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The impact of a reading intervention program on students with reading difficulties

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THE IMPACT OF A READING INTERVENTION PROGRAM ON STUDENTS WITH READING DIFFICULTIES

by

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Dedication

I would like to dedicate this study to my children; Hollie, Scotty, Laura and Anna.

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Abstract

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The primary purpose of this study was to compare the impact of a reading intervention program, *Read 180/System 44*, on students in a Behavior Disabilities class, with students in a Learning and/or Language disabilities class and an "at risk" group of students from the general education population. The researcher collected pre and post data in September and February. The classroom teachers implemented the *Read 180/System 44* program for approximately five months. The "at risk" general education program displayed the most significant growth. The students in the Behavior Disabilities class as well as those in the Learning and/or Language group also responded positively to the reading intervention program. The current results, as well as previous research suggest that the *180/System44* program may be effective for struggling readers.

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Chapter 1: Introduction

Learning to read is probably one of the most important skills that children obtain. Children need to learn to read so they can learn about different subjects and be able to function well in society. Unfortunately, every-day in the United States, 3,000 students drop out of school and they are mostly poor readers. According to the Alliance for Excellent Education (2003), one significant risk factor for dropping out of school is reading achievement level. Students with below grade level reading skills are two times as likely to drop out of school as those who can read on or above grade level. Roughly, 85% of children diagnosed with learning difficulties have a primary problem with reading and related language skills (LD Online). Reading is a fundamental skill needed to be successful in life. Unfortunately children with reading disabilities experience a lot of frustration while learning to read. Often, the obstacles that students face are too difficult to overcome and some never learn to be proficient readers. Without proper facilitation some individuals never manage to overcome the barriers that stop them from learning to read.

The specific cause of reading disabilities is unknown. However, some recent studies imply that structural and/or functional brain problems may cause individuals with reading disorders to identify and sequence phonemes less efficiently and they have a more difficult time making associations within the context of what they read than do normally progressing readers (PBS Parents Online). If this neurobiological difference exists, there may be future medical treatments discovered for reading disabilities. As of now, most specialists agree that the best strategy for reading difficulties is early intervention.

Learning to read is a sequential process where each new skill builds on the mastery of a secure skill already obtained. In the emerging stages of learning to read, individuals learn to break down words into their most basic sounds in a process called decoding. After that, they begin to comprehend the meaning of words, sentences and eventually the entire passage of text. For many individuals, decoding naturally occurs and turns into an automatic process. An individual with a reading disability may encounter difficulties with decoding. The purpose of reading is to gain an understanding, known as comprehension. When a reader has difficulty decoding, they often miss the meaning of the passage because they were focusing on decoding each word. Retaining what was read relies on two skills: decoding and comprehension.

Students who have been classified with a behavioral disability, also, often are reading well below grade level. However, it is unclear whether the behavioral disabilities are causing the reading deficits or vice-versa. I am interested in this problem because many students are placed in a behavioral disabilities program and display modest growth in their academic achievement. Many stay in the behavioral disabilities program throughout their academic career without obtaining the necessary reading skills their non-disabled peers obtain. Teachers of behavioral disabilities programs are often dealing with the behavioral problems and not the learning disability. Learning and/ or language disability readers experience problems with age-appropriate reading, spelling, and/or writing. "At Risk" readers are students in the general education population that struggle with reading. These students are not classified with a specific learning disability but are not reading on grade level.

Many educators are looking for methods to assist their students in reaching their full potential. However, educators may be reluctant to implement anything new due to the many programs that they have been required to implement and they find are not effective.

In this study I compared the impact of an intervention reading program on students in a behavior disabilities class, compared to students with learning and/or language disabilities and an "at risk" group of students from the general education population. It was hypothesized that the foundational reading program will have significant effects on all of the struggling readers.

The reading program used was *Read 180/ System 44*. This is a rigorous reading intervention program intended to meet the needs of students whose reading achievement is lower than the proficient level. Read 180 directly addresses specific needs through direct instruction in writing and reading skills, adaptive and instructional software, and the use of high-interest literature. The Read 180 program supports student development in the five areas of reading identified by the National Reading Panel; phonemic awareness, phonics, fluency, vocabulary, and comprehension. This program provides teachers with the resources needed to help struggling readers. Through research studies that demonstrate Read 180's effectiveness in improving the achievement of struggling readers, such as the studies acknowledged in the Compendium of Read 180 Research (Scholastic Research and Validation, 2008a), it was possible to recognize a sub-population of students who displayed less substantial growth than other Read 180 students. This subset of students may have difficulties with the reading comprehension instruction because they did not have the foundational phonological, decoding, and

morphological skills necessary to progress. To address this need System 44 was developed. System 44 is a foundational reading program that was designed for the most struggling readers in grades 3-12. The System 44 scope and sequence supports student development in the five areas of reading identified by the National Reading Panel; phonemic awareness, phonics, fluency, vocabulary, and comprehension. The System 44 program helps students realize that the English language is a finite system of 44 sounds and 26 letters that can be mastered. The System 44 program was designed to be a stand-alone instructional model or it could be integrated with Read 180.

Some possible implications from my research problem would be to gauge the effectiveness of the Read 180 reading program with students with a variety of disabilities. If the program is successful, it could be implemented in more schools and districts. This data could be used in decision making of the language arts programs. It is imperative that educators have the resources necessary to help their students succeed. Educators need to be aware of successful programs that are based on research. An advantage to using the Read 180 program is that it differs from other reading intervention programs because it is a complete program. The program offers skilled development through balanced literacy. It provides individualize, adjusted reading instruction to move the students to their grade level at their own pace. Assessment is provided instantly and continuously so teachers can immediately guide their lessons based on the data. The instruction is delivered in the areas of phonemic and phonological awareness, fluency, vocabulary, comprehension, spelling, and writing. Students are motivated to become lifelong readers and learners because it provides them with high-interest, leveled paperback books and on-level

audiobooks. Teachers are provided with comprehensive instructional materials and professional development to support them in best teaching practices.

The primary purpose of my study was to compare the impact of an intervention reading program, Read 180, on students in a behavior disabilities class, with students in a learning and/or language disabilities class and an "at risk" group of students from the general education population. I think it will be beneficial to measure the impact in each of these populations because we can use that information in the decision making process if we should expand the *Read 180* program into more classrooms.

Chapter 2: Literature Review

In 2000, the National Reading Panel (NRP) (2001) issued a report that identified key skills and methods important to reading achievement. After intensive research, the NRP identified five areas of reading instruction: phonemic awareness, phonics, fluency, vocabulary, and text comprehension. Phonemic awareness is defined as the ability to hear, identify, and manipulate individual sounds (phonemes) in spoken words. Teachers knowledgeable about phonemic awareness can help student's word reading, reading comprehension and spelling ability. The most effective phonemic awareness instruction is when students are taught to manipulate phonemes by using the letters of the alphabet; and when instruction focuses on only one or two rather than several types of phoneme manipulation. Phonics instruction helps students learn the relationships between the letters of written language and the sounds of spoken language. It is essential because it develops the understanding of the alphabetic principle which is the systematic and predictable relationships between written letters and spoken sounds. In order for programs of phonics instruction to be effective they should be systematic (the plan of instruction includes a carefully selected set of letter-sound relationships that are organized into a logical sequence) and explicit (the programs provide teachers with precise directions for the teaching of these relationships). Systematic and explicit phonics instruction greatly improves student's word recognition, spelling, and reading comprehension. It is most effective when it begins in kindergarten or first grade. Fluency is the ability to read text quickly and accurately. When students are not struggling to sound out words they improve their comprehension. Reading fluency can be developed by modeling fluent reading. Students need to engage in repeated oral

reading. Assessing students' fluency can help in planning instruction and be motivating to students. Vocabulary is the words we need to know to effectively communicate. Reading vocabulary means the word we see or use in print. Oral vocabulary means the words that we use in speaking or recognize in listening. Vocabulary is imperative to beginning readers because they use their oral vocabulary to make sense of the words they see in text. When students are reading they need to know what most of the words mean so they can comprehend what they are reading. Vocabulary can be developed directly or indirectly. Text comprehension is active, purposeful and understanding what has been read. Comprehension is the reason for reading. Teaching comprehension strategies can be developed. Text comprehension strategies can be taught; through explicit instruction, cooperative learning, and by helping readers use strategies.

Students with learning disabilities often struggle with all aspects of reading. There are six million students in the United States that have significant emotional and physical disabilities, as defined by the Individuals with Disabilities Act (IDEA), and experience learning difficulties. Approximately two million of those identified as Special Education students have be identified with a learning disability because they have not learned to read. (The President's Commission on Excellence in Special Education, 2002). Some of the students in my study have been identified with a learning disability.

In an article by, Martin, D., Martin, M., Carvalho, K. (2008), research was reviewed on the different approaches of instruction used to teach students with learning disabilities in reading. The authors revealed that whole language and direct instruction are the two major approaches to teaching reading. For many students with learning disabilities the whole language approach has proven to be successful. Also, direct

instruction enables teaches to guide and evaluate student progress frequently. However, there is minimal research available comparing the effectiveness of the whole language approach versus the direct instruction approach. The whole language approach is a student-centered approach where the students learn to read and write through the use of completed texts, such as short stories and novels. The direct instruction approach uses a teacher-centered format. The students are grouped by the teacher according to their instructional reading level and are taught specific skills on a sequential basis that considers their current ability.

Researchers have discovered that intensive, early, and remedial instruction is needed to help beginning and at-risk readers toward securing the skill of reading (Maiao, Darch, and Rabren. 2002). In addition, researchers also noted that poor readers in elementary school often remain poor readers throughout their school years, with their difficulties intensifying each year (Carlson and Francis. 2002). This information notes the need for early interventions in reading.

One constant problem when deciding on the appropriate instructional approach for students with learning disabilities in reading is that no single approach can be recommended for all students. The spectrum of learning disabilities is as varied as the students themselves (Swanson and Carson. 1996). Students with learning disabilities present distinctive challenges to teachers. Using the proper instructional approach may make a significant difference in the academic achievement of children with learning disabilities in reading.

A language-based disability that affects both written and oral language is known as dyslexia. It may also be referred to as a reading disability. The most common

educational difficulties experienced by students with dyslexia are in the areas of decoding, spelling, communicating ideas through writing, and reading comprehension (Shaywitz, 2003). It is estimated that a full 80% of those with specific learning disabilities have a primary disability in reading. Furthermore, research suggest that another 15-20% of the total school population exhibits symptoms of dyslexia, such as difficulty with reading, writing, or spelling, even though they may not receive special education services (International Dyslexia, 2007; Shaywitz,2003).

According to Shaywitz (2003) effective intervention programs for students with reading disabilities provide systematic, direct instruction in phonemic awareness and phonics. The program needs to teach students to apply these skills to reading and writing. Also, the program should provide fluency training and include rich experiences listening to and using oral language.

Instruction in reading is an important aspect in the education of students identified with learning disabilities, an estimated 80% of whom have difficulty reading (Foorman, Fletcher, & Frances, 1997). The teachers of students with learning disabilities have the difficult task of accommodating their reading disability and teaching these students to read in the classroom setting. Research reveals that a balanced approach to teaching reading may be best for all learners, and it is critical for students with learning disabilities (Vellutino & Scanlon, 1987; Lyon, Alexander, & Yaffe, 1997).

How to teach students with emotional and/or behavioral disorders to be proficient readers is a complex task. In research completed by Coleman and Vaughn (2000), teachers shared that children with emotional and/or behavioral disabilities experienced difficulty with reading because of their emotional variability, lack of trust, and fear of

failure. These students experienced difficulty separating their academic problems from their emotions and behavior problems. Due to this difficulty, the students' self-negativity was brought into their reading activities. The teachers reported that these students fear of failure was so embedded that they refused to put forth any effort to even try to complete any reading activity unless they could be guaranteed they would succeed. Children with emotional and/or behavioral disabilities may not trust their teachers. Since these students did not trust many adults, they put forth little effort in their reading activities. Even though there is information revealing that students with emotional and/or behavioral disorders display difficulties in reading, Coleman and Vaughn (2000) report there is minimal research studies on interventions with reading in this group of students. Coleman and Vaughn (2000) conveyed that among the effective interventions that have been identified are: (1) consistent teacher effort to keep students engaged (2) creative and relevant instructional practices, (3) ongoing teacher monitoring of student progress, (4) self-monitoring of student progress, and (5) daily reading for enjoyment.

Academic at-risk children with low literacy skills come from all walks of life. Some of these students live in suburban, and urban and rural communities and they represent all ethnic and social groups. However, definite student populations have considerably higher percentages of students that are reading below grade level. According to Grig, W.S., Daane, M.C., Jin, Y., and Campbell, J.R., (2003). The National Assessment of Educational Progress (NAEP) reports almost half of all African-American and Hispanic eighth graders read below basic level. Only 13 percent are reading at or above proficient level compared to 41 percent of white eighth graders reading at or above proficient level. With the passage of the No Child Left Behind legislation, these students

are becoming more apparent. No Child Left Behind requires very detailed reports broken down by, race, gender, income level, ethnicity, and special needs. Additionally, some students included in my study are students who are learning English as a second language. These students often have difficulty meeting the reading achievement level of their peers. English language learners represent approximately four million students in middle and high schools throughout the United States (Hoffman, 2003). The students in my study are from families with incomes below the poverty level. These students have an increased possibility of low literacy (Alliance for Excellent Education [AEE], 2002).

The research shows that as early as the end of first grade, children's self-esteem and motivation to learn decreases substantial if they have not been able to secure basic reading skills. When these students enter middle and high school still struggling with reading, they display extremely low self-esteem, and a lack of interest in school (Guthrie and Wigfield, 2000). The statistics on older readers' proficiency rates is cause for great concern. Research from the 2005 National Assessment of Educational Progress (Perie, Grigg and Donahue, 2005) discovered that 36 percent of fourth graders in the United States are reading at below basic levels. Almost every social, cultural, and ethnic group has students with reading difficulties. Their results revealed that 24 percent of whites, 58 percent of African Americans, 54 percent of Hispanics, 27 percent of Asian Americans, and 52 percent of Native Americans were not reading on grade level in fourth grade. *Read 180* is a remedial reading program that is based on more than a decade of scientifically based research and the collaboration of reading specialists. It was developed in clinical and classroom settings. Research has convincingly revealed that when schools implement and follow the 90-minute instructional model, significant

increases can be expected after one to two years of program participation. Read 180 is currently in use in more than 6,000 classrooms nationwide, and is one of the most thoroughly researched and documented reading intervention programs. After over a decade of research in association with Vanderbilt University and six years in schools, *Read 180* is producing quantifiable gains in reading achievement.

Read 180/System 44 is driven by individual assessment that specifically addresses a student's need in each skill area, and provides customized instruction. As the research on struggling readers was analyzed, the developers discovered key problems found in struggling readers. The problems they discovered were closely related to the skills that the National Reading panel has identified as imperative for students to be successful readers.

The *Read 180* program was developed in collaboration with Vanderbilt University, and is based on ten years of research by Dr. Ted Hasselbring, who tapped into the strength of technology in reading intervention. Hasselbring's findings determined that readers who struggle face major problems in three areas: an inability to decode text, an inability to read fluently, and an inability to create mental models from text (Hasselbring and Goin, 2004).

The *Read 180* program has been implemented in classrooms across the United States since 1999. A research study was carried out by Papalewis (2004). The purpose of the study was to assess the impact of the Read 180 program on specific eighth grade students in a large urban district in Los Angeles, California. Most of the students were retained and half were English Language Learners. In the study 537 students in the district were enrolled in the Read 180 program and 536 compatible students were

enrolled in a different program within the same district. The students enrolled in the Read 180 program made substantially larger gains on the reading portion of the SAT-9 than the comparison group. The Read 180 students improved significantly in reading and language arts from pre (1999-2000) to post (2000-2001). The Read 180 students made significant gains of more than three normal curve equivalents in Reading and almost two normal curve equivalents in Language Arts using the (the Stanford Achievement Test, ninth edition; SAT-9). The comparison group actually regressed from their pre to post test. Analysis of the research revealed that 78 percent of the participants with 42 percent were limited English proficient and 27% who were recently reclassified from limited English proficient. According to this study, English language learners benefited from the Read 180 program. In my study many of the students enrolled in the classes are English language learners. This study revealed that the effectiveness with urban school eighth graders is significant.

A review of adolescent reading programs was conducted by, Slavin, R., Cheung, A., Groff, C., & Lake, C. (2008). Their review of adolescent reading programs is unprecedented in that, most research has studied the effectiveness of kindergarten through third grade reading programs. Their study is one of the first to focus on adolescent literacy initiatives. Research was reviewed on middle and high school reading programs, applying consistent methodological standards. To be included in the study a randomized or matched control group was necessary, at least 12 weeks in duration, and valid achievement measures that were independent of the experimental treatments. 33 studies met these criteria. This review also pursues common characteristics of programs likely to improve student reading skills. None of the programs met the criteria for the

strong evidence of effectiveness category; but four programs met the criteria for moderate evidence of effectiveness, Read 180 being one of them. Read 180 was one of four adolescent literacy programs that showed more evidence of effectiveness than the 128 other programs reviewed.

White, Haslam, and Hewes (2006) and Johnson, Haslam, and White (2006) while under contract to Scholastic, the publisher of Read 180, completed a large-scale evaluation of the program in the Phoenix Union High School District in Phoenix, Arizona. Low-achieving students engaged with Read 180 across the district were matched with low-achieving nonparticipants using propensity matching. The two groups were nearly identical on pretest measures (SAT-9). There were three cohorts that had control groups: The first students (n= 1,652) who were in ninth grade during the 2003-2004 school year, second students (n=1,630) who were in ninth grade during the 2004-2005 school year, and third students (n=2,058) who were in the ninth grade during the 2005-2006 school year. Experimental groups in all three cohorts used the Read 180 program for a full year. At the conclusion of the 2003-2004 school year, students who were enrolled in Read 180 scored 1.3 normal curve equivalents (NCE) higher on the SAT-9 than the control group (effect size [ES] =+0.12, $p<.05$). There were larger positive effects obtained for English language learners (ES = +0.32). Though, after a one-year follow-up, the 2003-2004 cohort had scores identical to those of nonparticipants on the AIMS (Arizona's Instrument to Measure Standards) reading test (ES=0.00). Ninth graders in the 2004-2005 cohort scored 2.9 NCEs higher than the control group on the Terra Nova (ES= +0.24, $p<.05$). Another time, increases were noted for English language learners (ES = +0.41). Students from the 2004-2005 cohort also scored almost

identical to nonparticipants on the AIMS reading assessment (ES=0.00) at the end of the tenth grade. Ninth graders in the 2005-2006 cohort scored 0.9 NCEs higher than the control group on the Terra Nova (ES= +0.04, $p<.05$). Positive effects were found for English language learners (ES = +0.23). Averaging effect sizes across the SAT-9 outcomes for the 2003-2004 cohort and the Terra Nova outcomes for the 2004-2005 and the 2005-2006 cohorts yielded a mean effect size of +0.13 overall and a mean effect size of +0.32 for English language learners.

Third-party evaluators, Mims, Lowther, Strahl, and Nunnery (2006), completed a study of Read 180 in middle and high schools in Little Rock Arkansas. Roughly 1,000 mostly African American students in five middle schools and five high schools participated in the Read 180 program. Based on the data from the reading section of the 2005 Iowa Tests of Basic Skills (ITBS) and demographic information an equivalent group was matched in the same grade and school not participating in the Read 180 program. For outcome measures the Arkansas Benchmark Exams were utilized. The Spring 2006 ITBS, revealed differences favored the control group at all grade levels (grade 6, ES= -0.15; grade 7, ES = -0.23; grade 8, ES= -0.12; and grade 9, ES = - 0.16), overall for a mean effect size of – 0.17. Although, differences were statistically significant only at grades 7 and 9. The patterns were similar on the Arkansas Benchmark Exams. The effect sizes were -0.19 at grade 6, -0.05 at grade 7, and +0.02 at grade 8, overall for a mean effect size of -0.07. The mean effect size averaged -0.12 on the 2006 ITBS benchmark exam.

Scholastic and the Council of the Great City Schools completed an evaluation of the Read 180 program in three urban school districts that were located in three major

United States cities. (Interactive, Inc., 2002). Grade 6 was the focus in Boston, Massachusetts; Grade 8 in Dallas, Texas; and grades 7 and 8 in Houston, Texas. The SAT-9 was used as the pre and posttest in each site. Students participating in the Read 180 program were matched with students not using the Read 180 program in each site. There were 387 students combined in the three sites participating in the Read 180 program. There were 323 students in the group not participating in the Read 180 program. Effect sizes averaged +0.24, $p<.001$.

Haslam, White, and Klinge (2006) assessed the Read 180 program in the Austin Independent School District in Austin, Texas. Seventh and eighth grade low achieving students (n = 307) who participated in the Read 180 program were matched with students (n=307) not participating in the Read 180 program based on demographic factors and the pretest scores from the Texas Assessment of Knowledge and Skills. Based on posttests' the students who participated in the Read 180 program revealed a gain of 1.9 NCEs more than the group not participating in the Read 180 program. (ES = +0.18, $p<.05$).

Woods (2007) assessed the Read 180 program in an urban school that was in the southeastern section of Virginia with students in two cohorts receiving reading intervention. In the 2003-2004 and 2004-2005 school year cohort 1 and cohort 2 were students enrolled in the middle school. The third cohort data was not able to be used due to the fact that Scholastic Reading Inventory was used and this is used in the Read 180 program. Students who needed literacy assistance (n= 268) were assigned to traditional remediation reading interventions or to the Read 180 program. This was based on teacher recommendations and pretest scores. The Read 180 students were matched well based on demographic factors and the reading pretest. About 57 % participating students

received free lunch. 63% of the participating students were African Americans and 32% were white. 58 students participating in the Read 180 program in the 2003-2004 school year and 76 students participated in the 2004-2005 school year. There were an equal number of participants in the traditional reading remediation program. Students participating in the Read 180 program received 90 minutes of Read 180 every other day for the whole school year. Students not participating in the Read 180 program participated in a traditional reading remediation program every other day for a quarter of the school year. At the conclusion of the 2003-2004 school year, cohort 1 students participating in the Read 180 program displayed a small increase on the Degrees of Reading Power test over the group not participating in Read 180.(ES= +0.05). In the 2004-2005 school year the use of the Degrees of Reading Power test over the group not participating in Read 180.(ES= +0.05). In the 2004-2005 school the STAR Reading assessment program replaced the Degrees of Reading Power test. The students participating in Read 180 from cohort 2 made significantly better gains on the STAR Reading assessment (ES= + 0.81). The two cohorts combined made an effect size of + 0.43.

A yearlong study was conducted by Caggiano (2007) of 120 mostly African American at- risk readers enrolled in grades 6, 7, and 8th grade in Virginia at an urban middle school. There were 20 students enrolled in the Read 180 program from each grade. 60 students were matched with nonparticipants based on gender, grade level, ethnicity, and the SRI pretest scores. All of the classes received daily language arts instruction for 75 minutes each day. Students participating in the Read 180 program received an additional 90 minutes of supplementary instruction every other day using the

Read 180program. The posttest consisted of the Virginia Standards of Learning test using SRI pretests as covariates. On adjusted posttests, the effect sizes were: grade 6: +64, grade 7: -0.29 and grade 8: -0.31, which result in an overall mean effect size of +0.01.

Nave (2007) led a small retrospective analysis of the Read 180 program with 110 seventh graders in Tennessee. The Tennessee Comprehensive Assessment Program (TCAP) was utilized to compare at-risk students who participated in Read 180 (n=80) with those of a comparable group (n=30) who did not participate in the Read 180 program during the 2004-2005 school year. The findings revealed substantial positive effects on TCAP Reading-Language Arts scores (ES= +1.58). This reveals that the students who participated in the Read 180 scored substantially better on the Tennessee Comprehensive Assessment Program than their peers who did not participate in the program. Read 180 is an effective intervention program.

With research available on what needs to be taught in the early years, I wonder why so many students are being left behind. The results of my study will gauge the effectiveness of the Read 180 program on students that are "at risk" readers, students identified as emotionally disturbed and students with learning and/or language disabilities. Using the data, my district can take action in using a program that can have positive outcomes for our struggling readers. If found effective, one possibility would be to expand the Read 180 program to include more students. If the program is found ineffective, we need to investigate why. Research has shown that if the Read 180 program is implemented with integrity and fidelity there will be significant gains in reading achievement for our struggling readers. I believe my district is overdue in

finding a reading intervention program that produces positive results for our struggling readers.

Chapter 3: Methodology

This study explored the impact a reading intervention program had on students with reading difficulties. The research questions were: (1) What effects did the reading intervention program have on students enrolled in a behavioral disabilities program? (2) What effects did the reading intervention program have on students enrolled in a learning and/or learning disabilities program? (3) What effects did the reading intervention program have on an "at risk" group of students enrolled in a general education program? The Read 180/ System 44 reading intervention program was implemented in the 2011-2012 academic school year with each group of students.

Study Participants

For this study, students from one school with 1,025 students, in a large urban school district were selected. This particular district's District Factor Group (DFG) is "A". The DFG is a method that categorizes districts from the lowest socioeconomic status to the highest. The categories are A, B, CD, DE, FG, GH, I and J.

Three groups of students participated in this study: Students classified Emotionally Disturbed, students with a Specific Learning Disability in reading, and students "at risk" for reading difficulties (see table 1.)

The students that participated from the Behavior Disabilities (BD) program are placed in a self-contained classroom for students with behavior disorders. All academic subjects are taught in a well-structured environment which utilizes behavior improvement plans on an individual basis based on the student's Individual Education Plan. All students enrolled in the Behavior Disabilities program are eligible for special education

and related services under the category Emotionally Disturbed. There were ten students enrolled in the program; however two students transferred to other programs. The program is instructed by a special education teacher and an instructional assistant. A total of ten students were selected from the Behavior Disabilities program: (4) fourth graders, (3) fifth graders and (3) sixth graders. Two students are female and eight are males. There are six African Americans, three Hispanics, and one Caucasian.

The students that participated from the Learning and/or Language Program are all eligible for special education and related services under the category of Specific Learning Disability. All ten of the students enrolled in the class participated in the reading intervention program. However, four students transferred out of the program and two were declassified. The Learning and/or Language program is a self-contained program for an 80 minute block of language arts and an 80 minute block for mathematics. The students are mainstreamed for science, social studies, related arts and lunch. The general education curriculum is used for mathematics but modified and supplemented based on each student's Individual Education Plan. The Read 180 program is used for the language arts curriculum. The program is instructed by a special education teacher and instructional assistant. A total of ten students were selected from the learning and/or language program: (5) seventh graders and (5) eight graders. There are four females and six males. There are four African Americans, four Hispanics, and two Caucasians. The students in the "at risk" group were selected based on their: New Jersey Assessment of Skills and Knowledge (NJASK) score, and an informal reading inventory assessment level. The students NJ ASK score was 10 to 15 points below proficiently level in the previous school year. The students selected from the "at risk" group are enrolled in the

general education program. A total of ten students were selected from the "at risk" group: (3) sixth graders, (4) seventh graders and (3) eighth graders. There are four females and six males. There are nine Hispanics and one Caucasian.

Table 1. Subject Demographic Information

Group	Grade	Race	Gender
BD	4th - 4 5th – 3 6th - 3	African American-6 Caucasian -1 Hispanic -3	Male -8 Female -2
LLD	7th - 5 8th - 5	African American-4 Caucasian-2	Male -6 Female -4
"At-Risk"	6th-3 7th- 4 8th-4	Caucasina-1 Hispanic -9	Male -6 Female-4

Reading Program

Each group used the program in a different way. The Read 180/System 44 classroom models can be used together in one classroom. The System 44 and Read 180 programs provide intensive interventions for older struggling readers, including those with diagnosed reading disabilities. Read 180/System 44 directly addresses specific needs through direct instruction in writing and reading skills. The programs consist of comprehensive and explicit instructional materials; adaptive, leveled software; multicultural and diverse paperbacks and audiobooks. The Scholastic Achievement Manager (SAM) provides validated and actionable assessments, and embedded professional development and training. For students who are reading at a BR to 400L, System 44 is used for these most challenged students.

In this study, the Behavior Disabilities students utilized the System 44 program. The Learning and/or Language group utilized the Read 180 program as a stand-alone program. The "at risk" group utilized the Read 180 program in addition to their regular language arts program.

The Behavior Disabilities (BD) program students participating were from one self-contained classroom. The System 44 program is the language arts curriculum used and implemented for eighty minutes daily. The lesson begins with whole-group instruction, and then the students break into three small groups that rotate from small-group instruction, to instructional software, to modeled and independent reading. Whole-group instruction takes place during the first twenty minutes. The teacher utilized the System 44 Teaching Guide and 44Books to teach reading skills and strategies. The teacher sometimes used this time to review classroom procedures, discuss goals, and preparation for test. Small-group instruction took place during the rotations while two other groups of students are working independently at the instructional software and modeled and independent reading areas. During the 20 minute of small-group instruction, the teacher utilized the System 44 teacher's edition and 44Books to teach, reinforce, and practice skills. The instructional software instruction is the rotation where the students used the computers. They received customized instruction, immediate feedback and individual practice. The System 44 software used adaptive and audio technology to customize and scaffold individual skill practice. The students were offered the option to watch background videos again or reread passages for more support. System 44 also builds comprehension support into students' independent reading. There are prompts to check for understanding incorporated throughout System 44 library books

and the Decodable Digest. Two tracks in the System 44 software are standard and fast track individualize instruction by allowing students to skip content for which they already show mastery and focus more closely on their specific area of need.

The students participating from the Learning and/or Language Disabilities (LLD) program were from one classroom. The Read 180 program is the language arts curriculum used and implemented for eighty minutes daily. The lesson begins with whole-group instruction, and then the students break into three small groups that rotate from small-group instruction, to instructional software, to modeled and independent reading. Whole-group instruction takes place during the first twenty minutes. The teacher utilized the teacher's edition and rBooks to teach reading skills and strategies, vocabulary, word study, grammar and writing. The teacher sometimes used this time to review classroom procedures, discuss goals, and preparation for test. Small-group instruction took place during the rotations while two other groups of students are working independently at the instructional software and modeled and independent reading areas. During the 20 minute of small-group instruction, the teacher utilized the teacher's edition and rBooks to teach, reinforce, and practice skills. The teacher also used the Resources for Differentiated Instruction books to review and reteach specific skill based on the individual students' needs. The instructional software instruction is the rotation where the students used the computers. They received customized instruction, immediate feedback and individual practice. The topic software collected data based on individual responses and adjusted instruction to meet each student's needs in the areas of decoding, word recognition, fluency, comprehension, vocabulary, and spelling. The topic software consisted of Four Learning Zones. The lesson begins with Reading Zone; where the

students viewed videos and read leveled passages to develop phonics, fluency, vocabulary, and comprehension skills. To complete the Reading Zone for each segment the students must have correctly answered ten vocabulary and comprehension questions. In the Word Zone, the student received systematic instruction in decoding and word recognition as they mastered words from the reading passage and build fluency. Work Zone work is completed for a segment when the student mastered all of their study words from the passage. In the Spelling Zone, the students completed an initial assessment and then received a customized word list. They practice their study words and received immediate corrective feedback based on their specific errors. To complete the Spelling Zone for each segment, the students must correctly spell a minimum of six to twelve new study words, depending on their level. Students reach the Success Zone after they have successfully achieved all requirements and demonstrated mastery of all words in the passage. Students exhibit success through a final oral recording of their passage. Then they move to a new segment.

The students participating from the "at risk" group received The Read 180 program slightly different to the Learning and/or Language program. The program is in addition to their regular 80 minute block of language arts instruction. They go to the Read 180 classroom five days a week for 30 minutes of instruction. The rotations take three days to be completed while the Learning and/or Language group complete all rotations daily. Some students go during their remediation period and others go during their social studies period. They receive a grade from the Read 180 teacher.

Procedure

All the students were pretested using the Read 180/System 44 software in September 2010 and post tested in February 2011. The Lexile Framework for Reading is a scale (see Table 2.) used to measure a student's reading level. The Lexile level assists teachers in measuring each student's growth, placement in the Read 180 program, and matches students to books for independent reading. For the purpose of this study the pre and post Lexile score is reported. The chart below provides a range to an approximate Lexile level for each grade.

Table 2. Proficiency Lexile Ranges

Grade	Lexile Level
BR	Beginning Reader- Below 100L
1	200L- 400L
2	300L- 500L
3	500L- 700L
4	650L- 850L
5	750L- 950L
6	850L- 1050L
7	950L- 1075L
8	1000L-1100L
9	1050L-1150L
10	1100L-1200L
11 and 12	1100L-1300L

The researcher collected pre and post data in September and February. The classroom teacher implemented the Read 180/System 44 program for approximately five months. Informal classroom observations of the program were completed by the researcher. After the data was collected it was analyzed by the researcher.

Chapter 4: Results

This study compared the impact of a reading intervention program, Read 180/System 44 on students with behavior disabilities, students with learning and/or language disabilities and an "at risk" group of students from the general education population.

The Behavioral Disabilities class had two students transfer out of the program so there is no posttest data for those students. Overall the Behavior Disabilities class responded positively to the reading intervention program (see table 3.). The mean pretest Lexile score was 185.4 and the posttest Lexile score was 301.2, indicating an average growth of 115.9 Lexiles. Of the eight students remaining in the program, seven displayed significant growth in reading. The program states that on average, students are expected to grow approximately 75-100 Lexiles per year. Four students were at the Beginning Reading (BR) level in September: One student moved to 306L, which placed her in the second grade reading level range. Two students moved 77L and the other to 88L which is growth but they remain in the Beginning Reading (BR) level. One student did not display growth as his Lexile score remained at BR (0). One fifth grade student moved from459L to 534L which is from a second grade to a third grade reading level. One sixth grade student moved from a 231L to a 478L which is from a first grade reading level to a third grade reading level. One sixth grade student moved from a 541L to 584 which displayed a growth of 43L, the third grade reading level range. One sixth grade student moved from 252L to 343L which displayed growth of 91L, the first grade reading level range. These students will continue in the System 44 program for the remainder of the year, almost four months.

Table 3. Behavior Disabilities (BD) Subjects

Student	Program	Grade	Gender	September Pretest	February Posttest	Growth in Lexiles
A	BD	4	F	BR (0)	306	306
B	BD	4	M	BR (0)	BR (77)	77
C	BD	4	M	BR (0)	BR (88)	88
D	BD	5	M	459	534	75
E	BD	5	M	BR (0)	BR (0)	0
F	BD	6	M	231	478	247
G	BD	6	M	541	584	43
H	BD	6	M	252	343	91
MEAN				185.4	301.2	115.9

The Learning and/or Language class had six students transfer out of the program. Two students were declassified and moved to a general education classroom so there is not post data. Four students transferred to different schools so there is not post data. The mean pretest Lexile score was 334 and the posttest Lexile score was 427, indicating an average growth of 93 Lexiles Of the remaining four students, two displayed significant growth and one student displayed minimal growth in Lexile scores (see table 4.). The program states that on average, students are expected to grow approximately 75-100 Lexiles per year. One, eighth grade student moved from 228L to 494L which is from a first grade reading level to a second grade reading level. One eighth grade student moved from a 337L to a 447L which is 110L growth and in the second grade reading level. One eighth grade student regressed from 226L to 210L, (-16L), he remains at a first grade reading level. One seventh grade student moved from 545L to 557L, a growth of 12L, a third grade reading level. These students will continue in the Read 180 program for the remainder of the year, almost four months.

Table 4. Learning and/or Language (LLD) Subjects

Student	Program	Grade	Gender	September Pretest	February Postest	Growth in Lexiles
A	LLD	8	F	228	494	266
B	LLD	8	M	337	447	110
C	LLD	8	M	226	210	(-16)
D	LLD	7	F	545	557	12
MEAN				334	427	93

Overall, the "at risk" students displayed significant growth in Lexile scores in the five months of participating in the program (see Table 5.). The mean pretest Lexile score was 604.2 and the posttest Lexile score was 766.9, indicating an average growth of 162.7 Lexiles. All students made at least 75 Lexiles in the months monitored. The program states that on average, students are expected to grow approximately 75-100 Lexiles per year. Of the sixth graders, one moved from 359L to 669L, a growth of 310L, which moved the student from a second grade reading level to a third grade reading level. One sixth grader moved from a 483L to a 654L, a growth of 171L, which moved the student from a second grade reading level to a fourth grade reading level. One sixth grade student moved from a 499L to a 680L, a growth of 181L, which moved the student from a second grade reading level to a fourth grade reading level. Of the seventh grader, one moved from a 536L to a 772L, a growth of 236L, which moved the student from a third grade reading level to a fifth grade reading level. One seventh grader moved from a 706L to a 856L, a growth of 150L, which moved the student from a fourth grade reading level to a fifth grade reading level. One seventh grader moved from a 523L to a 652L, a growth of 129L, which is in the third grade reading level range. One seventh grader moved from a 590L to a 712L, a growth of 122L, which moved the student from a third grade reading

level to a fourth grade reading level. Of the eighth grade students, one student moved from an 868L to a 1008L, a growth of 122L, which is in the sixth grade reading level range. One student moved from a 756L to an 844L, a growth of 88L, which is in the fifth grade reading level range. One student moved from 722L to an 822L, a growth of 100L, which is in the fifth grade reading level range. These students will continue in the Read 180 program for the remainder of the year, almost four months.

Table 5. "At Risk" Subjects

Student	Program	Grade	Gender	September Pretest	February Posttest	Growth in Lexiles
A	At Risk	6	F	359	669	310
B	At Risk	6	M	483	654	171
C	At Risk	6	M	499	680	181
D	At Risk	7	F	536	772	236
E	At Risk	7	M	706	856	150
F	At Risk	7	M	523	652	129
G	At Risk	7	M	590	712	122
H	At Risk	8	F	868	1008	140
I	At Risk	8	M	756	844	88
J	At Risk	8	M	722	822	100
MEAN				604.2	766.9	162.7

Chapter 5: Summary, Conclusions, and Recommendations

In this study the impact of a reading program, *Read 180/System 44* on students with behavior disabilities, was compared to students with learning and/or language disabilities and an "at risk" group of students from the general education population.

Learning to read is probably one of the most important skills that children need to obtain. Children need to learn to read so they can learn about different subjects and be able to function well in society. Unfortunately, every-day in the United States, 3,000 students drop out of school and they are mostly poor readers. According to the Alliance for Excellent Education (2003), one significant risk factor for dropping out of school is reading achievement level. Students with below grade level reading skills are two times as likely to drop out of school as those who can read on or above grade level.

The reading program, Read 180/System 44 is a rigorous reading intervention program intended to meet the needs of students whose reading achievement is lower than the proficient level. Read 180 directly addresses specific needs through direct instruction in writing and reading skills, adaptive and instructional software, and the use of high-interest literature. The results of this study are exciting and encouraging. Most students demonstrated that the Read 180/System 44 program increased their reading levels.

All groups displayed growth. The "at risk" general education program displayed the most significant growth. The program states that on average, students are expected to grow approximately 75-100 Lexiles per year. I think greater gains would be made with the "at risk" group with full implementation of the program. Full implementation would have the students receive the program for 80-90 minutes per day, which would permit the

students to complete all rotations daily. It should be noted that the Read 180 program was implemented in addition to the students' regular language arts program where the "at risk" students received 30 minutes per day taking three days to complete a rotation compared to the Behavior Disabilities program and the Learning and/or Language program which completed an 80 minute rotation daily. The Behavior Disabilities program and the Learning and/or Language program were implemented using the Read 180/System 44 program as a stand-alone language arts program. These two programs were able to cover more skills because there was 80 minutes daily dedicated to the Read 180/System 44 program versus 30 minutes daily with the "at risk" group.

In research completed by Coleman and Vaughn (2000), teachers shared that children with emotional and/or behavioral disabilities experienced difficulty with reading because of their emotional variability, lack of trust, and fear of failure. In this research study, seven of eight students participating from the behavior disabilities class displayed significant growth in their reading levels. The classroom teacher reported through an informal interview that the Read 180 program makes a positive effect on his students. The teacher also shared that his language arts period was the most productive every day. The students willingly participated and enjoy the program. The results of this study imply that the Read 180/System 44 program is effective, although it would be interesting to measure the students' final Lexile score of the school year. Also, I would like to compare the students' New Jersey Assessment of Skills and Knowledge scores to the previous year to see if the Read 180/System 44 program had a positive impact.

According to Shaywitz (2003) effective intervention programs for students with reading disabilities provide systematic, direct instruction in phonemic awareness and phonics.

The Read 180/System 44 program provides a systematic, direct instruction approach to teaching reading. In a research study by Papalewis (2004), the impact of the Read 180 program on eighth graders was assessed. The researcher found that the students using the Read 180 program made significant gains of more than three normal curve equivalents in reading and almost two normal curve equivalents in language arts using the Stanford Achievement Test. Although, different measures are used to compare growth in this study, all three groups in the present study made gains in their reading achievement. A review of adolescent reading programs was conducted by, Slavin, R., Cheung, A., Groff, C., & Lake,C. (2008) and they found the Read 180 program to be one of four adolescent literacy programs that showed more evidence of effectiveness than the 128 other programs reviewed.

This research study supports the effectiveness of the program. Teachers need to be equipped with materials that have been proven to be successful. According to the results of the New Jersey Assessment of Skills and Knowledge (NJ ASK), which is a comprehensive, multi-grade assessment program, the elementary school where the students participating in this study are enrolled demonstrated a dire need of a reading intervention program. At each grade level, from fourth through eighth the students were well below the proficiency level. According to the New Jersey Department of Education, 17% of the students in fourth grade were proficient in language arts, while the state average was 60%. At fifth grade, 26% were proficient in language arts, while the state mean was 63%. 19% of sixth graders were proficient, while the state average was 65%. 34% of seventh graders were proficient, while the state mean was 69%. In eighth grade, 33% were proficient in language arts compared with the state mean of 83%. As noted

from the aforementioned data, there is a serious problem in language arts. Too many students are not proficient readers at fourth grade or beyond.

The Read 180 program supports student development in the five areas of reading identified by the National Reading Panel; phonemic awareness, phonics, fluency, vocabulary, and comprehension. Informal interviews with teachers revealed the program has been implemented for approximately a year and half. The teachers did not have all the materials until the middle of the first year. The teachers are positive about the program and felt more comfortable with implementation after six full days of training over the last year and a half.

Given the large amount of research reviewed on effective reading programs and the findings from this research study, it would only make sense to implement the *Read 180/System44* program to more struggling readers.

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