THE EFFECT OF TEACHER MODELING ON READING BEHAVIORS, FLUENCY AND COMPREHENSION

by

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The purpose of this study was to examine the effect of an intervention aimed at increasing time on task during silent sustained reading periods, teacher modeling, on reading fluency and comprehension scores in fifth grade students. Five classrooms in a rural county in eastern North Carolina served as the participants, with one class used as a control and one class that was dropped from the study. Target students from each class were administered curriculum based measurements of oral reading fluency and comprehension twice weekly throughout the study and a multiple baseline across settings and participants design was used to document the effectiveness of the intervention on reading achievement. Students did not demonstrate significant increases on either reading fluency or comprehension following the application of teacher modeling and did not differ significantly from the student in the classroom that did not receive the intervention. Additionally, direct behavior ratings completed to document time on task during silent sustained reading periods did not demonstrate an increase in time on task following the application of the intervention.

THE EFFECT OF TEACHER MODELING ON READING BEHAVIORS, FLUENCY AND COMPREHENSION

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CHAPTER 1: INTRODUCTION

During the past few decades we have seen a stark decline in the amount of voluntary reading among American children, adolescents and adults (National Endowment for the Arts, 2007, Cline & Kretke, 1980). Despite extensive research demonstrating the positive effects of reading, it remains unclear how best to increase the amount of time Americans spend reading and the effects that time spent reading has on fluency and comprehension (National Reading Panel, 2000). In its report of scientific research on reading, the National Reading Panel (2000) indicated a lack of literature on the topic of independent reading and even fewer studies with appropriate methodology. Accordingly, the panel announced a need for further studies examining the effect of silent reading, especially in the area of fluency and comprehension (National Reading Panel, 2000). The current research examined the degree to which an established intervention for increasing the amount of time spent reading, teacher modeling, affects fluency and comprehension.

Review of the Literature

Importance of Voluntary Reading

Recently The National Endowment for the Arts released *To Read or Not to Read-A Question of National Consequence* (2007), outlining several sobering conclusions about America's reading habits. For example, not only are Americans reading far less than they have in past years, but reading comprehension is steadily declining, and these declines are associated with civic, social and economic problems. Employers now cite reading and writing as top deficiencies in new hires, and reportedly 1 in 5 workers in the United States read at a level below what is required for their job (National Endowment for the Arts, 2007). Additionally, when reading does occur it is across a limited number of genres, includes mostly non-challenging

selections (Kelly & Clausen-Grace, 2006), and competes with other media sources (National Endowment for the Arts, 2007). American teens between grades 7 and 12 report concurrently using other sources of media, such as television, music, and computers, during 35% of the time they spend reading (National Endowment for the Arts, 2007).

Although the United States has witnessed a general decline in voluntary reading, positive outcomes have been identified including higher test scores, more job opportunities, and higher salaries among those who read for pleasure. Individuals who read voluntarily are more likely to vote in presidential elections, attend museums, exercise regularly and exhibit higher rates of volunteering and charity work (National Endowment for the Arts, 2007). Although reading scores dropped significantly between 1992 and 2005 among most age groups, 9 year olds were the only age group to maintain above a 50% rate of reading "almost daily" and interestingly were also the only group to show an increase in reading scores (National Endowment for the Arts, 2007). However, in 2004 the percentage of 13 year olds who read almost every day for pleasure was only 30%, down from the 54% of 9 year olds reporting this same reading habit (National Endowment for the Arts, 2007). Clearly, there is a need to determine a way to best motivate children to read and encourage them to continue this as a lifelong habit, especially in the age groups where declines are evident.

Increasing Reading Behavior

When it comes to increasing reading behavior in students the research base has identified factors that seem to be associated with engagement in silent reading. Edmunds and Bauserman (2006) suggested that the top two actions that lead to more time spent in reading are giving or buying them books and reading aloud to them (Edmunds & Bauserman, 2006). Despite these findings, between 1995-2005 Americans spent 4.8% less on reading materials,

while spending 3.6% more on television and audio equipment (National Endowment for the Arts, 2007). Additionally, 12th grade students living in households with more than approximately 100 books show higher average scores in science, civics, and history, and these scores drop continuously as number of books in the home declines (National Endowment for the Arts, 2007). With regards to interpersonal factors influencing students to read, students cite peers as their most valued source when selecting books, followed by family members (especially mothers) and then teachers (Edmunds & Bauserman, 2006). Based on these findings Edmunds and Bauserman (2006) recommend allotting time during the day for children to read and talk about what they're reading with peers, family members and teachers as well as introducing family members to those habits in order to increase motivation in the home (Edmunds & Bauserman, 2006).

For many years, schools have attempted to increase student reading by providing periods of time for sustained silent reading (SSR), with mixed results. Cline and Kretke (1980) examined attitudes toward reading in three Junior High Schools in Boulder, Colorado, one of which had employed a long-term (six years) school-wide SSR program. As per the requirements of the SSR program each teacher was to ensure that students read silently and without disruption until the bell signaling the end of the SSR period sounded. Students were also encouraged to exchange books as well as bring in books from other sources than the classroom library, and teachers were urged to convey enthusiasm towards reading. Researchers compared responses to an attitudes inventory administered to students who had attended the junior high school with SSR for all three years with students from similar schools in the area that did not employ a SSR program. They found those who attended the school with SSR reported significantly higher ratings of attitudes towards going to the library, reading a book, doing assigned reading, and the importance of reading (Cline & Kretke, 1980).

That same year, however, another study conducted with grades 2-6 implemented a SSR program for 15 weeks without finding significant differences in attitudes toward reading (Collins, 1980). Students who participated in a 15-week SSR program were compared in terms of reading achievement, progression in basal readers and attitudes toward reading with a control group from the same area. Teachers in the experimental group were allowed to determine how much time they devoted to silent reading, with times ranging from 10-30 minutes per day. No significant differences were found in terms of achievement or attitudes toward reading; however, students who participated in the SSR program progressed significantly farther in their basal readers than students in the control group and performance in the subjects previously covered during SSR time (English and Spanish) did not suffer (Collins, 1980).

One important aspect to consider when examining differing results is whether or not the SSR program employed contained an interpersonal aspect that could have an impact on the effectiveness of the program in increasing student reading behaviors. A notable difference between Cline and Kretke's (1980) study and Collins' (1980) study is the inclusion of teacher endorsed praise towards reading that was present with the junior high students, as well as the social aspect of encouraging students to share books among each other. Perhaps providing time to read is more effective in increasing reading behaviors when concurrently presented with a social motivator to encourage the action as well.

SSR with modeling. Promising results in increasing time spent in reading have been found in studies that included aspects of scaffolding or modeling (Kelly & Clausen-Grace, 2006; Methe & Hintze, 2003; Morrow & Weinstein, 1986). Both teachers and peers appear to play a role when increasing student engagement in silent reading. Through having a teacher introduce SSR time by sharing with the class her enjoyment of reading and then reading silently herself,

students have been found to demonstrate higher rates of on-task time during silent reading periods compared to rates prior to providing teacher modeling of reading behavior (Methe & Hintze, 2003).

The additional component of interaction between students and peers, as well as teachers has also shown promise in increasing reading behaviors in students (Kelly & Clausen-Grace, 2006; Morrow & Weinstein, 1986; Reutzel et al, 2008). Kelly and Clausen-Grace (2006) describe a procedure they refer to as R^5, in which students read, relax, reflect, respond, and rap. In addition to providing time to read independently, students are asked keep journals about what they're reading and are taught metacognitive strategies during mini-lessons on reading habits. The "rap" portion of the R^5 procedure pairs students with partners to discuss their selections and recommend books to each other. Through using this procedure researchers found students greatly increased the amount of genres they read from, as well as improved their metacognitive skills as evidenced by their improved abilities in making predictions, summarizing, generating questions about passages, interpreting readings, and reflecting on what they've read. After implementing the R5 procedure for seven months 100% of students scored at the independent or advanced levels for reading, up from 33% at that same level initially. Teachers participating in this study described a changed culture where students requested books be purchased, asked their parents to take them to libraries, and had open dialogs with each other about the books they were reading. They credit this change to the interpersonal aspect included in the R5 procedure, encouraging students to talk about what they've read and turning reading into a social experience (Kelley & Clausen-Grace, 2006).

Morrow and Weinstein (1986) also found success increasing the amount of time students spend reading through providing students with a form of literature instruction each day.

Teachers provided students with 20 minutes a day of instruction that included reading aloud, discussing books, and completing reading activities. In addition, each classroom created a library center containing attractively displayed books, children's magazines, posters encouraging reading, a felt board and felt-board stories, audiotapes to accompany books, and materials for creating books (Morrow & Weinstein, 1986). Furthermore, a portion of parents of students in the study enrolled in a reading-at-home program in which they received training on how to encourage reading in their children and asked to engage in these procedures at home as well. Data were collected 10 weeks prior to the intervention, 9 weeks during, and 3 weeks follow up. Following the implementation of the intervention the percentage of students choosing literature activities during their free-choice time increased from about 12% to about 50%. Interestingly, the increase in participation in the group also receiving the intervention at home did not increase more than the students whose parents did not participate in the at home portion. (Morrow & Weinstein, 1986) These results speak to the profound effects school environments have on students, as well as support the idea that given an environment that supports reading and encourages social involvement in the process of reading can impact the amount of time students spend engaging in reading.

Students most likely to benefit. Readers of differing levels require specific instructional approaches to best meet their needs (Daly, Lentz, & Boyer, 1996; Martens & Witt, 2004). When acquiring reading skills, a more direct and explicit approach is necessary. When a student is able to read independently with high levels of accuracy the recommended instructional approach is to increase the amount of practice they have with reading materials in order to increase fluency (Begeny et al., 2010; Sindelar, Monda & O'Shea, 1990). Methe and Weegar (in submission) have found that students who responded the most to a teacher modeling intervention in first

grade were those identified as “established” readers, meaning those students who correctly read 50 or more correct letter sounds when presented with nonsense words consisting of a consonant-vowel-consonent (e.g. biv, suc, tif). These results indicate those students who have the skills to read were more likely to increase reading behaviors when presented with a model of the behavior. Accordingly, it seems teacher modeling should be a beneficial instructional approach to implement with students who have the necessary skills but who also need more practice using those skills to further establish fluency and comprehension, both of which are key hypotheses in the current study.

Statement of the Problem and Rationale

Despite evidence associating many positive effects with higher rates of voluntary reading, Americans are reading less each year, and along with this decline a documented steady drop in reading scores is evident. Teacher modeling of silent reading has been shown to increase time on task in students (Kelly & Clausen-Grace, 2006; Methe & Hintze, 2003; Morrow & Weinstein, 1986), and as such shows promise in providing a means by which to increase the amount of time that students spend engaged in reading (i.e., practice). Additionally, increased practice has been documented as an effective intervention for students with the skills to read who need to increase fluency (Begany et al., 2010; Sindelar, Monda & O’Shea, 1990). Therefore, it is likely that teacher modeling will increase reading fluency and comprehension in accurate but slow readers.

Research Objective and Hypothesis

The objective of the current research is to gather achievement data for individual children from four classrooms in order to examine the effects of teacher modeling on reading achievement. Additionally, a multiple baseline design was employed to examine student response to teacher modeling (where modeling is the primary intervention employed in the

study). Achievement data were collected twice weekly as teacher modeling is applied in a stratified manner to separate classrooms and the effect on achievement data following the application of the modeling intervention was examined. The three dependent variables were (a) direct behavior rating scores during silent sustained reading (b) scores on oral reading fluency probes, and (c) scores on MAZE probes. The primary hypothesis of the current study was that teacher modeling should result in gains in oral reading fluency, ostensibly through the increased time spent reading. A secondary exploratory hypothesis was that reading comprehension scores should also increase slightly.

CHAPTER 2: METHOD

Participants

Teachers. Five fifth-grade teachers (4 female and 1 male) volunteered to participate in the current study. All were of Caucasian origin and certified to teach K-6. One of the teachers was also certified to teach reading grades K-12, holds National Board Certification and has taught fifth grade for 12 years after also teaching K, 1, 2 and 4. The other four teachers taught only fifth grade. Three teachers held bachelor degrees while the other two held masters degrees. Two were first year teachers while the other three had been teaching for three, nine and twenty-four years.

Students. Seven students began the study, 6 males and 1 female. Two were in the class that was dropped, leaving five students for the remainder of the study, four males and one female. Three were African American, three were Caucasian, and one was Hispanic. All students qualified for free and reduced lunch.

Setting

The current study took place in an elementary school in a small, rural, low-wealth (20.04% of the population of children aged 5-17 in the district live below the poverty line and 82.79% of the students at the school receive free or reduced lunch) district in eastern North Carolina. The student population of the district consists of approximately 43% African-American, 33% Caucasian, and 22% Hispanic. Silent reading periods took place in the classroom as part of the normal school activity, with students seated at their desks and the teacher seated in the front of the classroom. All data were collected seated in the hallway just outside the classroom.

Design

The design for the current study was a multiple baseline across participants and settings design. An additional comparison group was included that remained in the baseline (A) phase. This design allows for evaluation of the primary and secondary research questions through baseline logic by providing prediction, verification and replication (Cooper, Heron & Heward, 2007). In a multiple baseline design prediction is demonstrated in the first classroom prior to the application of the intervention. Following the application of the intervention in the first setting affirmation of the consequent is achieved as the outcome data is compared to the prediction statement. Since the intervention has not been applied in the second setting verification of the prediction statement is demonstrated in the second setting prior to the application of the intervention. Following applying the intervention in the second setting replication is achieved, while further verification of the prediction statement is demonstrated in the third setting. Finally, a second replication is achieved when the intervention is applied in the third setting. For this study further verification of the prediction statement was demonstrated through the use of a fourth classroom that never received the intervention. Through verification of the prediction statement experimental control is achieved as evidence the intervention was the controlling agent is provided. Replication provides more confidence towards the conclusion the intervention was a controlling agent. Data collection sessions were not always spaced apart equally due to a three week break following a devastating tornado and a one week break following the death of a student in one of the target classes; however, each student was subjected to the same breaks in time throughout the study.

Dependent Variable Measures

Oral reading fluency. Curriculum-based measurement (CBM) is a series of brief tests that measure the skills students need to be successful with the curriculum. Tests are based on the grade level of the child and contain skills that should be developed over the course of the entire year. The Oral Reading Fluency (ORF) component of CBM is an individually administered, standardized test of accuracy and fluency in reading aloud connected text. ORF performance has been determined to be a strong predictor of later reading comprehension success (Reschly et al., 2009). Additionally, ORF has been found to be a reliable measure, with reliability for grade 5 when using the mean of three probes being .96 (Howe & Shinn, 2002) and the reliability for grade 5 across four months .92 for the fall-winter and .93 for winter-spring (Christ & Silberglitt, 2007). Additionally, correlations ranging from .88-.95 (M=.91) have been found from fourth grade fall to fifth grade spring, demonstrating high consistency over time (Graney et al., 2010). For ORF at the fifth grade level there are 30 probes, providing more than enough needed to complete the study so no probes were repeated. Each student is given 1-minute to read aloud a passage selected from fifth grade material. Their score represents the number of words read correctly during this time.

Reading comprehension measure. CBM Maze passages can be administered individually or in a group. For this study, students were provided with a fifth grade passage between 150-400 words total. The first sentence of the passage was left intact, and after that every seventh word was replaced with three words inside parentheses of which the student was to choose the appropriate word to complete the phrase. For example, a sentence would read "Sally was excited to visit the (zoo, store, aquarium) to see gorillas". Students were given three minutes to complete the task. CBM Maze passages have been found to have high (.80)

correlations across 1-to 3-month intervals (Shin, Deno & Espin, 2000) and to have high criterion-related validity (.86) with the Gates-MacGinitie Reading Test (MacGinite et al., 1978) as well as .80 with the Metropolitan Achievement Tests (Prescott et al., 1986).

Time on task. To track the approximate amount of time the target students spent on task during silent sustained reading periods teachers filled out daily Direct Behavior Ratings (DBRs), a behavior assessment tool used to monitor student behavior. DBRs feature characteristics of both rating scales and systematic direct observation (SDO), allowing behavior to be tracked both frequently and systematically. DBRs have been found to correlate highly (.81) with SDO data when used to rate on task behavior (Riley-Tillman et al., 2008). Teachers are provided with one sheet of paper containing five DBR grids (one of each day of the week) for each of the target students. Grids contain ten dashes corresponding to a percentage ranging from 10%-100%. Above the line are three faces, a sad face at the far left of the line, a face with a straight mouth line over the middle, and a smiley face at the far right of the line.

Independent Variable

Verbal prompt. Teacher modeling was provided by use of both a verbal prompt and a visual prompt. The verbal prompt included the teacher sharing with the class her joy of reading by discussing her book selection and the joy she feels from reading and was intended to demonstrate positive feelings towards silent reading and invoke a sense of enjoyment from the students as they engaged in reading themselves. In order to express the joy she feels from reading the teacher would show the book she was reading to her class and tell them she loved reading it and couldn’t wait to see what was going to happen next.

Visual Prompt. In addition to verbally prompting the students to engage in silent reading, the teacher modeled the behavior from a chair in the front and center portion of the

classroom. This provided the students with a continuous visual reminder to continue silent reading.

Procedure

Twice per week all target students were administered one ORF and one Maze probe in order to track progress. The examiner administered these measures in the hallway just outside the classroom door, so the students only missed about five minutes per assessment period of instructional time for data collection. Data was collected following conclusion of a reading block the school took part in every morning from 8:00-9:30. During this time students were getting settled in their classrooms after completing bathroom breaks following the conclusion of the school wide reading program, so movement in the hallway was minimal. For the first week all classrooms followed their normal schedule as it pertained to silent sustained reading, which meant the teacher instructed the students to get out their materials for reading and then would proceeded to prepare for focused reading groups that convened after the ten minute period of full class SSR while the students read silently. The second week one teacher introduced modeling to her classroom following a checklist of steps. The teacher would introduce the session of SSR by standing in front of the classroom with her book in hand, showing it to the class. Next she informed the class she was looking forward to reading and finding out what was happening next in her book before instructing the students to get out their books to read. She would then announce that everyone, including herself, would be reading silently for the next ten minutes without interruption. Following this introduction she would sit in a chair front of the classroom, always in the same location, and spend the next ten minutes with eyes focused on the book engaging in SSR. Finally, she would end the session by telling the students she enjoyed the time spent reading and then would proceed with the scheduled classroom routine. At the completion

of SSR time the teacher would complete a checklist in order to note if any deviations from this scheduled had occurred. Additionally, the teacher kept a record of what book and what grade level the target students were reading this day, also recorded on the checklist page. For two weeks the other classrooms continued their normal routine. After the first two weeks the second teacher engaged in modeling while the first continued as well. This staggered implementation continued until three classrooms were engaging in modeling. The fourth classroom continued with their normal routine and served as a comparison group. Completion rates for checklist items were reported at 100% compliance with the exception of one day during the second week of implementation when the grade was on a field trip for the entire day. At this point only one classroom was implementing the intervention. Additionally, one week following implementation of the intervention for the third class the target student was absent for the entire week and therefore did not receive the intervention during that week and the target student in the first class was absent for one day following the implementation of the intervention.

Initial Recruitment and Consent

School and Teacher Selection. Informed consent was obtained in the form of writing from the assistant superintendent and principal after the researcher met with each of them to describe the procedure, necessary teacher and student involvement, and anticipated benefits of the study. Following this approval the researcher attended a grade level meeting to describe the study to all of the fifth grade teachers, and five volunteered to participate. Three of these classrooms received the intervention, one served as a comparison group, and one was dropped after two weeks due to a crisis within the school.

Parental Passive Consent. In order to identify target students a screening procedure was first implemented in each of the five classrooms. For this opt-out permission forms were

sent home with every student in the five classrooms explaining the screening procedures, and purpose of the study as well as a brief overview of what being a target student would entail. Additionally, the form explained they would be contacted a second time if their child was chosen and given an additional chance to opt out of participation. In the case where parents spoke Spanish (as identified by teachers) the form was sent home in both English and Spanish. Parents were then given the option of opting for their child to not participate in screening by sending the form back with their dissent. Students whose parents did not send back the opt-out form were screened for possible participation. One parent returned the form indicating they did not wish for their child to participate.

Parental Active Consent. Following screening and identification of potential target students more detailed permission slips outlining the purpose, expected benefits, potential risks, and what would be required of the student/parent if they were to participate as a target student were sent home with these students, once again in English and Spanish for parents identified as Spanish speaking. Parents were asked to sign and return the forms if they chose to allow their child to participate. Nine students were sent permission forms. Of these nine, 7 parents returned the forms indicating their consent for their child to participate, 1 parent indicated they did not wish for their child to participate and 1 did not return the form.

Child Assent. Prior to screening the researcher spoke to each class as a whole and explain to them the purpose and procedure of the study in child friendly language. At the time of screening each child was told again what they will be asked to do as well as informed they do not have to participate if they do not want to. After this the child was asked if he or she is willing to participate in the screening and was only given measures if he or she agreed. When target students had been identified the researcher met with each of the children individually and

described to them what their participation would mean for them and asked if they want to participate. Additionally, prior to each progress monitoring session assent was obtained. There were no instances of a child not providing their assent at any point throughout the study.

Student Participant Selection

Initial Screening. In order to ensure that students were relatively comparable with regard to levels of accuracy and fluency, in addition to learning rate, an initial and follow up screening was employed. All students from each of the five classrooms, with the exception of those whose parents opted out participated in the initial screening. Screening was completed on one day with the assistance of nine graduate students, all trained in the administration of ORF. Moving from one classroom to another the graduate student assistants lined up in the hallway seated on the floor spaced about six feet apart from one another. Each student participating had been given a folder with their first name and teacher's last name on it that contained the three passages they were to read. All students were given the same three passages. Glued inside the folder were the directions for administering ORF according to Aimsweb to ensure that each student was read the exact same directions. Students took their folder to the graduate assistant that would be completing their administration and upon completion of the three passages left the folder with the graduate student to be collected by the examiner at the end of the day. The examiner stood in the doorway of the classroom and each time a student finished selected another student from the class and walked them towards the available graduate student in order to streamline the process. This process continued until all participants had been administered three passages.

Second Screening. The purpose of the second screening was to reexamine those individuals that fit the profile of students most likely to benefit from the intervention in order to

increase confidence in the accuracy of their scores. Following the first round of screening all scores were entered into Excel grouped by class. The median words read correctly and the median percent accuracy were then examined to identify a subset of students from each classroom who represented the profile of an accurate but not fluent reader. Students who read with 97% accuracy or higher with below 107 words per minute (the 25th percentile for 5th grade according to Aimsweb winter norms) were identified for a second screening to confirm their growth rate remained stable. These students were then screened with an additional three ORF probes by the examiner. After this round of scores was entered into Excel in the same manner those students whose data remained stable were chosen as target students and permission forms were sent home. When possible two students were chosen from each classroom in order to have a back up student, however, some classes did not have two students who met this profile. Of the students who met this profile, 7 parents provided consent for their child to participate.

Data Collection. Twice per week students were administered ORF and CBM Maze passages individually. Probes were downloaded from Aimsweb and used in the order in which they appear on the download page. Additionally, teachers filled out daily DBRs for each target student following the conclusion of each silent reading period and these were collected by the examiner at the end of every week.

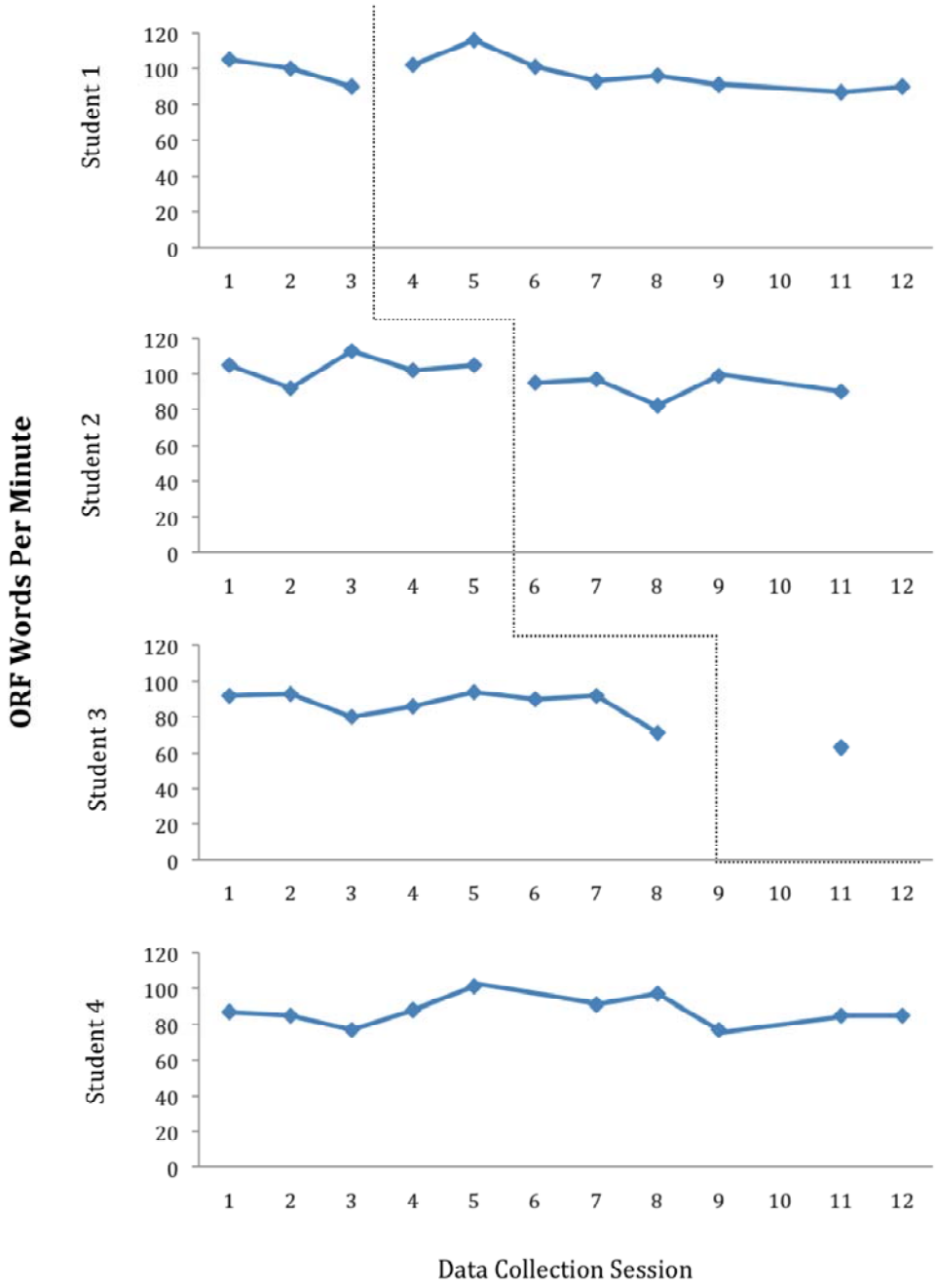
CHAPTER 3: RESULTS

Hypothesis 1: Following the application of the intervention, reading fluency will increase.

Fluency data across participants and settings are presented in Figure 1. Visual analysis of the data in Figure 1 do not indicate support for the primary hypothesis that teacher modeling would result in gains in oral reading fluency. Visual analysis indicates that ORF scores for each of the participants remained stable and did not reflect a change in level that is considered sufficient to meet the goal of the intervention. Data for the three students who received the intervention did not differ substantially from the student who received no teacher modeling. Student 1 did demonstrate an immediate increase from the last data collection period of the baseline phase to the first data collection period of the intervention phase; however, this change did not exceed other baseline data points and was not maintained through the remaining data collection periods. Furthermore, this immediacy of change was not verified or replicated with the remaining participants, and in fact there was a slight immediate decrease in scores Student 2 and Student

Figure 1.

ORF words per minute across data collection periods



Additionally, percentage of nonoverlapping data (PND) calculated for each of the students receiving the intervention did not provide support for the primary hypothesis. The PND for Student 1 was 12.5%, while for Students 2 and 3 the PND was 0%. When using PNDs to determine the effectiveness of an intervention a PND below 50% is regarded as an ineffective intervention (Scruggs & Mastropieri, 1998), indicating for this sample teacher modeling was not successful at increasing ORF scores.

Mean levels for each of the students were calculated for each phase of the study as well and are summarized in Table 1. Mean level changes did not support the primary hypothesis, and actually decreased for each of the students following the application of the intervention, ranging from a mean change of 8.3 words per minute to 24.28 words per minute.

Table 1.

ORF changes in level across phases

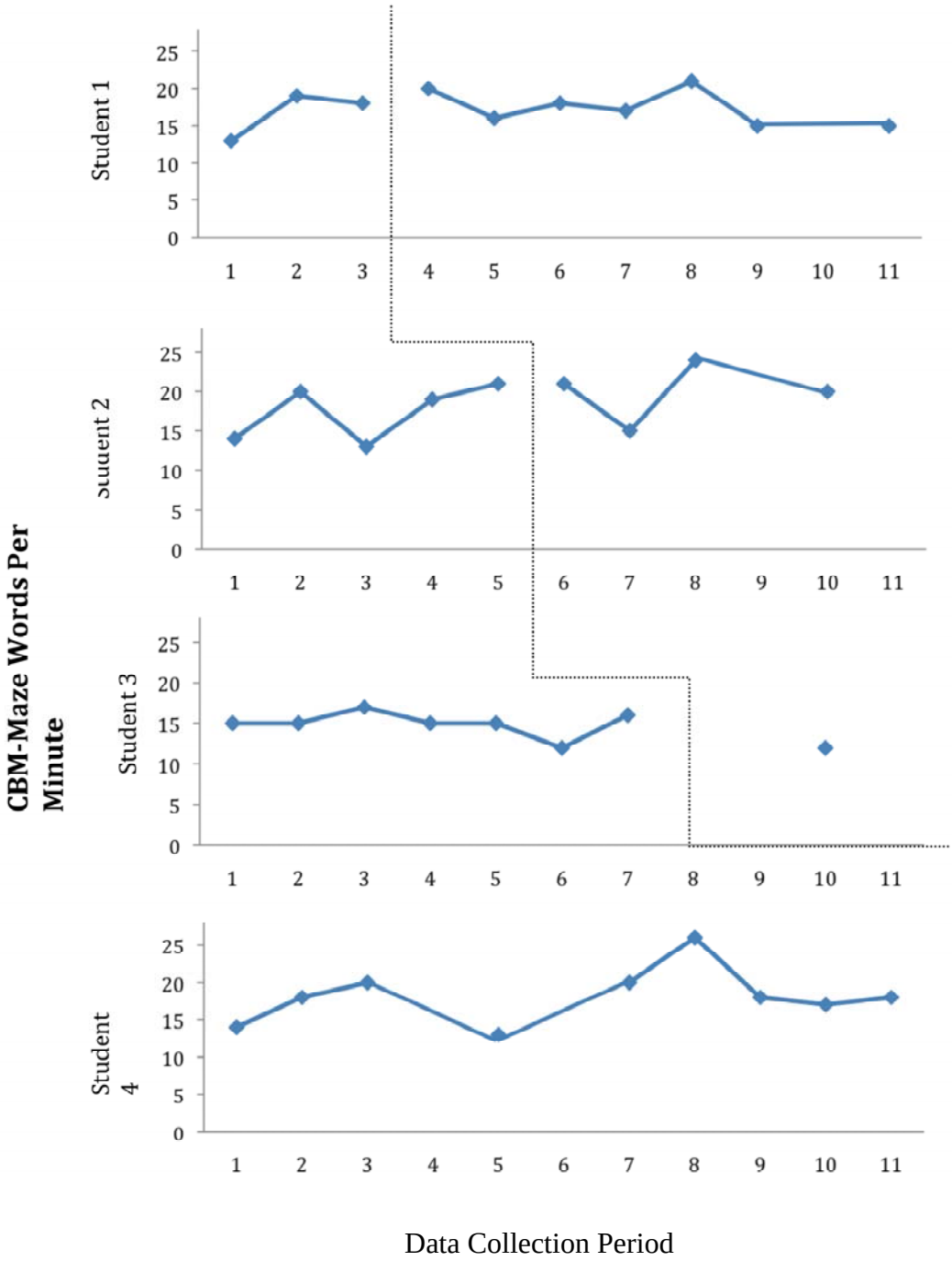
	ORF Level Before Intervention	**ORF Level After Intervention**	**Change**
Student 1	98.3	90	-8.3
Student 2	103.4	92.6	-11.8
Student 3	87.25	63	-24.28
Student 4	87.3	N/A	N/A

Hypothesis 2

Data from CBM-Maze are presented in Figure 2, and visual representation of the data does not provide support for the secondary hypothesis that teacher modeling will result in an increase in reading comprehension scores. Scores remained relatively stable across phases and did not reflect a sufficient change in level to provide support for an increase in scores following the application of the intervention. The variability of the data for Student 1 did not change between phases and for Student 2 the change was only 1 word greater in the intervention phase. Because Student 3 only had one data point in the intervention phase variability could not be compared.

Figure 2.

CBM-Maze scores across data collection periods



Additionally, the PND calculated for each of the students did not provide support for the secondary hypothesis. The PND for Student 1 was 28.57%, for Student 2 25% and Student 3 0%. Each of these falls below 50% and are therefore support the intervention was not successful at increasing CBM-Maze scores for these students.

Mean level changes for each of the students are summarized in Table 2 and do not support the secondary hypothesis. Two of the students (Student 1 and Student 3) demonstrated a slight decrease in mean level during the intervention phase. Student 2 demonstrated a slight increase in mean level (an increase of 2.6 words) during the intervention phase.

Table 2.

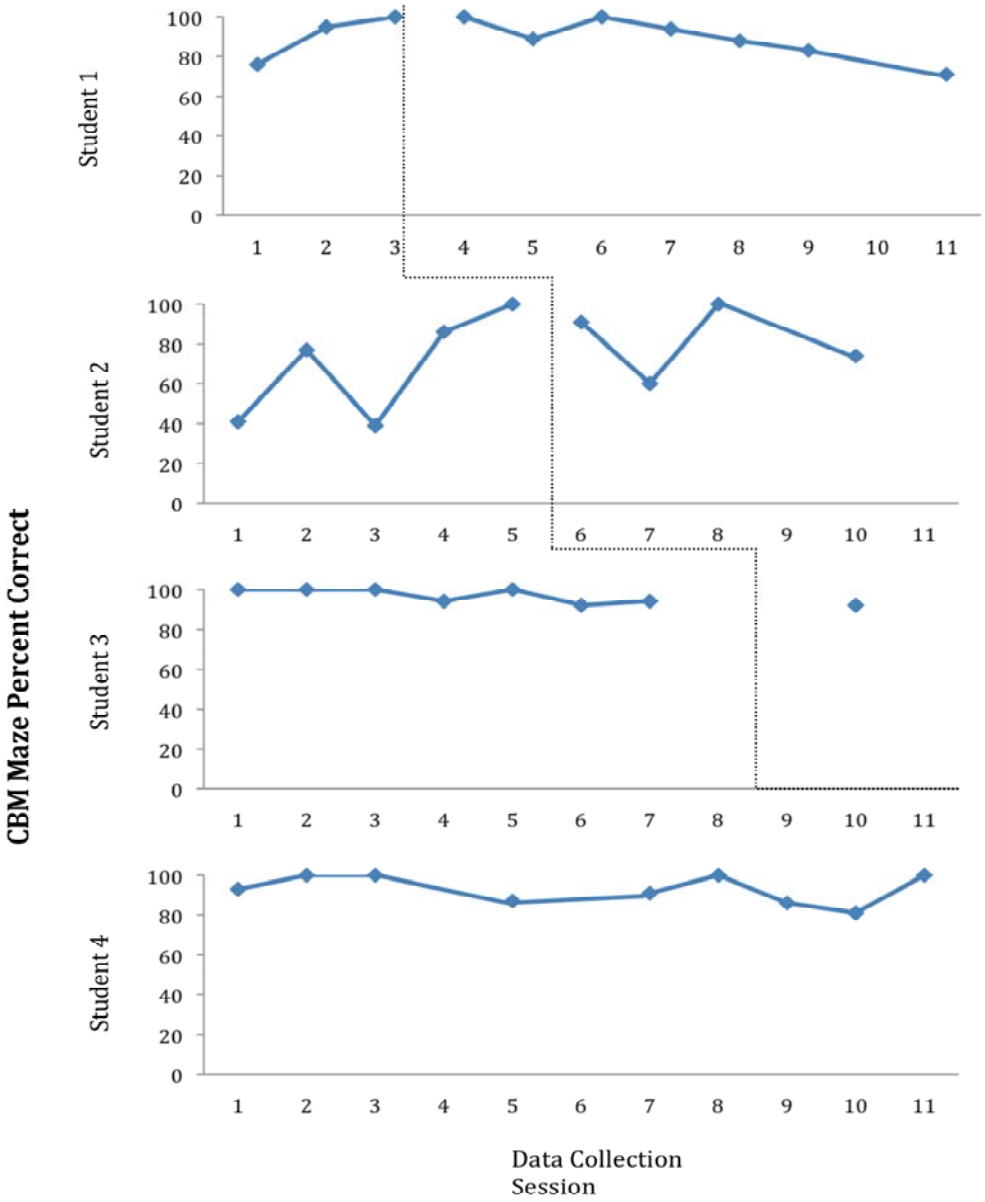
CBM-Maze changes in level across phases

	CBM-Maze Level Before Intervention	**CBM-Maze Level After Intervention**	**Change**
Student 1	16.67	15	-1.67
Student 2	17.4	20	2.6
Student 3	15	12	-3
Student 4	18.22	N/A	N/A

To further examine the effect of teacher modeling on comprehension, Figure 3 presents the percentage correct scored on CBM-Maze for each of the students at all of the data collection periods. Visual analysis of the data does not provide support for the secondary hypothesis. Student 1 demonstrates an increasing trend in percentage correct during the baseline phase followed by a decreasing trend (though not enough to fall below the lowest baseline point) during the intervention phase. Student 2 also demonstrates an increasing trend during baseline that does not continue through the intervention phase. Percentage correct for Student 3 remains stable over time and in fact is very similar to the profile of scores for Student 4, who did not receive the intervention.

Figure 3.

CBM-Maze percentage correct across data collection periods



CHAPTER FOUR: DISCUSSION

The objective of the current study was to examine the effect teacher modeling of sustained silent reading had on student achievement in the areas of fluency and comprehension as measured by ORF and CBM-Maze. The primary hypothesis that ORF scores would increase following the application of teacher modeling was not supported. Additionally, the secondary hypothesis that CBM-Maze scores would increase following the intervention was also not supported. When considering explanations for why the expected results were not observed in this sample there are several options to consider, including the amount of time spent in application of the intervention, the directness of the intervention, the use of silent reading as an alterable educational variable, pre-intervention levels, and the grade of the sample.

The first explanation to consider is the amount of time the students received the intervention, in terms of both minutes per day and weeks. According to Carroll's model of school learning, the extent of student learning is a function of the amount of time the students spends learning divided by the time that student needs for learning to occur. Factors included in the amount of time the student spends learning are opportunity and perseverance (Carroll, 1963). The present study sought to increase the amount of time spent learning mainly by targeting the student's perseverance, as teacher modeling was aimed at increasing the amount of time the student spent engaged in reading. Opportunity for learning was also targeted in the current study, by ensuring that classroom time was specifically designed for student engagement and also ensuring that the whole class received the intervention. However, targeting perseverance and opportunity to increase learning time was only accomplished for 10 minutes per day over approximately 5 weeks or less, depending on the time the class began receiving the intervention.

It is likely that increasing the minutes per day or the amount of weeks could very well result in a higher degree of learning as Carroll's model suggests.

An additional component of learning to be considered is the concept of active learning time (ALT). According to Gettinger, academic achievement is influenced heavily by the amount of ALT, defined as the portion of time provided to students in which they are actively engaged in the learning activity. ALT consists of allocated time, instructional time, and engaged time. Allocated time is the amount of time planned as time for instructional activities (Gettinger, 1995). For the present study, the 10 minutes per day set aside for silent reading represented allocated time. Instructional time is the amount of allocated time that is actually used for instruction and is reduced by interruptions, transitions and other factors that result in lost time (Gettinger, 1995). In the present study teachers reported very little loss of instructional time, indicating this component of ALT was met. Engaged time is the amount of instructional time in which students are engaged in learning, both procedurally and substantively. Procedural engagement refers to the observable behaviors present during learning, such as paying attention (Gettinger, 1995). DBR ratings indicate that with the exception of Student 2 participants in the present study exhibited these behaviors by sitting quietly with eyes directed towards their books. Substantive engagement, however, refers to the amount of time the student is personally committed to the content of the instruction, and is affected by the appropriateness of the task. When a mismatch between student need and task assigned is present, ALT is reduced because the student is unlikely to be committed to the task and instead is going through the motions of being engaged (Gettinger, 1995). In the present study, it was unclear if the books chosen for reading led to substantive engagement and also, no direct teaching strategies were used to engage children or provide feedback and guidance. Although the students in the current study exhibited

behaviors that indicated engagement in learning, it is unclear whether or not the substantive engagement necessary for successful ALT to occur was facilitated with the chosen intervention.

Considering the difficulty of determining the rate of substantive engagement in students, it is questionable as to whether SSR is appropriate for use as an alterable educational variable. Although students can be observed during silent reading periods, whether or not they are actually reading is questionable. For this study, as well as similar studies (e.g. Methe & Hintze, 2003) teachers modeled the act of silent reading but not reading itself, and students imitated that action. Teachers and students engaged in what appears to be SSR by directing their eyes towards the book. However, it is unclear whether they are actually reading or merely appearing to read by engaging in the visual aspects associated with reading. Therefore, teacher modeling was targeting a variable that cannot be seen and observed.

A major limitation of the present study that could account for the lack of results is the failure to demonstrate higher DBR ratings following the application of teacher modeling. Specifically, a major premise of the study was that an increase in time on task as a result of the application of teacher modeling would provide students with increased practice, therefore leading to an increase in student achievement. Time on task, measured by DBRs in this sample did not reflect substantial changes in ratings of time on task. Table 3 represents mean DBR levels prior to and following application of teacher modeling. According to social learning theory, when acquiring a skill children will imitate the behavior of adults or peers they observe completing the behavior in question while in the presence of the model (Bandura & Huston, 1991). Following the premise of this theory, it would be expected students would increase their time exhibiting the behavior while observing a model, but increases on DBR ratings were minimal.

Table 3.

Mean DBR ratings

	Mean DBR Prior to Intervention	**Mean DBR After Intervention**	**Change**
Student 1	7.4	7.9	.5
Student 2	1.5	2.1	.6
Student 3	8.1	7.5	-.6

Perhaps this lack of substantial increase can be explained by the DBR ratings the students received prior to the application of the intervention. With the exception of Student 2 ratings began high and remained high throughout the study, suggesting teacher modeling had little to no benefit for these students because it aimed at increasing a behavior they were already demonstrating at high levels. At the other end of the spectrum, Student 2 received low ratings throughout the study, perhaps indicating the need for an intervention more suited towards following directions, such as differential reinforcement of the target behavior. Mean DBR rates for each student receiving the intervention are summarized in Table 3. Therefore, providing the students with a model seemed an inappropriate instructional strategy primarily because the students already performed the behavior in the absence of modeling.

Implications for Research and Practice

Silent sustained reading continues to be a major component of education in the United States and given the positive outcomes, both educationally and civically, (National Endowment for the Arts, 2007) associated with reading remains a topic of interest to educators. Despite a lack of evidence to support the use of teacher modeling as a means of increasing student achievement in reading in this sample finding ways to increase both engagement in reading and reading achievement remains a priority. Future research in these areas should focus on increasing the dosage of the intervention as well as exploring the use of teacher modeling with students who have not yet acquired the habit of staying on task during SSR periods. Similarly, exploring reading behaviors outside the school environment could provide more information on how much increased practice is demonstrated following teacher modeling. Finally, augmenting teacher modeling with a more direct intervention, such as the R5 procedure (Kelly & Clausen-

Grace, 2006) or the HELPS procedure (Begeny et al., 2010) could be useful if data indicates a need for both engagement in reading and reading skill development is necessary for students.

In the current sample, students were already demonstrating high levels of on task behavior during SSR therefore limiting the effect modeling the behavior had on the students. The high DBR ratings achieved prior to the application of the intervention indicate the majority of the students in this sample had already acquired the behavior in question and therefore did not need a model. The current research failed to document a substantial increase in on task behavior in students with high and low rates of on task behavior, but did not examiner the use of teacher modeling to increase time on task in students receiving moderate DBR ratings for on task behavior. Perhaps future research exploring the relationship between teacher modeling, ORF, and comprehension scores should be focused on students who exhibit moderate levels of on task behavior combined with accurate but not fluent ORF scores.

Additionally, examining if reading behaviors acquired through teacher modeling generalize into other environments is a key topic of interest. Generalization is pertinent to the current study because it should be programmed when evidence suggests that students have acquired, become fluent, and can maintain a behavior over time (Daly, Lentz, & Boyer, 1996). In the current study, ORF data suggested that the target students were accurate and developing fluency and DBR data suggested that students were maintaining engagement both with and without the modeling. It has been shown that students will reproduce reading behaviors in the presence of a model (Kelly & Clausen-Grace, 2006; Methe & Hintze, 2003; Morrow & Weinstein, 1986), but will this imitation occur when students have not been given the direction to sit and read silently, such as in home or recreational settings? In addition to imitating the actions of models while in the presence of the model, Bandura found that children would also

imitate without the model present (Bandura et al., 1961). Furthermore, the behavior was reproduced without the opportunity to practice the behavior in the presence of the model (Bandura et al., 1961). Additionally, researchers have found through designing appealing library centers and implementing teacher led literature activities in the classroom students choosing to engage in reading activities during their free-choice time increased significantly (Morrow & Weinstein, 1986). Examining if students will chose to engage in reading at home where they often have even more options of activities to choose from would be a substantial step towards encouraging reading as a habit instead of a school assignment.

The current study sought to employ an intervention documented to increase time on task in students (Kelly & Clausen-Grace, 2006; Methe & Hintze, 2003; Morrow & Weinsten, 1986) to examine the effects of the intervention on reading achievement. Teachers implemented a modeling intervention in their classrooms following a staggered implementation schedule and students were administered ORF and Maze probes as measures of reading fluency and comprehension to determine if increases in reading achievement scores were observed following implementation of the intervention. Increases in reading fluency and comprehension were not observed during the course of this study. A major limitation of the current study is the failure to document increased time on task in the target students following application of the intervention, as students were expected to show gains in reading achievement scores as a result of the increased practice with grade level materials they would receive through increased time on task during SSR periods.

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APPENDIX A: IRB APPROVAL

EAST CAROLINA UNIVERSITY
University & Medical Center Institutional Review Board Office
1L-09 Brody Medical Sciences Building• 600 Moye Boulevard • Greenville, NC 27834
Office 252-744-2914 • Fax 252-744-2284 • www.ecu.edu/irb

Date: February 28, 2011

Principal Investigator: Anna Anthony, Student
Dept./Ctr./Institute: Dept. of Psychology
Mailstop or Address: ECU – 104 Rawl Building

RE: **Exempt Certification**
UMCIRB# **11-0149**
Funding Source: Unfunded

Title: "The Effect of Teacher Modeling on Reading Behaviors, Fluency and Comprehension"

Dear Anna Anthony:

On 2.23.11, the University & Medical Center Institutional Review Board (UMCIRB) determined that your research meets ECU requirements and federal exemption criterion #1 which includes research conducted in established or commonly accepted educational settings, involving normal educational practices, such as research on regular and special education instructional strategies, or research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

It is your responsibility to ensure that this research is conducted in the manner reported in your Internal Processing Form and Protocol, as well as being consistent with the ethical principles of the Belmont Report and your profession.

This research study does not require any additional interaction with the UMCIRB unless there are proposed changes to this study. Any change, prior to implementing that change, must be submitted to the UMCIRB for review and approval. The UMCIRB will determine if the change impacts the eligibility of the research for exempt status. If more substantive review is required, you will be notified within five business days.

The UMCIRB Office will hold your exemption application for a period of five years from the date of this letter. If you wish to continue this protocol beyond this period, you will need to submit an Exemption Certification Request at least 30 days before the end of the five year period.

Sincerely,

Chairperson, University & Medical Center Institutional Review Board KY

Attachments:
- Parental Permission Form (received 2.22.11)
- Informed Consent (version date 2.22.11)

Pc: Dr. Scott Methe

APPENDIX B: ENGLISH PASSIVE CONSENT FORM

Dear Parents:

This semester your child's class will be participating in a research study conducted by a graduate student at East Carolina University who is currently working in Greene County Schools as a practicum student. The purpose of the study is to determine if students read more and make more gains in reading ability when teachers silently read in front of other students.

Teachers will spend 10 minutes of the class' silent reading time modeling silent reading by sitting in front of the class and reading from their own books. This procedure has been shown to increase the time students spend on task during silent reading periods, which should result in increased scores in the areas of fluency and comprehension.

To document the effectiveness of this intervention two students will be selected to serve as target students. These students will be given reading fluency and comprehension passages once weekly that will take about five minutes of class time. There are no expected risks involved with this process. Additionally, results from this study can provide teachers with valuable recommendations for increasing reading achievement in students.

Before selecting target students your child's entire class will be given three fifth grade passages to read out loud for one minute per passage. If your child is selected you will be contacted with additional details regarding the study and a separate permission form, and will have an additional opportunity to decide if you want your child to participate.

If you do not want your child to participate in screening please send this form back to your child's teacher signed by Wednesday January 19, 2011. **Only send this form back if you <u>do not</u> want your child to participate.**

If you have any questions please contact Anna Anthony at 252-230-0907 or anthonya09@students.ecu.edu.

Thank you,

Anna Anthony
ECU Graduate/Practicum Student

I **do not** want my child to participate in screening for possible participation in this study.
_____

Child's Name: _____

APPENDIX C: SPANISH PASSIVE CONSENT

Estimados Parientes:

Este semestre la clase de su hijo va a participar en un estudio de investigación de una estudiante de posgrado del Programa de la Escuela de Psicología de ECU. El propósito de la investigación es determinar si los estudiantes puedan leer más y aumentar la capacidad de leer cuando los maestros leen en silencio en frente de otros estudiantes.

Los maestros van a leer en silencio como un modelo por 10 minutos durante la clase por sentir en frente de la clase y leer de sus propios libros. Este proceso se ha demostrado que aumenta el tiempo que pasan los estudiantes más centrados en periodos de leer en silencio. El proceso debe dar lugar a las puntuaciones aumentados en las áreas de fluidez y comprensión.

Dos estudiantes serán estudiantes objetivos con el fin de documentar la eficacia de la intervención. Se les dará lecturas de comprensión y fluidez de leer una vez por semana para cinco minutos durante la clase. No hay nada riesgos esperados del proceso. Los resultados de la investigación pueden dar recomendaciones valiosas a los maestros para aumentar los logros de leer de los estudiantes.

Antes de elegir los dos estudiantes objetivos, la clase va a leer en voz alta tres lecturas de nivel quinto grado para uno minuto por cada lectura. Si su hijo es elegido, nos pondremos en contacto con usted con más detalles de la investigación y usted tendrá la oportunidad de decidir si quiere que su hijo participe.

Si no quiere que su hijo participe en la selección, por favor envié la carta formada a la maestra de su hijo de nuevo a más tardar el miércoles 19 de enero 2011. **Sólo enviar este formulario por si no quieres que tu hijo participe.**

Si usted tiene alguna pregunta póngase en contacto con Anna Anthony en 252-230-0907 o anthonya09@students.ecu.edu.

Les saluda atentamente,

Anna Anthony
Estudiante de Posgrado del Programa de la Escuela de Psicología de ECU

No quiero que mi hijo participe en la selección de la participación en esta investigación.

_____

Nombre de Niño: _____

APPENDIX D: ENGLISH ACTIVE CONSENT

East Carolina University

Informed Consent to Participate in Research

Information to consider before taking part in research that has no more than minimal risk.

Title of Research Study: The Effect of Teacher Modeling on Reading Behaviors, Fluency and Comprehension
Principal Investigator: Anna Anthony
Institution/Department or Division: East Carolina University
Address: 120 Rawl Building, Greenville NC, 27858
Telephone #: (252) 230-0907

Researchers at East Carolina University (ECU) study problems in society, health problems, environmental problems, behavior problems and the human condition. Our goal is to try to find ways to improve the lives of you and others. To do this, we need the help of volunteers who are willing to take part in research.

Why is this research being done?

The purpose of this research is to determine if reading achievement improves when teachers model silent reading by reading in front of the students during silent reading periods. The decision on whether your child takes part in this research is yours to make. By doing this research, we hope to learn how these students' reading scores change over time as a result of teacher modeling of silent reading.

Why am I being invited to take part in this research?

Your child is being invited to take part in this research because he or she has been found to be an accurate but slow reader. It is expected students with these types of scores are the most likely to show improvements in reading as a result of teacher modeling. If you volunteer to take part in this research, you will be one of about 10 people to do so.

What other choices do I have if I do not take part in this research?

You can speak to the Principal Investigator to discuss strategies to improve reading.

Where is the research going to take place and how long will it last?

The research procedures will be conducted in the regular classroom setting during regular school hours. Data will be collected once per week for approximately 10-12 weeks. The total amount of

time your child will be asked to volunteer for this study is about 5 minutes on each data collection day and there will be no loss of instructional time.

What will I be asked to do?
You will be asked to allow your child's progress in reading to be monitored by having them read one fifth grade passage out loud for one minute and to read one passage where they will be asked to fill in missing words by choosing from three options one time per week. These scores will be graphed to measure academic progress over time. All data will be entered into a computer file using numbers to represent the child instead of their name. These academic data files will be stored on a password protected computer and the files themselves will also be password protected. Signed consent documents will be kept in a locked file cabinet in the primary researcher's office for a period of five years, after which they will be shredded.

What possible harms or discomforts my child might experience if I take part in the research?
Because we will be using tests that schools typically and because student names will not be used in data entry or any presentation of findings, no risk to your child is anticipated. The purpose of the study is not to examine any one student's performance, but to evaluate the effectiveness of the intervention by using scores obtained from tests to examine changes over time.

What are the possible benefits that my child may experience from taking part in this research?

Results from the study may be helpful in developing ways to increase reading scores in children by examining how children's achievement scores improve when teachers read silently along with them.

Will I be paid for taking part in this research?
No. There are no costs to you and no compensation resulting from participation in this study.

Who will know that I took part in this research and learn personal information about me?

To do this research, ECU and the people and organizations listed below may know that you took part in this research and may see information about you that is normally kept private. With your permission, these people may use your private information to do this research:

- The sponsors of this study.
- Any agency of the federal, state, or local government that regulates human research. This includes the Department of Health and Human Services (DHHS), the North Carolina Department of Health, and the Office for Human Research Protections
- The University & Medical Center Institutional Review Board (UMCIRB) and its staff, who have responsibility for overseeing your welfare during this research, and other ECU staff who oversee this research.
- People designated by PCMH and University Health System;

How will you keep the information you collect about me secure? How long will you keep it?
Any information that is obtained in connection with this study will remain confidential, will be known only to the researcher team, and will be disclosed only with your permission to your child's teacher. No names or other personally identifying information will be included in any analyses or reports that result from this study.

What if I decide I do not want to continue in this research?

If you decide you no longer want to be in this research after it has already started, you may stop at any time. You will not be penalized or criticized for stopping. You will not lose any benefits that you should normally receive.

Who should I contact if I have questions?

The people conducting this study will be available to answer any questions concerning this research, now or in the future. You may contact the Principal Investigator at (252) 230-0907.

If you have questions about your rights as someone taking part in research, you may call the UMCIRB Office at phone number 252-744-2914 (days, 8:00 am-5:00 pm). If you would like to report a complaint or concern about this research study, you may call the Director of UMCIRB Office, at 252-744-1971

I have decided I want to take part in this research. What should I do now?
The person obtaining informed consent will ask you to read the following and if you agree, you should sign this form:

- I have read (or had read to me) all of the above information.
- I have had an opportunity to ask questions about things in this research I did not understand and have received satisfactory answers.
- I know that I can stop taking part in this study at any time.
- By signing this informed consent form, I am not giving up any of my rights.
- I have been given a copy of this consent document, and it is mine to keep.

_____

Participant's Name (PRINT) **Signature** **Date**

Person Obtaining Informed Consent: I have conducted the initial informed consent process. I have orally reviewed the contents of the consent document with the person who has signed above, and answered all of the person's questions about the research.

_____

Person Obtaining Consent (PRINT) **Signature** **Date**

APPENDIX E: SPANISH ACTIVE CONSENT

University Health Systems of Eastern Carolina

1907-2007 CENTENNIAL East Carolina University

Consentimiento informado a participar en una investigación

Información a considerar antes de participar en una investigación con no más que un riesgo mínimo

Título de la investigación: El efecto de la modelización de la maestra en el comportamiento, fluidez y comprensión lectura.

Investigadora Principal: Anna Anthony
Institución: La Universidad de Carolina del Este
Dirección: 120 Rawl Building, Greenville NC, 27858
Número de teléfono: (252) 230-0907

Investigadores de la Universidad de Carolina de Este estudian problemas de la sociedad, problemas de salud, los problemas ambientales, los problemas comportamientos y la condición humana. Nuestro objetivo es encontrar métodos a mejorar la vida de usted y las vidas de los otros. Para hacerlo, necesitamos voluntarios para participar en las investigaciones.

¿Por qué haces esta investigación?

El propósito de la investigación es determinar si los estudiantes puedan leer más y aumentar la capacidad de leer cuando los maestros leen en silencio en frente de otros estudiantes. Usted decide si su hijo va a participar en la investigación. Al hacer esta investigación, esperamos aprender cómo cambian los grados de leer como resultada de la modelización de la maestra de la lectura en silencio.

¿Por qué me invitas a participar en esta investigación?

Le invitamos a su hijo a participar en esta investigación porque su niño se ha encontrado para ser un lector preciso pero lento. Se espera que los estudiantes con este tipo de grados son los más propensos a mostrar mejoras en la lectura como resultado de la modelización de la maestra. Si decide ser voluntario en esta investigación, usted estará uno de las cerca de 10 personas para hacerlo.

¿Cuáles son mis otras opciones si no participa en esta investigación?

Usted puede hablar con la Investigadora Principal para discutir estrategias para mejorar la lectura.

¿Dónde va a pasar la investigación? ¿Cuánto tiempo durará?

La investigación va a pasar en el salón de clase regular durante el horario escolar. Los datos se recogen una vez por semana durante aproximadamente 10-12 semanas. La cantidad total de tiempo que su hijo tendrá que ser voluntario para esta investigación es unos cinco minutos por cada día de recolección de datos. No habrá pérdida de tiempo de instrucción.

¿Qué me pedirán hacer?

Se le pide que permita el progreso de su hijo en la lectura de un seguimiento por haber leído un pasaje de nivel quinto grado en voz alta durante un minuto y leer un pasaje donde

se les pedirá a suplir la falta de palabras mediante la elección de tres opciones una vez por semana. Estos resultados se grafican para medir el progreso académico a través del tiempo. Todos los datos serán incorporados a un documento de computadora usando números para representar al niño en lugar de su nombre. Estos archivos de datos académicos será almacenada en una computadora protegida con contraseña y los archivos también estarán protegidos por contraseña. Formularios de consentimientos firmados serán mantenidos en un archivador cerrado en la oficina de la investigadora principal durante un período de cinco años, después de lo cual será triturado.

¿Cuáles son los posibles daños o molestias que mi niño puede experimentarlos de participar en esta investigación?

Porque vamos a utilizar pruebas de que las escuelas suelen utilizar y porque los nombres de los estudiantes no van a ser utilizados en la entrada de datos o cualquier presentación de los resultados, esperamos que no exista riesgo para su hijo. El propósito del estudio no es examinar el desempeño de cualquier estudiante solo, pero es evaluar la eficacia de la intervención mediante el uso de las puntuaciones obtenidas a partir de pruebas para examinar los cambios a través de tiempo.

¿Cuáles son los posibles beneficios que mi niño puede experimentarlos de participar en esta investigación?

Los resultados del estudio pueden ser útiles en el desarrollo de formas de aumentar las puntuaciones en la lectura mediante el examen de cómo las puntaciones de los niños logro mejorar cuando los maestras leen en silencio juntas con ellos.

¿Me pagarán por participar en esta investigación?

No. No hay ningún costo ni compensación por participar en esta investigación

Para realizar esta investigación, ECU y las personas y las organizaciones enumeradas a continuación puede saber que participaron en esta investigación y pueden ver información sobre usted que normalmente se mantiene como privado. Con su permiso, estas personas pueden utilizar su información privada a hacer esta investigación:

- Los patrocinadores de esta investigación.
- Cualquier agencia del gobierno federal, estatal o local que regula la investigación con seres humanos. Esto incluye el Departamento de Salud y Servicios Humanos, el Departamento de Salud de Carolina del Norte, y la Oficina de la Protección de Sujetos Humanos de Investigación
- UMCIRB y su personal, que tienen la responsabilidad de velar por su bienestar durante esta investigación, y personal de la Universidad de Carolina del Este que supervisan esta investigación.
- Las personas designadas por PCMH y el Sistema de Salud Universitario

¿Cómo va a mantener segura la información que recopilan sobre mí? ¿Hasta cuándo va a mantener la información?

Cualquier información que se obtiene durante este estudio será confidencial a los investigadores y será compartida con la maestra de su niño solamente con su permiso. Ninguno de los nombres u otra información personal será incluido en los análisis o informes que resulten de esta investigación.

¿Qué pasa si decido que no quiero seguir a participar en esta investigación?

Si usted decide que ya no quiere participar en esta investigación después de que ya ha comenzado, puede dejar de participar en cualquier momento. Usted no será penalizado o criticado para dejar de participar.

No perderá ningún beneficio que normalmente debe recibir.

¿A quién debo contactar si tenga preguntas?

Las investigadores de esta investigación estarán disponibles para contestar cualquier pregunta sobre esta investigación, ahora o en el futuro. Póngase en contacto con la Investigadora Principal a (252) 230-0907.

Si usted tiene alguna pregunta sobre sus derechos como participante en esta investigación, llama la Oficina de UMCIRB a 252-744-2914 (8am–5pm). Si usted quiere hacer una queja o una preocupación sobre esta investigación, llama el Director de la Oficina de UMCIRB a 252-744-1971.

Quiero participar. ¿Qué hago ahora?

La persona que obtiene consentimiento informado le preguntara a leer la siguiente. Si usted está de acuerdo, debe firmar este formulario.

- He leído toda la información anterior.
- He tenido la oportunidad de hacer preguntas sobre la investigación que no entiendo, y he recibido respuestas satisfactorias.
- Yo sé que puedo dejar de participar en la investigación en cualquier momento.
- Al firmar este formulario de consentimiento informado, no renuncio a ninguno de mis derechos.
- Me han dado una copia de este formulario consentimiento, y la copia es mía para guardar.

_____

Nombre de Participante **Firma** **Fecha**

La persona que obtiene consentimiento informado: He hecho el proceso inicial de consentimiento informado. He revisado oralmente el contenido del formulario de consentimiento con la persona que firma anterior, y he contestado todas las preguntas de la persona sobre la investigación.

_____

La persona que obtiene consentimiento informado **Firma** **Fecha**

APPENDIX F: TREATMENT INTEGRITY CHECKLIST

Date: _____
Time: Begin _____
End _____

Intervention Fidelity Checklist for Modeling

Following each session please place a check next to each intervention step that was completed.

1. Introduce the session by standing in front of the classroom with your book in your hands, showing it to the class. ____

2. Tell the class you are looking forward to reading to find out what is going to happen next in your book. ____

3. Instruct the students to get out their books to read. ____

4. Announce to the students that everyone, including you, will be reading silently for the next 10 minutes without interruption. ____

5. Sit in your seat in front of the classroom (this should be the same seat every session) and begin reading. ____

6. Spend the next 10 minutes with eyes focused on your book engaging in silent sustained reading. ____

7. After 10 minutes end the session by telling the students you enjoyed the time you spent reading and proceed with your scheduled routine. ____

Additional information to document:
Target Student:
Title of Book read this session: _____
Reading Level of book: _____

Back-up Student:
Title of Book read this session: _____
Reading Level of book: _____

Were there any disruptions during the 10 minutes of SSR? YES NO
If yes, describe:
_____
_____
_____
_____