance in reading. A relatively small number of participants (15 in each group) were also another limitation.

Wasik (1998) found common features throughout the 17 programs: (a) the presence of a designated coordinator who had specialized training in reading and reading instruction, (b) the training provided to the tutors, and (c) the lack of coordination between the volunteer programs and classroom instruction. Common components found in the tutoring sessions were: (a) reading of new material by the student, (b) reading books in which either the words or the entire story were familiar to the student, and (c) activities emphasizing word analysis, letter-sound relationships, and composing (Wasik, 1998). All of the reviewed tutoring programs show the potential of well-designed volunteer tutoring programs.

A study by Scales, George and Morris (1997) investigated whether an after-school tutorial program, developed and operated in a local African American church helped children improve in their academic subjects at school. Thirty-three students, mostly African Americans were tutored by 28 adults in two weekly sessions during the school year. The tutoring session for middle school students consisted of working on homework assignments, academic performance, communication skills, and developing an awareness

of the importance of economic security for their lives. The pastor would also discuss with interested students the importance of high academic achievement in school.

Near the end of the school year participating students, parents, tutors, and other adults responded to a questionnaire designed for their group. Of the 31 student responses, 21 reported that the program helped them in school. Twenty-two of 31 students reported that the program helped them with their homework. About 84% of the parents reported their children were helped with their homework, and 100% said they would enroll their children in the next program. One hundred percent of the tutors said they would tutor in the program again (Scales, et al., 1997).

The Likert-type questionnaire indicated that the majority of participants had a positive perception about the results of the after-school program. However, there is an inherent subjection to the study by Scales, et al. (1997) when only perceptions are used to evaluate the success of a treatment. A more indicative measure would be to examine the report card or the school-wide achievement test results to verify the perceived benefits of the program.

Parent volunteers as tutors. Several national reading programs use volunteers as an integral part of providing remediation for children. Even the primary component of the America Reads Challenge is the use of volunteers to tutor children in schools (Wasik, 1997a). As many as one million tutors will be working with children at an estimated cost of \$2.75 billion to subsidize this effort. But currently there is little work documenting the effectiveness of using volunteers as tutors.

In a review of five tutoring programs, Wasik (1997b) concluded one-to-one tutoring was an extremely effective form of instruction. The primary drawback, however, was the high cost. Additionally, programs that used certified teachers as tutors appeared to have substantially larger effects on achievement, than programs that used paraprofessionals. Only two of the programs reviewed compared students receiving volunteer tutoring, with similar students not receiving tutoring. Both research studies involved a small number of students and showed from .25 to .61 gains in various reading skills.

A noteworthy feature in training volunteers was shared by both the research studies. The Howard Street Tutoring Program for 2nd and 3rd grade students, and the School Volunteer Development Project for children in 2nd to 6th grade, both modeled tutoring sessions by a reading specialist to train the volunteers. The reading specialist provided feedback, offered comments on the tutoring session, and developed tutoring lessons for each child. Volunteers then tutored students for a total of two hours weekly for a minimum of one year. Only the Howard Street Tutoring Program remains in existence (Wasik, 1997a).

While there is insufficient evidence that the volunteer programs improve children's reading achievement, there is even less evidence concerning what forms of volunteer tutoring programs are most likely to work. More research should be conducted to ensure fiscal resources are well spent.

Peer Tutoring

Cost-effectiveness research shows that peer tutoring provides greater achievement per dollar than other more often used educational innovations (Martino, 1994). Levin, Glass, and Meister found peer tutoring produced more than twice as much achievement as did computer-assisted instruction (as cited in Martino, 1994). Also peer tutoring produced three times more growth in achievement than reducing class size from 35 to 30 students.

Research reported by the National Association of Secondary School Principals (as cited in Martino, 1994) showed that at-risk young people who are involved in well-planned and supervised peer tutoring show gains in their: (a) grade-point averages, (b) reading skills, and (c) reading comprehension along with other subjects.

The Parsons School District developed a peer tutoring class as a regularly scheduled elective course offered for high school students. Students wanting and needing help with any of their classes can request enrollment in the peer tutoring class (Martino, 1994). In addition to assistance with the academic content, (a) study and organizational techniques, (b) computer-assisted instruction, (c) listening skills, (d) note-taking procedures, (e) speed-reading, and (f) word processing are addressed. A "Responsibility Contract" is signed by both parents and their children insuring a commitment is made by all stake-holders.

Both peer tutors and tutees receive a grade and earn elective credit in the class. Often schools attempt to conduct some form of peer tutoring after school or during lunch, which is a hit and miss time slot. By making peer tutoring a part of the regular school day

and limiting the class to motivated students, students are able to learn from the success of their peers.

Completion of academic coursework. Academic coursework completion was one of the variables examined in a longitudinal national study of 8,100 at-risk high school students (Anderson, 1997). Respondents completed a survey about family background and educational experiences, along with a battery of ability and achievement tests. Results indicated that completion of academic coursework was a significant and important predictor of achievement for at-risk high school students. Anderson noted that student motivation exerted a powerful influence on the completion of academic coursework. It stands to reason that students who have consistently completed their assignments will perform well in the future. Good study habits, adequate motivation, and self-discipline will contribute to students' success. The implications of the Anderson study provided the basis for the coursework assistance in the after-school program in the study.

Possible limitations of Anderson's study include that student motivation may have had a stronger influence on at-risk youth compared to youth in general. Students who have fallen behind may require more motivation to complete the same assignment, compared to students on grade level. At-risk students' sensitivity to changes in motivation should be investigated. In addition, the sampling selection procedure could have biased the findings by eliminating some of the lowest achieving at-risk learners from the final analysis, due to drop out rates. Explanations should be sought as to why these students failed to remain in school.

At Owen Brown Middle School in Howard County, Maryland, many activities have been initiated to enhance the academic success of African American students (Berrington & DeLacy, 1993). One of these is a homework club, held two afternoons a week for one hour after school. This supervised time may be the only time set aside for homework for many children. An activity bus is provided to take children home, ensuring that all students have the opportunity to participate. Those having academic difficulties are individually encouraged to attend. Parents are contacted to increase the likelihood of their child's participation. A record is kept of minority student attendance to determine whether there is a correlation between participation and improved academic performance (Berrington & DeLacy, 1993).

Summary of The Literature Review

The review of literature seems to support remedial reading instruction for at-risk students, many of whom are minorities, in an extra subject class during the school day. This class should have a small teacher-student ratio with specific reading remedial training provided for the teacher and other assisting paraprofessionals. A multidimensional approach to reading using high interest and challenging reading text, coupled with multimedia computer-assisted instruction, has shown positive gains in achievement.

After-school tutoring using trained parent volunteers has provided supplemental assistance for at-risk youth. Consistent use of these tutoring sessions over the course of the school year has shown increases in reading achievement. In addition, course completion of low achieving students has shown to increase achievement scores in high school students. The elements of the successful reading remedial and tutoring programs

found in the review of literature, have served as the basis for the methodology used in this study.

Chapter III

Methodology

Sample Selection and Characteristics

A Department of Defense Educational Activity school that serves military dependent children in the 6th, 7th, and 8th grades served as the site for this research. A new remedial reading class and after-school tutorial program was implemented at the school in October of 1998. Students were selected based on low reading achievement scores, or recommended by teachers for the additional reading class during school hours.

Most of the students in 6th and 7th grade attended the remedial reading class as an additional subject class. Due to scheduling problems, several of the 6th grade students attended the remedial class instead of the regular reading program. The sample included African Americans and other minorities, in order to further examine the effects of remedial reading and tutoring on reading achievement.

The tutorial class participation was on a volunteer basis for both grade levels. Students attended the after-school tutoring program two sessions, twice a week for 45 minutes each session during the school year. Students, parents, or teachers could request the students' participation in the program. Tutoring sessions involved all academic areas or provided assistance with homework completion. Many students who have fallen behind in school tend to not complete their homework or coursework, which only adds to the achievement gap between minority and Caucasian students. Letters explaining the study were sent to each parent whose child was recommended for the reading remedial class (see Appendix A).

Remedial reading class selection. Reading scores below the 4th stanine from the 1998, California Test of Basic Skills (CTBS) were used to identify the 6th and 7th grade minority students selected for the Remedial Reading Class. In addition to the minority students selected by their reading scores on this last achievement test given, students were also recommended by their teachers based on low grades in reading class. In 6th grade, students were selected based on low CTBS scores and their teachers recommended 15 students for a total of 22 students. In 7th grade, students were selected based on low CTBS scores and their teachers recommended 8 students for a total of 10 students.

After-school tutorial class. Students needing extra assistance after school from the teacher because of poor grades in any subject had the opportunity to attend the tutorial class offered twice a week. All attendance was on a volunteer basis. An attendance chart was kept with the subject area requiring extra assistance for attending students noted.

Data Collection Instrument

The Gates McGinitie Reading Test was used as in the Showers et al., (1998) study. The Gates McGinitie Reading Test served as the pre-test and post-test for the reading remedial class. Survey D for grades 4-6 was given to the sixth graders and Survey E for grades 7-9 was given to the seventh graders. The test examined three reading areas: (a) vocabulary, (b) speed and accuracy, and (c) comprehension. The vocabulary section of the test sampled the students' ability to recognize or analyze isolated words. The test required the matching of a word with the correct synonym. Speed and examining how rapidly students can read with understanding material of relatively uniform difficulty tested accuracy. The short paragraphs were then followed by a simple multiple-choice item

measuring comprehension of the inferential type. And finally, comprehension was meant to measure the student's ability to read complete prose passages with understanding. This subtest involved short paragraphs of increasing difficulty in which comprehension was measured by asking the pupil to choose appropriate words to fit two or three omissions in the paragraph.

Alternate-form reliabilities of the Gates McGinitie Reading Test range from .78 to .89, except on the speed and accuracy sub-tests, where the coefficients tend to be somewhat lower. The inter-test correlation co-efficients fall substantially below alternate-form reliabilities. The inter-test correlations were high enough to permit a diagnostic analysis of reading difficulties. No mention of validity was made in the Gates McGinitie Reading Test Manual. The grade equivalent score obtained on the test was considered the instructional reading level for the student.

Sixth grade students were only given the comprehension portion of the Gates McGinitie Reading Test, while the 7th grade students were given both the vocabulary and comprehension sections of the test. A computerized reading diagnostic test called STAR was used as a pre- and post-test to assess the reading grade level for students in the treatment groups. Students' scores on the STAR indicated how they performed on the test compared to a nationally representative sample of students who were administered the test during the Spring of 1996. A letter from the Principal giving permission to analyze the data is included in Appendix B.

Quasi-experimental Treatment

Treatment group A was 6th and 7th grade students who received between 45 and 55 minutes of remedial reading instruction each day in addition to a regular reading class. Treatment group B was 6th and 7th grade students who received remedial reading instruction daily and attended an after-school tutorial class for 45 minutes twice a week.

All middle school students participated in a heterogeneous reading class taught by the regular classroom teachers. The remedial reading class was an additional class as opposed to a pullout program. The remedial class taught by the remedial reading teacher began in October and continued for 26 weeks until May. Post-tests were administered the last week of April. In each remedial class the student-teacher ratio was between 8-12 student per teacher. The remedial teacher, who was an African-American, did not receive any staff development pertaining to remedial reading. However, the teacher has taught in a learning impaired resource room for the past 15 years.

Design and Procedures

In the remedial class, multidimensional reading strategies were employed. The teacher introduced age-appropriate vocabulary through natural language and reading using prose, narratives, and literature based sources. Novels were primarily used as the source of reading material. Instruction in comprehension was given through teaching how to use: (a) the dictionary, (b) the thesaurus, (c) strategies for finding the meaning of words in context, (d) the main idea, (e) conclusion formation, and (f) predictions of outcomes. Spelling and vocabulary words were introduced each week from a list of the 1000 most frequently used words in addition to those students would encounter in their novels.

Activities included cooperative learning, direct instruction, inductive models of instruction, with regular practice and assessment. Technology was incorporated through locating appropriate high interest articles on the Internet, and providing practice with assessment by using Success Maker.

In the reading remedial class, students usually spent 15 minutes daily, working on Success Maker, a computerized self-pace program designed to increase vocabulary and reading comprehension with assessment. In addition the teacher and students orally read for approximately 15 minutes each day. The remaining 20 minutes during the class were used to: (a) read content area books, (b) teach study skills and develop guides, (c) work on reading skills listed above, or (d) work on projects and activities with peers.

Teachers or parents worked with students needing extra assistance in any academic area in the tutorial class. Students' absence, poor test grades, or incomplete assignments may be some of the reasons students were requested to stay after school.

Statistical Procedures and Analysis

Data was recorded in a table to indicate pre-test and post-test scores for the reading remedial treatment groups. Normal curve equivalent and percentile scores as well as the grade level in reading are given. A table was used to display the pre-test and the post-test results of both experimental groups.

Descriptive statistics such as the mean and standard deviation were used to explicate the pre-test and post-test scores of both treatment groups. A *t* test for dependent samples was used to test the hypothesis comparing the remedial reading group's pre-test and post-test scores. A *t* test for independent samples, was also used for the hypothesis

comparing students in both the remedial, and tutorial programs to those only in the reading remedial class. A significance level of .05 was used for both *t* tests. The STAR was used to compare the reading level of students both before and after participating in the reading remedial class, comparing expected annual gain against the actual annual gain for the school year.

Summary and Importance of The Study

The purpose of this study was to examine the effects a remedial reading class and an after-school tutoring session has on achievement scores of at-risk students who are mostly African Americans. A review of literature was conducted to gain insight about relevant remedial and tutorial program studies that have influenced reading achievement for students who have fallen behind. The study compared pre-test and post-test reading achievement scores between the pre- and post-test reading scores of 6th and 7th grade students. Students in the reading remedial class and the after school tutorial program were compared with those who only participated in the reading remedial class. Methodology and data analysis procedures have been described.

Middle school teachers have not been well prepared to teach beginning readers or students who have not developed basic vocabulary and comprehension skills. Many of these struggling students are African Americans, who have fallen further and further behind each year, due to poor reading skills.

Poor competence in reading causes acute academic and social problems for students who have fallen behind. Presently 40% of all U.S. children are now reading below the basic level on national reading assessments (Wasik, 1997). Educators must explore

new strategies, or new combinations of strategies, in order to decrease the reading achievement gap for African American students and other minorities.

Chapter IV

Data Analysis

Research was guided by the following questions: Will students participating in an extra subject reading remedial class make significant reading achievement gains? In addition, will students participating in both a reading remedial program and an after-school tutoring program make significant reading gains, compared to students only participating in a reading remedial program?

The following two hypotheses were formed based on these questions. There will be no significant difference in reading achievement scores, between the pre- and post-tests of middle school minority students in a remedial reading class. There will be no significant difference in reading achievement between middle school minority students attending both the after-school tutorial, and remedial reading classes and those only participating in the remedial reading class only.

Sixth Grade Reading Results

Results were examined based on these two questions and hypotheses utilizing the Gates McGinitie Reading Test and STAR, beginning with the 6th grade, followed by the 7th grade results. Tables 1-4 are included to list the compiled data for each grade.

Sixth grade students were given a pre-test in October of 1998 and the post-test in May 1999 using two instruments: the Gates McGinitie and the STAR Reading Tests. All 15 students were military minority students with 80% of them being African Americans. All students received 45-55 minutes daily of remedial reading instruction. Five of the 15 students received the remedial reading instruction in addition to a daily regular reading

class. Based on comparison of the raw scores between the students who received the remedial reading class as an additional reading class and those who did not, no significant differences were noted.

On the Gates McGinitie Reading Test, 6th grade students took the comprehension portion of the test. The pre-test had a mean of 27 (out of 52 total questions) or a grade equivalent of 4.8. The post-test given showed a mean of 33 or a grade equivalent of 5. The post-test showed a significant decrease in the standard deviation, variance, and range. Students with the lowest pre-test scores showed the most improvement A two-sample *t* test assuming equal variance was used to determine significance. The calculated *t* value was .097, which was lower than critical value of 2.04 at a .05 level of significance. Distribution of the scores is illustrated in Table 1 below.

Table 1. Sixth Grade Gates McGinitie Comprehension Test

Grade Equivalent		
	Pre-test	Post-test
Mean	4.5	5.3
Median	4.5	5.3
Mode	4.1	5.3

On the STAR Reading Test, the mean grade equivalent on the pre-test was 3.8, compared to the post-test mean of 4.7. The *t* test for two samples assuming equal variance was .007 compared to the calculated *t* value of 2.05.

The expected gain for students using STAR and Accelerated Reader is between 1.8 and 2.0 grade equivalents. The expected gain for 75% of the students using Success Maker for approximately 20 hours during the school year should be one year. Only two students improved between 1.4 and 1.6 grade levels on the STAR Reading Test, and only 40% of the 6th grade students increased their reading level by one year or more using Success Maker. Table 2 below shows the descriptive and inferential statistics.

Table 2. Sixth Grade STAR Test

	Pre-test	Post-test
Mean Grade Equivalent	3.9	4.7
Median	4.1	4.7
Mode	4.5	4.7
PR	13.1	15.5
NCE	24.0	27.6

Test results on both instruments do not show a significant difference between the pre-test and post-test mean scores for the 6th grade. Therefore the null hypothesis is accepted.

Seventh Grade Reading Results

Seventh grade students were given the Gates McGinitie Reading Test and the STAR during the same time period as the 6th. Additionally, the 7th grade were given both the vocabulary and comprehension sections of the Gates McGinitie.

On the Gates McGinitie vocabulary portion of the test, the mean grade equivalent increased by .62 and the comprehension mean grade equivalent increased by .84 from the pre-test to the post-test. On the vocabulary test, unlike 6th grade, no trend was noted as to what student benefited the most from the class. However, on the comprehension portion of the test students with the lowest scores improved the most. On average this improvement was by 3.5 grade equivalents. This is well beyond the expected 1-2 year gain predicted by Success Maker and STAR programs.

The calculated *t* values for the vocabulary and comprehension means were .17 and .20 respectfully. Both were well below the critical *t* values of 2.1. Therefore the null hypotheses is accepted. Table 3 below shows the statistics.

Table 3. 7th Grade Gates McGinitie Reading Test

	Vocabulary		Comprehension	
	Pre-test	Post-test	Pre-test	Post-test
Mean Grade Equivalent	5.1	5.7	4.1	4.9
Median	5.2	5.5	3.9	4.7
Mode	5.2	5.2	2.9	3.6
NCE	32.8	36.8	25.2	29.8
PR	21.9	29.1	15.9	21.4

On the STAR Reading Test mean grade equivalent scores increased by .56 from the pre-test to the post-test. Of the ten students tested, seven improved by an average of

.97 grade equivalent and three had lower scores by an average of .3 grade equivalents. Of the improved students, only one had the two year expected growth above normal by the standard set by STAR and five had approximately the one year expected gain predicted by Success Maker. Table 4 below shows the STAR statistics.

Table 4. Seventh Grade STAR Reading Test

	Pre-test	Post-test
Mean Grade Equivalent	4.41	5.0
Median	5.0	5.0
Mode	5.9	NA
PR	15.7	16.3
NCE	25.7	26.8

After-School Tutoring Program

Insufficient data was gathered to accept or reject the second hypothesis which stated: There will be no significant difference in reading achievement between middle school minority students in both the after-school tutorial, and remedial reading classes and those only participating in the remedial reading class. Although the after-school program assisted struggling students who may have failed the year without the help, not enough of the reading remedial students consistently attended to determine an effect.

Results of The Study and Previous Research

Previous research literature supports a reading remedial program as an extra subject class during the school day. A smaller student-teacher ratio using a multidimensional approach with computer technology has shown positive gains in reading achievement. An after-school tutoring program using trained parent or community volunteers has also been shown to provide essential supplemental assistance for at-risk youth (Anderson, et al., 1995; Hasselbring et al., 1997; Lee & Croninger, 1994; MacIver, 1991; Showers et al., 1998; Wasik, 1998).

The purpose of this study was to examine the effects a remedial reading class and an after-school tutoring session had on achievement scores of at-risk students the majority of were African Americans. Two hypotheses were proposed. First, there will be no significant difference in reading achievement scores, between the pre- and post-tests of middle school minority students in a remedial reading class. And second, there will be no significant difference in reading achievement between middle school minority students in both the after-school tutorial, and remedial reading classes and those participating in the remedial reading class only.

The findings of this study indicate that students gained between .6 and .8 grade equivalents after participating for approximately seven months in a reading remedial program. Sixth graders showed the most improvement on both reading tests. Although the

t tests did not indicate a significant difference between the pre and post-test means, the results of the study are consistent with the measure of improvement in other studies.

In the Anderson, Chan, and Henne, (1995) students showed a .85 grade equivalent improvement in reading achievement scores on a standardized achievement test after utilizing a multidimensional approach in reading. Sixth grade students in the study improved by .80 grade equivalents.

Blasewitz and Taylor (1999) showed that by attacking literacy with a comprehensive balanced approach in which technology was utilized, middle school vocabulary and comprehension scores increased .5 and 1.0 grade equivalents respectively. Again, both 6th and 7th grade students overall improved their scores from .6 to .8 grade equivalents in reading.

However, the Computer Curriculum Corporation (1999) stated 75 % of the students will improve by one grade equivalent with 20 hours of participation on Success Maker each school year. Only 40% of 6th and 7th graders in the reading remedial class showed a gain of one grade equivalent or more in the study. However, the 7th graders in the reading remedial class improved by an average of .97 grade equivalents, which is close to the expected gain of Success Maker.

In the study by Alfassi (1998) employing a reciprocal reading technique, students did not show a significant improvement compared to the traditional methods used in remedial reading classes on the Gates McGinitie Test as compared to the experimenter tests. But after examining the means on both instruments used in this study, students scored as well or better on the Gates McGinitie as on the STAR Reading Test.

Limitations of Analyses

The lack of remedial reading training for the instructor could have contributed to the lack of improvement of the students. Although the instructor has had 15 years of teaching experience, the new program utilized recently implemented technology, which was previously unfamiliar to the instructor.

The small number of students in the study also makes it difficult to draw conclusions on the outcome of the treatment and make generalizations to other similar students. The after-school program hypothesis pertaining to the benefits of the combination of a reading remedial and after-school program was not rejected due to limited participation.

Conclusions

Hypothesis one. Test data from the study did not show a significant difference in reading achievement scores, between the pre- and post-tests of minority students in a remedial reading class. Although an improvement in test scores does exist and is consistent with the research mentioned above, most of the students did not achieve the expected one year growth gain of the STAR Reading Test or Success Maker. Nor did they show the 1.7 grade equivalent growth gain as in the Shany and Biemiller (1995) study.

Sixth grade students in the study who benefited most were students who had the most to improve. This pattern was not noted in the 7th grade, which perhaps indicates the lower grade, struggling readers at the middle school level have the most to benefit from a more individualized reading program.

Hypothesis two. The second hypothesis stated, there will be no significant difference in reading achievement between middle school minority students in both the after-school tutorial, and remedial reading classes and those only participating in the remedial reading class, could not be tested due to a lack of participation in the after-school program. There were only three students who could participate due to scheduling problems. Teachers, parents and community members who were volunteers in the program stated the students who did participate in the program seemed to improve their grades.

In addition, the volunteer nature of the after-school study program hindered the rate of participation of the remedial reading students. The lack of participation again limited the amount of data that could be collected to test the hypothesis.

Implications for Further Research

Although most of the students showed improvement, expected gains were not achieved for both grades. The study also revealed 6th grade struggling readers have the most to gain from a reading remedial program and overall showed the most improvement compared to the 7th grade students.

Additional study is needed to explore modifications to the reading remedial multidimensional program that will further enhance students' achievement in reading who enter middle school as struggling readers. Suggestions to improve the effectiveness of a subsequent program and study include the following.

1. A larger sample consisting of at least 30 or more students at each grade level would increase the validity of the study.
2. More teacher training in remedial reading would enhance the program's effectiveness.

3. A mandatory after-school program for failing or struggling students would not only assist students but also provide data to verify the effectiveness of such a program.
4. Increase the length of the study to increase the reliability of test data.

Educators must continue to investigate new avenues of pedagogy to impede the trend of an achievement gap between minority and Caucasian students. Remedial reading classes that go beyond just mastering skills need to be implemented. More research is needed to discover strategies that will bridge the growing gap of knowledge among our middle school population.

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APPENDIX A

October 21, 1998

Dear Parents,

Beginning Monday, October 26th, Mahaffey Middle School will offer a new reading program during the school day, designed to provide extra assistance for students who have difficulty in reading. Research has shown that more individual instruction in reading will cause an improvement in reading achievement.

Your child will have the opportunity of participating in this new class, taught by Mrs. Lynch. Students were selected based on last year's reading achievement scores or on teacher recommendation. Innovative reading strategies, state of the art technology, and more individual attention will be offered. High School is right around the corner, and we want all our children to be well prepared for the challenges that await them.

Some scheduling changes within the team may need to occur, to accommodate an additional class into your child's schedule. We promise to make this transition as smooth as possible.

If you have any questions about this program, please call Mrs. Lynch or Mrs. Haller at 439-3792.

Sincerely,

A handwritten signature in cursive script, reading "Madeline Haller".

Mrs. Haller
Assistant Principal

Dear Parents of _____

Something Great Is Happening at Mahaffey!!!!

A new reading class has been created to increase reading fluency and comprehension. We at Mahaffey know that poor competence in reading causes acute academic and social problems. We know from research on reading that an extra period of reading instruction is effective in raising the average reading achievement.

This reading course includes extensive reading in school and at home. The course stresses:

1. Building vocabulary through reading
2. Reading in school and at home
3. Instruction in Comprehension
4. Reading in the content areas

Our goal is to ensure that every identified student develop high levels of fluency and comprehension in reading.

After reviewing achievement scores from 97/98 school year, your child _____, is eligible to participate in this new class.

TRC

The Reading Class

TRC had been created to address low reading scores. Our goal is to increase reading fluency and comprehension. Students were selected on the basis of reading scores that were below 4th stanine on the Terra Nova and/or teacher recommendation.

Research indicated the following:

- An extra period of reading instruction is effective in raising the average reading achievement.
- Vocabulary words should be taught in context. Skills are not to be taught in isolation.
- Intensive instruction should be focused only on those particular skills or strategies where need has been identified.
- A successful study, the Morse High School Study, was based on the development of a reading course in lieu of electives.

Please take the time to discuss the following within teams and bring your thoughts to PIC Thursday, Oct. 8:

Preferable TRC class size, possible inclusion of ESL students, notification of parents, the difficulty that rotating schedules present in the scheduling of identified students and a suggestion for the name of the class.

THE READING CLASS (TRC)

THE READING CLASS (TRC) was created to increase reading fluency and comprehension scores of our students that fell in the “gap” percentile. Students were selected for this class based on the Terra Nova Standardized Test, teacher recommendations, and the grade score of the STAR examination.

Materials used for TRC include selected novels, Survival Vocabulary, Thinking Skill Lessons and Exercises, 1000 Instant Words, and SuccessMaker.

Novels are read orally every day for at least 15-20 minutes. The students are given daily/ weekly quizzes over material read.

Students receive 30-90 vocabulary words weekly. On Friday the students are required to spell/ unscramble, and define them.

Science and Social Studies lessons are read orally in this class also.

All students are enrolled in the Reading Workshop Success Maker Program.

A TYPICAL DAY IN THE TRC

8:00-8:55 8TH GRADE

8:55-9:30 8TH GRADE

9:30-11:00 7th GRADE

11:00-11:30 8th GRADE

11:00-11:45 6th GRADE

11:45-1:00 lunch/ planning

1:00-1:45 6th GRADE

1:35-2:30 6th GRADE

APPENDIX B

MAHAFFEY MIDDLE SCHOOL

585 South Carolina Avenue
Fort Campbell, KY 42223-5134

April 28, 1999

Dear Research Council,

Mahaffey Middle School began a reading remedial class this year to address the achievement gap that exists amongst our students in support of the Department of Defense Education Activity Strategic Plan. In order to gauge the success of this new program Mrs. Haller, my Assistant Principal has permission to analyze the test results and use these results as part of her study at Austin Peay State University. Mrs. Haller has shared with me acceptable strategies to maintain confidentiality throughout the study.

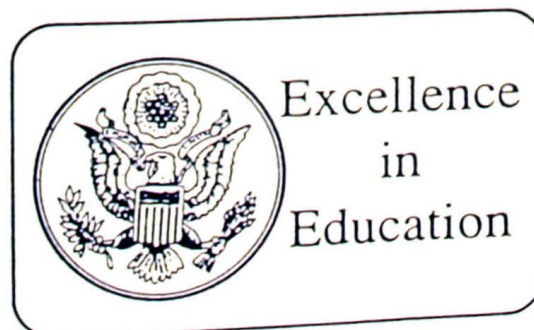
As Principal and as an Adjunct Faculty member at Murray State University, teaching an Educational Research Class, I approve of Mrs. Haller's proposed study, and look forward to seeing the results.

Sincerely,



Dr. Suzanne Jones
Principal
Mahaffey Middle School

Suzanne Jones, Ed.D.
Principal



Madeline Haller
Assistant Principal

VITA

Madeline Myers Haller was born in Warwick, New York on October 9, 1958.

Madeline lived in Warwick until she graduated from Warwick Valley High School in June of 1976. The following August, Madeline attended Orange County Community College for one semester before transferring to Arizona State University in January 1977. In May, of 1980 she graduated with a Bachelor of Science degree.

After her marriage to Brian Haller, Madeline moved to Ft. Campbell, KY where she worked as an adjunct faculty member for Austin Peay State University at the Ft. Campbell Center. After Brian's death, Madeline attended Austin Peay State University and obtained her teaching license. She began working at Ft. Campbell Schools teaching 8th grade science in August of 1987.

In 1989 she reentered Austin Peay State University and graduated with Master of Education degree in Administration and Supervision in May of 1991. This degree led to obtaining a position as Assistant Principal at Mahaffey Middle School, Ft. Campbell Kentucky in August of 1991, which she currently holds. In January of 1998, Madeline returned to Austin Peay State University again and will graduate with an Education Specialist Degree in Administration and Supervision in August of 1999.