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Implementing a Response to Intervention Model
With Special Education Students

2010

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Implementing a Response to Intervention Model with Special Education Students

A Special Project

Presented to

Dr. Gretta Merwin

Heritage University

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of the Requirement for the Degree of

Master of Education

Shirley M. Percifield

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FACULTY APPROVAL

Implementing a Response to Intervention Model with Special Education Students

Approved for the Faculty

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ABSTRACT

The purpose of this project was to learn how implementing Response to Intervention impacted special education middle school children. Middle school students were tracked from sixth grade with no Response to Intervention Model in place at the start of the year. Intense interventions were used examining the effects of those interventions on reading and mathematics. After collecting the data, the results were used to determine the effectiveness of implementing the Response to Intervention Model with special education students.

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CHAPTER 1

Introduction

Background for the Project

The middle school in which the project took place was located in a town in the Northwest close to a nuclear plant where three cities were joined together by a major river. The special education students of the school were impacted by poverty and a high migrant population. The special education students consistently had low test scores and the school staff needed to find a way to start closing the achievement gap.

Statement of the Problem

The school planned on implementing the Response to Intervention Model building-wide because the school was on the verge of being placed on a school-wide School Improvement Plan for not meeting Adequate Yearly Progress over a two year period. The author's focus was on the special education students at the middle school because they had not met Adequate Yearly Progress.

Purpose of the Project

The purpose of the study was to explore the effectiveness of the Response to Intervention Model program within one seamless, efficient system, by providing the opportunity to expand special education student's knowledge

and skills through learning opportunities, interventions, and research. In addition the purpose was to maintain an effective accountability system that measured student progress.

Delimitations

The author worked in the middle school where 15.8% of the students were special education students. The middle school was a sixth through eighth grade public school with a student population of 782 students and 47 instructional staff members. The average years of teacher experience at the building was 12.4 years, and 72.3% of the teachers had at least a master's degree. The middle school had a diverse population of students; 56% of the students were white, of the remaining 44% Hispanic/Latino students made up 35.3%. The number of students who were identified for free and reduced lunch program was 55% (Office of Superintendent of Public Instruction, 2009). The middle school had a principal, two assistant principals, two counselors, one school psychologists, six special education teachers, and 14 special education para-educators.

Assumptions

The research took place with special education students. The students tracked and evaluated were seventh grade middle school students. The highly-

qualified special education teachers who taught these students for sixth grade looped with them to seventh grade along with the para-educators who were in their sixth grade class.

The two teachers who worked with the students in the project had 45 years of experience. One had two master's degrees, a K-12 endorsement, a special education endorsement, and a reading endorsement. The other had a bachelor's degree, a K-8 endorsement, a special education endorsement, and was working on a master's degree. The para-educators all had an Associates of Arts degree. All of the special education students were properly identified for special education by highly-qualified special education teachers as defined by the No Child Left Behind Act.

The Response to Intervention Model was implemented at the beginning of the students' seventh grade year. Since the Response to Intervention Model was implemented, many interventions were put into place. These interventions included reading support such as Read Naturally, Accelerated Reading, Second Shot reading, small reading groups, and computer-based reading activities. The interventions also included mathematics support such as Math Facts in a Flash, Accelerated Math, multiplication Flash cards, computer-based mathematics activities.

Hypothesis

Seventh grade special education students met Adequate Yearly Progress when the Response to Intervention Model with interventions was implemented as measured by the Measures of Academic Progress test.

Null Hypothesis

Seventh grade special education students did not meet Adequate Yearly Progress when the Response to Intervention Model with interventions was implemented as measured by the Measures of Academic Progress test.

Significance of the Project

The intent of the project was to determine how the Response to Intervention Model worked in the middle school setting with special education students. The author was interested in finding out what interventions helped special education students grow academically to close the achievement gap. If the results were positive the Response to Intervention Model could be used to close the achievement gap for special education student in other low performing middle schools. If the results were negative the Response to Intervention Model would

not necessarily be a program that was useful to middle schools to help close the achievement gap with special education students.

Procedure

The author compared test data from special education students who were the author's students in sixth grade and followed to seventh grade. The author also researched the literature to find the most recent information on the Response to Intervention Model.

The data collected was the Measures of Academic Progress scores from the fall of 2008 to the fall of 2009 and the spring 2009 to spring of 2010. The data was recorded in an excel spreadsheet during the two years the students were followed. Data was compiled to compare results from the 2008-2009 school year to the 2009-2010 school year to see if significant growth occurred.

Definition of Terms

Academic Achievement Standards. Academic achievement standards referred to the expected performance of students on measures of academic achievement.

Adequate Yearly Progress. Adequate Yearly Progress was an individual state's measure of yearly progress toward achieving state academic standards.

Adequate Yearly Progress was the minimum level of improvement that states, school districts and schools must achieve each year.

Continuous Assessment. Continuous Assessment was an element of responsive instruction in which the teacher regularly monitored student performance to determine how closely it matched the instructional goal.

Differentiated Instruction. Differentiated instruction was an approach to teaching that included planning out and executing various approaches to content, process, and product. Differentiated instruction was used to meet the needs of student differences in readiness, interests, and learning needs.

Individualized Education Program. Individualized Education Program was a plan outlining special education and related services specifically designed to meet the unique educational needs of a student with a disability.

Response to Intervention. Response to Intervention was a process whereby local education agencies documented a child's response to scientific, research-based intervention using a tiered approach. In contrast to the discrepancy criterion model, Response to Instruction provided early intervention for students experiencing difficulty learning to read. Response to Intervention was authorized for use in December 2004 as part of the Individuals with Disabilities Education Act (IDEA).

Acronyms

AYP. Adequate Yearly Progress.

MAP. Measures of Academic Progress

NCLB. No Child Left Behind Act

OSPI. Office of Superintendent of Public Instruction

RtI. Response to Intervention

CHAPTER 2

Review of Selected Literature

Introduction

The review covered a thorough investigation of the Response to Intervention Model, along with differentiated instruction and the No Child Left Behind Law. Other literature reviewed were multi-leveled interventions for students struggling in the special education classroom.

According to the literature reviewed the Response to Intervention Model was a philosophy that encompassed alternative assessment, which utilized quality interventions matched to what the students needed. Many interventions were used to help close the achievement gap. The literature suggested that interventions such as Read Naturally, Accelerated Reading, Second Shot, and many others were good interventions for reading. The literature also suggested that programs such as Math Facts in a Flash, Accelerated Math, and using flash cards were good for mathematic interventions.

Response to Intervention

Response to Intervention was endorsed in the 2004 Reauthorization of the Individuals with Disabilities Education Improvement and was often

associated with special education (Office of Superintendent of Public Instruction, 2004).

Classroom teachers needed to try different interventions and assessments to identify students below grade level before referring students for help in special education. The interventions were designed to help students succeed in mastering the grade level concepts. Students not mastering the concepts after the interventions were then referred for special education intervention. The interventions were designed to help students succeed in mastering the grade level concepts. Students not mastering the grade level concepts were then referred for special education testing. When students were placed into special education, intense interventions were put into place according to the needs of that child. When Congress reauthorized IDEA, it changed the law about identifying children with specific learning disabilities. Schools would “not be required to take into consideration whether a child has a severe discrepancy between achievement and intellectual ability ...” (Hale, 2008, p. 97).

IDEA -97 expanded on the positive changes started. Change started with the focus on bringing the regular educational program and the special education programs together. Response to Intervention was a three-tiered model which

provided early interventions for at-risk students falling two, three, or more grade levels behind their grade level peers.

Tier I of an RtI model was typically referred to as classroom instruction. General education classes taught the curriculum designated by the district. The curriculum needed to be the type of curriculum that was “a coherent and viable core curriculum that embeds ongoing monitoring for all students” (Buffum, Mattos, & Weber, 2009, p. 9). Students not making Adequate Yearly Progress under Tier I graduated to Tier II.

Tier II was the next step with more intensive interventions. Under Tier II students were placed in interventions according to test scores and abilities. The interventions needed to be “immediate and powerful targeted interventions systematically applied and monitored for any students not achieving” (Buffum et al., 2009, p. 9).

The last step on the pyramid was Tier III. Tier III was the most intensive step on the pyramid. The focus was to close the gap and reach those students who would normally fall through the cracks. If all three tiers did not achieve the desired goals, the next intervention called for a special education referral to take place.

Differentiated Instruction

Differentiated instruction was another aspect of the Response to Intervention Model. Differentiated instruction, sometimes referred to as differentiated learning, involved providing students with different avenues to acquiring content; to processing, constructing, or making sense of ideas; and developing teaching materials so that all students within a classroom learned effectively, regardless of differences in ability. By using differentiated instruction, educators met all individual students' needs and helped every student meet and exceed established standards. The diversity of students in our classrooms across the nation was increasing; there was a need to shape curriculum and instruction to maximize learning for all students. Differentiation was an umbrella concept that incorporated many effective traditional methods and strategies as well as merging many aspects of critical thinking, brain research, interdisciplinary instruction, and constructivism. The roots of differentiated instruction were developed as a means of accommodating the range of readiness levels, learning styles and interest of heterogeneous schools and classrooms. In a differentiated classroom, teachers recognized that all students were different and required varied teaching methods to be successful in school. According to Karen Plumely, "Using one teaching method will

probably not satisfy the needs of all students, and indeed may eventually cause children with special needs and /or learning disabilities to become frustrated, confused and left behind” (2009, p. 1).

Research suggested that there was some disagreement over the methods used to identify students with learning disabilities. According to Cortiella (2008),

A growing body of research suggests that the ability-achievement discrepancy method of identifying students as eligible for special education services requires students to fail or fall behind for a substantial period of time before the students were eligible for help. (p. 1)

The implication of the information seemed to mean students fell through the cracks before the testing was completed or the students received interventions from special education.

No Child Left Behind Act

The No Child Left Behind Act was signed into law on January 8, 2002. The law set deadlines for states to expand the scope and frequency of students’ testing and revamped the school’s accountability systems. The law guaranteed every teacher was qualified in specific subject areas, thus narrowing the test-score gap between advantaged and disadvantaged students by using the interventions to help the students make significant growth. In turn Response to

Intervention Model was the type of intervention that fit comfortably with the No Child Left Behind Act. The No Child Left Behind Act had a sweeping impact on the United States' public classrooms. No Child Left Behind Act affected what students were taught, the tests they took, the training of their teachers, and the way money was spent on education. The Florida Department of Education stated:

The law confirms that as a nation, we will not accept a public school system that educates only a portion of its children, and to achieve its goals, No Child Left Behind works according to four common-sense principles: holding schools accountable for results, giving states and districts flexibility in how they spend federal money, using scientific research to guide classroom practice, and involving parents by giving them information and choices about their children's education.

(Morphew, 2009, p. 1)

Interventions

Many interventions were reviewed to support the Response to Intervention Model. The four main interventions were Accelerated Reader, Accelerated Math, Math Facts in a Flash, and Read Naturally.

The Accelerated Reader program was a curriculum-based assessment tool that provided a summary and analysis of results that enabled teachers to monitor both the quantity and quality of reading practice engaged in by students. The Accelerated Reader reading program allowed students to take computerized quizzes after they had read AR books. The strengths of the program were the appropriate difficulty levels set by the teacher. Grade level standards were covered through the comprehension and analysis standard. Once the students were trained on the program, minimal help was needed by the teachers for students. The Accelerated Reader program was a guided reading intervention in which teachers were closely involved with students' reading of the text. According to the United States Department of Education Institute of Education Sciences, "Accelerated Reader (AR) is a daily progress monitoring software assessment in wide use by primary and secondary schools for monitoring practice of reading" (2008, p. 1)

Another program was the Accelerated Math program. The Accelerated Math mathematics program was designed to make mathematics instruction easier for teachers. The program generated customized worksheets for each of the students and created detailed reports to help keep track of student progress. The program had a computer component which graded problems automatically.

The program was used to diagnose what a student had already mastered and what the student still needed to master. The students were given a diagnostic test over specific objectives and if the students mastered the objective, no more work was needed on that objective. The computer generated a new objective when students mastered the last one. The National Center on Response to Intervention, which was funded by the United States Department of Education, stated:

Accelerated Math is a scientifically based, continuous progress-monitoring system for educators that produces daily, personalized, student math practice and assessments. Accelerated Math meets all National Center on Student Progress Monitoring criteria for scientifically based progress-monitoring tools, and was favorably reviewed by the Comprehensive School Reform Quality Center and the Northwest Regional Educational Development Laboratory. (2009, p.1)

Math Facts in a Flash were another program that was used as an intervention. Math Facts in a Flash were three tools in one and streamlined measurable practice, targeted interventions and progress monitoring of mathematics facts into one tool for improved computational fluency. The program was designed to let students practice and conquer their mathematic

facts at an individual rate. Math Facts in a Flash was a computer-based way to improve the students' mathematical computational skills. The program had 44 levels of skill testing in addition, subtraction, multiplication, division, squares and more. One of the components of the Math Facts in a Flash was the ability for students to practice at home. Renaissance Learning stated, "Math Facts in a Flash is three tools in one and is ideal for all tiers of RtI. It streamlines measureable practice, targeted intervention, and progress monitoring of math into one tool for improved computational fluency" (2009, p. 1).

The Read Naturally program was a program designed to improve reading fluency using a combination of books, audio-tapes, and computer software. The program included three main strategies: repeated reading of text for reading fluency development, teacher modeling of story reading and monitoring of student progress. Most struggling readers had fluency problems and did not spend much time reading. Read Naturally was designed to increase time spent reading while using the strategies that helped students. The Florida Center for Reading Research stated, "Motivated by research indicating that comprehension and fluency are highly correlated, the developer of this program aimed to give students a tool to accomplish the task of becoming fluent readers" (2009. P. 1). The premises of Read Naturally were that teacher modeling, repeated reading,

and progress monitoring created a powerful tool to improve the reading fluency of struggling readers.

Summary

The Response to Intervention Model, differentiated instruction, the No Child Left Behind law, and multi-leveled interventions were the topics that were reviewed. All were based on what struggling students needed to be successful in school.

The Response to Intervention Model was a philosophy that encompassed alternative assessment, which utilized quality interventions matched to what the students needed. Those interventions were used to help close the achievement gap. The literature suggested many different types of interventions that helped struggling student in the special education classroom achieve success in school.

CHAPTER 3

Methodology and Treatment of Data

Introduction

The author used several procedures and practices in this study. First the author researched the problem to have better insight to the background of the subject that was studied. The author then laid out the plan of action for the study and what tools were to be used to complete it. The author also decided what method of testing was to be used and what group of students was to be studied.

Methodology

The author started the study by researching the background into the middle school's School Improvement Plan and what was being required by the school district. The school district and the middle school were both moving toward a Response to Intervention model. The author decided to test the effectiveness of the Response to Intervention model and how effective it would be with Special Education students in the middle school. The author started with sixth Special Education students with no Response to Intervention model in place. The author followed those same students to seventh grade where the Response to

Intervention model was put into place that school year. The author used students' Measurement of Academic Progress test scores for both years to compare the data to see if there was a significant difference between the two years.

This quantitative study utilized intervention models and the test scores after the interventions were used. The time period covered by the study was the 2008-2009 school year for the pre-study, and 2009-2010 school year for the post testing.

Participants

Students were identified by prior test scores and placed into the Special Education Resource Room class by the administration. In the fall of both 2008 and 2009 students were given the Measurement of Academic Progress test to determine what areas they needed interventions. Students were again tested in the spring of 2009 and 2010 to see the growth made in the school year. The same teachers and para-educators that had the students in the school year 2008/2009 in sixth grade followed them to the next school year of 2009/2010 in seventh grade. The students had the interventions during the 2009/2010 school year but not in the 2008/2009 school year. When the study started there were 19 students in the study. Because of class changes, moving, and student

behaviors, the study ended with 13 students in the study. Of these students three were female and ten were male. All were at different levels in reading and mathematics.

The study took place in a middle school located in a town in the Northwest close to a nuclear plant where three cities were joined together by a major river. The special education students of the school were impacted by poverty and a high migrant population. The special education students consistently had low test scores.

Instruments

The author used one instrument to measure the students' achievement. The Measures of Academic Progress test was a test that leveled the students as they tested. The MAPS testing started with a base line from the student's grade level, then gave questions based on the right or wrong answers to the previous questions. The author had questions about the validity of some of the test scores as several students were done testing within 15 minutes and had large dips in their scores. After the study data was collected and computed, the author retested three students and all three had gains of at least 3 points. All of the students in the study were identified by the school administrator and the

special education teacher as needing interventions for the school year 2009/2010.

Design

Several researched methods of intervention were put into place in the students' regularly-scheduled classes along with an additional intervention period for the study group. Pre and post tests were given both years of the study. A *t*-test was used to determine the significance of the data collected for the study for the school years 2008/2009 and 2009/2010.

Procedure

Data was collected during the school year 2008/2009 for both fall and winter. The Measures of Academic Progress scores were collected and recorded in a spread sheet for the students in the study. The data was again collected in the school year 2009/2010 and recorded in the same spread sheet. When the author had collected all the data needed, a *t*-test was used to determine if there was significant growth for the students in the study group for reading and mathematics in special education.

Treatment of the Data

The author collected data on special education students for two consecutive school years. The data collected, MAPS, was compared from fall 2008/2009 to

the data from fall 2009/2010, and again from spring 2008/2009 to the data from spring 2009/2010. The data collected was on the same group of 13 students in a middle school special education class. The growth, or lack of, was charted for each student. The author used the statistical t -test from the Statpak to compare the growth between the two sets of data from the students. These test were given both before the Response to Intervention model and after to determine if there was significant growth after the implementation of the Response to Intervention model.

Summary

This chapter covered the treatment and methodology of the data collected and used to determine if there was significant growth for the middle school special education students after having the Response to Intervention in place. The chapter also discussed the method of assessment and results that were used and scored with the t -test from the Statpak.

CHAPTER 4

Analysis of the Data

Introduction

The middle school that was in the study was close to being placed on a School Improvement Plan with the school district. The study followed 13 special education students through their sixth and seventh grade school years. The school and the district were starting to implement the Response to Intervention model. The students had not made Adequately Yearly Progress.

Description of the Environment

The project was a quantitative research project. The author tracked the 13 middle school special education students over a two year period to determine if the Response to Intervention model was effective. The students were over two years below grade level.

The middle school had a 15.8% population of special education students. The middle school was a sixth through eighth grade public school with a student population of 782 students and 47 instructional staff members. The average years of teacher experience at the building was 12.4 years, and 72.3% of the teachers had at least a master's degree. The middle school had a diverse population of students; 56% of the students were white, of the remaining 44%

Hispanic/Latino students made up 35.3%. The number of students who were identified for free and reduced lunch program was 55% (Office of Superintendent of Public Instruction, 2009). The middle school had a principal, two assistant principals, two counselors, one school psychologists, six special education teachers, and 14 special education para-educators.

The administration and staff were in the first year of implementing the Response to Intervention model. The author and co-teacher worked together on curriculum and interventions that could be helpful for the struggling students. The interventions were approved by the administration team. That team consisted of one principal and two vice principals.

Hypothesis

Seventh grade special education students met Adequate Yearly Progress when the Response to Intervention Model with interventions was implemented as measured by the Measures of Academic Progress test.

Null Hypothesis

Seventh grade special education students did not meet Adequate Yearly Progress when the Response to Intervention Model with interventions was implemented as measured by the Measures of Academic Progress test.

Results of the Study

The 13 students followed from sixth to seventh grades who received interventions that coincided with the Response to Intervention Model during the 2008/2009 and 2009/2010 school years did not demonstrate greater than expected growth in the school year of 2009/2010 compared to their growth in the 2008/2009 school year. The Null hypothesis was accepted. Seventh grade special education students did not meet Adequate Yearly Progress when the Response to Intervention Model with interventions was implemented as measured by the Measures of Academic Progress test.

Table 1.1

t-test of Pre/Post-test Results for Special Education Students in a Resource Room

2008/2009 Mathematics Class

Test	N	Mean	Standard deviation
Pre-test	13	7.46	9.6
Post-test	13	3.62	7.11
df= 12		t= -1.13	p>.05

Table 1.2

t-test of Pre/Post-test Results for Special Education Students in a Resource Room

2008/2009 Reading Class

Test	N	Mean	Standard Deviation
Pre-test	13	13.92	15.6
Post-test	13	7.15	5.48
df= 12		t=-1.48	p>.05

Findings

Even though the null hypothesis was accepted and the hypothesis was found not to be correct, the author discovered several interesting points. Over all, according to the data, there was growth for many of the students with the intense interventions. In mathematics six of the students grew ten or more points and in reading seven grew eight or more points. Overall some growth was noted. The author also found that for reading the Read Naturally program was good at hooking the students into short stories. The students went directly to the Read Naturally station and started working. The other eye-opening information the author learned was that testing should be in the morning when the students were more focused and could sit for longer periods of time.

Discussion

The author and partner used many research-based interventions for both reading and mathematics in the special education classroom with the seventh grade students. The author noted that the students who were consistently at school every day, participated actively, and took the testing seriously were the students who made the most growth.

As stated in the literature review, the interventions needed to be “immediate and powerful targeted interventions systematically applied and monitored for any students not achieving” (Buffum et al., 2009, p. 9). The author believed that the interventions were strong interventions and that if continued more growth in the special education students would occur.

During testing several of the students did not stay on task or were done in ten to fifteen minutes, which indicated they went through the test without trying. The author believed, had those few students completed the testing correctly, the growth would have been significantly higher. The main concerns the author had for the testing in spring of 2010 were that several students were not focused on the testing. One student had run out of his ADHD medicine several days before, another student had just come back from a five-day suspension, and another one had come back from being out sick for several days.

All three students had scores that dropped at least three points to show a loss of level.

Summary

The special education students in the middle school were pre-tested both spring and fall in the school year 2008/2009 prior to the implementation of the RtI model with the interventions. The students were again tested in the spring and fall of 2009/2010 after the implementation of the RtI model with interventions to determine if they made significant growth with those interventions.

The study did not show significant growth for the special education students in the middle school. Therefore the author's hypothesis was not supported and the evidence pointed to the null hypothesis. The data showed there was growth for some of the students while others actually showed a loss of growth.

CHAPTER 5

Summary, Conclusions and Recommendations

Introduction

Education has experienced sweeping changes in the past few years. The implementation of the No Child Left Behind Act has had an impact on schools and their accountability. The reforms have changed the way that special education students are taught. Special education students are allowed more accommodations and need stronger interventions. The school in which the author completed this study was in the process of implementing the RtI model school-wide because of not making Adequate Yearly Progress in the areas of reading and mathematics. Special education students were in the Tier III of the RtI pyramid and continue to need intense interventions.

Summary

The administration and staff at the middle school have completed ardent research on the RtI model. The school district, school administrators, and teachers all determined that interventions of some type were necessary. The RtI model with the three levels of interventions was what was selected. The author wanted to proceed with this study with intense research to determine if the RtI model was effective with special education students at the middle school level.

In this project the students were clearly identified to need the most intensive interventions in both reading and mathematics. The special education students were in the resource room with many programs in place that were designed to help close the achievement gap between them and their general education peers. Although some of the students made significant growth, the data did not support the hypothesis and the null hypothesis was accepted.

Conclusions

The study did not show the significant growth required to prove the hypothesis. While some students did make growth, not all students made the growth with the interventions put in place that was needed to prove the hypothesis.

Recommendations

The project's length of time needed to be longer to give the students time to get a better grasp on the concepts in reading and mathematics. The author would like to see the length of time extended from two years to all three years the students were in middle school. Students in the study were only a third of the way through the curriculum at the end of the study, which is a reason for the program to be in place for a longer period of time. The author recommends that

the program be in place and the students followed their three years of middle school.

The author believes the testing should have stopped when students were not taking the testing seriously and should have restarted at a time when the students could have focused on what they were doing. By improved proctoring of the test, the scores would have been more valid.

Overall the author believes that completing the curriculum and extending the length of the study would show increased gains in both reading and mathematics for special education students in the middle school. Therefore, the hypothesis would be supported, the achievement gap would be narrowed, and the school would have the potential to make Adequate Yearly Progress.

REFERENCES

- Buffum, A., Mattos, M ., & Weber, C. (2009). *Response to intervention: RTI, professional learning communities, and how to respond when kids don't learn*. Bloomington, IN: Solution Tree.
- Cortiella, C. (2008, July). *Great schools*. Retrieved April 18, 2009, from Response to Intervention: An emerging method for LD identification web site:
<http://www.greatschools.net/cgi-bin/showarticle/2840>
- Florida Center for Reading Research. (2009, March). Retrieved March 26, 2009, from <http://www.fcrr.org>
- Florida Center for Reading Research. (2008). Retrieved September 18, 2009, from <http://www.fldoe.org/nclb/>
- Hale, J. B. (2008). *Wrightslaw*. Retrieved April 18, 2009, from Response to intervention: Guidelines for parents and practioners web site:
www.wrightslaw.com
- Morphew, J. (2009). *No child left behind*. Retrieved April 26, 2010, from <http://www.fldoe.org/nclb/>
- Office of Superintendent of Public Instruction. (2004). *IDEA 2004 and Special Education in Washington State*. Retrieved October 8, 2009, from
<http://www.k12.wa.us/specialed/IDEA_2004.aspx>

Office of Superintendent of Public Instruction. (2009). *IDEA 2009 and Special Education in Washington State*. Retrieved October 8, 2009, from <http://www.k12.wa.us/specialed/IDEA_2009.aspx >

Plumely, K. (2009, May 29). *Differentiation instruction for special needs*. Retrieved April 17, 2009, from <http://www.specialneedseducationsuite101.com>

Renaissance Learning. (2009). *Practice with a purpose*. Retrieved April 17, 2009, from <http://.renlearn.com/mf/RTI.aspx>

U.S. Department of Education. (2004, October). *A guide to education and No Child Left Behind*. Retrieved January 16, 2010, from <http://www.ed.gov/nclb/overview/intro/guide/guide.pdf>

APENDICES

Reading Students	Reading Fall 2008/2009	Reading Spring 2008/2009	Gain/Loss	Reading Fall 2009/2010	Reading Spring 2009/2010	Gain/Loss
Valeria B.	205	199	-6	217	220	3
Natasha C.	182	211	29	202	213	11
Madeline C.	208	206	-2	206	205	-1
Hector F.	182	182	0	195	198	3
Henry M.	182	199	17	202	205	3
Liam N.	161	190	29	202	210	8
Jonnathan P.	153	174	21	185	185	0
Brock R.	209	213	4	215	225	10
Julian S.	158	209	51	162	181	19
Tyler S.	179	193	14	215	225	10
Curtis T.	193	191	-2	194	206	12
Anthony T.	194	202	8	214	218	4
Austin W.	193	198	5	191	202	11
Math Students						
Valeria B.	202	203	1	200	204	4
Madeline C.	200	211	11	209	220	11
Steven H.	221	227	6	209	217	8
David L.	183	215	22	193	194	1
Henry M.	210	207	-3	199	210	11
Anais M.	189	191	3	198	207	9
Liam N.	166	203	33	198	207	9
Jonnathan P.	175	179	4	198	190	-8
Brock R.	205	204	-1	202	210	8
Julian S.	190	194	4	204	193	-11
Tyler S.	192	203	11	206	201	-5
Curtis T.	189	193	4	187	195	8
Austin W.	211	213	2	211	213	2

Reading
2008/2009

Reading 08-09

MEAN AND STANDARD DEVIATION

Statistic	Values	Scores
No. of Scores(N)	13	-6
Sum of Scores	168.0000	29
Mean	12.92	-2
Sum of Squared Scores	5358.00	0.0
Sum of Squares (SS)	3186.92	17
Standard Deviation for a Population	15.66	29
Standard Deviation for a Sample	16.30	21
		4
		51
		14
		-2
		8
		5

Main Menu

Enter Score

Calculate

Clear Scores

Print

Reading 2009/2010

Reading 09/10

MEAN AND STANDARD DEVIATION

Statistic	Values	Scores
No. of Scores(N)	13	3
Sum of Scores	93.00	11
Mean	7.15	-1
Sum of Squared Scores	1055.00	3
Sum of Squares (SS)	389.69	3
Standard Deviation for a Population	5.48	8
Standard Deviation for a Sample	5.70	0.0
		10
		19
		10
		12
		4
		11

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Reading

Reading

t - TEST FOR NONINDEPENDENT SAMPLES

Statistic	Values	Group X
Number of Pairs	13	11
Sum of D's	-75.00	29
Mean of D's	-5.77	21
Sum of D's Squared	2817.00	4
t-Value	-1.48	51
Degrees of Freedom	12	14
		-2
		8
		5

Enter Score

Calculate

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Group Y

3
8
0.0
10
19
10
12
4
11

Group X

Group Y

Main Menu

Math 2008/2009

MEAN AND STANDARD DEVIATION

Statistic	Values	Scores
No. of Scores(N)	13	1
Sum of Scores	97.00	11
Mean	7.46	6
Sum of Squared Scores	1923.00	22
Sum of Squares (SS)	1199.23	-3
Standard Deviation for a Population	9.60	3
Standard Deviation for a Sample	10.00	33
		4
		-1
		4
		11
		4
		2

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Clear Scores

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Math 2009/2010

MEAN AND STANDARD DEVIATION

Statistic	Values	Scores
No. of Scores(N)	13	4
Sum of Scores	47.00	11
Mean	3.62	8
Sum of Squared Scores	827.00	1
Sum of Squares (SS)	657.08	9
Standard Deviation for a Population	7.11	9
Standard Deviation for a Sample	7.40	-8
		8
		-11
		-5
		8
		2

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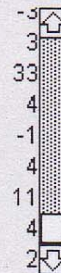
Math

Math

t - TEST FOR NONINDEPENDENT SAMPLES

Statistic	Values
Number of Pairs	13
Sum of D's	-50.00
Mean of D's	-3.85
Sum of D's Squared	1984.00
t-Value	-1.13
Degrees of Freedom	12

Group X



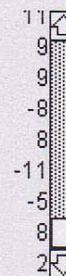
Enter Score

Calculate

Clear Scores

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Group Y



Group X
Group Y

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