

Improving Reading Theme Scores in the Houghton-Mifflin Reading Curriculum with
Rewards as an Intervention for Students with Behaviors

A Special Project

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FACULTY APPROVAL

Improving Reading Theme Scores in the Houghton-Mifflin Reading Curriculum with
Rewards as an Intervention for Students with Behaviors

Approved for the Faculty

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ABSTRACT

This study examined the effects of using the Rewards Program which was a systematic, phonics-based reading intervention with the 4th Grade Houghton-Mifflin Reading Curriculum. The purpose of this research was to find out if using the REWARDS Program with the District's selected Houghton-Mifflin Curricula would increase reading scores on the Integrated Theme Tests for students who were below grade level reading and had behavioral disorders that interfered with their learning. Typically, these students were expected to maintain grade level reading fluency and comprehension skills at a pace that was set for typical students in the general education setting. For this study, a multiple-baseline design for eight participants was used to calculate the effect of daily, small group setting, 25-minute reading instructional sessions provided over the course of 26 weeks. Using REWARDS intervention with the Houghton-Mifflin Curricula did not increase the Integrated Theme Test scores for students with behaviors and at risk in reading.

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CHAPTER 1

Introduction

Background for the Project

A major concern that general and special education classroom teachers had dealt with was providing an effective program for students who had failed not only in their academics, but have behaviors disorders that had made them at-risk students early in their school career. The number of students identified with Emotional and Behavioral Disorder (EBD) increased more than 18% between 1992 to 2001 to nearly half a million (U.S. Department of Education, 2002) according to O Rivera, Al-Otaiba & Koorland (2006). Those students were frequently considered difficult to teach. Under the Federal Regulation of the No Child Left Behind Act (NCLB), the success rate of students with special needs in designated programs became high stakes. The major focus of the NCLB 2001 was to provide all children with a fair, equal, and significant opportunity to obtain a high-quality education, signed on January 3, 2002. There were four items address: 1) Accountability; 2) Flexibility; 3) Researched-based education; 4) Parent options (OSPI, 2008). Along with that, the Washington's Assessment of Student Learning (WASL) made the stakes even higher with graduation requirements. Schools were required to show student growth yearly in reading, mathematics, and writing. Not only were school district's required to offer professional training to teachers but to provide curriculum that

guaranteed all students a fair opportunity to pass the Essential Academic Learning Requirements (EALR's) and Grade Level Expectations (GLE's) set forth by the Office of Superintendent for Public Instruction (OSPI, 2008). Leaders from the state level on down to the school's district administrators had mandated that all classrooms use the same curriculum throughout school buildings in the Yakima School District. General education students and students with disabilities were expected to maintain a district implemented pacing chart for each of the six reading units in the Houghton-Mifflin Reading Curricula, meet grade level expectations (GLE's) and pass Integrated Unit Theme Tests. The Houghton-Mifflin Reading Curricula that the school district selected was researched-based and had data that stated it improved students reading fluency and comprehension skills (National Reading Panel). The results of scores from the past three years had not shown consistent yearly growth for students who had learning disabilities or difficulties in reading, along with learned behaviors, those students did not become successful readers. Added on to the curriculum was the Dynamic Indicators of Basic Early Literacy Skills (DIBELS). Using the DIBEL's Benchmark Goals and Indicators chart, reading coaches expected students to read fluently at their grade level. Three times during the year (fall, winter, and spring), students were timed to see if their number of words per minute increased since the last test. The Social Skills Training (SST) self-contained students had behaviors of shutting down, low or no motivation, lack of

confidence, or went into off-task and defiant behaviors when it came to reading. Reading was not a skill seen as a positive, successful subject for students who had very little success in a general education classroom or in reading.

Statement of the Problem

Does using only the Houghton-Mifflin Reading Curricula meet the needs of students who struggled with reading and have a behavior disorder label? Behavioral students typically have learning disabilities along with learned behavioral issues, such as verbal outbursts, shut-downs, exhibiting off-task behaviors to disrupt learning, or were confrontational with staff and peers, and lacked confidence. They were shown to have reading scores that were one to three years behind their same grade level general education students. This was a concern because those students had been left behind. Would using additional interventions with students with emotional behavior disorders (EBD) have helped them gain additional skills to be more prepared and successful in becoming sufficient readers?

Purpose of the Project

The purpose of the research was to discover if students with behaviors whom have been known to do poorly in the area of reading would improve on their Houghton-Mifflin Integrated Theme Test scores with an additional reading intervention to become successful readers. Prior to this research project no interventions had been

given to the participants in the past two years. To accomplish this purpose, a review of selected literature was conducted.

Delimitations

The study was conducted in a self-contained Special Education Social Skills Training (SST) classroom after the mandated 90 minutes Houghton-Mifflin daily lessons. Reading was schedule from 10:30 a.m. to 12:00 p.m., Monday through Friday. The curriculum used during the reading block was the 4th grade Houghton-Mifflin Reading program. All students in the SST classroom participated in the REWARDS intervention lessons. The intervention instruction was given for 25 minutes for four days per week (Monday through Thursday). The REWARDS intervention program was administered right after the reading block. A REWARDS pre-test assessment was given to all participants to find out what their present level of decoding ability was. Six boys and two girls were tested.

Assumptions

Based on the data taken from the REWARDS pre-test, it was determined that the students were in need of decoding intervention instruction. The author believed that students who struggled with reading and were significantly one to four years below their general education grade-level peers would benefit from using the intervention program. The researcher had used the REWARDS intervention one other time during a third grade

summer school program. There was no formal training provided prior to using the intervention program. The researcher was required to read over and plan out the instruction for approximately ten minutes each day. The REWARDS intervention program was selected because it was geared for intermediate and middle school students who were at-risk in their school's reading program. The students had difficulty with decoding skills in their daily reading tasks. Based on this author's nine years of working with students with special needs and also at-risk in the academic area of reading the REWARDS intervention program was a necessary tool included in the education of the research participants. The researcher made the assumption that students in the SST classroom who received the REWARDS intervention with Houghton-Mifflin would increase scores on the integrated theme tests.

Hypothesis or Research Question

Was using the REWARDS for SST students enough to help raise the Houghton-Mifflin Integrated Theme Test scores? One essential thought led to the researcher's hypothesis. Students in the self-contained SST classroom when given the REWARDS intervention instruction would improve their Houghton-Mifflin Integrated Theme Test scores, when compared with those SST Students who did not receive REWARDS intervention program.

Null Hypothesis

There was no significant difference when students used the REWARDS intervention with HM Reading Curricula. Significance was determined for $p \geq .05, .01, .001$.

Significance of the Project

The significance of this project was to determine if students' test scores would improve after being given the REWARDS intervention. In the past, students in the self-contained SST classroom had not been successful in performing as well or as quickly as their other regular education peers in DIBELS and Houghton-Mifflin Integrated Theme Tests. Information collected from the DIBELS 2006-2007 showed that some of the SST students were at-risk in reading fluency. The ranges of collected Integrated Theme Tests scores for the 2006-2007 school year were between a low 35 to a high 89 percent. Data was collected from DIBELS assessments for the 2006-2007 and 2007-2008 school years. Also, scores were collected from the Houghton-Mifflin Themes Test 2006-2007 and 2007-2008 school years. It was essential that students' scores improved on the DIBELS and Houghton-Mifflin Integrated Theme Tests as part of Ridgeview's Annual Yearly Progress (AYP) report.

Procedure

In October of 2007, this researcher was granted permission from the building principal and from the reading coach to do a research paper with the REWARDS intervention program. During the month of October, the researcher looked at two reading intervention programs. The first one was SRA Decoding Skills and the second one was REWARDS program. The researcher selected the REWARDS intervention program. Also in October 2007, a scheduled time was incorporated into the learning day for the SST classroom to use the REWARDS intervention. The established time was 12:00 noon to 12:25 p.m.

Between November 6 and 7, 2007, the REWARDS pretest assessment was administered by SST staff to find out what the participant's present level of decoding multisyllabic word skills were. The following dates were the days that the Houghton-Mifflin Integrated Theme Tests (HMITT) were given and completed. On October 29, 2007 Houghton-Mifflin Journeys Level 4, Theme 1 Integrated Theme Test was administered to students. On January 11, 2008, Houghton-Mifflin That's Amazing Level 4, Theme 2 Integrated Theme Test was administered. On March 5, 2008 Houghton-Mifflin That's Amazing! Level 4, Theme 3 Integrated Test was given to students. On May 8, 2008, Houghton-Mifflin Heroes Level 4, Theme 4 Integrated Test was given to

students. The REWARDS intervention program was started on November 9, 2007 and ended on March 22, 2008. The dates of each lesson were provided for this study.

Lesson 1 started on 11-09-07 and completed on 11-13-07.

Lesson 2 started on 11-15-07 and completed on 11-26-07.

Lesson 3 started and completed on 11-28-07.

Lesson 4 started on 12-2-07 and completed on 12-3-07.

Lesson 5 started on 1-07-08 and completed on 1-09-08.

Lesson 6 started on 1-15-08 and completed on 1-16-08.

Lesson 7 started on 1-23-08 and completed on 1-24-08

Lesson 8 started on 1-31-08 and completed on 2-05-08.

Lesson 9 started on 2-13-08 and completed on 2-14-08.

Lesson 10 started on 2-25-08 and completed on 2-26-08.

Lesson 11 started on 2-27-08 and completed on 2-28-07.

Lesson 12 administered on 03-03-08 and completed on 03-04-08.

Lesson 13 administered on 03-05-08 and completed on 03-06-08.

Lesson 14 administered on 03-10-08 and completed on 03-11-08.

Lesson 15 administered and completed on 03-20-08.

On May 8, 2008 the research project ended.

Definition of Terms

General education classroom. This classroom consisted of students who did not qualify for special service support from Special Education funds. The general education teacher taught only the core subject areas with the school district's selected curriculum. The majority of students in the general education classroom did not have an Individual Educational Plan (IEP) as mandated by Federal Law.

Self-contained SST classroom. This classroom consisted of students who qualified for services as were determined by a Child Study Team, with supported documented data from educators, parents, and a school psychologist of consistent off-task or disruptive behaviors in all learning environments. The students generally had mild to extreme learning disabilities academically in one or all of the academic areas of mathematics, reading, and written language. All SST students had an Individual Educational Plan (IEP) that measured skills on their goals and objectives.

Acronyms

ADHD. Attention Deficit Hyperactive Disorder

AYP. Annual Yearly Progress

CD. Conduct Disordered

DIBELS. Dynamic Indicators of Basic Early Literacy Skills

df. Degrees of freedom

EBD. Emotional Behavioral Disorders

EALR's. Essential Academic Learning Requirements

GLE's. Grade Level Expectations

HM. Houghton-Mifflin

HMITT. Houghton-Mifflin Integrated Theme Test

IEP. Individual Educational Plan

MMR. Mild Mental Retardation

NCLB. No Child Left Behind Act

OCD. Oppositional Conduct Disorder

ORF. Oral Reading Fluency

ORT. Oral Retell Fluency

OSPI. Office of the Superintendent of Public Instruction

REWARDS. Reading Excellence: Word Attack and Rate Development Strategies

SST. Social Skills Training

WASL. Washington's Assessment of Student Learning

WCPM. Words Correct per Minute

WPM. Words per Minute

CHAPTER 2

Review of Selected Literature

Introduction

The researcher gathered resources that helped to provide input on working with at-risk students who did not enjoy reading or lacked the confidence, or skills to become successful readers. Negative behaviors were exhibited with defiance, off-task, disruptive, and non-compliant attitudes that hindered the learning process for students with behaviors disorders and learning disabilities in the SST classroom. The researcher used the guidelines set in the National Reading Panel according to the National Assessment of Educational Progress (2000) to seek ways for the SST students to improve reading skills (Houghton-Mifflin, 2002).

The following resources and materials were selected and used to help the researcher to gather research information from other researchers who had worked with students who were struggling readers, or worked with students who were identified as having emotional behavior problems. Kathleen Lane had done research on a three-tier model program that helped prevent and respond to antisocial behaviors of students in school. According to Lane, in the school environment, students with EBD lacked decorum and limited social skills which often demanded teachers' attention, interfered with instruction, lead to impaired social relationships and negatively influenced the

educational experiences of other students in the classroom. They also had poorer attendance, were likely to be retained a grade, and had higher school drop out rates than any other disability category (2007).

Using DIBELS, REWARDS, and Houghton-Mifflin Reading Resources

The Dynamic Indicators of Basic Early Literacy Skills (DIBELS) assessment was a district wide mandated assessment used to test a student's reading fluency (ORF) and retell fluency (ORT). The measures were developed to assess student development of phonological awareness, alphabetic understanding, accuracy and fluency reading connected text, vocabulary and comprehension (Good & Kaminski, 2008). The reading passages and procedures were based on a program of research and development of Curriculum-Based Measurement of Reading by Stan Deno and colleagues at the University of Minnesota (Univ. of Oregon, 2008). The research was supported by the Early Childhood Research Institute on Measuring Growth and Development funded by the U.S. Department of Education, Special Education Programs as cited by DIBELS (2008). The passages were calibrated for the goal level of reading for each grade level. It was a performance based test used to identify children who needed additional instructional support and monitored progress toward instructional goals. The Dynamic Indicators of Basic Early Literacy Skills was selected due to sound predictors of later reading achievement, alternate forms for monitoring early progress, multi-probe

reliability that exceeded 0.95, and was sensitive to responsiveness to literacy interventions. In the ORF assessment, student performance was measured by having student read a passage aloud for one minute. Words omitted, substituted, and hesitations more than three seconds were scored as errors. Self-corrected word errors were not counted as errors if within three seconds. The number of correct words per minute from the passage was the oral reading fluency rate. The ORF assessed fluency with text and the ability to translate letters-to-sounds-to-words fluently without effort (DIBELS, 2008).

For the ORT, there were two items that were assessed. The first was for any incorrect learning or practicing of misrules and the second was to identify the student's comprehension level. Next, the evaluator would note that the oral retell was or was not consistent with their oral reading rate. The student had to retell the read passage with words used from the story. The student was given a score based upon the number of words read. A student who had an ORF score of 100 words per minute (wpm) should have had an ORT score of a least 50. Teachers were concerned with children who read fluently but comprehended poorly. The DIBELS made comprehension core components maps connected to the first three years of a student's early reading. The ORT was a measurement tool that assessed comprehension with the ability to extract meaning from read text. The ORT provided a brief measure that corresponded to the National Reading Panel 2000 report (DIBELS, 2008).

Archer, A., Gleason, M., & Vachon, V. stated that the REWARDS intervention program was used for students who struggled with decoding long words and to increase oral and silent reading skills (Teacher Guide, 2000, p.1). The program was designed for students who were in fourth through twelfth grade, and were also performing below their present grade-level in reading by two to three years. Out of the six goals of the REWARDS program (Teacher Guide, 2000, p.1-2), this researcher was interested in seeing the students read grade level content words from their daily lessons and from the DIBELS passages.

The Houghton-Mifflin Reading Curricula was the Yakima School District's chosen curriculum that was used district wide. The curriculum covered Kindergarten through 6th grade. It was a comprehension based curriculum with additional lessons in word phonetics, spelling, and writing (Houghton-Mifflin, 2002). The Houghton-Mifflin Integrated Theme Test evaluated students' progresses as readers and writers. It provided students an opportunity to apply skills to theme-related test selections. Last, it was an indicator of how well students had learned skills and strategies that were in the curricula. The skills that were assessed were reading strategies, comprehension and comparing texts, structural analysis and vocabulary, writing, and language (Houghton-Mifflin, 2002). The next two skills on the test were listening comprehension and self-assessment. The listening comprehension and self-assessment were optional components of the tests

assessments. According to the National Reading Panel report in 2002, Houghton- Mifflin Reading Curricula met the criteria for effective reading instruction. The major concepts the National Reading Panel found necessary were phonemic awareness and letter knowledge as the two best predictors of how well children would learn to read (Houghton-Mifflin, 2002).

Prior Research Information from other Educators

The researcher read articles that dealt with the problems of students with EBD and who struggled daily in the area of reading. It should be noted that all the students were at-risk readers due to their behavioral and learning disability. It was really important for this author to understand that there was not one effective way to improve reading skills and the behaviors at the same time. According to O Rivera, Al-Otaiba & Koorland, students with EBD were a unique group with a high risk of academic and social failure due to poor academic achievement and pervasive behavioral problems. O Rivera, et al., did a research that included students who were at risk of antisocial behaviors as well as students who were EBD. In O Rivera, et al., their article focused on interventions that were used in the primary grades. In the eleven studies that O Rivera, et al., reviewed, they found reading interventions of direct instruction, peer tutoring, and behaviorally based procedures such as time delay prompting, trial and error, and differential reinforcement were used successfully. O Rivera, et al., stated that there

were some changes in behaviors but not significant to eliminate negative behaviors completely. Another study done by Allen-DeBoer, Malmgren, & Glass, selected students who were EBD, had health issues of diagnoses which included attention deficit hyperactivity disorder, conduct disorder, depression, and pervasive personality disorder (2006). Allen-DeBoer, et al., students closely resembled the participants who were part of this author's research project. The article was of value to this author because of the similarity of the two groups of students. In the article by Starkman (2007), the research reviewed a study done at Westwood Elementary School. The principal and staff monitored student's progress using a variety of assessments throughout the year. The various assessments used had pre and post tests to document the progress that students made on their reading skills. Starkman stated that knowing where a student was at in present skill levels provided the best results of growth (2007). Not all of the tests were paper and pencil, some of the assessments were provided by software programs. Principal Jan Borelli said that her students learned better and showed greater progress when computer programs were used than when direct instruction was applied (Starkman, 2007).

Thomas & Wexler, and O Rivera, et al., reported that all students were expected to show growth in reading skills for phonological awareness, phonics, fluency, sight words, vocabulary, and comprehension, as mandated by the NCLB Act that was

established in 2000. In two of the studies, 30 minute block times were set-up to provide intervention to students. Another study had done interventions over the course of nine weeks and was able to show that the students had improved in their reading skills. O Rivera, et al., had teachers who had implemented some reading incentives to support student behaviors during the intervention process (2006). However, the positive reinforcement was not done consistently in the studies for the controlled and the treatment group to have validity and reliability. According to O Rivera, et al., & Allen-DeBoer, et al., it was most effective to give students with EBD one-to-one reading intervention instruction. However, the cost of provided support for each student would not had been feasible in a self-contained classroom for students with EBD in most public school settings. Small group settings were more realistic for this researcher's classroom of students with EBD. The study by Allen-DeBoer, et al., used the Corrective Reading Program for intermediate elementary grades (2006). The primary grade level used the Reading First Curricula that was implemented by the NCLB Act for primary grades first through third (2002). O Rivera, et al., & Thomas & Wexler used measurements from the DIBEL's Assessment to document student's reading growth.

After reading the resource articles in the research project, the studies done by O Rivera, et al., and Allen-DeBoer, et al., believed that the interventions contributed to the students with EBD reading skills growth. Thomas & Wexler summarized their study

by stating that students with EBD would be better in a general education classroom versus a self-contained or resource setting (2007). Lane stated that teacher preparation programs focused predominantly on social and behavioral competencies such as classroom management, social skills instruction, conflict resolution, and anger management. Noting these were important skills but that more attention needed to be focused on working with the academic instruction for students with EBD (2007). Lane's belief was that special education teachers lacked professional development to provide the best research based-methods for their students. Last, all the studies mentioned that more research still needed to be done to develop a program that would help all students with EBD or at-risk students struggling with reading to become life-long learners of reading.

What Struggling Readers Find Difficult

Educators had found that there were many students who had not become independent readers. They lacked certain skills or many of the skills necessary to become self-sufficient readers. The students needed to be taught ways of solving their own reading problems. For example, when students were tested for fluency, had they been given the skills to help them to decode? What phonics knowledge had they possessed? Were sight words and high-fluency words taught in the classroom?

Many struggling readers had experienced difficulty in decoding multisyllabic words. However, teaching the six syllable types in the English language, along with the

rules for syllabication had helped students to break down unknown words in their reading (DIBELS, 2008). When students read from grade level materials instead of their individual reading levels, the instructor gave support in pre-teaching of vocabulary, practiced with unfamiliar or un-mastered phonemes and morphemes. Reading text was considered to frustrating for most struggling students when their fluency was below 90 percent (Beers, 2003). In addition to fluency, Beers stated that the Five Finger test was used to determine the difficulty of a reading book for independent reading. If a student missed more than five words on a page, the book was too difficult to enjoy (2003). Struggling readers needed lots of practicing decoding automatically, accurately, and effortlessly with expression. Best practices used repeated reading to practice reading smoothly and helped them to increase the speed they read. To be considered fluent, older struggling readers would practice until they got 100 words correct per minute (wcpm) minimum. For vocabulary acquisition, teaching to the structure of words, including word roots, affixes, derivations, and meaning provided deeper comprehension. Teachers used semantic maps that connected other words to other words, concentrating on similarities, differences, and meaning, especially in tier three words. Thomas & Wexler recommended teaching acquisition strategies that used key words, mnemonics, and elaborative techniques for comprehension (2007). According to Beers, it was important to build comprehension by teaching before, during, and after reading strategies so that

students moved towards being independent learners (2003). It was necessary to teach efficient previewing strategies in the reading of titles, graphics, headings, and key words or ideas in a passage. Modeling “think aloud” strategies helped struggling readers to generate questions for themselves and others about what they read. Students needed to elaborate connections they made between the text, their own experiences, and other texts read. Summarization skills also helped students to focus on key details, ideas, and concepts in a text. After reading Beers (2003) key ideas on building confident readers, the Houghton-Mifflin Curricula fitted best with building independent readers. Teachers that had students graph word reading and error rates collected during students’ weekly fluency practice, such as the DIBELS provided accountability and motivation.

Guiding instructional decision-making to curriculum-based assessments was a critical feature for student success on the tests. The use of authentic assessment such as reflective journals, self-assessment, and project-specific rubrics helped teachers to be aware of changes in performance over time. Beers stated that differentiate instruction should not be changed in the content between what the student should know or be able to do after instruction (2003). Pre and post assessments were good indicators of student’s present knowledge and what was learned after instruction of similar content (Starkman, 2007).

How did an educator reach out to students that were aware that they struggled with reading in the classroom? According to Beers, students needed to become confident in their own reading abilities (2003). Some ways that teachers had done this was to reach out to the student and learn about them. What interests students, and what do they like? Teachers needed to set high expectations, instead of dummed down reading materials. Classrooms that encouraged risk taking were successful in building self-confident for struggling readers. Teachers needed to seek different ways to encourage engagement. Sustained silent reading needed to be implemented in the classroom. Last, teachers needed to build the student's confidence and literacy to reading (Beers, 2003). According to Beers, "We must, at all times, remember that we don't teach a subject, we teach you-specific children with specific needs," (p.301).

Working With the Emotional Issues of Struggling Students

According to O Rivera, et al., students with EBD were a unique group with a high risk of academic and social failure due to poor academic achievement and pervasive behavioral problems. Educators that worked with students with EBD had many challenges in providing reading instruction. Those students exhibited academic underachievement combined with high levels of externalizing behaviors and resistance to instructional efforts. This was a critical issue given that reading was the gateway to

content area knowledge and the ability to complete grade level academic work (O Rivera, et al., 2006).

Lane discovered that students with EBD were typically receiving only the basic skills with limited attention to higher level skills (2007). Instructional designs lacked core components such as social validity, treatment integrity, and generalization and maintenance. There were very few or poorly defined outcome measures in the academics. As with Thomas & Wexler, Lane stated that there was a need to learn how to address the academic needs of students with EBD (2007).

In one of the studies that O Rivera, et al., researched, the teachers agreed that teacher-led direct instruction and tutoring were effective instructional strategies for teaching reading to students with EBD (2006). It was noted that teachers most often delivered in whole groups and placed attention on behavior management than on reading instruction. Also, research based-practices were not being used consistently in the classroom. Thomas & Wexler highlighted the need for professional development in reading for teachers of students with EBD (2007).

Starkman stated that special need students needed to be assessed using a variety of tests throughout the year to get an accurate view of their abilities. It was important to look at each individual skill with each individual child to see what a student could and couldn't do (2007). Further, language in the reauthorization of IDEA (2004) requested

incentives for whole-school approaches, scientifically-based early reading programs, positive behavior interventions and supports, and early intervening services that reduced the need to label children as disabled in order to address the learning and behavioral needs of such children (Lane, 2007).

Summary

In summary, despite the academic needs of students with EBD, research on the effectiveness of reading instruction for students with EBD was limited and not robust, especially for samples of students below third grade (O Rivera, et al., 2006). This researcher took into consideration all of the materials that were reviewed prior to the implementation of the research. Since the reading block for Houghton-Mifflin was regulated by the school district and set for undisruptive 90 minutes of teaching, the researcher provided specific times to instruct from the Houghton-Mifflin (HM) Reading Curricula, the REWARDS program, and the DIBELS assessment. During the Houghton-Mifflin block, the researcher focused on teaching to strategies of predicting, inferring, asking or clarifying questions, along with evaluating and giving opinions. The students did get vocabulary and spelling lessons during the same time frame. The comprehension of reading was practiced throughout the HM Reading Curricula. It was known for its rich comprehension based activities, questions, and think aloud strategies. The REWARDS intervention was used to increase students learning and practice of decoding words

(Archer, et al., 2000). Students with behavioral and reading disabilities tended to be low in decoding and phonic skills. Students who decoded and sounded out words on their own were able to read more words per minute with fewer errors. They would then concentrate on understanding the information that was being read. Good & Kaminski stated that the results of the DIBELS were used to evaluate individual student development towards validated instructional objectives, along with provided feedback on effectiveness of an intervention support (2008). Since reading fluency was important for students to be successful in their middle and high-school years, the DIBELS was an ongoing assessment. Also, teachers needed to think about the ratio between the ORF and the ORT. According to DIBELS assessment summary, the ratio of ORF and ORT should be 2:1. Comprehension was measured by the number of words retold in a DIBELS' reading passage. This researcher gathered information of students who needed more help in using high-frequency words, sight words, or multisyllabic words. All three of the assessment parts were valuable to the researcher in delivering the daily lessons. The assessments from the three reading programs were the tools that evaluated the effectiveness of the research project.

CHAPTER 3

Methodology and Treatment of Data

Introduction

The purpose of this experimental study was to determine if using the Reward Intervention Program, in addition, to the Houghton-Mifflin (HM) Reading Curricula would increase the student's theme tests scores. Since the REWARDS intervention program worked on word phonetics and decoding skills, it was expected to increase student's reading skills with the 4th grade HM Reading Curricula. The DIBELS reading assessment was used to obtain baseline data from which related conclusions and recommendations were formulated from.

Methodology

This researcher used a quantitative experimental research method that determined the effectiveness of using the HM Reading Curricula with the REWARDS intervention program to improve the reading skills for SST students who struggled in reading and exhibited behaviors that attributed negatively to their academic reading experiences. Scores from the Houghton-Mifflin Integrated Theme Tests (HMITT) were recorded from the previous year (2006-07) and compared with this past year's data (2007-08). The 2006-07 HMITT scores were the controlled group and the 2007-08 HMITT scores were the treatment group. A t-test for independent samples was used for data analysis to

determine significance with Rewards pre and post test, the DIBELS assessment, and the HMITT Scores. The DIBELS and Reward scores were then assessed to determine any significant improvement in the HMITT skills.

Participants

All of the participants attended Ridgeview Elementary. The students were bused from various locations inside the Yakima School District. The students received all of their academic instruction in the self-contained specialized classroom. The students left the classroom only to get additional instruction in music, library, and physical education during the week. All of the students were instructed daily in this researcher's classroom for all of their academic needs. Student number eight left the SST classroom twice a week for 25 minutes of speech therapy. Student number three was the only student who did not qualify for free or reduced breakfast or lunch. All of the participant's meals were eaten in the SST classroom.

The behavioral disabilities ranged from classifications of Health Impairment for Attention Deficit Hyperactive Disorder (ADHD), Oppositional Conduct Disorder (OCD), Conduct Disorder (CD), or Mild Mental Retardation (MMR). All of the students also had learning disabilities in the areas of mathematics, reading, and written language. Each of the participants had an IEP that qualified and placed them into the SST Behavioral Program.

There were a total of eight participants used in the research project. However, student number one and number eight were not in the HM Reading Curricula for the 2007-08 school year. Both students were in a SRA Reading Mastery Curriculum. Student one was in Reading Mastery Level IV, and student eight was in Reading Mastery Level II. The ages of the students were from ten to twelve years of age. There were four 5th grade students, whom were significantly lower by two to four years academically, and four 4th grade students who were considered within one year or at grade level.

Participant #1 was an 11-year old female, diagnosed with ADHD, MMR and with cognitive disabilities in all core subject areas. She was at risk in reading fluency and comprehension by two to three grade level years. She did not pass the spring 2007 Reading WASL. Participant #2 was a 12-year old male with ADHD and MMR. Short term memory retention was a challenge with his academic subjects. He was three grade levels behind his general education peer and was retained to repeat 5th grade. He was at risk in reading fluency and reading comprehension skills. He did not pass the spring 2007 WASL Reading Assessment. Participant #3 was a ten-year old male with ADHD and OCD, with 4th grade level reading fluency and comprehension. He was considered low risk in fluency and reading comprehension. He did pass the spring 2007 WASL Reading section. Participant #4 was a ten-year old male with ADHD and OCD, 3.5 grade level skills in reading and comprehension skills. He was considered at some risk for

reading fluency and comprehension. He did not pass the 2007 WASL Reading Assessment. Participant #5 was a ten-year old female with ADHD and OCD, with 3.5 grade level reading skills. She was at risk in reading fluency and in reading comprehension. She did not pass the spring 2007 WASL Test for Reading. Participant #6 was a ten-year old male diagnosed with ADHD and CD, with 3rd grade level reading skills for fluency and comprehension. He was considered at risk in reading fluency and comprehension. He did pass the modified WASL Reading Assessment for spring 2007. Participant #7 was a 12-year old male with ADHD and EBD, with 3rd grade level reading skills in fluency and 4th grade level in reading comprehension. He missed half of his 4th grade and one-third of his 5th grade year with attendance issues. He was retained at 5th grade. He was at risk in reading fluency and in reading comprehension. There were no scores collected from the 2006-07 year in the Houghton-Mifflin Reading Curricula. Also, there was no data for the fall 2006 and winter 2007 for DIBELS. He did not pass the spring 2007 Reading WASL Test. Participant #8 was a 12-year old male with EBD and OCD. He was significantly low in all subject areas of reading, writing and math by three to four years academically. He was retained at 5th grade. The participant was at risk in reading fluency and reading comprehension. An alternative assessment portfolio for reading was completed spring 2007 which he passed. Participant #8 did not use the HM Reading Curricula. He participated in using the REWARDS intervention program.

Student number seven was the only participant that did not take any prescription medications for his existing disabilities. Students number four and eight were administered two doses of medications daily for the am and pm times. Those students that were medicated were able to attend to their studies with fewer difficulties.

Instruments

The DIBELS reading assessment was utilized for administering a set of scores from the previous school year (2006-07) with the current school year (2007-08) which made a baseline to determine the significance of using the REWARDS intervention with HM Reading Curricula. The DIBELS assessment was an approved testing instrument used by the Yakima School District to assess oral reading fluency and oral reading retell skills. All participant scores were taken from school year 2006 -07 and school year 2007-08. Statistics used were from the t-test for independent samples provided by the STATPAK from the book Education Research: Competencies for Analysis and Applications, Sixth editions text (Gay, Mills, and Airasian, 2006). The experiment was set up with treatment group X: DIBELS scores for Fall 07, Winter 08, and Spring 08 with REWARDS intervention program. The controlled group Y: DIBELS scores for Fall 06, Winter 07, and Spring 07 without REWARDS intervention.

A t-test for independent samples was also used for data analysis to determine significance with the HMITT from the participant's previous school year 2006-07 scores

and 2007-08 scores. For the duration of this research only the data from theme reading units one, two, three, and four were used to determine the significance. The experiment was set up with treatment group X: HMITT scores for school year 2007-08 with REWARDS intervention. The controlled group Y: HMITT scores for school year 2006-07 without REWARDS intervention.

Design

This was a quantitative research method that used a comparative experimental research design with two different groups. Pre and post tests were used to determine if participants would benefit from the REWARDS intervention. Two separate groups were organized with treatment group X: DIBEL scores for Fall 07, Winter 08, and Spring 08 with REWARDS intervention program. A controlled group Y: DIBEL scores for Fall 06, Winter 07, and Spring 07 without REWARDS intervention. The same design was again used to research the experiment with a treatment group X: HMITT scores for 2007-08 school year with REWARDS intervention program. The controlled group Y: HMITT scores for school year 2006-07 without REWARDS intervention.

Procedure

On November 6, 2007, students one through eight were given a Rewards pretest to determine their present skill level for decoding a list of generalized words. The

students were given 20 words to sound out and pronounce. When a student missed a sound from any of the words given, he or she was marked off one point.

The following dates were the days that Rewards Intervention lessons and Houghton-Mifflin theme tests were given and completed.

On 10-29-07, Houghton-Mifflin Journeys Level 4, Theme 1 Integrated Theme Test was administered to students.

Rewards Lesson 1 started on 11-09-07 and completed on 11-13-07.

Rewards Lesson 2 started on 11-15-07 and completed on 11-26-07.

Rewards Lesson 3 started and completed on 11-28-07.

Rewards Lesson 4 started on 12-2-07 and completed on 12-3-07.

Rewards Lesson 5 started on 1-07-08 and completed on 1-09-08.

On 1-11-08, Houghton-Mifflin That's Amazing Level 4, Theme 2 Integrated Theme Test administered.

Rewards Lesson 6 started on 1-15-08 and completed on 1-16-08.

Rewards Lesson 7 started on 1-23-08 and completed on 1-24-08

Rewards Lesson 8 started on 1-31-08 and completed on 2-05-08.

Rewards Lesson 9 started on 2-13-08 and completed on 2-14-08.

Rewards Lesson 10 started on 2-25-08 and completed on 2-26-08.

Rewards Lesson 11 started on 2-27-08 and completed on 2-28-07.

Rewards Lesson 12 administered on 03-03-08 and completed on 03-04-08.

Rewards Lesson 13 administered on 03-05-08 and completed on 03-06-08.

03- 5 & 7- 08 Houghton-Mifflin That's Amazing! Level 4, Theme 3 Integrated Test given to students.

Rewards Lesson 14 administered on 03-10-08 and completed on 03-11-08.

Rewards Lesson 15 administered and completed on 03-20-08.

Rewards Post test given on 3-22-08.

On 05-08-08, Houghton-Mifflin Heroes Level 4, Theme 4 Integrated Test given to students. May 8, 2008, end of research project.

Treatment of the Data

T-test results for independent samples were provided by the STATPAK statistical software program that accompanied the Education Research: Competencies for Analysis and Applications, Eight edition text (Gay, Mills, and Airasian, 2006). The t-test allowed the researcher to compare DIBELS and HMITT scores for the treatment and the controlled group for assessing the hypothesis and null hypothesis.

Summary

Chapter 3 provided a description of the research methodology employed in the study, the participants involved, the instruments used, the research design, and procedure utilized. Group X was the treatment group using the HM Reading Curricula with the

REWARDS intervention program. Group Y was the controlled group using only the HM Reading Curricula. T-tests for independent samples were used to provide reliability and validity in the experimental research project. Also presented, were details concerning the treatment of the data obtained and analyzed.

CHAPTER 4

Analysis of the Data

Introduction

The experimental cause and effect study sought to determine the extent to which a group of students who were at grade or below grade level reading with behavioral issues would increase their reading scores on HMITT. The experiment was to improve Houghton-Mifflin reading scores after using the REWARDS. Data collected from the DIBELS 2006-07 and the 2007-08 school years were used to compare the controlled and treatment group of the participants in the self-contained 4th/5th grade classroom.

Description of the Environment

The study focused on students who were in the researcher's SST classroom at Ridgeview Elementary. All SST participants received daily instruction from the researcher for all of the reading assignments. Six of the participants received reading instruction using the HM Reading Curricula, augmented with REWARDS. The other two students were using the SRA Curriculum with REWARDS intervention. All eight of the students received REWARDS after their regular reading block was over. Monday through Thursdays, the participants were given 25 minutes of direct instruction from those lessons going over the sounds of word syllables, phonetic sounds with long and short vowels, prefixes and suffixes.

Hypothesis/Research Question

Was using the REWARDS for SST students enough to help raise the Houghton-Mifflin Integrated Theme Test scores? One essential thought lead to the researcher's hypothesis. Students in the self-contained SST classroom when given the REWARDS intervention instruction improved their Houghton-Mifflin Integrated Theme Test scores, when compared with those SST Students who did not receive REWARDS intervention.

Null Hypothesis

There was no significant difference when students used the Rewards Intervention Program. Significance was determined for $p \geq .05$, .01, .001.

Results of the Study

Table 1 displayed the DIBELS test results for the eight participating 4th/5th grade SST self-contained students. The researcher collected the data from school years 2006-2007 and 2007-2008 to obtain the analysis for treatment group X and controlled group Y. The DIBELS had three recommended instructional levels: Low Risk/At grade level/Benchmark; Some Risk /Strategic/Additional Intervention; and At Risk /Intensive Needs/Substantial Intervention. Low risk readers received practice on reading DIBELS passages one time per month. Some risk readers practiced reading DIBELS passages twice per month. At risk readers practiced reading DIBELS passages one time per week. For the 2006-07 school year, the researcher was not able to get DIBELS scores for

student #7 because he did not attend school during that testing schedule and for student #8 who was not able to read words with more than three letters. The DIBELS tests were used as a baseline to determine the reliability of the REWARDS with the HM Reading Curricula.

Table 1

DIBEL Scores for School Years 2006 to 2007 and 2007 to 2008

Y Group	Fall 06	Winter 07	Spring 07	X Group	Fall 07	Winter 08	Spring 08
	ORF/ORT/ Status	ORF/ORT/ Status	ORF/ORT/ Status		ORF/ORT/ Status	ORF/ORT/ Status	ORF/ORT/ Status
Student 1	67/ 7 At Risk	85/30 At Risk	101/23 Some Risk	Student 1	88/03 At Risk	85/30 At Risk	108/15 Some Risk
Student 2	53 /12 At Risk	40/19 At Risk	63/32 At Risk	Student 2	66/18 At Risk	74/28 At Risk	83/22 At Risk
Student 3	90/32 Low Risk	97/41 Low Risk	129/50 Some Risk	Student 3	113/33 Low Risk	135/92 Low Risk	164/97 Low Risk
Student 4	53/19 Some Risk	87/36 Some Risk	101/38 Some Risk	Student 4	89/31 Some Risk	99/56 Some Risk	116/58 Some Risk
Student 5	91/14 Low Risk	85/62 Some Risk	99/54 Some Risk	Student 5	91/34 Some Risk	103/59 Some Risk	105/66 Some Risk
Student 6	46/24 At Risk	58/23 At Risk	92/24 Some Risk	Student 6	81/20 Some Risk	103/64 Some Risk	118/40 Low Risk
Student 7	No Score Available	No Score Available	68 /08 At Risk	Student 7	68/27 At Risk	67/26 At Risk	76/43 At Risk
Student 8	00/00 At Risk	08 /00 At Risk	12 /04 At Risk	Student 8	11/09 At Risk	19/11 At Risk	21/13 At Risk

Instructional Recommendations: Low Risk = At grade level/Benchmark. Some Risk = Strategic/Additional Intervention. At Risk = Intensive Needs/Substantial Intervention

Table 2 showed the scores of HMITT for school year 2006-07. Theme tests one through four were used for the research study. The data on this table became known as Y, the controlled group. There was no data to record for student number seven and student number eight. Both were not using the HM Reading Curricula for that school year. The sums of scores for each participant were entered into the t-test for independent samples group Y.

Table 2

HMITT Scores for School Years 2006-07 (Controlled Group Y)

Student #'s	Theme 1 Test	Theme 2 Test	Theme 3 Test	Theme 4 Test	Sums of Scores
Student 1	33	65	35	63	196
Student 2	57	73	50	37	217
Student 3	89	90	84	82	345
Student 4	52	91	67	79	289
Student 5	70	83	48	57	258
Student 6	49	73	55	40	217
Student 7 in SRA	No score available	No score available	No score available	No score available	No score available
Student 8 in SRA	No score available	No score available	No score available	No score available	No score available

Table 3 displayed HMITT scores for school year 2007-2008. Theme test one through four were used for the research study. The data on this table was X, the treatment group with the REWARDS. There was no data to record for student number one and student number eight. Both students were using SRA Reading Mastery Materials. Student number seven was not able to complete theme test four as he was absent for approximately two weeks and refused to make up the work. The sums of scores for each participant were entered into the t-test for independent samples group X.

Table 3

HMITT Scores for School Years 2007-08 (Treatment Group X)

Student #'s	Theme 1 Test	Theme 2 Test	Theme 3 Test	Theme 4 Test	Sums of Scores
Student 1 in SRA IV	No score available	No score available	No score available	No score available	No score available
Student 2	62	57	76	61	256
Student 3	76	75	58	70	279
Student 4	65	66	63	76	270
Student 5	57	49	73	69	248
Student 6	63	77	74	77	291
Student 7	48	54	56	N/A	158
Student 8 in SRAII/III	No score available	No score available	No score available	No score available	No score available

Table 4 displayed the results of the t-test for independent samples using the HMITT 2006-07 and the 2007-08 scores. The degrees of freedom (df) was determined by $6 + 6 - 2 = 10$. The t-value determined the significance of difference between the means of the X and Y groups.

Table 4

STATPAK Table for HMITT Results

Statistics	Values
Number of scores for X	6
Number of scores for Y	6
SS ₁	1502.0000
SS ₂	1522.0000
Mean of Group X	250.33
Mean of Group Y	253.67
df	10
t	-0.11

Table 5 showed the distribution of t at $p \geq .05, .01, .001$. The researcher used reference Table A.4, p. 571 from Education Research: Competencies for Analysis and Applications, Eight edition text (Gay, Mills, and Airasian, 2006). The calculated value of t was -0.11 well below the thresholds provided by Gay, et al. Thus the null hypothesis was accepted and the hypothesis was not supported.

Table 5

Distribution of t

df	<i>p</i>		
	.05	.01	.001
10	2.228	3.169	4.587

Findings

The data from Table 1 displayed the DIBELS scores for group X and Y scores from years 2006-07 and 2007-08. Data presented in Tables 2 and Table 3 were used to compare scores from SST students that received reading instruction using HM Reading Curricula with REWARDS intervention to the scores of the SST students not using REWARDS intervention. Table 4 provided the statistics used from t-test for independent sample in the STATPAK statistical software program that accompanied the Education Research: Competencies for Analysis and Applications, Eight edition text (Gay, Mills,

and Airasian, 2006). Numbers used from the statistics were the number of scores for X (X_1) and group Y (X_2), the sums of squares from group X (SS_1) and group Y (SS_2), the number of participants for group X (n_1) and group Y (n_2), the mean of group X (X_1) and group Y (X_2), and the df and the t-value. Next, calculations were taken to determine if the null would be accepted or rejected at $p > .05$, $.01$, and $.001$. The null hypothesis was accepted at thresholds $.05$, $.01$, and $.001$. The hypothesis was not supported.

Discussion

After reviewing the results of the findings, the participants' scores were not adequate to show that using REWARDS with the HM Reading Curricula made an impact of increasing the scores on the HMITT. However, student number's two and six made significant gains in their HMITT using after using the REWARDS intervention. The remainder of the students' scores decreased after using the REWARDS intervention. The t-value did not support the premise that using the REWARDS intervention improved the skills assessed by the HM Reading Curricula. The results were puzzling because according to the National Reading Panel phonemic and letter knowledge were the two best predictors of how well children would learn to read (Houghton-Mifflin, 2002). The students in the SST classroom were low in skills to decode long or multisyllabic words. The REWARDS program provided decoding skills for students that performed below their present grade level reading by two to three years (2000). The researcher used the

REWARDS pretest to determine how low the SST participants were in decoding general multisyllabic words. Six out of the eight participants did not have enough skills mastered to decode. At the end of Lesson 15, a post test was given and all but one student improved in using decoding to sound out big words. The REWARDS program did do what it was designed to do in teaching skills to decode words but it was not effective with HMITT skills.

Summary

The analysis of data that were gathered and used from the research project, determined students who received reading instruction using HM Reading Curricula, augmented with REWARDS had performed similarly to those that received reading instruction using only HM Reading Curricula. The null hypothesis was accepted as there were no significant differences in the HMITT scores ($t = -0.11$) when using the REWARDS intervention with the HM Reading Curricula. The hypothesis was not supported. The SST students did not do better with the REWARDS intervention than students using only the HM Reading Curricula to improve HMITT scores.

CHAPTER 5

Summary, Conclusions and Recommendations

Summary

The purpose of this experimental study was to determine the extent to which a group of SST students who were at below grade level reading and had behavioral issues that made them at risk in the area of reading would improve HMITT scores. The experiment was to improve Houghton-Mifflin reading scores after using the Rewards Intervention Program. To accomplish this purpose, a review of selected literature was conducted. Additionally, the DIBELS 2006-07 and 2007-08 scores were used to obtain baseline data from which related conclusions and recommendations were formulated. The analysis of data that were gathered and used from the research project, determined that students who received reading instruction using HM Reading Curricula, augmented with REWARDS had performed similarly to those that received reading instruction using only HM Reading Curricula.

Conclusions

From the review of selected literature presented in Chapter 2 and the analysis of the data in Chapter 4, this researcher's findings resulted in many conclusions. First, the researcher's students were given a fair, equal, and significant opportunity to obtain a high-quality education under the NCLB Act of 2001. The HM Reading Curricula was

researched-based and implemented to use at all Yakima elementary schools. Secondly, there were challenges that at-risk students with behaviors dealt with in reading that were not only academic but also emotional needs. Each student really needed to be taught with strategies that were compatible to their unique needs in academics and emotional areas. Research studies noted that the academic studies had always been hindered by the behaviors first, as teachers sought ways to curtail them prior to teaching the reading content. Results in finding curriculum or training that assisted the teachers to instruct to those students with behavior disorders and also learning disabilities was marginal. However, teachers that used interventions helped challenging at-risk readers with behavioral disorders and learning disabilities gained additional skills as they became much more confident and successful readers. Next, research studies that used reading interventions suggested that students with behavioral disorders and learning disabilities needed instruction that was evidence based, used explicitly taught skills, and used well-balanced curriculum materials that aligned with GLE's. Guided instructional decision-making to curriculum-based assessments was a critical feature for student success on tests. Educators used meaningful assessments that measured student's present level of skills in reading fluency and in reading comprehension. Students that were taught how to assess their learning using authentic assessments such as reflective journals, self-

assessments, project-specific rubrics and recording benchmarks on charts showed improved reading skills.

Also, at-risk readers with behavioral disorders and learning disabilities needed reading interventions that helped them to solve their own reading problems. Such as using rules for syllabifications for decoding, pre-teaching of vocabulary, practice with phonemes and morphemes, knowing word roots, affixes, derivations, using semantic maps, concentrating on similarities, differences, and meaning, especially in tier three words. At-risk readers were also taught previewing strategies in reading titles, graphics, headings, and key words or ideas. Modeling “think aloud” was a strategy that helped students generated questions about what they read. Last, the analysis of data obtained accepted the null hypothesis that SST students who received reading instruction using HM Reading Curricula augmented with REWARDS intervention showed no significant difference in HMITT scores when compared to SST students who received only HM Reading Curricula instruction without REWARDS intervention.

Recommendations

Based on the conclusions, cited above, the following recommendations are changes that can be used to improve reading instruction with SST self-contained students in this researcher’s classroom. First, use the REWARDS intervention program to teach decoding skills of multisyllabic words, not for comprehension building. The REWARDS

intervention would work best for helping to increase reading fluency. Next, this author would benefit from taking some professional development that confirmed evidenced-based reading strategies that would support challenging at-risk readers with comprehension. Third, know what each student is capable of doing at their present level of performance. The use of pre and post test assessment regularly in reading would monitor and document student's progress giving this researcher accurate information. Last, it is best to work with students in small group settings versus teaching to the whole class. Additional recommendations that could benefit other teachers who work with challenging at risk readers are:

1. More professional training needs to be developed with the Teaching and Learning Center and the Special Education Department.
2. Have appropriate intervention materials available for students that are not making significant gains in their reading fluency and comprehension.

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