Specialist-Level Internship Portfolio

2013-2014 Internship In School Psychology

Keara Sherman, M.Ed.
University of Cincinnati
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Introduction to the Internship Portfolio

This portfolio details some of the many diverse experience I have had throughout my internship year in the School Psychology program at the University of Cincinnati. Cumulatively, these cases demonstrate my competency and readiness for independent practice across all tiers and in the areas of both academics and behavior. The work encompassed throughout this portfolio demonstrates the application and integration of my knowledge and skills into school practice. These seven comprehensive case entries are representative of practice at all levels of support, and satisfy the requirements of the specialist-level internship year in school psychology. In order to protect teacher and student identity as well as to maintain confidentiality, all names and identifying information has been changed in the following case entries.
Table 1: Portfolio Case Entry Alignment with NASP Domains and Program Requirements

<table>
<thead>
<tr>
<th>Portfolio Case Entries</th>
<th>NASP Domains</th>
<th>Program Requirements Fulfilled</th>
</tr>
</thead>
</table>
| Improving Reading Comprehension with Two Fifth Grade Classes                         | X X X X X X X X | • Tier 1 case
|                                                                                       |              | • Academic                     |
| Increasing Engagement and Decreasing Off-Task Behaviors in a Kindergarten and First Grade Classroom | X X X X X X X | • Tier 1 case
|                                                                                       |              | • Behavioral                   |
| Implementation of a Small Group Intervention to Improve Early Literacy Skills in Kindergarten Students | X X X X X X X | • Tier 2 case
|                                                                                       |              | • Academic                     |
| Teaching Effective Communication and Social Skills to Fifth Grade Boys: A Small Group Intervention | X X X X X X X | • Tier 2 case
|                                                                                       |              | • Group Counseling             |
|                                                                                       |              | • Behavioral                   |
| Strategic and Intensive Supports for a Student Struggling with Reading Comprehension and Fluency | X X X X X X X | • Tier 3 case
|                                                                                       |              | • Academic                     |
|                                                                                       |              | • Eligibility Case             |
| Implementing an Intensive Intervention Targeting Organization, Homework Completion, and Time Management Skills | X X X X X X X | • Tier 3 case
|                                                                                       |              | • Behavioral                   |
| Increasing the Implementation of Multi-Tiered Systems of Support in an Elementary School | X X X X X X X | • Systems Level
|                                                                                       |              | • Academic                     |

NASP Domains:
1. Data-based decision making and accountability
2. Consultation and collaboration
3. Interventions and instructional support to develop academic skills
4. Interventions and mental health services to develop social and life skills
5. School-wide practices to promote learning
6. Preventive and responsive services
7. Family-school collaboration services
8. Diversity in development and learning
9. Research and program evaluation
10. Legal, ethical, and professional practice

Reference
CURRICULUM VITAE

KEARA SHERMAN
2908 Minto Avenue, Apt. 3  •  Cincinnati, Ohio 45208  •  513-543-8177  •  shermaka@mail.uc.edu

Education

EDUCATION SPECIALIST (ED.S.) IN SCHOOL PSYCHOLOGY
UNIVERSITY OF CINCINNATI  •  CINCINNATI, OH
- NASP Accredited

MASTERS OF EDUCATION (M.ED.)
UNIVERSITY OF CINCINNATI  •  CINCINNATI, OH

BACHELORS OF SCIENCE (B.S.) IN PSYCHOLOGY | CUM LAUDE
XAVIER UNIVERSITY  •  CINCINNATI, OH
- Minor: Gender and Diversity Studies
- University Scholars Program

Certification/Licensure

TEMPORARY PUPIL SERVICES LICENSE
OHIO DEPARTMENT OF EDUCATION

PROFESSIONAL LICENSURE ANTICIPATED UPON GRADUATION

Professional Experience

SCHOOL PSYCHOLOGIST INTERN
CINCINNATI PUBLIC SCHOOLS  •  1500+ hour state approved internship

Silverton Elementary Academy (PreK-6); Sayler Park School (PreK-8); Withrow University High School (7-12); Roll Hill School (PreK-6)

Universal Support
- Co-facilitated universal DIBELS and AIMSweb screening for grades K-8
- Assisted with organizing and analyzing universal screening data to collaboratively make instructional decisions for selection of students for Tier 2 interventions
- Class-wide academic consultation, intervention, and progress monitoring in two 5th grade classes in reading comprehension, which resulted in both class averages on track to meet the year end goal
- Provided behavioral supports, intervention, and progress monitoring in a K/1 class, which resulted in a 20% increase in class-wide engagement
- Positive School Culture Committee: Participated in school-wide prevention and universal planning activities

Targeted Support
- Supervised 1st year school psychology graduate students in tutoring small groups of at-risk Kindergarteners; led data meeting utilizing data-based decision making
- Facilitated a weekly small group on effective communication/social skills with fifth grade students and a small group on relational aggression with fourth grade students

Intensive Support
- Consulted with teachers and provided behavioral support to students with challenging behaviors
- Consulted with teachers and provided academic support to students struggling academically
- Directed Functional Behavioral Assessments and developed effective behavior plans for students
- Independently conducted special education evaluations and designed interventions using a multi-tiered approach
· Conducted intervention assistance team meetings, initial, and re-evaluation planning and summary meetings

SCHOOL PSYCHOLOGY PRACTICUM STUDENT  
AUGUST, 2012-MAY, 2013

Holly Hill Elementary, West Clermont, OH
· Consulted, designed and monitored the progress of individualized academic and behavioral interventions using a problem-solving tiered approach to service delivery, in collaboration with teachers and parents
· Helped monitor Tier 1 supports through universal screening measure (DIBELS)

Amelia Elementary, West Clermont, OH
· Conducted a Functional Behavioral Assessment (FBA) utilizing a Brief Functional Analysis with a 6-year-old student
· Co-facilitated nine weekly small groups on effective communication and social skills with 5th grade students

Northern Kentucky Head Start, Newport, KY
· Consulted, designed and monitored the progress of class-wide positive behavior supports and early literacy and numeracy prevention supports using a problem solving tiered approach to service delivery
· Participated in the development and delivery of staff and parent developments about Positive Behavior Supports, early academic universal screening measures, separation anxiety, and kindergarten readiness

LITERACY TUTOR  
NOVEMBER, 2011-MAY, 2012

Silvertown Paideia Academy, Cincinnati, OH
· Tutored three individual students in grades 2, 3, and 6, twice per week with a repeated reading intervention
· Monitored weekly progress using Oral Reading Fluency and used progress monitoring data to determine intervention decisions at monthly data meetings

Additional Experience

GABBARD FELLOWSHIP (HONORARY)  
SEPTEMBER, 2011-AUGUST, 2013

University of Cincinnati | College of Education, Criminal Justice, and Human Services
· 20+ hours per week in the Office of the Dean on various projects
· Significant projects include:
  · Southwest District Science and Engineering Expo, Judging Coordinator, 2011-2013; Expo Co-coordinator 2012-2013
    · Recruited and coordinated 250 judges to award over $100,000 in prizes and scholarships (over two years) for 500 6-12th grade participants
    · Provost’s Committee on Teaching Excellence, 2012
    · Faculty Senate Board, 2012-2013

FERNSIDE CENTER FOR GRIEVING CHILDREN  
NOVEMBER 2013-PRESENT
· Group facilitator; Coordinate and facilitate biweekly discussions and activities for children ages 3-6 who are coping with the death of a parent

PROFESSIONAL DEVELOPMENTS
· Critical Incident Stress Management (CISM); Resources to support students social/emotional development; Special Education Automation Software training; Supporting students in and after a crisis training

Professional Memberships
· National Association of School Psychologists (NASP)
· Ohio School Psychologists Association (OSPA)
Improving Reading Comprehension with Two Fifth Grade Classes

The following describes a Tier 1 consultation focused on increasing universal supports to improve reading comprehension in 5th grade students. The grade consisted of two classrooms with students from 10-11 years old. Due to the large number of students that were below the benchmark based on fall benchmarking of reading comprehension, Tier 1 supports were necessary to maximize impact. While the reading curriculum used targets reading comprehension, it was hypothesized that the students were not receiving enough explicit instruction in reading comprehension.

The target variable for the intervention was reading comprehension. Comprehension is a critical reading target, and is considered to be the best predictor of reading success in middle school (Jenkins & Jewell, 1993). Research has found prereading procedures, such as the TELLS (Title, Examine, Look, Look, and Setting) procedure, to be effective at improving reading comprehension (Idol-Maestas, 1985; Ridge & Skinner, 2011). The teacher was interested in an activity that could be used during their book club and reading curriculum. Through consultation and discussion of various ideas, the decision was made to use the TELLS procedure (Appendix A). This was implemented as a class-wide intervention, and all students in the classes were progress monitored monthly. The data were used to make decisions about the effectiveness of the supports. Results indicate that both classes made significant improvements in reading comprehension, and one class had met the end of year goal at the time data collection was terminated. There are several limitations of the consultation, but this case illustrates the utilization of data-based decision making at a grade-wide level.

Methods

Participants and Roles
The participants were the members of two fifth grade classrooms in an urban, Midwestern elementary school. Each classroom consisted of 23 students from 10 to 11 years old. Based on baseline data, only two students in Classroom A and six students in Classroom B met the fall benchmark target. The intervention chosen was a class-wide intervention because of the high percentage of students below and well below the fall benchmark. The teacher and intern were prepared to intensify the current instructional activities by adding further comprehension strategies if students were not making adequate progress after implementation.

The intervention was implemented by the 5th grade language arts and social studies teacher. The intern school psychologist collected baseline and progress monitored the students, consulted throughout the implementation of the intervention, and collected adherence on the intervention. The intern was supervised by the building school psychologist and a university supervisor. Permission for intervention support was received from the teacher in the classroom.

Setting

This consultation took place in a 5th grade classroom in a PreK-6 elementary school in an urban district in the Midwest. The school has students from preschool through 6th grade. There are two 5th grade teachers, one teaches language arts and social studies, the other teaches math and science. The school day lasted from 7:45am to 2:15pm. The students spend about 90 min. each day on language arts. They use the curriculum Journey’s Common Core. The school utilizes a tiered intervention model and, as part of it, collects reading benchmarking three times a year based on the target reading skills for each grade.

Target Variables

The target variable for this intervention was reading comprehension. This was selected based on research that this is a critical reading skill, and is considered to be the overall purpose
of reading (Daly, Chafouleas & Skinner, 2005; National Reading Panel, 2000; Shapiro, 2004). In addition, as students move into middle school, reading comprehension becomes a stronger predictor of overall reading skills than oral reading fluency (Jenkins & Jewell, 1993). The fall benchmarking period for reading occurred in September, 2013. Based on this benchmark, in Classroom A, 2 students met the fall target, 3 students were in the below benchmark range, and 18 students were in the well below benchmark range (Dynamic Measurement Group, Inc., 2011). In Classroom B, 7 students met the fall target, 1 student was in the below benchmark range, and 16 students were in the well below benchmark range.

**Reading comprehension.** Reading comprehension was measured through the DIBELS Next DAZE assessment. The DAZE is the DIBELS version of a maze assessment, and the purpose is to measure the reasoning processes that represent comprehension (Good & Kaminski, 2011). It assesses the student’s ability to construct meaning from text using word recognition skills, background information and prior knowledge, familiarity with linguistic properties such as syntax and morphology, and reasoning skills (Good & Kaminski, 2011). The maze process has been found to be a valid and reliable measure of reading comprehension and reading skills (Fuchs & Fuchs, 1992; Hale et. al, 2011; Marcotte & Hintze, 2009; Parker & Hasbrouck, 1992). In addition, the maze assessment has been found to be sensitive to student growth, and is positively related to later reading performance on standardized reading tests and content specific tests. (Espin & Foegen, 1996; Shin, Deno & Espin, 2000). Research has found that the maze may be more sensitive to reading skills in the higher grades, and is more predictive of overall reading skills than oral reading fluency past fourth grade (Jenkins & Jewell, 1993).

The DAZE can be given to a whole class at the same time and students are asked to read a passage silently and to circle their word choices for 3 min. In the passage, approximately every
seventh word is replaced with a box containing the correct word and two distractor words. The 
student receives credit for selecting the word that best fit in the reading passage. The final score 
is an adjusted score to compensate for guessing, and is calculated based on the number of correct 
and incorrect responses (Good & Kaminski, 2011). The DAZE was administered to all fifth 
graders every month.

Inter-Scorer Agreement

The intern administered all baseline and progress monitoring assessments. Inter-scorer 
checks were made in approximately 25% of administration sessions. Table 1 shows the 
percentage of inter-scorer agreement by date. It was calculated by dividing the smaller observer 
score for the measure by the larger observer score for the measure and multiplying this by 100.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Percentage of Inter-Scorer Agreement by Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9/5/13</td>
</tr>
<tr>
<td>DAZE score</td>
<td>100%</td>
</tr>
</tbody>
</table>

Goals

The class average goals were set at the end of year benchmark target for the spring of 5th 
grade. The DAZE target was a score of 24+. The benchmark goals are empirically derived target 
scores that indicate a level of skill at which the student is 80-90% likely to achieve later reading 
outcomes when receiving research-based instruction from a core classroom curriculum (Good & 
Kaminski, 2011).

Decision Rule
If improvement was not seen in either class average’s progress, as seen by three consecutive data points below the aim line, the intervention was intensified to better help the student or students grow (Hixon, Christ & Bradely-Johnson, 2008). If the intervention was not being implemented or adherence was less than 75%, additional steps would be taken to ensure improvement, such as a feedback condition. If the class met or exceeded the goal on a measure, progress monitoring for that class was discontinued.

**Functional Hypotheses**

It was hypothesized that the students were not receiving enough explicit instruction in reading comprehension. Thus, the consultation targeted an intervention focused on giving explicit instruction in reading comprehension.

**Accountability Design**

This intervention was set up as an A/B design, where data on the target variables were collected in the baseline phase (A) as well as in the intervention phase (B). In the intervention phase, the DAZE was collected once a month. This design was appropriate in an applied setting and can be used for data-based decision making by teams.

**Intervention Procedure**

**Baseline.** Prior to the intervention, students in the class received about 90 min of language arts instruction daily. The curriculum utilized in the district is Journey’s Common Core curriculum.

**Implementation of the TELLS procedure.** When presented with a variety of research based comprehension strategies, the teacher selected the TELLS procedure as the strategy that would fit best into their classroom ecology (Idol-Maestas, 1985) (Appendix A). The first step is for the students to look at the title and form clues as to what the story is about by reading the title. The
next step is examine, where the students are taught to look at each page of the material and skim for clues in illustrations or figures. The third step is look, where the students are taught to scan for important words such as ones that are bolded or used frequently. The fourth step is look, where students are taught to look for hard words or word they don’t recognize. The fifth step is setting, where the students are taught to skim for clues about the setting of the story. Finally, the students are asked to hypothesize if the story is fiction or nonfiction.

TELLS is a prereading procedure that has been found to improve student’s comprehension of texts (Idol-Maestas, 1985; Ridge & Skinner, 2011). In addition, this procedure helps students to activate previous knowledge related to the content, which is strongly tied to reading comprehension (Shapiro, 2004; Tarchi, 2010). It also asks the students to look for hard or unknown word, and look them up. Knowing the meaning of words has been found to be critical and can significantly help improve student’s comprehension (Burns & Hodgson, 2011; National Reading Panel, 2000; Stahl, 2003)

This procedure was slightly adapted so it could be used both with the class text book, where one short story was read each week, as well as in the “book club”, where students are grouped by ability and read different novels. Initially, it was very heavily teacher directed, to explicitly teach the students how to use the procedure. Once the students understood how to follow the procedure, they were able to use it independently. The teacher used it at least 3-4 days a week, and the students had the checklist of it stapled in their assignment notebooks (Appendix B).

**Adherence Data**

Adherence of correct intervention implementation of the academic games was measured through direct observation using procedural checklists with the main steps for each activity
(Appendix C). In these checks the intern observed the teacher to ensure implementation of the intervention. Adherence was calculated based on the percentage of steps the teacher correctly implemented if possible. When going through some stories, the whole procedure was not able to fully complete in one day, so the checklist was calculated through the step they reached. Adherence was initially collected weekly then was faded to less frequently. See Table 2 for adherence information. Performance-based adherence checks were used; if adherence for the intervention was lower than 75% the intern reviewed the intervention with the teachers and discussed possible changes to increase acceptability or implementation.

Table 2

<table>
<thead>
<tr>
<th>Intervention Step Adherence</th>
<th>Percentage of Steps Possible Followed</th>
</tr>
</thead>
<tbody>
<tr>
<td>TELLS</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Social Validity**

The interventions were developed collaboratively with the teachers in the classroom to target their students’ needs. The target variable was chosen based on the research supporting it as a critical reading skill, so social validity can be seen in the students’ improvement in reading comprehension (Daly, Chafouleas & Skinner, 2005; National Reading Panel, 2000; Shapiro, 2004). Intervention acceptability was assessed ongoing through consultation and at the end of the consultation through a teacher acceptability survey (Appendix D). The teacher evaluated the consultation supports with ratings of 4 and 5, that she “agreed” and “strongly agree”, respectively, with the statements on the survey, indicating she found the intervention acceptable.
In addition, the teacher commented that she really enjoyed using the TELLS procedure, thought it definitely helped improve her students’ comprehension, and would highly recommend it to other teachers.

**Results**

Baseline and progress monitoring data of DAZE scores for the 5th grade students are displayed in Figures 1 and 2 below. Each class had two baseline points taken.

The data for the students in Classroom A can be seen in Figure 1 below. Baseline data show an average DAZE score of 11.21, which was significantly below the fall benchmark. Baseline data had an increasing trend. The students’ mean score increased at the first point, then fell below the aim line for one point before increasing almost to the goal line at the last point. Overall, the trend increase over baseline but was variable. The students in Classroom A had not yet reached the end of year target when data were discontinued for this portfolio. However, the last point was very close to the goal and the students’ mean is on track to meet the end of year goal.
Figure 1. Baseline and progress monitoring data of DAZE for students in Classroom A.

The data for the students in Classroom B can be seen in Figure 1 below. Baseline data show an average DAZE score of 13.85, which was significantly below the fall benchmark. Baseline data showed an increasing trend. The students’ mean score increased at the first point, then fell slightly below the aim line for one point before increasing above the goal line on the last point. Overall, the intervention trend increased over baseline but was variable. The students mean in Classroom B had reached the end of year target one time when data were discontinued for this portfolio.
In support of this visual analysis, summary statistics were calculated for each classroom. Table 4 contains the percent of non-overlapping data, effect size, and goal attainment scaling for each classroom. The percentage of non-overlapping data (PND) for each classroom was determined by identifying how many intervention data points did not overlap with the highest baseline data point. The effect size was also calculated, which was found by dividing the difference of the baseline mean and the last intervention phase mean by the standard deviation of the baseline. Goal attainment scaling (GAS) at the time data collection ceased for the purposes of this portfolio was also reported (where “0” corresponds to no progress towards the goal, “1” indicates progress made towards the goal, and “2” indicates the goal was met).

For Classroom A, an effect size of 2.30 was found. All intervention points increased over the baseline mean (PND=100%). The data in the intervention condition were variable (SD=3.59),
but overall improved. For Classroom B, an effect size of 2.28 was found, and all intervention points were higher than the mean in baseline (PND=100%). The data in the intervention condition were variable but overall improved (SD=4.35). Using goal attainment scaling, Classroom A received a ‘1’, and Classroom B received a ‘2’.

Table 3

*Mean and Standard Deviations of DAZE Scores in Classrooms A and B (Baseline Phase)*

<table>
<thead>
<tr>
<th>Number of Baseline Data Points</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom A</td>
<td>2</td>
<td>11.21</td>
</tr>
<tr>
<td>Classroom B</td>
<td>2</td>
<td>13.85</td>
</tr>
</tbody>
</table>

Table 4

*Mean and Standard Deviations of DAZE Scores in Classrooms A and B (Intervention Phase)*

<table>
<thead>
<tr>
<th>Number of Intervention Data Points</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom A</td>
<td>3</td>
<td>19.57</td>
</tr>
<tr>
<td>Classroom B</td>
<td>3</td>
<td>21.08</td>
</tr>
</tbody>
</table>

Table 5

*Percent of Non-overlapping Data, Effect Size and GAS for DAZE Scores in Classrooms A and B*

<table>
<thead>
<tr>
<th>PND</th>
<th>Effect Size</th>
<th>GAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom A</td>
<td>100%</td>
<td>2.30</td>
</tr>
<tr>
<td>Classroom B</td>
<td>100%</td>
<td>2.28</td>
</tr>
</tbody>
</table>

**Discussion**

Overall, both classrooms made significant improvements on the average reading comprehension scores. The mean in Classroom A is on track to meet the end of year goal, and
was just below the target on the last data point. Classroom B successfully exceeded the end of
year goal on the last data point collected. The students’ progress towards, and meeting of the
goals, seen through the classroom average, is significant because these are meaningful, socially
valid goals supporting the improvement of the students comprehension and overall reading skills.

The mean increase of 10.12 from fall to the mean of the last data point of 24.65 is
significantly greater than the average increase from fall to spring benchmark seen in the DIBELS
benchmark goals (18 in fall to 24 in spring). This represents a rate of improvement much higher
than expected, which was needed to help the students below benchmark or well below
benchmark close the gap to meet the benchmark target.

The results of this interventions indicate that increased focus on explicit instruction of
comprehension, specifically through a prereading strategy, can successfully improve students
reading comprehension. However, one concern that this intervention brought up was the question
of the strength of the core curriculum used in district. The fall screening data indicated only 19%
of the students in 5th grade were at benchmark for reading comprehension. In a prevention and
intervention focused model, 80% of the students should be successful with only core supports,
indicating that the student’s previous core curriculum was not sufficient. In addition, best
practices would indicate the goal should be set at having 80% of the class at the spring
benchmark. However, because the fall benchmark was so low, we decided the goal and decision
rules would be based on the class average, while still aiming to reach that target of having 80%
at benchmark.

One limitation of this case is that there were only two baseline points collected, and they
showed an increasing trend prior to the TELLS procedure being out in place. Ideally I would
have collected additional baseline data, both to have the preferred three data points and to have a
stable baseline. However, as I was only at this school twice a week, and the teacher was very motivated to begin the extra supports, we decided to only collect one additional baseline point in addition to the fall benchmark.

Another limitation of this consultation was due to the extreme inclement weather that occurred in January and February of this school year. There were a significant number of days where students were off school, or delayed, because of snow or sub-zero temperatures. This resulted in less instruction overall, which may have been why the assessment collected in February dropped below the aim line for both classes. In addition, because of the time off school, there was no data point collected in January, which was not planned and is not in best practice.

This case was a great opportunity for to observe and participate in the process of benchmarking, and how it can serve as a means of identifying changes that may need to be made at the core curriculum level. This case supports the importance of universal screening, and using that screening data to guide instructional practices. In this case the universal screening highlighted a significant weakness at the beginning of the year that could then be targeted and supported throughout the year. This case has been beneficial as it provided the opportunity for data-based decisions to be made at the Tier 1 level, and demonstrates the need to have a strong core level of support before determining students need more intensive intervention support. This case also helped further develop and utilize my consultative and collaborative skills through working as a team with the teacher to develop a strategy that would fit into the classroom ecology.
References


National Reading Panel. (2000). Teaching Children to Read: An Evidence-Based Assessment of the Scientific Research Literature on Reading and Its Implications for Reading Instruction. Washington, DC: National Institute of Child Health and Human Development, National Institutes of Health


Appendices

A. TELLS Intervention
B. TELLS Checklist for Students
C. TELLS Adherence Checklist
D. Intervention Acceptability Questionnaire
Appendix A

TELLS Intervention

**TELLS Procedure: Title-Examine-Look-Look-Setting**

**Preparation:** Provide a reading passage and Worksheet 5.1 to each student

1. Introduce students to the following 5 concepts.
   1. **Title:** Teach students to form clues as to what the story is about by reading the title. Introduce the reading material by reading the title and asking students what they think the story is about and why they believe this way.
      a. It is important for students to learn that they can *form hypotheses about content by reading the title*.
   2. **Examine:** Teach students to look at each page of the material and skim for clues (i.e., illustrations, sections or subtitles, and figures or graphs).
   3. **Look:** Teach students to scan for important words. Teach students to look for clues signaling important words, such as bold or italic font, illustrations, and captions. Teach students to look for words that are used frequently, because frequency may be a clue that the words are important for understanding the material.
   4. **Look:** Teach students to look for hard words—skim page by page through the text looking for words they don’t readily recognize.
   5. **Setting:** Teach students to skim for clues about the setting of the story such as indications of places (i.e., city names), area descriptions, dates, or references to time periods.

2. After the steps have been completed, allow students to answer one question about the general nature of the story.

3. From the clues gathered during the TELLS exercise, students should be able to predict whether the text is a true story or pretend story.

4. Once students are familiar with the procedure, provide them with Worksheet 5.1 to answer as they read future reading passages.
Appendix B

TELLS Checklist for Students

<table>
<thead>
<tr>
<th>T</th>
<th>Title</th>
<th>What is the title of this story? What is the title of the chapter? Does it give a clue as to what the story/chapter is about? What do you think it is about?</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>Examine</td>
<td>Look at each page of the story/chapter to find clues about the story/chapter. What did you find?</td>
</tr>
<tr>
<td>L</td>
<td>Look</td>
<td>Look for and write down important words, such as the ones that are bold or used frequently. What do they mean?</td>
</tr>
<tr>
<td>L</td>
<td>Look</td>
<td>Look again through the story/chapter for hard words you do not know. Write them down. What do they mean?</td>
</tr>
<tr>
<td>S</td>
<td>Setting</td>
<td>Write down clues about the setting, such as the place, date, and time period. (Hint: These clues are often found in the beginning of the story.</td>
</tr>
</tbody>
</table>

FACT OR FICTION? Is this a true story (fact)? Or is this a pretend story (fiction)?
Appendix C

TELLS Adherence Checklist

**TELLS Adherence**

______ Students were told to use the TELLS procedure as they are reading

______ Teacher is monitoring their use of their TELLS procedure

______ Teacher asks or talks to at least one student about:

______ Title

______ Examine

______ Look

______ Look

______ Setting

______ Fact/Fiction

Number Checked________

Number Possible________

Percent Implemented________
Appendix D

Intervention Acceptability Questionnaire

**UC Intervention Acceptability Questionnaire**

Purpose: The purpose of this questionnaire is to get feedback concerning your overall satisfaction with the intervention(s) implemented in your classroom.

Directions: Please read the following statements and circle the number (1-5) that best describes your agreement or disagreement with each statement.

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>I had adequate input in developing the intervention script</td>
<td></td>
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<td>The intervention was easy to follow</td>
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<tr>
<td>I liked the procedures used in this intervention</td>
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<td>The intervention was easy to include in my daily routine</td>
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<td>I would be willing to use this intervention in the future</td>
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<td>Overall, this intervention was beneficial for the student(s)</td>
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Increasing Engagement and Decreasing Off-Task Behaviors in a Kindergarten and First Grade Classroom

The following report describes a Tier 1 consultation targeting off-task behaviors in a kindergarten and first grade split classroom. The classroom consisted of a lead teacher, an assistant teacher, and students from 5 to 7 years old. This classroom was chosen based on several behavior concerns, as well as the challenges inherent in teaching a multi-grade classroom. While there was a moderate implementation of positive behavior supports in place, there was a need to increase core supports based on the high levels of disruptive behaviors seen in preliminary observations. The target variables the team decided on were engagement and off-task behaviors. These variables were progress-monitored through direct behavior observation.

It was hypothesized that the students were not being reinforced for behaving appropriately so the intervention addressed this. The intervention focused on building on the positive behavior supports that were naturally occurring in the classroom, and adding additional reinforcement through an independent group contingency. The classroom utilized a level system, their “color chart,” where the students start the day in the middle on “ready to learn” and move up or down the chart based on their behavior. While there were some negative consequences, there were no explicit positive consequences for appropriate behavior. The teacher implemented an independent group contingency, where at the end of the day a student chooses a reward card from a mystery reward box, and all students at “ready to learn” or higher receive that reward. Based on observational data, additional supports were necessary so the team decided to implement the Good Behavior Game during station work. Once there was a strong Tier 1 classroom environment, appropriate plans would be made if individual children needed additional support through further individualizing of Tier 1 or additional supports. Results
indicated that the interventions were effective, as engagement increased significantly and off-task behaviors decreased.

**Methods**

**Participants and Roles**

The participants were the members of a kindergarten and first grade split classroom in an urban Midwestern elementary and middle school. There were 22 five through seven year old students with a lead teacher and assistant teacher. The consultation began with this teacher because there were a significant number of behavior referrals from the classroom, so it was critical that core supports were strongly in place. This classroom had additional challenges as it was a multi-grade classroom that was not formed until two months into the school year. This classroom selection was verified through direct observation that indicated a high level of off-task behaviors. The teacher and intern were prepared to intensify the current instructional activities by adding further supports if students were still not making adequate progress after implementation.

The intervention was implemented by the lead and assistant teacher. The school psychology intern collected observational data in both the baseline and intervention phases. The intern also consulted throughout the implementation of the intervention and collected adherence checks on the interventions. The intern was supervised by the building school psychologist and a university supervisor. Permission was received from the teacher in the classroom.

**Setting**

The consultation took place in a kindergarten and first grade split classroom in an urban elementary and middle school serving students from kindergarten-8th grade in the Midwest. There was a teacher and instructional aide in the classroom. The school day lasted from 7:45am-2:15pm. The school is approximately 88% economically disadvantaged (free or reduced lunch).
The district has a policy requiring implementation of Positive School Culture in each school, which has the goal of creating an environment where teaching and learning can prosper. This school teaches the behavioral expectations across settings, has 3 positively stated rules that are recited daily (be respectful, be responsible, be a problem solver), and has a token economy, where students receive “jaguar bucks” for positive behaviors and can spend them at a monthly store.

**Target Variables**

The intervention targeted increasing engagement and decreasing off-task behaviors. These variables were chosen through consultation with the teachers as a significant concern. Engagement is widely accepted as a keystone target variable for learning in schools, and is linked to future achievement (Christenson, Reschly, Appleton, Berman-Young, Spanjers, & Varro, 2008; Gettinger & Ball, 2008; Shapiro, 2011). In addition, engaged students show behavioral involvement in learning and positive emotional tone (Connell 1990; Connell & Wellborn, 1991). Engagement also served as the replacement behavior for the off-task behaviors seen in the classroom. Qi and Kaiser found that almost 30% of students from low SES backgrounds were reported as having behavior problems compared with 3-6% of the general population (2003). As the majority of the school population is considered economically disadvantaged it was imperative that the classroom have strong Tier 1 supports. In addition, disruptive or off-task behaviors in early elementary school has been significantly linked to poor outcomes, both academically and behaviorally (Hunter, 2003; Tremblay, Masse, Perrom, Leblanc, Schwartzman & Ledingham, 1992; Todd, Horner & Sugai, 1999).

The target variables were measured with direct behavior observation using the Behavioral Observation of Students in Schools (BOSS) that was adapted to capture the engagement of an
entire class (Shapiro, 2011). The operational definitions described below were based on the BOSS guidelines.

**Active engaged time.** This variable was coded if the student observed was actively engaged in the assigned task. Examples of this would be writing, raising their hand, reading aloud, or talking to a teacher or a peer about an assigned task. It was coded using momentary time sampling and was combined with passive engaged time to determine total engagement.

**Passive engaged time.** This was coded if the student observed was passively engaged in the assigned task. Examples of this would be listening to the lesson, looking at an assignment, looking at the board during instruction, or reading an assignment silently. It was coded using momentary time sampling and was combined with active engaged time to determine total engagement.

**Off-task motor.** This variable was coded if the student observed engaged in any instance of motor activity that was not directly related to the assigned task. Examples of this would include manipulating objects not related to the task, touching oneself or another student, or being out of the seat or turning around in the seat. It was coded using partial-interval time sampling.

**Off-task passive.** This variable was coded for any instance of the student passively not attending to the assigned task for at least 3 seconds. Examples of this would include looking around the room, staring out the window, or staring at the assignment and not working towards the assigned task. It was coded using partial-interval time sampling.

**Off-task verbal.** This variable was coded for any audible verbalizations that are not permitted and/or not related to an assigned academic task. Examples of this would include making any audible sound such as whistling or humming, talking to another student about an unrelated issue or calling out answers to academic problems when the teacher has not
specifically asked for an answer or permitted such behavior. It was coded using partial-interval time sampling.

**Measurement System**

Engagement was coded using momentary interval time sampling with 15-second intervals. Off-task behaviors were coded using partial time sampling with 15-second intervals. Each interval observed a different student in the class. The observation code (Appendix A) separated engagement into active and passive but decision rules were made based on overall engagement. The code also separated off-task behaviors into motor, verbal, and passive. The observation sessions lasted 15-20 minutes and took place utilizing the BOSS (Appendix A).

**Goals and Decision Rules**

The goal for engagement was set to be 80% or higher, which was determined by the consultative team to be a socially significant goal (Shapiro, 2011). This was above baseline levels to make the goal attainable, yet was believed to be meaningful (O’Neill, McDonnell, Billingsley & Jenson, 2011). The goal for each type of off-task behaviors was set to be below 10%, based on belief by the teacher and team that it was socially significant (Shapiro, 2011).

If the intervention was implemented without a significant increase in the class performance above baseline, the intervention was modified. If the class did not show progress towards the goal, or if it was not reaching the goals for three or four points based on direct observation, modifications were made (Hixson, Christ, & Bradely-Johnson, 2008).

**Functional Hypotheses**

Based on teacher consultation, as well as observations and referral concerns, it was hypothesized that the high level of off-task behavior was due to unclear behavioral expectations
and students not receiving positive reinforcement for appropriate behavior. Based on this hypothesis, the intervention targeted increasing positive reinforcement for appropriate behaviors.

**Accountability Plan**

The intervention plan was an A/B/C, where data on the target variables were collected in the baseline phase (A) as well as in the intervention phases (B/C). Two points of baseline data were taken prior to intervention implementation and it was collected approximately once per week during the intervention phases. This design was appropriate in an applied setting and can be used for data-based decision making by teams.

**Inter-Observer Agreement**

Formal agreement checks were not conducted specifically for the direct observation used for baseline and progress monitoring. This was because the collection of this data is a frequent process in our profession, and the intern had been trained on the BOSS and had established adequate observer agreement on the BOSS observation multiple times. This, and ensuring teacher perception of the students behavior was similar to the direct observation, was deemed sufficient for the inter-observer agreement.

**Intervention Procedure**

Through consultation with the teacher, the team decided to implement an independent group contingency for students following the classroom expectations. A group contingency is useful and time efficient in a classroom because instead of administering consequences individually, they can be administered to the whole group (Skinner, Skinner & Cashwell, 1999). They have been found to be effective and economical, and can be implemented with only one teacher (Cooper, Heron & Heward, 2007; Brantley & Webster, 1993). In addition, because baseline data indicated significant off-task behaviors in most students, using a group contingency
is more time efficient and manageable than setting up individualized behavior plans (Cooper, Heron & Heward, 2007).

In an independent group contingency, a contingency is given to all members of the class, but the reinforcement is only given to those students who meet the criteria (Cooper, Heron & Heward, 2007). The teacher was initially interested in setting up an independent group contingency based on their classroom’s color chart (Appendix B). The color chart is a type of level system where the students begin at “ready to learn” each day and can move up or down depending on their appropriate or inappropriate behaviors throughout the day. There was no explicit positive reinforcement given to the students for following the expectations in baseline, but there were negative consequences when they did not. Using an independent group contingency, all students who were at “ready to learn” or higher at the end of the day received a small reward. The reward was chosen through a mystery reward box, which has been found to be very effective at reducing off-task behaviors and ensures all students strive to receive a reward daily (Appendix C) (Kehle, Bray & Theodore, 2000; Kraemer, Davies, Arndt & Hunley, 2012).

**Good Behavior Game**

While the engagement level increased over baseline, the off-task levels were still not meeting the target, so additional supports were necessary. Through consultation, the team decided to implement the Good Behavior Game (GBG) during their math instruction (Appendix D). This instruction occurred at the end of the day, and the teacher reported high levels of off-task behavior during this time.

The GBG game is a type of interdependent group contingency, which utilizes team competition, peer influence and reinforcement procedures to increase appropriate behaviors. The GBG is set up as differential reinforcement of low rates of behaviors, where access to
reinforcement for each group member is based on the group’s performance. A meta-analysis of research on the GBG, found it to be easy-to-use, time-efficient, widely applicable and very effective at reducing disruptive or off task behaviors (Tingstrom, Sterling-Turner & Wilczynski, 2006). It had been found to be very successful in classrooms as low as kindergarten, and has significantly reduced off-task behaviors (Donaldson, Vollmer, Krous, Downs, & Berard, 2011; Tanol, Johnson, McComas & Cote, 2010). Utilizing “mystery motivators” when selecting the reward at the end of the game has also been found to improve the games effectiveness so students don’t refuse to participate if they do not like the pre-determined reward (Skinner & Watson, 2000). This game was selected because the teacher felt students frequently acted out in the afternoon during math small group stations, and the GBG would fit well into their classroom ecology.

Each afternoon, the students were split up into three math stations, two had teachers and one was the independent station. The rules were read to the class and at the end of each station the number of tallies each group received for breaking the rules was shared with the class (Appendix E). The game lasted 45 min. to an hour and each team that had less than 5 tallies, or had the least amount overall, was the winner. A mystery reward was selected each day and given or earned in the last five min. of the day.

**Adherence Plan**

Adherence checks were conducted weekly (approximately 20% of the time) through direct observation. In these checks the intern observed the lead and assistant teacher who implemented the intervention. Adherence for implementation of the mystery motivator and the good behavior game was calculated based on the percentage of steps the teacher correctly implemented (Appendix F). See Table 1 for adherence information.
### Table 1

**Intervention Step Adherence**

<table>
<thead>
<tr>
<th>Intervention Activity</th>
<th>Percentage of Steps Followed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent Group Contingency</td>
<td>100%</td>
</tr>
<tr>
<td>Good Behavior Game</td>
<td>-</td>
</tr>
</tbody>
</table>

### Social Validity

The interventions were developed collaboratively with the teacher and teacher’s aide in the classroom to target their student’s needs. In addition, the targets chosen are research supported as socially valid targets. Intervention acceptability was assessed ongoing through consultation and at the end of the consultation through a teacher acceptability survey (Appendix G). The teacher evaluated the interventions with ratings of 4 and 5, that they “agree” and “strongly agree”, respectively, with the statements on the survey, indicating found the intervention acceptable and successful.

### Results

Baseline and progress monitoring data for engagement and the off-task variables are displayed in Figure 1 below.

Baseline data for the classroom in Figure 1 showed a variable, but high number of intervals with off-task motor behavior ($M=39.5\%, SD=3.54$). In the independent group contingency condition the average percentage of intervals with off-task motor behavior decreased from baseline and the average number of intervals with off-task motor activity was 18.3% at a slightly variable level ($SD= 5.38$). However, this was still a higher level of off-task
motor than the goal, so the GBG was introduced. In this condition, off-task motor significantly decreased to an average level of 8.8%, and was below the target of 10% two times ($SD=3.64$).

![Classwide Engagement and Off-Task Behaviors in a Kindergarten and First Grade Classroom](image)

**Figure 1**: Baseline and progress monitoring data for engagement, off-task motor, off-task verbal, and off-task passive

Baseline data for the classroom in Figure 1 showed a decreasing, but high number of intervals with off-task verbal behavior ($M=26\%, SD=5.66$). In the independent group contingency condition the average percentage of intervals with off-task verbal behavior decreased from baseline, and the average number of intervals with off-task motor activity was 15.65% with a slightly decreasing trend ($SD=3.05$). However, this was still a higher level of off-task verbal than the goal, so the GBG was introduced. In this condition, off-task verbal decreased to an average level of 6.57%, and was below the target of 10% three times ($SD=1.50$).
Baseline data for the classroom in Figure 1 showed a high number of intervals with off-task passive behavior that was decreasing ($M=12\%$, $SD=7.07$). In the independent group contingency condition the average percentage of intervals with off-task passive behavior decreased from baseline and remained under the target with a decreasing trend ($M=4.5\%$, $SD=1.91$). When the GBG was introduced, off-task passive levels were variable but remained below the target ($M=5.43\%$, $SD=3.38$).

Engagement was below 80% in baseline and had an overall stable trend ($M=60.5\%$, $SD=2.12$). In the independent group contingency condition engagement increased over baseline but was not consistently above the goal and was variable ($M=80\%$, $SD=6.48$). When the GBG was introduced, engagement increased and remained above the target three times ($M=90\%$, $SD=3$).

In support of this visual analysis, summary statistics were calculated for each variable. Tables 2 and 3 below contain means and standard deviations for both the baseline and intervention phases, respectively. Table 4 contains the percent of non-overlapping data, effect size, and goal attainment scaling for each classroom. The percentage of non-overlapping data (PND) for each classroom was determined by identifying how many intervention data points did not overlap with the highest or lowest baseline data point. The effect size was also calculated, which was found by dividing the difference of the baseline mean and the last intervention phase mean by the standard deviation of the baseline. Goal attainment scaling (GAS) at the time data collection ceased for the purposes of this portfolio was also reported (where “0” corresponds to no progress towards the goal, “1” indicates progress made towards the goal, and “2” indicates the goal was met).
Table 2

*Mean and Standard Deviations of Observed Behavior Variables (Baseline Phase)*

<table>
<thead>
<tr>
<th>Number of Baseline Data Points</th>
<th>Mean</th>
<th>SD</th>
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<tbody>
<tr>
<td>Off-task motor</td>
<td>2</td>
<td>39.5</td>
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<tr>
<td>Off-task verbal</td>
<td>2</td>
<td>26</td>
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<td>Off-task passive</td>
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<tr>
<td>Engagement</td>
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Table 3

*Mean and Standard Deviations of Observed Behavior Variables (Intervention Phases)*

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<th>Number of Intervention Points</th>
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<tr>
<td>Off-task motor</td>
<td>7</td>
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<td>Off-task verbal</td>
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<td>11.76</td>
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<td>Off-task passive</td>
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<td>Engagement</td>
<td>7</td>
<td>84.29</td>
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Table 4

*Percent of Non-overlapping Data over the Baseline Mean, Effect Size, and GAS of Observed Behavior Variables*

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<th></th>
<th>PND</th>
<th>Effect Size</th>
<th>GAS</th>
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<tbody>
<tr>
<td>Off-task motor</td>
<td>100%</td>
<td>7.15</td>
<td>2</td>
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<tr>
<td>Off-task verbal</td>
<td>100%</td>
<td>2.52</td>
<td>2</td>
</tr>
<tr>
<td>Off-task passive</td>
<td>85.71%</td>
<td>1.00</td>
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Based on observation data, the consultation and class wide intervention supports were successful in increasing engagement and decreasing off-task behaviors. In the final intervention phase, all variables reached the target three times except off-task motor which reached the target the last two points. In addition, the students indicated they enjoyed receiving rewards for engaging appropriately, and especially enjoyed playing the GBG. The teacher also felt the increased supports decreased the off-task behaviors in the classroom, so much so that she began also implementing it during the reading stations in the mornings.

There were some improvements that could have strengthened the best practices present in this case. Only two baseline points were collected because the teacher was very eager to begin implementing the intervention, but in the future I would prefer to have at least three points to ensure there is a stable baseline. One limitation can be seen at the times the observations occurred. During baseline and the first intervention phase, observations occurred throughout the day. During the GBG phase, observations only happened in the afternoon when the GBG was being implemented. While the teacher indicated the afternoon had more problem behaviors, I would have liked to have more consistent timing of the data collection to fully support the results of the consultation. Another limitation can be seen in the fact that the several of the members of the class were pulled out of class to work with an intervention specialist during math, and the teacher felt some of these students were very off-task, so their absence may have skewed the data.

Because the students were exhibiting such high off-task behaviors in baseline, I would have preferred to do a more intense intervention initially as opposed to solely implementing the
independent group contingency. In consultation and collaboration with the teacher, she preferred to start with that less intense intervention. When the behaviors were not improving sufficiently, she agreed to add an additional component with the GBG. In the future I would like start with a more intense intervention, then fade the supports when necessary so as to improve the behavior and make the classroom more productive sooner.

A final limitation is that there were no direct behavioral IOA conducted with the BOSS observation. Although I have been trained in this assessment, and it is frequent process done in school psychology, in the future, I will try to collect IOA as much as is possible to rule out any observational drift. Finally, the students in the classroom began to know I was helping with the rewards and the GBG, so it is possible there was some reactivity that occurred during my observation.

Consulting with the teacher in this classroom, and supporting implementation of the interventions selected, was an excellent experience because of the importance of academic engagement, especially in these early grades. This intervention was selected and intensified using the problem-solving process, and demonstrated the importance of a strong collaboration, especially when working with a teacher at a Tier 1 level. This case affirmed the important of working as a team because as the teacher felt ownership with the interventions, both were implemented with good adherence. This ensured the validity of the data and allowed us to make data based decisions about changes to the intervention, and resulted in significant improvements in behaviors.
References


Appendix A

Observation Code

**B.O.S.S.**
Behavioral Observation of Students in Schools

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<th>Class:</th>
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Appendix B
Color Chart
Appendix C

Mystery Reward Box
Appendix D

Good Behavior Game Script

1. Hello class. I am going to tell you about a new game that we’ll be playing. It is called the Good Behavior Game. The purpose of this game is to help us become better students and classmates.

2. I will be dividing the class into (3?) teams. [you can give them names (e.g., Teams Red and Blue)]. The team that wins will earn a special prize. In fact, all teams will have a chance to earn the selected prize if they follow the rules! It’s important to be a good team member so that you can help your team win the prize.

3. Each day during Math, I will be keeping track of how each team follows all these rules: (provide examples/non-examples for each)
   a. Watch your teacher and watch your work
   b. Keep your hands and feet to yourself
   c. Talk only on your turn
   d. Follow directions the first time
   e. Not tattling on members of the other team (explain: if you tattle on a member of the other team, your team will get a tally mark under this rule)

4. It is important for members of each team to follow all these rules each time we play the Good Behavior Game. If I see a team member not following one of these rules, then the team will get a tally mark under the rule that is broken. I will make an announcement of how each team is doing each time we rotate in math.
   a. (Check for understanding) What happens if a team member is caught not following one of the rules?
   b. When will I make an announcement?

5. At the end of the game (at the end of math), the team that has least tallies is the winner. Also, any team that has less than _____ tallies also gets the prize. The better each member of each team follows all the rules, the more likely your team will WIN and earn a Magic Prize!

6. I will draw a Magic Reward card next. This card will let us know what reward the winning team or teams has won. )
   a. (check for understanding) What does the “Magic Reward” card tell us?
   b. You may not like all the possible rewards. Remember that you won’t know until after the game is over what possible reward your team may win. That is why it is important to follow all the rules every day to help your team win. You never know which Magic Reward card will be chosen. One day it just might be the prize you like best! Plus, the better you behave and follow the rules, the more likely your teammates will win a prize that they might like!

7. Does anybody have any questions about how we’ll play the Good Behavior Game?

8. I will be reviewing the rules of the Good Behavior Game each day before we begin playing. (You can review the rules using an abbreviated version of the script. By the 2nd week, a review of all the rules won’t be as important; however, each day provide a reminder that the Good Behavior Game is “now in effect”).
Appendix E

Good Behavior Game Tally Sheet

<table>
<thead>
<tr>
<th>Date</th>
<th>Team 1</th>
<th>Team 2</th>
<th>Team 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watch your teacher and watch your work</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Keep your hands and feet to yourself</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Talk only on your turn</td>
<td></td>
<td></td>
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<tr>
<td>Follow directions the first time</td>
<td></td>
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<tr>
<td>Not tattling on members of the other team</td>
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<tr>
<td>Total</td>
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Implementing the Mystery Motivator intervention.

- Remind students at the beginning of the day and the middle of the day that they can earn the mystery reward at the end of the day if they all follow the rules.
- At the end of the day, tell the students that everyone on green or higher has earned a Mystery Reward.
- Pick a different student daily to select the mystery reward.
- Praise the students as the reward is given out.

### Good Behavior Game Daily Adherence Checklist

Date: ____________________

1. _____ Introduce the Good Behavior Game. Review basic rules.
2. _____ Remind the students that the game is “in effect.”
3. _____ During the game, observe the students and keep track of any infractions. Place a tally mark under the corresponding rule for the corresponding team.
4. _____ At the beginning of each Math rotation, make an announcement of each team’s tally mark totals.
5. _____ At the end of Math, make an announcement that the Good Behavior Game is over. Remind the students that it is important to continue to follow the classroom rules all day long.
6. _____ Announce each team’s FINAL tally totals for each rule listed.
7. _____ At this point of the game, you can either draw the reward cards yourself, or you can call on individual students (team representatives) to draw the cards.
8. _____ Follow through with rewarding the teams (depending on what is selected, either pass out the reward immediately or at some point that day.)
Appendix G

Intervention Acceptability Questionnaire

Purpose: The purpose of this questionnaire is to get feedback concerning your overall satisfaction with the intervention(s) implemented in your classroom.

Directions: Please read the following statements and circle the number (1-6) that best describes your agreement or disagreement with each statement.

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<tr>
<th>Statement</th>
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<th>2</th>
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<tr>
<td>I had adequate input in developing the intervention script</td>
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<tr>
<td>The intervention script was easy to follow</td>
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<td>I liked the procedures used in this intervention</td>
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<td>The intervention was easy to include in my daily routine</td>
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<td>I would be willing to use this intervention in the future</td>
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<tr>
<td>Overall, this intervention was beneficial for the student(s)</td>
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Please make any additional comments below:

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________________________________________________________________________
Implementation of a Small Group Intervention to Improve Early Literacy Skills in Kindergarten Students

The following describes a Tier 2 intervention focused on improving early academic skills for Kindergarten students. The intern school psychologist supervised three graduate students in implementing a Tier 2 intervention with 24 kindergarten students in two classrooms. Kindergarten students were selected for this intervention based on universal screening data collected in the fall. The students were tutored three times each week for 30 minutes each day beginning in October. The graduate students implemented a teacher-directed adaptation of Kindergarten Peer-Assisted Learning Strategies (Mathes, Torgesen & Clancy-Menchetti, 2004). There were core literacy supports in place in the classroom, but it was hypothesized that the students had not received enough practice opportunities to learn the core literacy skills.

The target variables for the intervention were letter naming fluency, first sound fluency, phoneme segmentation fluency, and nonsense word fluency-correct letter sounds. Research has shown that increasing practice opportunities and immediate error correction are effective at improving academics so all activities targeted these learning essentials (Daly, Chafouleas & Skinner, 2005). The previous school year graduate students had implemented the same intervention program and the teachers felt that their current kindergarten students would also benefit from the intervention. The students’ progress was monitored weekly using the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) progress monitoring tools (Dynamic Measurement Group, Inc., 2011). When individual students were not making adequate progress towards the goals, the consultative team first modified the intervention through utilizing an additional letter naming game each session, then added a meet or beat component. Results indicate that 81.8% of students met the goal for FSF, 50% of students have met or are on track to
meet the goal for LNF, 63.6% of students have met or are on track to meet the goal for PSF, and 75% of students have met or are on track to meet the goal for NWF-CLS. This case exemplifies the utilization of data-based decision making in an applied multi-tiered system of support.

Methods

Participants and Roles

The participants in the intervention were 24 kindergarten students from two kindergarten classrooms in an urban Midwestern school. Each classroom consisted of about 24 students from 6 to 7 years old. The students were from diverse backgrounds, and the majority of students in the school came from low socioeconomic backgrounds and receive free or reduced lunches.

All students in the school are universally screened three times a year using the Dynamic Indicators of Basic Early Literacy Skills (DIBELS). The kindergarteners were assessed initially in the fall for the early literacy targets of first sound fluency (FSF) and letter naming fluency, and in the winter were also assessed for phoneme segmentation fluency (PSF) and nonsense word fluency (NWF). Based on fall benchmark data, 24 students were identified as needing additional supports due to being well below benchmark on one or both measures of early literacy based on the DIBELS Next benchmarks (Dynamic Measurement Group, Inc., 2011). If students switched schools, or met the end of year goal for all targets, another student joined the group based on teacher referrals, and winter benchmarks.

The intervention was implemented by three first year graduate students in the field of school psychology. They were supervised at the university level by a professor. Additionally, they were supervised at the school level by the intern school psychologist, a school psychology practicum student, and the building school psychologist. The intern school psychologist, practicum student, and three tutors helped the reading specialist collect the benchmark for the
students in September, 2013. Once the intervention was implemented, each student was progress monitored weekly by their tutors. The intern and practicum student consulted with the teachers throughout the implementation of the intervention and collected adherence on the interventions. The intern, practicum student, tutors, and building psychologist met monthly with the teachers to review progress, and address any concerns. Permission for intervention support was received from all students and from both teachers in the classroom (Appendix A).

**Setting**

This intervention took place in an elementary school serving students from kindergarten-6th grade in the Midwest. There was a teacher in each class and an instructional aide in one of the classrooms. The school day lasted from 7:45am-2:15pm. The district has selected a curriculum, Journey’s Common Core, that the students receive. The Tier 2 groups were held Tuesdays, Wednesdays, and Thursdays from 8:30-9:30 with each tutor conducting two 30 min groups. The teachers requested that their students be alternated weekly, in being pulled out first or second, so the students were not missing the same activities every time.

The districts implements positive school culture in each building, which has the goal of creating an environment where teaching and learning can prosper. This school teaches the behavioral expectations across settings, has three positively stated rules that are recited daily (be safe, be respectful, be responsible), and has a token economy, where students receive “eagle dollars” for positive behaviors and can spend them at a monthly store.

**Target Variables**

The target variables for this intervention were letter naming fluency, first sound fluency, phoneme segmentation fluency, and nonsense word fluency. These were selected based on research that these early academic skills are significantly related to future academic success.
Fluency measures have been shown to be a stronger predictor of future reading ability than accuracy, and are more time efficient (Ritchey & Speece, 2006). Students who do not master these basic reading skills may struggle later with reading fluency and comprehension because they have not become proficient with the basic reading and decoding skills essential to developing the higher-order skills (Hudson, Isakson, Richman, Lane & Arriaza-Allen, 2011). Through early intervention, future reading problems may be prevented and students will be set back on the track to reading success (Joseph, 2008). Universal screening of kindergarten students occurred in September, 2013 and the students selected for the intervention supports were below or well below benchmark for letter naming fluency and first sound fluency. The students were progress monitored on letter naming fluency and first sound fluency beginning in October and added phoneme segmentation fluency and nonsense word fluency as targets after the winter benchmark in January.

**Letter naming fluency.** Letter naming fluency (LNF) is the number of correct letter names identified in one minute from an array of numbers on a page with 100 uppercase and lowercase letters. Letter knowledge in kindergarten has been found to be a powerful predictor for reading skills at the end of fourth grade (Burke et al., 2009; Leppänen, Aunola, Niemi, & Nurmi, 2008; Stage et al., 2001). In this assessment, the student is asked to say each letter name on an array, and the number of letters they correctly name in one min is the score.

**First sound fluency.** First sound fluency (FSF) is the number of correct initial sounds identified when presented words orally. This is an important part of phonological awareness that is highly related to reading acquisition and reading achievement (Stahl & Murray, 2006; Yopp, 1988). In this assessment, the student is read a list of words orally and asked to produce the first
sound in the word. The number of first sounds correctly identified in one minute is the students’ score.

**Phoneme segmentation fluency.** Phoneme segmentation fluency (PSF) in the number of correct phonemes the student segments when presented words orally. This assessment is a brief measure of phonemic awareness, which is awareness that spoken words are made up of individual sounds or phonemes (Good & Kaminski, 2011). Research has found that phonemic awareness is highly predictive of success in learning to read (Gillon, 2004; Stahl & Murray, 2006). In addition, effective instruction in phonemic awareness can lead to significant improvements in reading achievement (Ehri, 2004; National Reading Panel, 2000). In this assessment, the student is told a word and asked to say each of the sounds in the word. The number of correct segments made in one minute is the score.

**Nonsense word fluency.** Nonsense word fluency (NWF) is the number of correct letter sounds read from an array of nonsense words (eg. nim). NWF targets the alphabetic principle through letter-sound correspondence. Letter sound knowledge in kindergarten has been shown to significantly predict students’ growth in first grade oral reading fluency scores and future reading ability (Stage et al., 2001). In addition, development of the alphabetic principle is critical for decoding unknown words (Adams, 1990; Ehri, 2002). The student is presented a page of nonsense words, generally consonant-vowel-consonant, and asked to read as many sounds or whole words as they can. The score reported for NWF was correct letter sounds, the number of correct letter sounds read in 1 min.

**Inter-Scorer Agreement**

The tutors were trained in DIBELS Next assessment procedures and had at least 90% reliability prior to tutoring (Good, & Kaminski, 2011). The school psychology practicum student
primarily monitored the administration of the assessments, and inter-scorer checks were made in approximately 25% of administration sessions. Table 1 shows the average inter-scorer agreement for the tutors by date. The overall average for each variable was higher than 90%. It was calculated by dividing the smaller observer score for the measure by the larger observer score for the measure and multiplying this by 100.

Table 1

Average Inter-scorer Agreement

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<tr>
<th>Date</th>
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<th>FSF</th>
<th>PSF</th>
<th>NWF-CLS</th>
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<tr>
<td>9/30</td>
<td>100%</td>
<td>100%</td>
<td>--</td>
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<tr>
<td>10/16-10/17</td>
<td>94.2%</td>
<td>92.1%</td>
<td>--</td>
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<td>10/23-10/24</td>
<td>97.91%</td>
<td>91.8%</td>
<td>--</td>
<td>--</td>
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<tr>
<td>11/12-11/15</td>
<td>99.1%</td>
<td>89.9%</td>
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<tr>
<td>12/5&amp;12/11</td>
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<td>88.7%</td>
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<tr>
<td>1/15-1/16</td>
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<td>92.2%</td>
<td>95.5%</td>
<td>97.6%</td>
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<td>100%</td>
<td>92.1%</td>
<td>95.5%</td>
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<td>2/26</td>
<td>100%</td>
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<td>94.6%</td>
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<td>100%</td>
<td>95.0%</td>
<td>94.6%</td>
<td>97.6%</td>
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<td>99.12%</td>
<td>92.37%</td>
<td>92.84%</td>
<td>98.40%</td>
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Goals

The students’ goals for FSF, PSF, and NWF were set at the end of year DIBELS benchmark. The benchmark goals are empirically derived target scores that indicate a level of skill at which the student is 80-90% likely to achieve later reading outcomes when receiving research-based instruction from a core classroom curriculum (Good & Kaminski, 2011). The FSF goal is 30, the PSF goal is 40, and the NWF goal is 28 correct letter sounds. DIBELS does not set a benchmark for LNF, so the Aimsweb target was set as the LNF goal at 48. Aimsweb
has found the 45th percentile scores to be associated with an 80% probability of future academic success, ensuring an academically valid goal (Aimsweb, 2011).

**Decision Rule**

If improvement was not seen in student progress as seen by three consecutive data points below the aim line for an individual student, the intervention was intensified or adapted to better help the student or students grow (Hixon, Christ & Bradely-Johnson, 2008). If adherence was less than 80%, additional steps would be taken to ensure improvement, such as feedback with the tutors to increase the likelihood of accurate implementation. If a student met or exceeded the goal on a measure three consecutive times, progress monitoring on that measure was discontinued. If a student met the goals on all measures, they graduated from the program.

**Functional Hypotheses**

Based on the fall benchmark data, it was hypothesized that the students had limited exposure and lacked practice opportunities with early academic skills. The intervention was targeted to increase practice opportunities and give immediate corrective feedback to acquire the major early literacy skills.

**Accountability Design**

This intervention was set up as an A/B, where data on the target variables were collected in the baseline phase (A) as well as in the intervention phases (B). In the intervention phase, the students were progress monitored weekly on LNF and FSF, and added PSF and NWF progress monitoring beginning in January. This design was appropriate in an applied setting and can be used for data-based decision making by teams.

**Intervention Procedure**
Baseline. The school psychology intern, practicum student, and three tutors helped the reading specialist collect the fall benchmark for all kindergarteners on FSF and LNF in September, 2013. The building psychologist, intern psychologist, practicum student, reading specialist and both kindergarten teacher met to review the fall benchmark data and determine which students required more intensive supports. Once the team selected the students who needed more intensive supports, the tutors collected two additional baseline points prior to implementing the intervention. Additional baseline data were collected in January on PSF and NWF.

K-PALS small groups. Upon entering graduate school in August, all the first year graduate students were trained on DIBELS next administration during orientation. While collecting the school wide winter benchmarking, DIBELS assessment was modeled and co-scored until all tutors were proficient. Prior to beginning the intervention the team met to discuss the requirements of their field experience, including possible ideas for their group behavior plans. The school psychology practicum student trained the tutors on implementing K-PALS and in creating graphs in Microsoft Excel during multiple training sessions in September. The first tutoring session began on October 1st and continued three times per week until May. Each tutor led two groups for 30 min. each, from 8:30-9:30am, which the teachers indicated would be the best time in order to not miss core instruction.

The tutoring program used was Kindergarten Peer-Assisted Literacy Strategies (K-PALS) that was adapted to be used in a small group tutor led session (Mathes, Clancy-Menchetti & Torgesen, 2004). Research on early literacy interventions found that direct, explicit instruction in alphabeticis and phonics are effective in reducing risk for reading failure (Kamps et al., 2008). When used in classrooms as a peer-assisted instruction, K-PALS has been found to improve early literacy skills in kindergarten students and students with disabilities (Fuchs et al., 2001; Rafdal, McMaster,
McConnell, Fuchs & Fuchs, 2011). While peer-assisted instruction has been found to be effective at improving early literacy skills, teacher directed small groups have been found to be even more effective, especially when the focus is on phonics (Mathes et al., 2003; Slavin, Lake, Davis & Madden, 2011).

K-PALS has multiple games that focused on explicit instruction, increased practice opportunities, and immediate feedback, all practices shown to increase learning outcomes and help students gain acquisition and fluency (Burns, VanDerHeyden, & Boice, 2007; Daly et al., 2005; Phillips, Clancy-Menchetti & Lonigan, 2008; Simonsen, Fairbanks, Briesch, Myers & Sugai, 2008). The program also utilized feedback that was specific, positive, frequent, and immediate, which have been found to increase interventions effectiveness (Daly et al., 2005).

Following a scripted daily direction card (Appendix B), the tutors directed the students through a series of literacy games that targeted letter identification, phonological awareness, phonemic awareness, and letter-sound correspondence. The games built on each other systematically, ensuring students became proficient at earlier skills before moving to more advanced skills. Tutors implemented K-PALS standard error correction procedure for providing corrective feedback to students, and each game was reviewed until students displayed mastery.

The team met approximately every 4-6 weeks to review the students’ progress and discuss any behavior or attendance concerns. The first data meeting agenda can be seen in Appendix C. At these meetings, based on the students’ data, the team decided to make any changes or additions to the interventions. At the first data meeting, the tutors shared that they had very little time on the 3rd day each week to do the K-PALS because of the progress monitoring, so the team discussed doing one or two students’ progress monitoring each day, or staying a few minutes after to complete it, to ensure the students were receiving enough meaningful
intervention. At the second data meeting, many students were below the aim line for LNF, so the
 tutors implemented an additional intervention, the letter monster (Appendix D). This game also
 focused on additional practice opportunities and immediate feedback with letter naming. During
 the third data meeting, the tutors indicated concerns with some students lack of motivation when
 being progress monitoring, so a self-graphing component with reinforcement for improvement
 was added. Self-graphing has been found to improve students’ scores on curriculum based
 measurements, and the reinforcement helped increase the student motivation (Conte & Hintze,
 2014).

**Adherence Data**

Adherence of correct intervention implementation of was measured through direct
observation using procedural checklists with the main steps for each activity (See Appendix E-
F). In these checks the practicum student or intern observed the tutor during their intervention
session. Adherence was calculated based on the percentage of steps possible that the tutors
correctly implemented. See Table 2 and 3 for adherence information. Performance-based
adherence checks were used; the tutors were given their completed adherence checklists and if
they were lower than 75% the intern or practicum student would have reviewed the checklists
with the tutors.
Table 2

*K-PALS Intervention Step Adherence*

<table>
<thead>
<tr>
<th>Date</th>
<th>Tutor 1</th>
<th>Tutor 2</th>
<th>Tutor 3</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/8</td>
<td>100%</td>
<td>86%</td>
<td>--</td>
<td>93.0%</td>
</tr>
<tr>
<td>10/9</td>
<td>--</td>
<td>--</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>10/16</td>
<td>90%</td>
<td>93.3%</td>
<td>--</td>
<td>91.7%</td>
</tr>
<tr>
<td>10/17</td>
<td>--</td>
<td>--</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>10/23</td>
<td>100%</td>
<td>100%</td>
<td>--</td>
<td>100%</td>
</tr>
<tr>
<td>10/24</td>
<td>--</td>
<td>--</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>11/12</td>
<td>--</td>
<td>76.2%</td>
<td>--</td>
<td>76.2%</td>
</tr>
<tr>
<td>11/14</td>
<td>--</td>
<td>--</td>
<td>89.4%</td>
<td>89.4%</td>
</tr>
<tr>
<td>11/15</td>
<td>87.5%</td>
<td>--</td>
<td>--</td>
<td>87.5%</td>
</tr>
<tr>
<td>12/5</td>
<td>--</td>
<td>88.2%</td>
<td>88.2%</td>
<td>88.2%</td>
</tr>
<tr>
<td>12/11</td>
<td>96.0%</td>
<td>--</td>
<td>--</td>
<td>96.0%</td>
</tr>
<tr>
<td>1/15</td>
<td>--</td>
<td>100%</td>
<td>--</td>
<td>100%</td>
</tr>
<tr>
<td>1/16</td>
<td>100%</td>
<td>--</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>2/6</td>
<td>--</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>2/13</td>
<td>100%</td>
<td>--</td>
<td>--</td>
<td>100%</td>
</tr>
<tr>
<td>2/26</td>
<td>100%</td>
<td>--</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>2/27</td>
<td>--</td>
<td>95.8%</td>
<td>--</td>
<td>95.8%</td>
</tr>
<tr>
<td>3/19</td>
<td>96.0%</td>
<td>100%</td>
<td>96.7%</td>
<td>97.6%</td>
</tr>
</tbody>
</table>
Table 3

The Letter Monster Intervention Step Adherence

<table>
<thead>
<tr>
<th>Date</th>
<th>Tutor 1(H)</th>
<th>Tutor 2(A)</th>
<th>Tutor 3(L)</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/15</td>
<td>85.7%</td>
<td>--</td>
<td>--</td>
<td>85.7%</td>
</tr>
<tr>
<td>12/5</td>
<td>--</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>12/11</td>
<td>100%</td>
<td>--</td>
<td>--</td>
<td>100%</td>
</tr>
<tr>
<td>1/23</td>
<td>100%</td>
<td>100%</td>
<td>85.7%</td>
<td>95.2%</td>
</tr>
<tr>
<td>2/6</td>
<td>--</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>2/26</td>
<td>100%</td>
<td>--</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>2/27</td>
<td>--</td>
<td>100%</td>
<td>--</td>
<td>100%</td>
</tr>
<tr>
<td>3/19</td>
<td>86.0%</td>
<td>100%</td>
<td>85.7%</td>
<td>90.6%</td>
</tr>
</tbody>
</table>

Social Validity

The intervention was chosen and developed collaboratively with the teachers in the classroom to target their students’ needs. The target variables were chosen based on the research linking them to future academic success, so social validity can be seen in the students’ progress towards the goals, and decreased future risk for the students (Burke et al., 2009; Gillon, 2004; Stage et al., 2001; Stahl & Murray, 2006). Intervention acceptability was assessed ongoing through consultation and at the end of the consultation through a teacher acceptability survey (Appendix G). The results from the intervention acceptability survey can be seen in Table 4, and the teachers commented that the tutors were very professional, worked well with the children, and that they hoped the program would continue.

The tutors were also surveyed about intervention acceptability, training, and supervision (Appendix H). The results from the tutor’s surveys can be seen in Table 5. Overall, the tutors indicated they really enjoyed working with the student, and loved seeing the student’s improvements. The tutors indicated they would have preferred to receive more training and
practice with implementing K-PALS right before beginning tutoring, instead of more than a month before implementing it. One tutor indicated that she disliked the repetitiveness of K-PALS, and another tutor reported feeling overwhelmed trying to fit in the additional components in the time frame they were supposed to work with the children. The students who participated in the interventions were also asked how they felt about the tutoring, and overall indicated they enjoyed and learned in the groups (Appendix I). The student’s social validity results can be seen in Table 6.

Table 4

*Results from the Teacher Social Validity Questionnaire*

<table>
<thead>
<tr>
<th>Questions</th>
<th>Teacher 1</th>
<th>Teacher 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>I had adequate input during the planning phase of the tutoring program</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>I was adequately involved in the decision making process throughout</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>I was involved in reviewing students’ progress</td>
<td>Strongly Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>I would be willing to allow my student(s) to participate in a tutoring program in the future</td>
<td>Strongly Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>I noticed improvement in the students’ reading scales</td>
<td>Strongly Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>Overall, I thought the reading program was beneficial for the student(s)</td>
<td>Strongly Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>
Table 5

Results from the Tutor Social Validity Questionnaire

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall training</td>
<td>0%</td>
<td>33% (1)</td>
<td>33% (1)</td>
<td>33% (1)</td>
<td>0%</td>
</tr>
<tr>
<td>Behavior management training</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>100% (3)</td>
<td>0%</td>
</tr>
<tr>
<td>Graphing material provided</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>100% (3)</td>
</tr>
<tr>
<td>Data meetings: Data-based decisions</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>66% (2)</td>
<td>33% (1)</td>
</tr>
<tr>
<td>Data meetings: ask questions &amp; feedback</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>33% (1)</td>
<td>66% (2)</td>
</tr>
<tr>
<td>Feedback from reliability/adherence checks</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>33% (1)</td>
<td>66% (2)</td>
</tr>
<tr>
<td>Courteous &amp; professional atmosphere</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>100% (3)</td>
</tr>
<tr>
<td>Understanding &amp; accommodating needs</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>33% (1)</td>
<td>66% (2)</td>
</tr>
<tr>
<td>Accessible &amp; responsive to questions</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>100% (3)</td>
</tr>
<tr>
<td>Learning &amp; usefulness of experience</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>100% (3)</td>
</tr>
</tbody>
</table>
Table 6

Results from the Student Social Validity Questionnaire

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I enjoyed the activities in this reading group.</td>
<td>95% (20)</td>
<td>5% (1)</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>I was treated with kindness and respect in this group.</td>
<td>90% (19)</td>
<td>10% (2)</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>I learned a lot and improved my reading skills in this group.</td>
<td>86% (18)</td>
<td>10% (2)</td>
<td>0%</td>
<td>0%</td>
<td>5% (1)</td>
</tr>
<tr>
<td>I feel more confident about my reading skills now.</td>
<td>85% (17)</td>
<td>10% (2)</td>
<td>0%</td>
<td>5% (1)</td>
<td>0%</td>
</tr>
<tr>
<td>I am glad that I was part of this reading group.</td>
<td>90% (18)</td>
<td>0%</td>
<td>10% (2)</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>I would recommend this group to my friends to improve their reading skills.</td>
<td>95% (19)</td>
<td>5% (1)</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Results

Baseline and progress monitoring results, and summary statistics are provided in the tables below. Depending on the target skill, between 50-81% of the students that received the interventions this year are on track, or have met the end of year goal. When possible, summary statistics were calculated. The percentage of non-overlapping data (PND) for each student was determined by identifying how many intervention data points did not overlap with the highest baseline data point. The effect size was also calculated, which was found by dividing the difference of the baseline mean and the last intervention phase mean by the standard deviation of the baseline. Goal attainment scaling (GAS) at the time data collection ceased for the purposes of this portfolio is also reported (where “0” indicates less progress was made than was needed towards the goal, “1” indicates on track to meet the goal, and “2” indicates the goal was met).

Tables 7 and 8 shows the summary statistics for First Sound Fluency for the 22 students who were participating in the tutoring when data were discontinued for this portfolio. Eighty-one
percent of students (18 out of 22) met the benchmark goal, and 90.9% (20 out of 22) moved up in risk category by the winter benchmark period. Results also indicate that, on average, students actual ROI exceeded the average needed ROI. The average final FSF score was 39.6, exceeding the benchmark score of 30. In support of this, the average percent of non-overlapping data points was 87%, the average effect size was 10.23, and average goal attainment scaling was 1.64.

Table 7

First Sound Fluency Results

<table>
<thead>
<tr>
<th>Student</th>
<th>Needed ROI</th>
<th>Actual ROI</th>
<th>On Track to Meet Goal?</th>
<th>First FSF Score</th>
<th>Final FSF Score</th>
<th>Increased In Risk Category?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.86</td>
<td>1.27</td>
<td>Goal met</td>
<td>2</td>
<td>33</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>0.64</td>
<td>1.80</td>
<td>Goal met</td>
<td>0</td>
<td>54</td>
<td>Yes</td>
</tr>
<tr>
<td>3</td>
<td>0.68</td>
<td>2.76</td>
<td>Goal met</td>
<td>0</td>
<td>55</td>
<td>Yes</td>
</tr>
<tr>
<td>4</td>
<td>0.84</td>
<td>3.87</td>
<td>Goal met</td>
<td>0</td>
<td>33</td>
<td>Yes</td>
</tr>
<tr>
<td>5</td>
<td>0.64</td>
<td>1.21</td>
<td>Goal met</td>
<td>1</td>
<td>44</td>
<td>Yes</td>
</tr>
<tr>
<td>6</td>
<td>0.76</td>
<td>1.64</td>
<td>Goal met</td>
<td>0</td>
<td>35</td>
<td>Yes</td>
</tr>
<tr>
<td>7</td>
<td>0.49</td>
<td>7.40</td>
<td>Goal met</td>
<td>0</td>
<td>55</td>
<td>Yes</td>
</tr>
<tr>
<td>8</td>
<td>0.46</td>
<td>1.43</td>
<td>Goal met</td>
<td>0</td>
<td>53</td>
<td>Yes</td>
</tr>
<tr>
<td>9</td>
<td>0.58</td>
<td>1.31</td>
<td>Goal met</td>
<td>0</td>
<td>53</td>
<td>Yes</td>
</tr>
<tr>
<td>10</td>
<td>0.73</td>
<td>1.08</td>
<td>Goal met</td>
<td>1</td>
<td>39</td>
<td>Yes</td>
</tr>
<tr>
<td>11</td>
<td>0.90</td>
<td>3.00</td>
<td>Goal met</td>
<td>1</td>
<td>58</td>
<td>Yes</td>
</tr>
<tr>
<td>12</td>
<td>0.64</td>
<td>0.23</td>
<td>Goal met</td>
<td>0</td>
<td>32</td>
<td>Yes</td>
</tr>
<tr>
<td>13</td>
<td>0.84</td>
<td>1.30</td>
<td>Goal met</td>
<td>0</td>
<td>36</td>
<td>Yes</td>
</tr>
<tr>
<td>14</td>
<td>0.71</td>
<td>2.01</td>
<td>Goal met</td>
<td>8</td>
<td>51</td>
<td>Yes</td>
</tr>
<tr>
<td>15</td>
<td>0.88</td>
<td>0.84</td>
<td>No</td>
<td>0</td>
<td>18</td>
<td>Yes</td>
</tr>
<tr>
<td>16</td>
<td>0.89</td>
<td>0.33</td>
<td>No</td>
<td>0</td>
<td>9</td>
<td>No</td>
</tr>
<tr>
<td>17</td>
<td>0.79</td>
<td>2.04</td>
<td>Goal met</td>
<td>2</td>
<td>42</td>
<td>Yes</td>
</tr>
<tr>
<td>18</td>
<td>0.63</td>
<td>1.13</td>
<td>Goal met</td>
<td>0</td>
<td>45</td>
<td>Yes</td>
</tr>
<tr>
<td>19</td>
<td>0.58</td>
<td>2.43</td>
<td>Goal met</td>
<td>9</td>
<td>55</td>
<td>Yes</td>
</tr>
<tr>
<td>20</td>
<td>0.87</td>
<td>2.98</td>
<td>Goal met</td>
<td>0</td>
<td>44</td>
<td>Yes</td>
</tr>
<tr>
<td>21</td>
<td>0.89</td>
<td>0.83</td>
<td>No</td>
<td>0</td>
<td>24</td>
<td>Yes</td>
</tr>
<tr>
<td>22</td>
<td>0.88</td>
<td>-0.04</td>
<td>No</td>
<td>0</td>
<td>13</td>
<td>No</td>
</tr>
<tr>
<td>Average</td>
<td>0.74</td>
<td>1.86</td>
<td>81.8%</td>
<td>1.27</td>
<td>39.60</td>
<td>90.9%</td>
</tr>
</tbody>
</table>
### Table 8

**First Sound Fluency Statistics**

<table>
<thead>
<tr>
<th>Student</th>
<th># BL Points</th>
<th>BL Mean</th>
<th>BL SD</th>
<th># Interv. Points</th>
<th>Interv. Mean</th>
<th>Interv. SD</th>
<th>ES</th>
<th>PND</th>
<th>GAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
<td>0.7</td>
<td>1.2</td>
<td>14</td>
<td>21.9</td>
<td>12.0</td>
<td>18.4</td>
<td>100%</td>
<td>+2</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>8.3</td>
<td>3.8</td>
<td>10</td>
<td>24.7</td>
<td>12.5</td>
<td>4.3</td>
<td>90%</td>
<td>+2</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>7.0</td>
<td>9.6</td>
<td>9</td>
<td>34.3</td>
<td>12.2</td>
<td>2.8</td>
<td>88.8%</td>
<td>+2</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
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Tables 9 and 10 shows the summary statistics for Letter Naming Fluency for the 22 students who were participating in the tutoring when data were discontinued for this portfolio.

Fifty percent of students (11 out of 22) met, or are on track to meet the benchmark goal, and 50% (11 out of 22) moved up in risk category by the winter benchmark period. Results also indicate that, on average, students actual ROI exceeded the average needed ROI. The average final LNF score was 35.60, which was below the benchmark score of 48. The average percent of non-overlapping data points was 81.62%, the average effect size was 9.41, and average goal attainment scaling was .82.
Table 9

*Letter Naming Fluency Results*

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<tr>
<th>Student</th>
<th>Needed ROI</th>
<th>Actual ROI</th>
<th>On Track to Meet Goal?</th>
<th>First LNF Score</th>
<th>Final LNF Score</th>
<th>Increased In Risk Category?</th>
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Average 1.19 1.23 50.0% 6.23 35.60 50.0%
Table 10

Letter Naming Fluency Statistics

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<th>BL SD</th>
<th># Interv. Points</th>
<th>Interv. Mean</th>
<th>Interv. SD</th>
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Tables 11 and 12 shows the summary statistics for Phoneme Segmentation Fluency for the 22 students who were participating in the tutoring when data were discontinued for this portfolio. Sixty-three percent of students (14 out of 22) met, or are on track to meet the benchmark goal. Results also indicate that, on average, students actual ROI exceeded the average needed ROI. The average final PSF score was 30.04, which was below the benchmark score of 40. In support of this, the average percent of non-overlapping data points was 67.95%, the average effect size was 3.45, and average goal attainment scaling was 0.72.
Table 11

Phoneme Segmentation Fluency Results

<table>
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<th>Student</th>
<th>Needed ROI</th>
<th>Actual ROI</th>
<th>On Track to Meet Goal?</th>
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<td>48</td>
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<td>No</td>
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<td>1.33</td>
<td>Yes</td>
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</tbody>
</table>

Average | 1.14       | 2.03       | 63.6% | 12.05 | 30.04 |
Table 12

*Phoneme Segmentation Fluency Statistics*

<table>
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<tr>
<th>Student</th>
<th># BL Points</th>
<th>BL Mean</th>
<th>BL SD</th>
<th># Interv. Points</th>
<th>Interv. Mean</th>
<th>Interv. SD</th>
<th>ES</th>
<th>PND</th>
<th>GAS</th>
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<td>3</td>
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<td>5.9</td>
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<td>+1</td>
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<td>27.7</td>
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</table>

Tables 13 and 14 shows the summary statistics for Nonsense Word Fluency-Correct Letter Sounds for the 20 students who were being progress monitored in NWF when data were discontinued for this portfolio. Seventy-five percent of students (15 out of 20) met, or are on track to meet the benchmark goal. Results also indicate that, on average, students actual ROI exceeded the average needed ROI. The average final NWF score was 26.35, which was below the spring benchmark score of 27. In support of this, the average percent of non-overlapping data points was 74%, the average effect size was 2.26, and average goal attainment scaling was 0.95.
Table 13

**Nonsense Word Fluency Results**

<table>
<thead>
<tr>
<th>Student</th>
<th>Needed ROI</th>
<th>Actual ROI</th>
<th>On Track to Meet Goal?</th>
<th>First NWF Score</th>
<th>Final NWF Score</th>
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<td>--</td>
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Average: Needed ROI 0.94, Actual ROI 2.07, Goal met 75.0%, First NWF Score 6.95, Final NWF Score 26.35
Discussion

Overall, the K-PALS tutoring program had a positive effect on the targeted early academic skills for students who were at risk for reading failure at the beginning of kindergarten. 81.8% of students met the goal for FSF, 50% of students have met or are on track to meet the goal for LNF, 63.6% of students have met or are on track to meet the goal for PSF, and 75% of students have met or are on track to meet the goal for NWF-CLS. Meeting the end of year goal indicates that the students are 80-90% likely to achieve later reading outcomes with a research-based core curriculum (Dynamic Measurement Group, Inc., 2011). The students’ progress
towards, or meeting of goals is extremely significant because most of the students began kindergarten scoring below benchmark, or well below benchmark.

While overall, the tutoring program showed significant improvement for the students, there were several limitations present in this study. While the tutors were very professional, and ensured they tutored three days each week, there were a number of students who were habitually absent or tardy. As the tutoring occurred immediately following breakfast, several students missed many sessions. While they did receive some of the intervention, they may not have made sufficient progress because they were not present to receive the full sequence.

In addition, at the first data meeting the tutors shared that they had only been doing two full days of the K-PALS and the third day was spend almost solely on progress monitoring. The team discussed the importance of three consistent days of the intervention, and came up with some solutions to ensure both the intervention and progress monitoring was taking place. However, in the first 4-6 weeks the students were not getting the three days of intervention that are critical for a Tier 2 intervention, thus may not have made as much progress. In the future, I would like to discuss more explicitly expectations of the time spent on interventions prior to beginning the intervention. Another limitation of the study can be seen in several students’ boredom and dislike of the assessments. While that was partially mediated by implementing the self-graphing with reinforcement component, several tutors still expressed concerns that the data did not indicate the full ability of a few students.

This case exemplified data-based decision making on a larger, group level. While we looked at individual student’s data in making intervention decisions, because so many students were below or well below benchmark, solely implementing individual interventions would not have been efficient. In addition, since this is the second year the program is being implemented,
we were able to take the feedback from the previous year’s tutors and the teachers and improve the process by having regular data meetings with the tutors and teachers. By meeting regularly with the tutors and teachers, this was truly a collaborative intervention with open communication between all members of the team. There were several times when the teachers had valuable insight into working with specific children that helped the tutors improve their behavior management techniques. In addition, the teachers used the data collected by the tutors during conferences with parents, and in selecting students that needed additional supports in the classroom as well. This was a very valuable intervention because it was focused on early intervention, and prevention of academic deficits in later grades. This case was also beneficial because it allowed me to gain leadership experience in supervising and collaborating with a large team, in order to best meet the need of the students being supported.
References


National Reading Panel. (2000). *Teaching Children to Read: An Evidence-Based Assessment of the Scientific Research Literature on Reading and Its Implications for Reading Instruction*. Washington, DC: National Institute of Child Health and Human Development, National Institutes of Health


Appendices

A. Parent Permission
B. K-PALS Daily Direction Card
C. Example Data Meeting Agenda
D. Letter Monster Script
E. K-PALS Adherence Checklist
F. Letter Monster Adherence Checklist
G. Intervention Acceptability Questionnaire for Teachers
H. Intervention Acceptability Questionnaire for Tutors
I. Intervention Acceptability Questionnaire for Students
Appendix A

Parent Permission

Dear Parent/Guardians of ___________________________,

We are pleased to announce that [insert school name] has again been offered the opportunity to provide tutoring support in reading for some of our students as part of a partnership that [insert sponsor name] has established with the University of Cincinnati School Psychology Program. Graduate students from the UC School Psychology program will be providing free tutoring during the school day to small groups of Kindergarten students who have been identified as being in need of developing early literacy skills.

Based on the results of the fall DIBELS benchmark assessment and teacher recommendation, your child has been selected as a potential participant in this tutoring program. DIBELS (Dynamic Indicators of Basic Early Literacy Skills) is a universal screening measure of early literacy skills used to identify students who may be at-risk for future reading difficulties. The students in the tutoring program will be assigned to small groups of approximately four students. These students will receive instruction using a research-based intervention that has shown to increase reading achievement for at-risk students.

Students participating in the reading intervention program will receive approximately 30 minutes of small group intervention three days each week.

The graduate student tutors’ involvement is part of their training in becoming school psychologists. They all have Bachelor’s degrees and have been trained on how to conduct the intervention groups, as well as how to monitor student progress.

Your participation is completely voluntary. Please return this form if you do not wish your child to participate in this program. If you do not return this form, your child will begin participating in the program in early October. If you have any questions or concerns regarding the program, please contact me. I can be reached at [insert phone number] on Mondays, Thursdays, and Fridays at [insert email address].

Sincerely,

[Name]
School Psychologist

☐ I DO NOT give my permission for my child, ___________________________, to participate in the __________________________ Kindergarten Tutoring Program.

_____________________________________________  ____________________________
Parent/Guardian Signature Date
Appendix B

K-PALS Daily Direction Card

**K-PALS Daily Direction Card**

**Game Sheets**

Name Game, Rhyme Time, First Sound, Letter Sound, Say the Word, Last Sound, & Stretch the Word

Teacher: It's time for K-PALS. Let's get ready. We are on Game Sheet __.
**Today the new letter is __.** (If there is no new letter, say, “Our new letter yesterday was __. Let's review the letter__.”) **Say it with me: __. By yourselves __.**

Teacher: **Now we are ready to play Name Game. Everyone, what letter?**

Go through one letter at a time, pointing to each letter as you go.

If an error is made, immediately tell the group the correct answer, ask everyone to repeat it (even if only one person made the error), and start again from the beginning of the line.

Once you’ve gone through all the letters as a group, call on each child individually to name a randomly selected letter on their own. **(Child’s name), your turn. What letter?** Make sure each child has a turn.

Teacher: **Now we are ready to play Rhyme Time.**

Teacher: Prompt the students to point to the first box. Then say, These two words are bell-shell. **Say them with me: __. Good. Do these rhyme? __ Good. Bell does rhyme with shell because they have the same ending sound.**

Go through each pair of words at a time, pointing to each pair as you go.

If an error is made, immediately tell the group the correct answer, ask everyone to repeat it (even if only one person made the error), and start again from the beginning of the line.

Once you’ve gone through all the pairs as a group, call on each child individually to answer one on their own. **(Child’s name), your turn. Do __ and __ rhyme?** Make sure each child has a turn.

Teacher: **Now we are ready to play First Sound.**

Teacher: Point and say the name of each picture, then ask, **Everyone, what’s the first sound?**

Go through one letter at a time, pointing to each picture as you go.
If an error is made, immediately tell the group the correct answer, ask everyone to repeat it (even if only one person made the error), and start again from the beginning of the line.

Once you’ve gone through all the pairs as a group, call on each child individually to answer one on their own. (Child’s name), your turn. What’s the first sound? Make sure each child has a turn.

Teacher: Now we are ready to play Letter Sounds. Everyone, what sound does this letter make?

Go through one letter at a time, pointing to each letter as you go.

If an error is made, immediately tell the group the correct answer, ask everyone to repeat it (even if only one person made the error), and start again from the beginning of the line.

Once you’ve gone through all the pairs as a group, call on each child individually to answer one on their own. (Child’s name), your turn. What sound? Make sure each child has a turn.

Teacher: Now we are ready to play Say the Word.

Teacher: Prompt the students to point to the first box. Then say, Listen and watch. Say the word, stretching it out with finger signal. Say the word: __. Good.

Go through each picture, stretching each word with the finger signal until students can say all the words with no errors.

If an error is made, immediately tell the group the correct answer, ask everyone to repeat it (even if only one person made the error), and start again from the beginning of the line.

Once you’ve gone through all the pairs as a group, call on each child individually to answer one on their own. (Child’s name), your turn. Stretch the word out. Say the word. Make sure each child has a turn.

Teacher: Now we are ready to play Last Sound.

Teacher: Point and say the name of each picture, then ask, Everyone, what’s the last sound?

Go through one letter at a time, pointing to each picture as you go.

If an error is made, immediately tell the group the correct answer, ask everyone to repeat it (even if only one person made the error), and start again from the beginning of the line.
Once you've gone through all the pairs as a group, call on each child individually to answer one on their own. (Child’s name), your turn. What’s the last sound? Make sure each child has a turn.

Teacher: Now we are ready to play Stretch the Word.

Teacher: Everybody, raise your hand so it looks like mine. Put your hand in a fist. Then say, Listen and watch. Say the word stretching it out with finger signal. Stretch the word ___ with me. Hold up a finger for each sound as you say it. Begin.

Go through each picture, stretching each word with the finger signal until students can stretch all the words with no errors.

If an error is made, immediately tell the group the correct answer, ask everyone to repeat it (even if only one person made the error), and start again from the beginning of the line.

Once you’ve gone through all the pairs as a group, call on each child individually to answer one on their own. (Child’s name), your turn. Stretch the word ___. Begin. Make sure each child has a turn.

Reminder on Teaching to Mastery: If the group has not mastered the lesson (all 4 games) by the end of the session, begin where you left off at the start of the next session. For example, if the group mastered Name Game and Rhyme Time but did not master First Sound, begin the next session with First Sound. Do not move on to the next lesson until the current lesson has been mastered.
Appendix C

Example Data Meeting Agenda

Tutoring Data Meeting

November 1st, 2013

1. Review individual student’s progress on LNF and PSF
   - Are they above/below the aim line?
   - Are they close to the goal line?
   3 points below the aim line
     - Look at attendance
     - Intensify/add to intervention

   3 points above the goal line
     - Stop monitoring progress on that target

2. Discuss teacher questions/concerns

11:00-11:15

3. Behavior problems

4. Graphing problems

5. Next week’s schedule

6. Additional concerns?
Appendix D

Letter Monster Script

Letter Naming: The Letter Monster Game

Materials:
The letter monster
Letter Cards

Time: 5-10 Minutes

Script:
1. Select the letters that have been reviewed in the KPALS manual, plus additional letters.

2. Review the letters with the students, showing them a letter card one at time and saying, “This is the letter ____.”

3. Have all the students repeat the letter name by saying “Everyone say ____.”

4. Place the cards face down, and select the first student to pick one of the cards.

5. The student then reads the letter on the card.

6. If the student reads the letter correctly they show the card to the rest of the group. Then you say, “That’s right, it’s the letter ____ You can feed the letter ____ to “The letter monster”

7. Everyone responds by saying, “Munch Munch, Yum Yum, the letter ____ tastes good!”

8. If the student says the letter incorrectly then they can ask a student for help or the teacher will select a student to help, and they will feed the letter monster together with the same response in step 5 & step 6.
Appendix E

K-PALS Adherence Checklist

Adherence Check

Tutor:  
Date:  

1. Name Game  
   _____ Introduces game  
   _____ Introduces new letter of the day (IF APPLICABLE)  
      ▪ Models Letter  
      ▪ Has students repeat letter  
   _____ Tutor has all students read all letters  
   _____ Tutor has individual students read letters  
   _____ Uses error correction and praise throughout activity  
   _____ Tutor points to letters as students recite them  
   _____ Repeats activity if errors are made (IF APPLICABLE)  

2. Rhyme Time  
   _____ Introduces game  
   _____ Does pairs of pictures as a group  
   _____ Does pairs of pictures individually  
   _____ Uses error correction and praise throughout activity  
   _____ Repeats lesson if errors are made (IF APPLICABLE)  

3. First Sound  
   _____ Introduces game  
   _____ Does first sounds as a group  
   _____ Does first sounds individually  
   _____ Emphasizes 1st sounds in word  
   _____ Uses error correction and praise throughout activity  
   _____ Repeats activity if errors are made (IF APPLICABLE)  

4. Name Game  
   _____ Introduces game  
   _____ Tutor has all students state the letter sounds  
   _____ Tutor has individual students state letter sounds  
   _____ Uses error correction and praise throughout activity  
   _____ Tutor points to the letter as students state the sound  
   _____ Repeats activity if errors are made (IF APPLICABLE)
5. Say the Word
   _____ Introduces game
   _____ Tutor stretches the sounds in words
   _____ Tutor raises one finger for each sound in the word as a cue
   _____ Tutor has all students say the word
   _____ Tutor has individuals say the word
   _____ Uses error correction and praise throughout activity
   _____ Repeats activity if errors are made (IF APPLICABLE)

6. Last Sound
   _____ Introduces game
   _____ Does last sounds as a group
   _____ Does last sounds individually
   _____ emphasizes last sounds in word
   _____ Uses error correction and praise throughout activity
   _____ Repeats activity if errors are made (IF APPLICABLE)

7. Stretch It
   _____ Introduces game
   _____ Tutor stretches the sounds in words
   _____ Tutor raises one finger for each sound in the word as a cue
   _____ Tutor has all students stretch the sounds in words
   _____ Tutor has individual students stretch the sounds in words
   _____ Students raise one finger for each sound in the word as a cue
   _____ Uses error correction and praise throughout the activity
   _____ Repeats activity if errors are made (IF APPLICABLE)
Appendix F

Letter Monster Adherence Checklist

Materials:
The letter monster
Letter Cards

Time: 5-10 Minutes

Script:
_____ 1. Select the letters that have been reviewed in the KPALS manual, plus additional letters.
_____ 2. Review the letters with the students, showing them a letter card one at time and saying, “This is the letter ___.”
_____ 3. Have all the students repeat the letter name by saying “Everyone say ____.”
_____ 4. Place the cards face down, and select the first student to pick one of the cards.
_____ 5. The student then reads the letter on the card.
_____ 6. If the student reads the letter correctly they show the card to the rest of the group. Then you say, “That’s right, it’s the letter ___. You can feed the letter ___ to “The letter monster”
_____ 7. Everyone responds by saying, “Munch Munch, Yum Yum, the letter ____ tastes good!”
_____ 8. If the student says the letter incorrectly then they can ask a student for help or the teacher will select a student to help, and they will feed the letter monster together with the same response in step 5 & step 6.
Appendix G

Intervention Acceptability Questionnaire for Teachers

**UC Intervention Acceptability Questionnaire**

Purpose: The purpose of this questionnaire is to get feedback concerning your overall satisfaction with the K-PALS program.

Directions: Please read the following statements and circle the number (1-5) that best describes your agreement or disagreement with each statement.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Not Sure</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I had adequate input during the planning phase of the reading program</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I was adequately involved in the decision making process throughout</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I was involved in reviewing students’ progress</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I would be willing to allow my student(s) to participate in a reading program in the future</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I noticed improvement in the students’ reading performance</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Overall, I thought the reading program was beneficial for the student(s)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Please make any additional comments below.

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________
Appendix H

Intervention Acceptability Questionnaire for Tutors

Social Validity Questionnaire for First-Year UC Tutors

(Using a 5-point rating scale: 1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree, except for questions 15-20, which are short answer)

1. The overall training provided at the beginning of the year was helpful.
   1  2  3  4  5

2. Specifically, I found the training on behavior management beneficial.
   1  2  3  4  5

3. The graphing materials provided at the onset of tutoring were useful.
   1  2  3  4  5

4. The data meetings allowed me to make important data-based decisions using the specified decision rules.
   1  2  3  4  5

5. The data meetings allowed me to ask questions and get feedback from my supervisors and classmates.
   1  2  3  4  5

6. I found the feedback received following the scheduled reliability and adherence checks beneficial and timely.
   1  2  3  4  5

7. My supervisor helped to create and maintain a courteous and professional atmosphere.
   1  2  3  4  5

8. My supervisor was understanding and attempted to accommodate my needs.
   1  2  3  4  5

9. My supervisor was accessible and responsive to my questions.
   1  2  3  4  5

10. Overall, the amount of learning and usefulness of this experience was beneficial.
    1  2  3  4  5
11. What specific suggestions do you have to improve this experience?

12. What have you found most enjoyable or rewarding about this experience?

13. What have you disliked or found most challenging?

14. Please add any additional comments relative to this experience. Make your comments as specific as possible. Your comments will be of great value to your supervisors in revising this experience for future first-year tutors.
Appendix I

Intervention Acceptability Questionnaire for Students

Social Validity Questionnaire for Students

(adapted from Erhardt et al., 1996 and Martens, Witt, Elliot, & Darveaux, 1985)

Purpose: The purpose of this questionnaire is to get feedback on your overall opinion of this reading group.

1. I enjoyed the activities in this reading group.

2. I was treated with kindness and respect in this group.

3. I learned a lot and improved my reading skills in this group.

4. I feel more confident about my reading skills now.

5. I am glad that I was part of this reading group.

6. I would recommend this group to my friends to improve their reading skills.
Teaching Effective Communication and Social Skills to Fifth Grade Boys: A Small Group Intervention

An effective communication and social skills counseling group was designed and implemented for eight weeks with four fifth grade boys. They were selected based on discipline incidents, and through referral by their teachers for numerous behavior concerns, such as anger, bullying or arguing with peers, and being disrespectful to staff. A school psychology intern facilitated the effective communication and social skills group based upon the curriculum in Skillstreaming in the Elementary School (McGinnis, 2005). Due to the more intensive needs of the fifth grade students that were addressed in the small group, this was considered a Tier 2 intervention.

This group was necessary because of the significant number of behavior concerns shared by the 5th grade team. The team decided that a several students would benefit from a social skills group, so based on discipline referrals and teacher input, five students were chosen. The teachers were then provided a needs assessment where they indicated if the skills listed were a concern for each student. The areas that the teachers felt were the most concerning were all related to effective communication and social skills. The needs assessment identified the most prevalent problems and determined the focus of each session with the students. Permissions (Appendix A) were sent to the parents of the students. The eight week group was primarily based on the Skillstreaming curriculum which has been found to improve skill deficits in students (Rahill & Teglasi, 2003; Sheridan et al., 2011). The group also had a self and teacher monitoring component, and students received reinforcement for meeting the weekly goal.

Overall, the effective communication and social skills group was effective and both staff and students found it successful. Most of the students made improvements in their effective
communication in school seen through increased rating in class and on the monitoring sheets and decreased office discipline referrals. The intervention, while ongoing, was effective and perceived to be successful by all involved.

Methods

Participants and Roles

During an initial meeting, the fifth grade team expressed a desire to create an effective communication and social skills group for several of their students. This grade was selected due to the high frequencies of disruptive behaviors exhibited, based on office discipline referral data. The students in the group were selected based on discipline incidents and confirmed by their teachers as having significant behavior concerns in school, such as anger, bullying or arguing with peers, and being disrespectful to staff. Because of these concerns, the team decided that these boys would benefit from a social skills group on effective communication. The teachers were then provided a needs assessment of all Skillstreaming skills, where they indicated if the skills listed were a concern for each student (blank=no concerns, 0=some concerns, X=major concerns). Based on this, all the students were confirmed to be in need of intervention supports because of the high levels of teacher reported concern, and there was significant overlap in skill deficits in the students chosen. The areas the teachers felt were the most concerning were expressing your feelings, dealing with your anger, dealing with another’s anger, problem solving, accepting consequences, dealing with an accusation, dealing with embarrassment, and asking for help. The teachers had major concerns in each of these areas for at least 3 of the students, indicating the students had similar skill deficits. While initially five students were selected, one student switched schools prior to beginning the group, so it was composed of only four students.
The needs assessment identified the most prevalent problems and determined the focus of each session with the students.

This intervention was led by the intern school psychologist with support and ongoing feedback from the teachers. The intern administered the needs assessments, developed group agendas and session content, facilitated the group, and monitored effectiveness using multiple methods. The students and teachers completed daily monitoring sheets about the student’s behavior (Appendix B). The two teachers also helped determine the students in the group, completed the needs assessment, and completed an intervention acceptability questionnaire to support social validity. The intern was supervised by the building psychologist and a university supervisor. Permission was received from all parents of the students in the group.

Setting

The effective communication and social skills group was conducted for eight weeks in a small conference room. Initially the group was on Tuesdays from 10:15-10:45, but because the students were missing instruction, starting at the fourth session, it was conducted at the end of the day from 1:30-2:00. Any materials needed to conduct the group were brought by the intern, such as agendas, in-group assignments, and rewards.

The school is approximately 88% economically disadvantaged. The school has strong systems wide supports; the school teaches the behavioral expectations across settings, has three positively stated rules that are recited daily (be respectful, be responsible, be a problem solver), and a token economy, where students receive “jaguar bucks” for positive behaviors and can spend them monthly. In addition, the classroom utilized a level system, the “color chart,” where students began each day in the middle at “ready to learn” (Appendix C). Based on the student’s behavior throughout the day they moved up or down, earning positive or negative consequences.
based on end of day color. These ratings also served as a source of data to indicate how the students were behaving in class.

**Target Variables**

The teachers overall concern was the students’ ability to effectively communicate in school, which is one facet of social skills. Social skills can also be defined in the context of social and emotional learning — recognizing and managing our emotions, developing caring and concern for others, establishing positive relationships, making responsible decisions, and handling challenging situations constructively and ethically (Zins, Weissbert, Wang, & Walberg, 2004). Successful learning the classroom requires students to interact closely with teachers and peers, and social skills can greatly impact a child’s ability to succeed in an academic setting (Steedly, et al., 2008).

Lacking social skills and effective communication skills has implications past school as well. The extent to which children and adolescents possess good social skills can influence their academic performance, behavior, social and family relationships, and involvement in extracurricular activities (National Association of School Psychologists, 2002). In addition, one of the best predictors of future adaptability is the degree to which a child was able to get along with other children (Hartup & Moore, 1990). In addition, lacking appropriate social skills is predictive aggression, unemployment, and mental health issues in adulthood (Hartup & Moore, 1990).

The team felt it would be difficult to define and observe explicit social skills and effective communication interactions with the fifth grade students through direct observation, so several indirect measures of effective communication were used. The first measure used were the self and teacher monitoring sheets that the students and teachers rated each day. The rating sheet
asked if the student listened and participated in class, followed directions without argument, and did their best work. The students and teachers could rate from ‘always’ (4) to ‘needs to work on’ (1). These questions were chosen in collaboration with the teachers as the most appropriate way to view effective way to view and rate communication each day, and as the replacement behaviors for the areas of concern. While direct observation is the preferred way to measure behavior, daily behavior report cards, such as the ones used, have been found to be reliable and interpretable in decision making when they are administered daily (Fabiano, Vujnovic, Naylor, Pariseau & Robins, 2009). In addition, a case study found that direct observations and daily behavior ratings were highly consistent, and both direct observation and daily behavior ratings led to the same conclusions of the interventions results (Riley-Tillman, Mehte, & Weegar, 2009). These sheets were used as one measure of the student’s improvement in effective communication.

Another source of data used were the daily ratings through the classwide level system. Both classrooms utilized a “color chart,” where students began each day in the middle at “ready to learn” (Appendix C). Based on the student’s behavior throughout the class, they moved up or down, earning positive or negative consequences based on end of class color. If they end the class at “ready to learn” they are given a rating of 1, and receive one jaguar buck. The students can be rated as high as 4, and as low as -2. These ratings were not directly tied to effective communication, but the teachers indicated that the students’ movement on the chart was frequently related to appropriate classroom behaviors or inappropriate communication like speaking or yelling out. Because these ratings indicated how the students were behaving in class, and were given even when the students may have forgotten their monitoring sheets, they
served as an additional source of data to would also indicate how the students’ classroom behaviors were progressing.

Office discipline referrals were another source of data. All the students had several discipline referrals in the past year, so the team also wanted to focus on ensuring that the rate of discipline referrals decreased. School discipline data were monitored using PowerSchool, the student records system employed by the district. Office disciplinary referrals were selected as a target for the intervention because research supports their use as an efficient screening measure that can be analyzed to reflect behavioral progress (McIntosh, Frank & Spaulding, 2010). Most of the behavior concerns are handled by the classroom teacher, and reflected through the color chart, so the office discipline referrals were primarily for extremely disruptive or dangerous behaviors.

**Intervention Procedure**

**Baseline.** The students did not receive any social skills training during core curriculum. Prior to this group, several of the students had been involved in an anger management group the previous year, with the school based mental health therapist. The school has strong Tier 1 supports and the classroom utilized a level system where students receive positive or negative consequences based on their level daily (Appendix C).

**Small group counseling.** Social skills training has been found to be an effective and beneficial intervention for students with a range of behaviors, including aggression and inappropriate social interactions (Gresham, Cook, Crews, & Kern, 2004). Additionally, social skills training may be effective in improving students’ engagement indirectly through the development of other social skills and interactions (Elliott and Gresham, 1993). The curriculum used was the Skillstreaming curriculum, which has been found to significantly improve targeted
skills and ratings of pro-sociality by teachers (Rahill & Teglasi, 2003; Sheridan et al., 2011). The Skillstreaming curriculum is based on social learning theory and a skill-deficit model, which assumes that an individual has not had sufficient practice learning or mastering a skill, or is unable or unwilling to perform these skills in some situations (McGinnis & Goldstein, 2003).

Role-playing, modeling, feedback, reinforcement, and the ability to practice new, developing skills are critical elements of a social skills group (Grossman, Neckerman, Koepsell, Liu, Asher, & Beland, 1997; Elliot, Roach, & Beddow, 2008; Sheridan et al., 2011). All these elements are built into the Skillstreaming curriculum, and were utilized weekly in the group meeting and through the self-monitoring sheets (McGinnis & Goldstein, 2003).

The eight small group social skills and effective communication sessions were usually conducted on Tuesday afternoons for approximately thirty min. An important step in the development of a social skills group is to identify specific skill deficits and build the intervention program around those needs (Lane, Menzies, Barton-Arwood, Doukas & Munton, 2005). The Skillstreaming manual includes checklists that identifies forty social skills, which have been divided into six groups: beginning social skills, school-related skills, friendship making skills, dealing with feelings, alternatives to aggression, and dealing with stress (McGinnis & Goldstein, 2003). The content of the sessions were based upon the needs assessment, using the teacher’s ratings of the student’s skill gaps. Session topics focused on teaching and practicing appropriate replacement skills. Table 1 shows the social skills and effective communication group plan.
Table 1

Social Skills and Effective Communication Group Plan.

<table>
<thead>
<tr>
<th>Session Number</th>
<th>Date</th>
<th>Skill Targeted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2/11/2014</td>
<td>Introduction</td>
</tr>
<tr>
<td>2</td>
<td>2/18/2014</td>
<td>Expressing your Feelings</td>
</tr>
<tr>
<td>3</td>
<td>2/25/2014</td>
<td>Dealing with your Anger</td>
</tr>
<tr>
<td>4</td>
<td>3/4/2014</td>
<td>Dealing with Another’s Anger</td>
</tr>
<tr>
<td>5</td>
<td>3/11/2014</td>
<td>Problem Solving</td>
</tr>
<tr>
<td>6</td>
<td>3/18/2014</td>
<td>Accepting Consequences</td>
</tr>
<tr>
<td>7</td>
<td>3/25/2014</td>
<td>Dealing with an Accusation and Embarrassment</td>
</tr>
<tr>
<td>8</td>
<td>4/8/2014</td>
<td>Asking for Help</td>
</tr>
</tbody>
</table>

Agendas were generated for each session (see Appendix D for an example). Every agenda was generally organized to have an energizer phase lasting approximately three min, an advanced organizer phase lasting approximately five min, a work phase lasting approximately fifteen min, a processing phase lasting approximately five min, and a closure phase lasting approximately three min. The energizer phase was an icebreaker activity that was related to the lesson of the day. The advanced organizer was when the group reviewed rules, the previous weeks monitoring sheets, and were introduced to the topic of the day. The work phase was the major focus of the session where the activities, scenarios, and practice opportunities would occur. The processing phase was the discussion of the work phase. The closure phase was rewarding participation for the day and handing out the monitoring sheets for the following week.

The first session was focused on creating group cohesion and the collaboratively developed rules that were reviewed every session. Rules were derived from the universal behavior supports already established within the school; be responsible, respectful, and a
problem solver. The group reward system based on completion of the monitoring sheets was also discussed during the first session. Every session differed, but used the same research-based methods to teach and practice the skills. The facilitator modeled both appropriate and inappropriate behaviors and had the students role-play or demonstrate the behaviors as well.

**Self and teacher monitoring sheet.** In addition to the weekly counseling group, the team also implemented a self and teacher monitoring sheet. There has been significant research on the use of self-monitoring on increasing engagement, as well as academic performance (Callahan & Rademacher, 1999; Axelrod, Zhe, Haugen & Klein, 2009; Wood, Murdock, & Cronin, 2002). In addition, because research has found that teacher ratings and student self-rating both successfully improve on-task behavior in students, the sheets utilized both to ensure accuracy in the student’s self-ratings (Hallahan, Lloyd, Kneedler, Marshall, 1982). In the intervention phase, the students rated themselves on three behaviors in each class period, listening and participating in class, following directions without argument, and doing their best work from ‘always’ (4) to ‘needs to do better’ (1) (Appendix B). The two teachers rated the students on the three statements in each class period as well (Appendix B). In order to receive the weekly reward, the students had to meet the weekly goal based on completion or rating received. Based on the results of the monitoring sheets, the students got to choose a weekly reward, a snack, five min playing a game on a tablet, a no homework pass, or a “jaguar buck” to spend at the positive school culture store. The students indicated they would like to receive all these rewards. The intern explained the sheets to the students and had them practice both examples and non-examples of receiving all their points on each question to ensure understanding.

**Inter-observer Agreement**
The measures used for this behavioral counseling intervention did not allow for formal inter-observer agreement checks, however it can be seen in the multiple sources of data reflecting similar student progress towards goals.

**Goals and Decision Rules**

The main goal for the group was for the students to learn the skills targeted in the group and apply them in the classroom. This goal would be seen by the students receiving ratings of ‘3’ or ‘4’ on their monitoring sheets, consistently receiving at the “ready to learn” level or higher on the classrooms rating scale, and decreasing the rate in which discipline referrals were occurring. If any of these data sources indicated students’ progress was insufficient as the group progressed, the group would be adapted to better support the student’s needs.

As the group was only eight sessions, the team decided that even if the student’s data indicated improvements, they would remain in the group. These data may be variable, so the student could not “graduate” from the counseling group.

**Functional Hypothesis**

The team believed the student’s discipline referrals, and the lack of appropriate communication in class were because of deficits in social skills and effective communications, and because there was insufficient reinforcement for behavior appropriately. The team believed these deficits could be remediated through instruction of social skills and increased practice opportunities provided by a small group intervention, and with increased reinforcement for appropriate behaviors.

**Accountability Plan**

The intervention was implemented as an A/B design. It was an A/B design because it consisted of a single baseline phase (A) followed by a single intervention phase (B). The baseline
phase (A) consisted of the normal Tier 1 supports in the classroom and the intervention phase (B) consisted of the implementation of the social skills and effective communication group, and self and teacher monitoring sheets.

**Adherence Data**

Formal measures of treatment adherence were not conducted for the effective communication and social skills group. The group occurred every week as scheduled, and the agenda’s served as a permanent product of what occurred. Completion of the student’s self and teacher monitoring sheets were the student’s responsibility. The monitoring sheets served as permanent product of adherence. This adherence data are reported in Table 2.

Table 2

*Student Adherence of Monitoring Sheets*

<table>
<thead>
<tr>
<th>Student #1</th>
<th>Student #2</th>
<th>Student #3</th>
<th>Student #4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of Ratings Received</td>
<td>82.61%</td>
<td>53.15%</td>
<td>60.00%</td>
</tr>
<tr>
<td>Sheets Returned</td>
<td>6/6</td>
<td>4/6</td>
<td>5/6</td>
</tr>
</tbody>
</table>

**Social Validity**

The intervention was developed through collaboration with the classroom teachers, the school psychologist, and the intern school psychologist. In addition, frequent consultation and communication with the teachers was made to ensure the intervention was both effective and acceptable. Both teachers completed an intervention acceptability questionnaire which can be seen in Table 3 and felt the group had really showed progress in three of the students. The social validity of the intervention can also be seen in the student’s improvement in class, and through decreased discipline referral.
Table 3

*Results from the Teacher Social Validity Questionnaire*

<table>
<thead>
<tr>
<th>Questions</th>
<th>Teacher 1</th>
<th>Teacher 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel my students enjoyed the group</td>
<td>Strongly Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>I would be willing to use this intervention in the future.</td>
<td>Strongly Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>It was easy to communicate and work with the group leader(s)</td>
<td>Strongly Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>I liked the procedures used in this intervention.</td>
<td>Strongly Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>The group time was easy to fit into my schedule</td>
<td>Strongly Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>Overall, I feel this group was beneficial for the students</td>
<td>Strongly Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

**Results**

Baseline and progress monitoring for the students color chart and self-monitoring ratings are depicted in Figures 1-8. The cumulative office referral data for the students can be seen in Figure 9. As demonstrated in the figures, three of the four students in the group made significant improvements, and met most of the goals set.

Figure 1 shows the color chart daily ratings Student 1 received in baseline and during the intervention after the additional supports were put in place. Student 1 received an average of .62 in English (SD=.92) and .72 in math (SD=.75) in baseline, but it was variable and inconsistent. The color chart ratings when Student 1 was in the effective communication group were also variable in both classes, but his mean rating in English stayed at a level consistent with baseline level (M=.61, SD=.78), while his mean rating in math improved to above the goal of 1 (M=1.09, SD=.85).
Figure 1. Student 1’s daily ratings on the classwide color chart.

Figure 2 displays the average weekly self and teacher ratings Student 1 received in baseline and the intervention phase. Student 1 rated himself with an average of 67% of points possible and his teachers rated him an average of 87.5% of possible points. The average weekly self and teacher ratings when Student 1 was in the effective communication group was above the goal for all intervention points. His mean self-rating over the intervention phase was 86.2% of points possible ($SD=3.42$), and the teachers mean rating over the intervention phase was 94.6% of points ($SD=5.55$).
Figure 2. Student 1’s weekly averages on the monitoring sheets.

Figure 3 shows the color chart ratings Student 2 received in baseline and after the additional supports were put in place. Student 2 received an average of .5 in English ($SD=.89$) and .90 in math ($SD=.54$) in baseline, but it was variable and inconsistent. The color chart ratings when Student 2 was in the effective communication group were even more variable and his mean rating decreased in both English ($M=.13$, $SD=1.52$) and in ($M=.73$, $SD=.96$).
Figure 3. Student 2’s daily ratings on the classwide color chart.

Figure 4 displays the average weekly self and teacher ratings Student 2 received in baseline and the intervention phase. Student 2 rated himself with an average of 67% of points possible and his teachers rated him an average of 92% of possible points. The average weekly teacher ratings when Student 2 was in the effective communication group began above the goal and had a decreasing trend that ended below the goal ($M=77.67$, $SD=6.1$). In addition, this student missed two weeks of group, so his data is incomplete. His mean self-rating over the intervention phase increased was 99% of points possible ($SD=1.41$),
**Figure 4.** Student 2’s weekly averages on the monitoring sheets.

Figure 5 shows the color chart ratings Student 3 received in baseline and after the additional supports were put in place. Student 3 received an average of .42 in English ($SD=.84$) and .67 in math ($SD=.59$) in baseline, but it was relatively variable. The color chart ratings when Student 1 was in the effective communication group were also variable in both classes, but his mean rating in English increased significantly over baseline level ($M=.80$, $SD=.83$), and his mean rating in math also improved ($M=.89$, $SD=.83$), although neither improved to the goal of 1.
Figure 5. Student 3’s daily ratings on the classwide color chart.

Figure 6 displays the average weekly self and teacher ratings Student 3 received in baseline and the intervention phase. Student 3 rated himself with an average of 73% of points possible and his teachers rated him an average of 63.5% of possible points in baseline. The average weekly self and teacher ratings when Student 3 was in the effective communication group increased in the intervention phase and was above the goal for the last two intervention points. Student 3 lost his sheet one week and was absent one week so his data is incomplete. His mean self-rating over the intervention phase was 86% of points possible ($SD=13.75$), and the teachers mean rating over the intervention phase was 87% of points ($SD=12.12$).
Figure 6. Student 3’s weekly averages on the monitoring sheets.

Figure 7 shows the color chart ratings Student 4 received in baseline and with the additional supports. Student 4 received an average of .62 in English (SD=1.07) and .75 in math (SD=.71) in baseline, but it was relatively inconsistent. The color chart ratings when Student 4 was in the effective communication group were also variable in both classes, but both his mean rating in English (M=.108, SD=1.15), and his mean rating in math improved to above the goal of 1 (M=1.03, SD=.59).
Figure 7. Student 4’s daily ratings on the classwide color chart.

Figure 8 displays the average weekly self and teacher ratings Student 4 received in the intervention phase. He had not returned his permission in time to attend the first group so no baseline was collected. The average weekly self and teacher ratings when Student 3 was in the effective communication group had an overall increasing trend and was above the goal for all points. His mean self-rating over the intervention phase was 96.2% of points possible ($SD=7.43$), and the teachers mean rating over the intervention phase was 92.6% of points ($SD=8.85$).
Figure 8. Student 4’s weekly averages on the monitoring sheets.

Figure 9 displays the cumulative discipline referrals for all members of the group since the beginning of 4th grade. All student had at least three office discipline referrals since beginning 4th grade, so an important component of the supports was to decrease the rate at which these were occurring. The figure below shows the cumulative number of discipline referrals received each month, as well as the linear trend line for this data. While this intervention has been implemented, only one of the students has received an office discipline referral, indicating a trend that is decreased from the overall rate.
**Figure 9.** Group cumulative office discipline referrals since beginning 4th grade.

In support of this visual analysis of the color chart ratings, summary statistics were calculated and can be seen in Tables 4-6. The percentage of non-overlapping data was determined based on how many data points did not overlap with the mean baseline, instead of the highest baseline point, due to the extreme variability seen in the daily ratings in baseline. The effect size was also calculated for the color chart ratings, which was found by dividing the difference of the baseline mean and the last intervention phase mean by the standard deviation of the baseline. Goal attainment scaling (GAS) at the time data collection ceased for the purposes of this portfolio was also reported (where “0” corresponds to no progress towards the goal, “1” indicates progress made towards the goal, and “2” indicates the goal was met).
# Table 4

**Mean and Standard Deviations of Graphed Variables (Baseline Phase)**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Number of Baseline Data Points</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student 1 English</td>
<td>21</td>
<td>.62</td>
<td>.92</td>
</tr>
<tr>
<td>Student 1 Math</td>
<td>21</td>
<td>.72</td>
<td>.75</td>
</tr>
<tr>
<td>Student 2 English</td>
<td>20</td>
<td>.50</td>
<td>.89</td>
</tr>
<tr>
<td>Student 2 Math</td>
<td>20</td>
<td>.90</td>
<td>.54</td>
</tr>
<tr>
<td>Student 3 English</td>
<td>19</td>
<td>.42</td>
<td>.84</td>
</tr>
<tr>
<td>Student 3 Math</td>
<td>19</td>
<td>.67</td>
<td>.59</td>
</tr>
<tr>
<td>Student 4 English</td>
<td>21</td>
<td>.62</td>
<td>1.07</td>
</tr>
<tr>
<td>Student 4 Math</td>
<td>21</td>
<td>.75</td>
<td>.71</td>
</tr>
</tbody>
</table>

# Table 5

**Mean and Standard Deviations of Graphed Variables (Intervention Phase)**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Number of Intervention Data Points</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student 1 English</td>
<td>23</td>
<td>.61</td>
<td>.78</td>
</tr>
<tr>
<td>Student 1 Math</td>
<td>23</td>
<td>1.09</td>
<td>.85</td>
</tr>
<tr>
<td>Student 2 English</td>
<td>23</td>
<td>.13</td>
<td>1.52</td>
</tr>
<tr>
<td>Student 2 Math</td>
<td>25</td>
<td>.73</td>
<td>.96</td>
</tr>
<tr>
<td>Student 3 English</td>
<td>21</td>
<td>.8</td>
<td>.83</td>
</tr>
<tr>
<td>Student 3 Math</td>
<td>23</td>
<td>.88</td>
<td>.83</td>
</tr>
<tr>
<td>Student 4 English</td>
<td>25</td>
<td>1.08</td>
<td>1.15</td>
</tr>
<tr>
<td>Student 4 Math</td>
<td>27</td>
<td>1.04</td>
<td>.59</td>
</tr>
</tbody>
</table>

# Table 6

**Percent of Non-overlapping Data over the Baseline Mean, Effect Size, and GAS for Color Chart Ratings**

<table>
<thead>
<tr>
<th>Subject</th>
<th>PND</th>
<th>Effect Size</th>
<th>GAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student 1 English</td>
<td>52.17%</td>
<td>.11</td>
<td>0</td>
</tr>
<tr>
<td>Student 1 Math</td>
<td>86.36%</td>
<td>.49</td>
<td>2</td>
</tr>
<tr>
<td>Student 2 English</td>
<td>43.48%</td>
<td>.46</td>
<td>0</td>
</tr>
<tr>
<td>Student 2 Math</td>
<td>72%</td>
<td>.31</td>
<td>0</td>
</tr>
<tr>
<td>Student 3 English</td>
<td>61.90%</td>
<td>.45</td>
<td>1</td>
</tr>
<tr>
<td>Student 3 Math</td>
<td>69.57%</td>
<td>.36</td>
<td>1</td>
</tr>
<tr>
<td>Student 4 English</td>
<td>80%</td>
<td>.43</td>
<td>2</td>
</tr>
<tr>
<td>Student 4 Math</td>
<td>85.19%</td>
<td>.41</td>
<td>2</td>
</tr>
</tbody>
</table>
In support of this visual analysis of the monitoring sheets, summary statistics were calculated and can be seen in Tables 7-8. The percentage of non-overlapping data was determined based on how many data points did not overlap with the baseline point. The effect size could not be calculated because there was only one baseline point. Goal attainment scaling (GAS) at the time data collection ceased for the purposes of this portfolio was also reported (where “0” corresponds to no progress towards the goal, “1” indicates progress made towards the goal, and “2” indicates the goal was met).

Table 7

<table>
<thead>
<tr>
<th>Rater</th>
<th>Number of Baseline Data Points</th>
<th>Mean</th>
<th>Number of Intervention Data Points</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student 1</td>
<td>Teacher 1</td>
<td>87.5%</td>
<td>5</td>
<td>94.6%</td>
<td>5.55</td>
</tr>
<tr>
<td></td>
<td>Self</td>
<td>67%</td>
<td>5</td>
<td>86.2%</td>
<td>3.42</td>
</tr>
<tr>
<td>Student 2</td>
<td>Teacher 1</td>
<td>92%</td>
<td>3</td>
<td>77.67%</td>
<td>6.11</td>
</tr>
<tr>
<td></td>
<td>Self</td>
<td>67%</td>
<td>2</td>
<td>99%</td>
<td>1.41</td>
</tr>
<tr>
<td>Student 3</td>
<td>Teacher 1</td>
<td>63.5%</td>
<td>3</td>
<td>87%</td>
<td>12.12</td>
</tr>
<tr>
<td></td>
<td>Self</td>
<td>73%</td>
<td>3</td>
<td>86%</td>
<td>13.75</td>
</tr>
<tr>
<td>Student 4</td>
<td>Teacher 1</td>
<td>87.5%</td>
<td>5</td>
<td>92.6%</td>
<td>8.85</td>
</tr>
<tr>
<td></td>
<td>Self</td>
<td>67%</td>
<td>5</td>
<td>96.2%</td>
<td>7.43</td>
</tr>
</tbody>
</table>

Table 8

<table>
<thead>
<tr>
<th>Subject</th>
<th>PND</th>
<th>Effect Size</th>
<th>GAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student 1</td>
<td>English</td>
<td>52.17%</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Math</td>
<td>86.36%</td>
<td>-</td>
</tr>
<tr>
<td>Student 2</td>
<td>English</td>
<td>43.48%</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Math</td>
<td>72%</td>
<td>-</td>
</tr>
<tr>
<td>Student 3</td>
<td>English</td>
<td>61.90%</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Math</td>
<td>69.57%</td>
<td>-</td>
</tr>
<tr>
<td>Student 4</td>
<td>English</td>
<td>80%</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Math</td>
<td>85.19%</td>
<td>-</td>
</tr>
</tbody>
</table>

Discussion
This intervention can overall be considered successful, as the majority of students made progress or met all goals set. In addition, the teachers both reported positive changes from the interventions, and indicated they would like to continue using the self and teacher monitoring sheets after the last group session. The students also enjoyed the group, and definitely enjoyed earning rewards based on their in class behavior.

There were some challenges to this case. Direct observations of the skills targeted was not possible because of the challenges observing these behaviors consistently, and because of concerns with reactivity. Although research has shown similar results from using daily ratings compared to direct observation, direct observation is still the most accurate and preferred method to determine improvement in behavior (Fabiano et al., 2009; Riley-Tillman et al., 2009). Because the data used was less precise, it was important to have multiple sources to correlate the progress made. The daily self and teacher monitoring sheets that were one source of data, were the student’s responsibility to complete, which resulted in gaps in the data. In best practices, the data would be more consistent, to ensure valid results. Because there were multiple sources of data supporting the positive results of the intervention, the results of the monitoring sheets were able to add support to the positive effects of the intervention.

Another limitation in this intervention is the absences of several of the students. Student 3 missed two groups in a row, so he did not learn and practice the skills we were targeting, or received reinforcement for positive ratings on the monitoring sheet. He was the student who made the least improvements throughout the intervention, seen in his results and as reported by the teacher, and missing the groups could have played a factor in those results.

A final concern can be seen in the time spent in the group. I was only able to hold the group for 30 min, as several of the students were also struggling academically, so the teachers
did not want them to miss very much instruction. The group may have been more effective if each meeting was longer, and more time could be spent on each skill.

This case provided me with very valuable experiences to improve my future professional practice. While social skills groups are beneficial when students are known to have skill deficits, in the case of this group it was unclear if the deficits were because the students did not have the skills or were not motivated to utilize them. By teaching the skills in group, and reinforcing the skills in class, the intervention was able to target both hypotheses for the behavior concerns. In addition, using the monitoring sheets also was able to help the students generalize the targeted skills and use them in class.
References


Appendices

A. Parent Permission Form

B. Self and Teacher Monitoring Sheets

C. Class Wide Behavior System - Color Chart

D. Sample Agenda
Appendix A

Parent Permission Form

Dear Parent/Guardian,

February 4, 2014

As students get older, there are more chances for them to meet new people and find themselves in brand new situations. Because there are as many ways to interact with others as there are people in the world, sometimes, it is difficult to know how to approach certain situations. Having the appropriate skills in new or awkward situations can often help individuals avoid confusion, frustration, anger, and confrontation.

In an effort to meet the needs of students who might have experienced those types of situations, the 4th and 5th grade teams are offering an Effective Communication Group. This small group is for boys only and is designed to teach students how to recognize their own behaviors and then be able to communicate effectively with others. Students will have the chance to learn appropriate ways to better interact with those around them, and earn rewards for using them. Your student is invited to be a part of this group with the support of their teacher. The group will begin meeting on Thursday, February 13th, and continue every Tuesday over the course of 8 weeks. The group will be led by school psychologist intern Keara Sherman under the supervision of Marija Dunatov, the school psychologist here at Sayler Park School.

If you will allow your student to participate, please sign the permission form below and the attached permission and have your student return it to their teacher by Tuesday, February 11th. Your permission is voluntary and you have the right to revoke that permission at any time should you, or your student, choose to end participation in the group.

If you have any questions please feel free to contact Marija Dunatov or Keara Sherman at (513) 363-5113 on Tuesdays or Thursdays. Thank you for your consideration! If you would like email updates of what we are working on each week, and how to target these skills at home, please write your email below.

----------------------------------------
|                                                                                     |
|                                                                                     |
|                                                                                     |
|                                                                                     |
|                                                                                     |
|                                                                                     |
|                                                                                     |
|                                                                                     |
|                                                                                     |
|                                                                                     |

Please sign and return this form to school by Tuesday, February 11th

_______________________________________
Student Name

☒ Yes, my student is allowed to participate. I understand permission is voluntary and can be withdrawn at any time.

☒ No I DO NOT wish my student to participate.

_______________________________________                                __________________
Parent/Guardian Signature/ Date                      Email Address

What are a few things you think your child might like to receive? (Ex. No Homework pass, Jaguar bucks, small piece of candy/chips, a small prize)
Appendix B

Self and Teacher Monitoring Sheets

**Student Self Evaluation**

<table>
<thead>
<tr>
<th>Student</th>
<th>Teacher (Math/Sci)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I listened and participated in class</td>
<td>4. Always</td>
</tr>
<tr>
<td>4. Always</td>
<td>3. Most of the Time</td>
</tr>
<tr>
<td>2. I could do a little better</td>
<td>2. I need to do better</td>
</tr>
<tr>
<td>2</td>
<td>1 (Needs to work on)</td>
</tr>
<tr>
<td>I followed directions without argument</td>
<td>4 (Always)</td>
</tr>
<tr>
<td>4. Always</td>
<td>3. Most of the Time</td>
</tr>
<tr>
<td>2. I could do a little better</td>
<td>2. I need to do better</td>
</tr>
<tr>
<td>2</td>
<td>1 (Needs to work on)</td>
</tr>
<tr>
<td>I did my best work</td>
<td>4 (Always)</td>
</tr>
<tr>
<td>4. Always</td>
<td>3. Most of the Time</td>
</tr>
<tr>
<td>2. I could do a little better</td>
<td>2. I need to do better</td>
</tr>
<tr>
<td>2</td>
<td>1 (Needs to work on)</td>
</tr>
<tr>
<td>Color:</td>
<td>H.W. completed?</td>
</tr>
</tbody>
</table>

**Teacher (ELA/SS)**

<table>
<thead>
<tr>
<th>Student</th>
<th>Teacher (ELA/SS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I listened and participated in class</td>
<td>4. Always</td>
</tr>
<tr>
<td>4. Always</td>
<td>3. Most of the Time</td>
</tr>
<tr>
<td>2. I could do a little better</td>
<td>2. I need to do better</td>
</tr>
<tr>
<td>2</td>
<td>1 (Needs to work on)</td>
</tr>
<tr>
<td>I followed directions without argument</td>
<td>4 (Always)</td>
</tr>
<tr>
<td>4. Always</td>
<td>3. Most of the Time</td>
</tr>
<tr>
<td>2. I could do a little better</td>
<td>2. I need to do better</td>
</tr>
<tr>
<td>2</td>
<td>1 (Needs to work on)</td>
</tr>
<tr>
<td>I did my best work</td>
<td>4 (Always)</td>
</tr>
<tr>
<td>4. Always</td>
<td>3. Most of the Time</td>
</tr>
<tr>
<td>2. I could do a little better</td>
<td>2. I need to do better</td>
</tr>
<tr>
<td>2</td>
<td>1 (Needs to work on)</td>
</tr>
<tr>
<td>Color:</td>
<td>H.W. completed?</td>
</tr>
</tbody>
</table>

Total Points for week__________  Reward options:

Points needed for Reward__________
<table>
<thead>
<tr>
<th>Student</th>
<th>Teacher (Math/Sci)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listened and participated in class</td>
<td>Listened and participated in class</td>
</tr>
<tr>
<td>1. I could do a little better</td>
<td>4 (Always)</td>
</tr>
<tr>
<td>2. I need to do better</td>
<td>1 (Needs to work on)</td>
</tr>
</tbody>
</table>

| I followed directions without argument | Followed directions without argument |
| 1. I could do a little better | 4 (Always) |
| 2. I need to do better | 1 (Needs to work on) |

| I did my best work | Did their best work |
| 1. I need to do better | 4 (Always) |
| 2. I need to do better | 1 (Needs to work on) |

| Color: | H.W. completed? |

---

**Thursday**

---

**Friday**

---

**Monday**

---

**Student**

| I listened and participated in class | Listened and participated in class |
| 1. I could do a little better | 4 (Always) |
| 2. I need to do better | 1 (Needs to work on) |

| I followed directions without argument | Followed directions without argument |
| 1. I could do a little better | 4 (Always) |
| 2. I need to do better | 1 (Needs to work on) |

| I did my best work | Did their best work |
| 1. I need to do better | 4 (Always) |
| 2. I need to do better | 1 (Needs to work on) |

| Color: | H.W. completed? |

---

**Student**

| I listened and participated in class | Listened and participated in class |
| 1. I could do a little better | 4 (Always) |
| 2. I need to do better | 1 (Needs to work on) |

| I followed directions without argument | Followed directions without argument |
| 1. I could do a little better | 4 (Always) |
| 2. I need to do better | 1 (Needs to work on) |

| I did my best work | Did their best work |
| 1. I need to do better | 4 (Always) |
| 2. I need to do better | 1 (Needs to work on) |

| Color: | H.W. completed? |

---

**Student**

| I listened and participated in class | Listened and participated in class |
| 1. I could do a little better | 4 (Always) |
| 2. I need to do better | 1 (Needs to work on) |

| I followed directions without argument | Followed directions without argument |
| 1. I could do a little better | 4 (Always) |
| 2. I need to do better | 1 (Needs to work on) |

| I did my best work | Did their best work |
| 1. I need to do better | 4 (Always) |
| 2. I need to do better | 1 (Needs to work on) |

| Color: | H.W. completed? |

---

**Student**

| I listened and participated in class | Listened and participated in class |
| 1. I could do a little better | 4 (Always) |
| 2. I need to do better | 1 (Needs to work on) |

| I followed directions without argument | Followed directions without argument |
| 1. I could do a little better | 4 (Always) |
| 2. I need to do better | 1 (Needs to work on) |

| I did my best work | Did their best work |
| 1. I need to do better | 4 (Always) |
| 2. I need to do better | 1 (Needs to work on) |

| Color: | H.W. completed? |
Appendix C

Class Wide Behavior System- Color Chart
## Effective Communication/Social Skills Group Agenda

### Expressing Feelings

| Energizing Phase (3 min) | Would you rather  
| | When asked 'Would you rather?' they have to jump to the left or right.  
| | Would you rather...?  
| | • Visit the doctor or the dentist?  
| | • Eat broccoli or carrots?  
| | • Watch TV or listen to music?  
| | • Own a lizard or a snake?  
| | • Have a beach holiday or a mountain holiday?  
| | • Be an apple or a banana?  
| | • Be invisible or be able to read minds?  
| | • Be hairy all over or completely bald?  
| | • Be the most popular or the smartest person you know?  
| | • Make headlines for saving somebody's life or winning a Nobel Prize?  
| | • Go without television or fast food for the rest of your life?  
| | • Be stranded on a deserted island alone or with someone you don't like?  
| | • See the future or change the past?  
| | • Be three inches taller or three inches shorter?  
| | • Wrestle a lion or fight a shark?  

| Advanced Organizer (5 mins) | Review Rules  
| | Review Monitoring Sheets  
| | Reward Monitoring Sheets  
| | Introduce topic for the day  

| Work Phase (15 mins) | Expressing your Feelings  
| | 1. Skill Steps  
| | 2. Review different types of feeling  
| | 3. 27.3- I feel_____ when__ situation cards  
| | 4. 27.5- Worksheet with 5 statements of- I feel ______ when you ______  
| | 5. Role play stations and expressing feelings  

| Processing Phase (5 mins) | Discuss activities  
| | • How can these skill steps be used in school?  

| Closure (3 mins) | Wrap up  
| | • Pass out monitoring sheets and set next week's goal  

Skill 27: Expressing Your Feelings

1. Stop and think of how your body feels.
2. Decide what to call the feeling.
3. Think about your choices:
   a. Say to the person, “I feel ________.”
   b. Walk away for now.
   c. Get involved in an activity.
4. Act out your best choice.
<table>
<thead>
<tr>
<th>Situation Cards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I improved my grade.</td>
</tr>
<tr>
<td>2. I went on a trip with my favorite cousin.</td>
</tr>
<tr>
<td>3. I left my bike out all night and it was stolen.</td>
</tr>
<tr>
<td>4. I wasn’t chosen for the baseball team.</td>
</tr>
<tr>
<td>5. I broke one of our dishes, and I lied to my mother about it.</td>
</tr>
<tr>
<td>6. I broke one of our dishes, and I told the truth.</td>
</tr>
<tr>
<td>7. My group won a prize in the science fair.</td>
</tr>
<tr>
<td>8. I told a friend a secret about someone.</td>
</tr>
<tr>
<td>9. My two best friends are going to a movie and didn’t invite me.</td>
</tr>
<tr>
<td>10. A teacher tells the class that I failed the test.</td>
</tr>
<tr>
<td>11. A friend can’t go to the school fun night because he doesn’t have any money.</td>
</tr>
<tr>
<td>12. A friend laughs at me when I get a good grade.</td>
</tr>
</tbody>
</table>

Expressing Your Feelings 27.5

I Feel/When

Students ___________________________ Date ______________________

1. I feel __________________________ when you say bad things about me.

2. I feel __________________________ when you tease me.

3. I feel __________________________ when I don’t understand the work.

4. I feel __________________________ when we have my favorite dinner at home.

5. I feel __________________________ when I make a mistake.

Strategic and Intensive Supports for a Student Struggling with Reading Comprehension and Fluency

The following describes Tier 3 supports that were developed to help Mariah, a fourth grader, increase her reading comprehension and fluency. Mariah was referred to the intervention assistance team at the beginning of 4th grade because of continued parent and teacher concerns with academic skills, and attention and participation in class. The team put Tier 2 supports in place, and when data indicated limited improvements, added additional Tier 3 supports as well. The target variables the team decided on were reading comprehension, fluency, engagement, and math skills. These variables were progress-monitored through curriculum based measures, a daily points sheet, and math assessment data. The team felt that the academic deficits were because Mariah had not had enough practice with the content, and that the lack of engagement was because there were few accessible contingencies for engagement.

The intervention took place at home and in an urban elementary school in Mariah’s classroom. It initially utilized a repeated reading and comprehension intervention and weekly point sheet, and when Mariah was not making sufficient progress, additional intensive math and reading interventions with an intervention specialist were added.

Results of these supports were varied, and the team felt that Mariah would need long-term intensive supports to maintain and accelerate Mariah’s growth. The team felt the intensive supports for Mariah constituted individualized instruction, and that she may require the continued intensive supports to accelerate her academic progress in the future. The team suspected Mariah had a disability and through the evaluation process, determined that Mariah qualifies for special education as a student with an Other Health Impairment-Minor. The
discussion discusses the utilization of a tiered model in determining eligibility decisions, and how to improve this utilization in future eligibility determinations.

Method

Participants and Roles

A fourth grade student was referred to the intervention assistance team in September of 2013. She had received intervention supports the previous year and her mother had noted academic concerns since first and second grade. Mariah had also been diagnosed with Attention-Deficit Hyperactivity Disorder- primarily inattentive (ADHD). Prior to the intervention, Mariah was below grade level academically and receiving C’s, D’s and F’s in most classes. Prior to fourth grade, Mariah had previously received small group Orton-Gillingham based small group instruction for 40 min, five days per week from September – November in 3rd grade from the reading specialist. Because Mariah passed the fall reading OAA, she was no longer able to access these supports, but her 3rd grade reading teacher indicated very serious continuing concerns. In addition, the reading benchmark data that was available from previous years indicated she was primarily below or well below benchmark on targets.

The intervention was created in collaboration with Mariah’s teachers, Mariah’s parent, the intervention specialists, the school psychologist, and the intern school psychologist. The interventions were implemented by Mariah, the school psychologist, Mariah’s parent, and the intervention specialists. Mariah asked her teachers to rate her behavior in each class period. Mariah’s mother completed the at home reading intervention with her. The intervention specialists supported Mariah in class and in small groups and the intern monitored Mariah’s progress in reading comprehension and fluency. The team met periodically to discuss progress and adapt intervention supports.
Setting

The intervention took place in an urban elementary school in the Midwest. The intervention was implemented throughout the day in Mariah’s classroom and at her house. Mariah and her teachers rated her behavior throughout each class period. Each week, if Mariah met the criterion for the week she received the reward in the school psychologist’s office or from the intervention specialist.

Target Variables

The intervention supports targeted improving Mariah’s reading fluency, comprehension, and engagement. These variables were chosen through consultation with Mariah’s teachers and parent as significant concerns. Reading comprehension was selected based on research that this is a critical reading skill, and is considered to be the overall purpose of reading (Daly, Chafouleas & Skinner, 2005; National Reading Panel, 2000; Shapiro, 2011). Reading comprehension was one of the primary initial concerns of the teachers, and was measured weekly using the DIBELS version of a maze assessment, the DAZE (Good & Kaminski, 2011). The maze process has been found to be a valid and reliable measure of reading comprehension and reading skills (Fuchs & Fuchs, 1992; Hale et. al, 2011; Marcotte & Hintze, 2009; Parker & Hasbrouck, 1992).

The DAZE is a reading passage where approximately every 7th word is removed and replaced with a box with three possible choices. Only one word fits contextually in the story. Mariah was given three min to select as many correct words as possible on a 4th grade passage. The number of correct and incorrect words selected was recorded. The adjusted score was the number of incorrect words selected divided by 2, then subtracted from the number of correct words.
Oral reading fluency was also a target for Mariah. Oral reading fluency is a very strong predictor of overall reading skills, is strongly linked to comprehension, and is one of the five “big ideas” in reading (Jenkins & Jewell, 1993; National Reading Panel, 2000). In addition, research has found that students with poor reading fluency are less likely to understand their reading material (Hawkins, Hale, Sheeley, & Ling, 2011). This variable was measured using 4th grade DIBELS passages (Good & Kaminski, 2011). Mariah was asked to read the grade level passage for one min, and the errors she made were tracked. The number of errors was subtracted from the total words read to obtain the number of correct words per min.

Another area of concern was Mariah’s engagement in class. Engagement is widely accepted as a keystone target variable for learning in schools, and is linked to future achievement (Christenson et al., 2008; Gettinger & Ball, 2008; Shapiro, 2011). In addition, engaged students show behavioral involvement in learning and positive emotional tone (Connell 1990; Connell & Wellborn, 1991). Engagement variables were measured by daily teacher ratings as one component of the intervention. While engagement variables would ideally be measured by direct observation, there were concerns with reactivity because Mariah met with the intern at least once a week for progress monitoring. While direct observation is the preferred way to measure behavior, daily ratings have been found to be reliable and interpretable in decision making when they are administered daily (Fabiano, Vujnovic, Naylor, Pariseau & Robins, 2009).

At the second intervention meeting, Mariah’s teachers also indicated that she was struggling in math. Because Mariah was already being progress monitored in reading comprehension and fluency, the team decided to utilize her math quiz grades to show progress in math as they were short, given frequently, tied explicitly to the material taught weekly, and were thought to be able to accurately show her progress when compared to the class averages.
Inter-Scorer Agreement

The intern administered all baseline and progress monitoring assessments. Inter-scorer checks were made in approximately 25% of administration sessions. Table 1 shows the percentage of inter-scorer agreement by date. It was calculated by dividing the smaller observer score for the measure by the larger observer score for the measure and multiplying this by 100.

Table 1

<table>
<thead>
<tr>
<th>Variable</th>
<th>Percentage of Inter-Scorer Agreement by Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9/5/13</td>
</tr>
<tr>
<td>DAZE</td>
<td>100%</td>
</tr>
<tr>
<td>ORF</td>
<td>100%</td>
</tr>
</tbody>
</table>

Goals and Decision Rules

All academic goals were set at the DIBELS end of year benchmarks. The benchmark goals are empirically derived target scores that indicate a level of skill at which the student is 80-90% likely to achieve later reading outcomes when receiving research-based instruction from a core classroom curriculum (Good & Kaminski, 2011). The goal for Mariah’s comprehension was set at the 4th grade end of year goal of 24. Since the class average was below the fall benchmark, a secondary goal for Mariah was to at least close the gap with her peers. The goal for Mariah’s oral reading fluency was set at the 4th grade end of year goal of 115 words. Since the class average was below the fall benchmark, a secondary goal for Mariah was to close the gap with her peer in fluency as well. The goal for engagement was set for Mariah to receive 80% or more of her points, which was determined by the consultative team to be a socially significant goal.
(Shapiro, 2011). The weekly goals were initially set lower, with the intention to increase gradually.

If the intervention was implemented without a significant increase in Mariah’s performance above baseline, the intervention was modified. If Mariah did not show progress towards the goal, or if it was below the goal line for three or four points, modifications were made (Hixson, Christ, & Bradely-Johnson, 2008). If Mariah did not make sufficient progress after multiple modifications, the team would decide if they suspected a disability.

**Functional Hypotheses**

Based on teacher consultation, as well as observations and referral concerns, it was hypothesized that Mariah’s academic concerns were based on a skill deficit because she had not had enough practice opportunities. Because the team felt Mariah had the skills necessary to stay on-task, the off-task behaviors were believed to occur because there were few accessible contingencies in place for on-task behavior.

**Accountability Plan**

The intervention plan was an A/B/C, where data on the target variables were collected in the baseline phase (A) as well as in the intervention phases (B/C). Baseline data were taken prior to intervention implementation. This design was appropriate in an applied setting and can be used for data-based decision making by teams.

**Intervention Procedure**

As indicated previously, Mariah had received some intervention supports in the previous year. She received small group Orton-Gillingham based small group instruction 40 min five days per week from September–November in 3rd grade from a reading specialist. This was the first year that the state had put in place the 3rd grade reading guarantee policy, where students who do
not pass the 3rd Grade Ohio Achievement Assessment (OAA) are retained. Based on this, the district hired reading specialists to support the 3rd grade students and help them pass the test. Because Mariah passed the fall reading OAA, she was no longer able to access these supports, but her 3rd grade reading teacher indicated very serious continuing concerns. The supports Mariah received beginning in 4th grade are described below.

**Re-read, Adapt, & Answer-Comprehend (RAAC).** Four days a week after school, Mariah and her parent completed the RAAC, a repeated reading and comprehension intervention (Therrien, Gormley, Kubina, 2006). The RAAC is a scripted intervention that targets reading fluency and comprehension (Appendix A). Repeated reading interventions have been found to improve reading fluency (Daly et al., 2005). In addition, answering comprehension questions after reading the passage is an element that can be added to repeated reading interventions to target improving comprehension (Vadasy & Sanders, 2008). The RAAC passages Mariah was given were at the 4th grade level, as were the comprehension questions accompanying the passages. Each passage has a time goal for each passage based on the reading level. The intervention consisted of Mariah reading the passage aloud to her mother, and receiving corrective feedback on any errors. She then reread it up to three more times until she met the established goal in the time specified, receiving corrective feedback each time and praise on improvements in speed and accuracy. The target on the passage was sent at the DIBELS 4th grade oral reading fluency benchmark. After reading the passage within the time limit, or after four readings, Mariah was orally asked generic questions about the story (Appendix B). She was asked the additional story questions, which were passage specific and her parent wrote Mariah’s answers (See Appendix C for an example). If Mariah answered the question incorrectly, her mother directed her back to the passage to where the answer could be found.
These procedures insured Mariah was getting immediate feedback on both reading fluency and comprehension, critical components of academic interventions (Daly et al., 2005; Simonsen, Fairbanks, Briesch, Myers & Sugai, 2008). The RAAC occurred throughout the entire 4th grade intervention process, and the intern frequently consulted with Mariah’s parent to ensure the intervention remained acceptable. This was considered by the team to be one component of Tier 2 intervention supports as it was occurring four times a week for approximately 20 min each day.

**Weekly behavior report card with a weekly reward.** In the first intervention condition, the team also implemented a weekly point sheet, considered by the team to be a check-in check-out system, where Mariah was rated on three behavior goals throughout the day by her teachers (Appendix D). There has been significant research on the impact of daily behavior report cards reducing problem behaviors (Fabiano et al., 2010; Owens, Holdaway, Zoromski, Evans, Himawan, 2012). A meta-analysis reviewing the use of daily report card found very significant improvements in behavioral outcomes (Vannest, 2011). The weekly point sheet was set up to have Mariah’s teachers rate her on three goals each week. It could be rated as 0 (No), 1 (Good), or 2 (Excellent). At the beginning of the week, Mariah initially met with the school psychologist to select a student goal and a teacher goal for the week. Mariah was also rated on participation daily. Mariah was responsible for the point sheet every week and received a reward at the end of the week for completing the sheets, and meeting weekly goals. The school psychologist explained the sheets to Mariah, had her sign a contract about the responsibilities of the point sheets, and had her practice both examples and non-examples of receiving an ‘excellent’ on each goal. This was considered by the team to be part of Tier 2 intervention supports.

**Daily small group intervention support.** At a team meeting on November 5th, 2013, Mariah’s teachers and parents indicated continuing concerns with comprehension and attention,
and additional concerns with Mariah’s math skills. The team decided Mariah needed additional supports that would constitute Tier 3 levels of support. The decision was made to continue the current RAAC intervention three times per week, weekly teacher rating sheets, and add support from the 3rd and 4th grade intervention specialist. Mariah switched 4th grade homerooms, so she was in the class the intervention specialist supported. The intervention specialist also took over the management of Mariah’s weekly point sheets, and delivering rewards, because she would be closely working with Mariah. She received at least hour daily of reading support and an hour daily of math support (about half in class and half in small groups). Both subjects utilized the critical components of academic interventions, with increased practice opportunities and frequent, specific error correction and feedback (Daly et al., 2005; Simonsen, Fairbanks, Briesch, Myers & Sugai, 2008). The math small group interventions utilized multi-sensory methods with manipulatives, doing problems on the board, graph paper, math notes, and flashcards. She also began receiving modifications, extended time, preferential seating, proximity control, and was seated by a peer tutor in the classroom. During this phase, Mariah was not using the Check in Check out sheets consistently, and her attention in class had reportedly made some improvements, so the intervention specialist discontinued it in December.

At the next team meeting on 1/13/14, upon reviewing the date, Mariah had made some improvements in her reading comprehension, but she had made very little progress in oral reading fluency. The team felt that she would need intensive supports to maintain and continue that growth. The intensive math supports also increased her skills in math, as evidenced by her math grades compared to the grade average. However, at the point the team felt the intensive supports for Mariah constituted individualized instruction, and that she may need the continued supports to accelerate her academic progress. The team suspected Mariah had a disability and
began the evaluation process to determine if she qualified for special education services as a student with a disability.

**Adherence Data**

The daily completed RAAC passages served as a permanent product for adherence of use and were implemented 97% of days from September-December. In January, because of inconsistency in school attendance due to inclement weather, and not receiving the sheets, adherence fell significantly to 25%. Her mother also indicated that Mariah had too much homework to also complete the RAAC, so that component was discontinued in February. Reinforcement administration was seen weekly on the point’s sheets, and was delivered by the school psychologist or the practicum student. Mariah struggled to remember to complete these sheets and frequently would complete them herself without having her teachers rate her behaviors. The sheets were only filled out and signed by the teachers approximately 36.84%, as seen through permanent product.

**Social Validity**

The intervention was developed through collaboration with the classroom teachers, the school psychologist, and the practicum student. In addition, frequent consultation and communication with the homeroom teacher was made to ensure the intervention was both effective and acceptable. The intervention specialist completed an intervention acceptability questionnaire and strongly agreed with all questions, indicating she felt the supports appropriate and beneficial.

**Results**

Baseline and progress monitoring for targeted variables are depicted in Figures 1-4. As demonstrated in the figures, both engagement and off-task behaviors have met the goal.
The data for Mariah’s reading comprehension can be seen in Figure 1 below. Baseline data show an average DAZE score of 8.22, which was significantly below the fall benchmark. Baseline data had an increasing trend ($SD=2.52$). Mariah’s DAZE scores remained at levels consistent with baseline in the first intervention phase, when the RAAC intervention and CICO interventions were in place, although it remained above the aim line except the last point ($M=10.33$, $SD=1.75$). When the RAAC was decreased to three times per week and intervention specialist support and small groups were added, Mariah’s scores initially increased, then returned to a level that was just over the highest baseline point ($M=12.79$, $SD=2.39$). Overall, Mariah did not make consistent significant improvements towards the end of year goals, however, with intensive supports, she was able to significantly close the gap between her scores and her classes average on the winter benchmark.
Figure 1. Baseline and progress monitoring for Mariah’s reading comprehension.

The data for Mariah’s oral reading fluency comprehension can be seen in Figure 2. Baseline data from the fall benchmark show a mean ORF score of 71, which was significantly below the fall benchmark of 90. Because it was below benchmark, it was progress monitored less frequently initially. Mariah’s ORF scores increased initially, then dropped below baseline levels when the RAAC intervention and CICO interventions were in place ($M=72.5$, $SD=10.61$). When the RAAC was decreased to three times per week and intervention specialist support and small groups were added, Mariah’s scores remained at a level similar to baseline, increased above the aim line, then returned to a level that was variable but was just over the highest baseline point ($M=76$, $SD=13.54$). Overall, Mariah did not make consistent significant improvements towards the end of year goals, however, with intensive supports, she was able to somewhat close the gap between her scores and her classes average, as her highest point was at a comparable level as the 4th grade winter benchmark average.
Figure 2. Baseline and progress monitoring for Mariah’s oral reading fluency.

The data for Mariah’s point’s sheets can be seen in Figure 3. There was no baseline data, but the team felt that 80% would be a meaningful target to improve Mariah’s engagement and participation. Overall, 71.43% of points were above that goal, however, because adherence to the intervention was so low, this data was not considered by the team to be fully accurate ($M=83.36\%, SD=12.53$). Mariah’s teachers and intervention specialist did indicate the noticed Mariah’s increase engagement and participation in class and small group, which may be partially due to beginning medication for ADHD during November.
Figure 3. Percentage of points received on Mariah’s Point Sheets.

The data for Mariah’s math quiz grades can be seen in Figure 4, along with the grade averages. While these grades cannot be considered baseline, the team it reflect improvements in math through comparing Mariah grades to the grade average. Prior to beginning intervention supports, there Mariah scored between 11-27% less than the grade average. With the RAAC intervention and CICO supports added, there was no improvements seen and Mariah’s average remained significantly below the average. Once Mariah began also receiving support from the intervention specialist in math and reading, her grades on quizzes significantly improved to a level similar to the grade average. Overall, with intensive intervention supports, Mariah was able to partially close the gap between her scores and the 4th grade average on math quizzes.
Figure 4. Mariah’s math assessment data and grade averages.

In support of this visual analysis, summary statistics were calculated when possible and can be seen in Table 2. The percentage of non-overlapping data (PND) for each classroom was determined by identifying how many intervention data points did not overlap with the highest baseline data point. The effect size was also calculated, which was found by dividing the difference of the baseline mean and the last intervention phase mean by the standard deviation of the baseline. Goal attainment scaling (GAS) was also reported (where “0” corresponds to no progress towards the goal, “1” indicates progress made towards the goal, and “2” indicates the goal was met).
Table 2

Means, Standard Deviations, Percent of Non-overlapping Data, Effect Size and GAS for targeted variables.

<table>
<thead>
<tr>
<th>Variable</th>
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<th>Intervention</th>
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<tr>
<td></td>
<td>Number of Data Points</td>
<td>Mean</td>
<td>SD</td>
<td>Number of Data Points</td>
<td>Mean</td>
</tr>
<tr>
<td>Reading Comprehension</td>
<td>3</td>
<td>8.33</td>
<td>2.52</td>
<td>9</td>
<td>12.78</td>
</tr>
<tr>
<td>ORF</td>
<td>1</td>
<td>71</td>
<td>-</td>
<td>7</td>
<td>76</td>
</tr>
</tbody>
</table>

Discussion

With intensive intervention supports, Mariah had made some improvements in her reading comprehension, but she made very little progress in oral reading fluency. The team felt that she would need intensive supports to maintain and continue that growth in reading. The intensive math supports also improved her skills in math, as evidenced by her math grades compared to the grade average. At this point the team felt the intensive supports for Mariah constituted individualized instruction, and that she may require the continued intensive supports to accelerate her academic progress in the future. The team suspected Mariah had a disability.

Through the evaluation process, the team found that data from observations, interventions, and assessment, indicate that Mariah meets eligibility criteria as a student with an Other Health Impairment- Minor. She qualified for this because she had been diagnosed with Attention Deficit Disorder- Primarily Inattentive, which limits her strength vitality and alertness, including a heightened alertness to environmental stimuli, that results in limited alertness with respect to the educational environment. In addition, the team found that Mariah's disability adversely impacts her educational performance in the general education curriculum and she requires the support of specially designed instruction in order to receive FAPE. Although Mariah
was not found to qualify for services as a student with a specific learning disability, the intern psychologist and team felt the guiding questions for four components of SLD determination provided a good framework and are discussed below.

**Establishing discrepant achievement.** The team was able to demonstrate that Mariah was not achieving adequately relative to state-grade level standards and age level standards by comparing her benchmark data in ORF and reading comprehension to DIBELS Next benchmarks. In the fall, Mariah was well below the benchmark in comprehension and below the benchmark in ORF, and at the winter benchmark she was below benchmark in comprehension and well below benchmark in ORF. Mariah has received core instruction in reading using the district-selected curriculum, Journeys Common Core. Journeys provides differentiated reading instruction focused on building vocabulary, supporting comprehension, teaching with effective text, and connecting writing and reading. There was some concern by the team that the core instruction was not sufficient, because the 4th grade average score on the fall benchmark in fluency were below the benchmark. However, at the winter benchmark the grade ORF average was at the benchmark target, indicating that most students are on target for reading.

Mariah has had a significant number of tardies this year, but they were not believed by the team to be the primary reason Mariah was struggling, and making in sufficient progress. This diverges slightly from best practice, because, as Mariah did have significant tardies, she should have received the continued intensive intervention for longer to determine if she would be able to catch up in a reasonable time frame. However, the team felt that Mariah would need the small group instruction because of her attention concerns, and they felt comfortable beginning the evaluation process earlier than may be in best practice. Ultimately, Mariah’s educational record indicates that she has struggled in academic achievement since being in first grade.
Establishing discrepant achievement. The team was able to demonstrate that Mariah was not making adequate progress through the visual analysis of her intervention data. The RAAC intervention that was implemented was research based and matched to her specific skill deficits and perceived needs from the fall benchmark assessment. In addition, it was delivered with fidelity. The small group instruction and support from the intervention specialist occurred daily, and utilized critical components of academic interventions, and gave Mariah a less distracting environment when they were in a small group. The team met frequently to review this data, and data-based decision making was used to determine when Mariah required more intensive intervention. For example, when the initial RAAC interventions showed little improvements, and there were continuing concerns with math, the team decided to expand supports so she would have more intense supports in school in reading and math, that matched her needs based on intervention data and classroom based assessment. She also began receiving additional modifications and accommodations in class, to support her when she was in a large group. These supports constituted an intense intervention that occurred daily for a significant amount of time, targeting her specific needs, and were given in addition to the Tier 2 supports. Mariah was progress monitored on the reading targets weekly or biweekly in order to capture small changes in progress. While the team could have continued current levels of support, because Mariah has a history of academic struggle since first grade, and had received some intervention supports the previous year, the team determined that they suspected a disability. Mariah’s mother was part of all team meetings and data based decisions, and was responsible for implementing the RAAC intervention at home.

Establishing educational need. Mariah’s progress monitoring graphs demonstrate a discrepancy between expected levels and her performance, even with targeted and intensive
interventions. In oral reading fluency, Mariah’s peers demonstrated growth from fall to winter universal benchmark screening measures with an average of 84 correct word read in the fall and a gain of 17 words, demonstrating an average 101 correct words read at winter benchmark. Mariah’s fall DIBELS benchmark ORF score was 71, and increased only 6 words to 77 at winter benchmark. The rate of improvement Mariah was making with fluency was not sufficient enough to catch Mariah up by the end of the school year, even with intensive supports. In reading comprehension, Mariah’s peers demonstrated growth from fall to winter universal benchmark screening measures with an average of 12 points on the DAZE in the fall and an increase to 15 points at the winter benchmark. Mariah’s fall DIBELS benchmark DAZE score was 6, and increased to 13 points by the winter benchmark. The rate of improvement Mariah was making with comprehension indicated that the intensive intervention supports were accelerating her progress, but the team felt this would not be maintained without long term supports such as she currently is receiving, which are so intense as to constitute special education. These results can also be seen in Mariah’s math assessments. With the intense intervention and small group instruction she is able to be successful in math, but without ongoing and long term supports, the team did not believe these improvements would remain.

**Eligibility determination.** For the evaluation process, I used the data collected from interventions, additional curriculum based measurements to determine Mariah’s academic achievements in the areas of reading fluency, comprehension, writing, math computation, and math problem solving. In addition, observations were completed to determine Mariah’s engagement in class. Also, Mariah’s teacher and intervention specialist completed a report to include in the evaluation team reports.
A copy of the Evaluation Team Report: Part 1 written for Mariah’s ETR by the intern school psychologist can be found in Appendix E. The report establishes the interventions that have been implemented, and the rate of progress Mariah has made on each. The direct classroom observations demonstrate that in the large group, when Mariah was not on her medication, she is much more passively off-task than her peers. However, when she was in a small group, having taken her medication, she was appropriately engaged in school. The evaluation team agreed based on the data collected, that Mariah demonstrated a need for specially designed instruction, and Mariah therefore qualified for special education services under the category of Other Health Impairment-Minor.

In reflection on this experience of utilizing a multi-tiered system of support to make eligibility determinations, there were a few limitations, and areas of concern going through the evaluation process. One area of concern is determining if the core curriculum is effective for most students. The fall benchmark data indicated the 4th grade class was below benchmark in both ORF and comprehension. The curriculum used is provided and required by the district, although it may not be the more effective curriculum. While ideally something like this could be changed, in a large urban district, individual schools typically are not able to choose their own curriculum. However, the fourth grade may be a target for implementing a grade level intervention to improve ORF and comprehension. In addition, Mariah’s data indicates she is below both the benchmark targets, as well as the class average on both fall and winter benchmarks, suggesting she would need additional supports even if the core curriculum is not fully effective for most students.

Another area that I would like to improve next time is the focus on Mariah’s class engagement. Ideally this would be monitored using direct behavior observation instead of the
point sheet, especially since adherence of completion was low. In addition, I would have liked to implement a different intervention to target engagement once the intervention specialist discontinued use of the point sheet, had I known it happened. Since the team ultimately determined Mariah qualified for special education in the category of other-health impairment, there should have been a strong focus on engagement as a target variable. While it seemed like engagement became less of a concern when Mariah began taking medication for ADHD, I would have preferred to implement something additional before removing all behavior supports.

Another limitation is the lack of data from previous years. This building has many new staff this year, and have lost a lot of the information from previous years because intervention and benchmarking records were not maintained. While I was able to discuss Mariah with her third grade teacher, I could not track Mariah’s academic achievement earlier than that, other than through letter grades. While the school is working on increasing data collection for this, I did not feel I had as much background information as I would have liked.

A final area of concern to me are the intensive supports given by the intervention specialist in the classroom and in small group. The intervention specialist at this level does not follow a particular program or method so it was challenging to determine what exactly those intervention supports were, and if they were matched in intensity and target selection to those Mariah needed. This seems to be a typical practice in this district, where Tier 3 essentially is working with the intervention specialist in reading or math, without really selecting specific skills to target. In addition, the intervention specialist did not use progress monitoring through curriculum based measurement, she determines growth based on progress in students IEP’s. Because Mariah did not yet have an IEP, there was no real progress monitoring in math, so
Mariah’s quiz grades were used as one way to track her math ability. This does not align with best practice in assessment, and valid and appropriate decisions cannot be made based on it.

This case was a great example of collaboration with a team. Mariah’s mom was very participatory and was even responsible for implementing the RAAC intervention, which gave Mariah even more practice outside of the school day. Ultimately, this case was a great example of utilizing tiered supports in guiding special education eligibility. It also helped me to think through each component and requirement of determining special education decisions, to make me a more thorough and knowledgeable school psychologist. In my future practice as a school psychologist, I will continue to follow the federal requirements, as well as best practices using these guiding questions, when making eligibility determinations.
References


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Instruction. Washington, DC: National Institute of Child Health and Human Development, National Institutes of Health


Appendices

A. RAAC Script

B. Generic Story Questions used during RAAC Intervention

C. Example of RAAC Passage and Comprehension Questions

D. Intern Psychologist ETR Report
Appendix A

RAAC Script

**Materials Needed:** Passages, Stopwatch, different colored highlighters to mark error words

**Step 1: Prompt Child:** “Read this story the best you can and as quickly as you can. Pay attention to what you are reading, as you will need to answer a few questions.”

**Step 2: Read Prompts:** Ask the child to read the cue card containing the story structure questions aloud.

**Step 3: Reread:** Ask the child to reread the whole passage aloud until s/he reaches the pre-established goal (the **bolded** word) within the time limit

- Read the passage no less than 2 times
- Read the passage no more than 4 times even if the goal is not met

**Step 4: Correct Errors:** If child pauses during reading, correct word and have child repeat. Correct all other errors after passage read and ask child to repeat them.

**Step 5: Praise:** Provide feedback to child on improvements in speed and accuracy.

**Step 6: Adapt and Answer:** After the child meets the goal, or reads the passage four times, ask the child to answer the questions on the cue cards orally.

**Error correction process:**

- If no answer or incorrect answer first time, prompt child to look for information in the passage: “See if you can find the answer in the passage.”

- If no or incorrect answer second time, point to sentence(s) where answer can be found and prompt “See if you can find the answer in this sentence.”

- If no or incorrect answer third time, provide answer and point to where you found the answer.

**Step 7: Additional Story Questions:** Orally ask the child the questions that follow the passage, write their answer and mark an X if they answer incorrectly.
Appendix B

Generic Story Questions used during RAAC Intervention

Question Cue Card

- Who is the main character?
- Where and when did the story take place?
- What did the main character do?
- How did the story end?
- How did the main character feel?
Tess and Leah were very excited for the sleepover this weekend. All week long they talked about it at recess and during lunch. They planned out the entire night and even decided what they would wear.

First, the girls would play with Leah’s older sister’s make-up. They would pretend they were at the salon and do each other’s hair. Tess even promised to bring all of her nail polish so they could paint their toenails.

Leah’s mom said they could order pizza. Tess and Leah decided that they would get cheese and mushrooms on the pizza. Leah’s mom said she would take them to rent a movie from the store. They both agreed to get a scary one.

The girls were so excited about the sleepover. They had been waiting for this weekend for weeks and knew it was going to be so fun.
Tess and Leah were very excited for the sleepover this weekend. All week long they talked about it at recess and during lunch. They planned out the entire night and even decided what they would wear.

First, the girls would play with Leah’s older sister’s make-up. They would pretend they were at the salon and do each other’s hair. Tess even promised to bring all of her nail polish so they could paint their toenails.

Leah’s mom said they could order pizza. Tess and Leah decided that they would get cheese and mushrooms on the pizza. Leah’s mom said she would take them to rent a movie from the store. They both agreed to get a scary one.

The girls were so excited about the sleepover. They had been waiting for this weekend for weeks and knew it was going to be so fun.
Questions
Write down student’s response and place an X on questions answered incorrectly

(**If students say they do not know an answer to a question ask them the following: Based on what the story said, what do you think the answer might be?)

1. (F) What were Tess and Leah excited about? (the sleepover this weekend)

2. (I) Whose house did they sleep at? (Tess slept over at Leah’s house)

3. (I) Did Tess’s mom say it was okay for her to sleep over? (yes, they planned it for weeks)

4. (F) What would the girls to first? (play with Leah’s older sister’s make-up)

5. (I) Was Tess allergic to cheese? (no, they planned on getting cheese on the pizza)

6. (F) What kind of movie did the girls agree to get? (a scary one)

7. (I) Did Tess and Leah like spending time together? (yes)

8. (F) What were the girls going to do with the nail polish? (paint their toenails)

Number correct: __________
## Appendix D

### Weekly Point Sheet

**Mariah's Point Sheet**

<table>
<thead>
<tr>
<th>Day</th>
<th>Mariah's Goal</th>
<th>Teacher Goal</th>
<th>Participation</th>
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Appendix E

Intern Psychologist ETR Report

**Evaluation Team Report**

<table>
<thead>
<tr>
<th>CHILD'S NAME:</th>
<th>[Redacted]</th>
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</table>

**Individual Evaluator's Assessment**

Section to be completed by each individual evaluator

**Evaluator Name:** Keara Sherman M.Ed  
**Position:** School Psychologist

**Areas of Assessment:**

Background information, information provided by Parent, General Intelligence, Academic Skills, Data from Interventions, Motor Skills, Observations  
Indicate the area(s) that were assessed by the evaluator in accordance with the evaluation plan.

**Evaluation Methods and Strategies**

Indicate the types of assessment strategies used to gather information about the child's performance

- [x] Observations  
- [ ] Scientific, Research-Based Interventions  
- [ ] Curriculum Based Assessments  
- [ ] Norm-Referenced Assessments  
- [ ] Classroom Based Assessments  
- [ ] Other (Specify)

**Review of Records and Relevant Trend Data (School Records, Work Samples, Educational History)**

[Blank]

**Assessment Information**

Provide a summary of the information obtained from the assessment results per the evaluation plan including the child's strengths, areas of need and baseline data

**Summary of Assessment Results:**

Background Information/ Information Provided by Parent: 
XXXX is in the fourth grade at XXXX. The 2013-2014 school year is her sixth year in attendance at XXX, as she began attending in preschool. XXXX is age appropriate for her grade level. XXXX was referred to the intervention assistance team in the fall of 2013 because of parent and teacher concerns with attention and comprehension. This evaluation was initiated to determine her eligibility for special education services.

XXXXX mother reports that XXXX has been diagnosed with Attention Deficit Disorder—predominantly inattentive, and began taking 10 mg of Adderall each day in 10/2013. Her mom reports that XXXX is very sweet and respectful and that she has had concerns with XXXX's academics and attention beginning in 1st and 2nd grade. At home, XXXX has to be woken up early and have her stuff set out for her in the morning because she moves very slowly. She needs frequent prompts throughout the morning to ensure she brings everything she needs to school.

In the third grade XXXX scored a 395 and a 376 on the Reading OAA, and a 394 on the Math OAA (400 is proficient). XXXX has been tardy 21 times this school year; 17 of those occurred between 8/29/13-11/8/13. She has no discipline entries reported in the online PowerSchool system.

General Intelligence: 
XXXX's educational team felt a formal cognitive assessment was not necessary at the time. The team decided, based on observation, interview and data obtained from multiple sources that cognitive ability most likely fell within the average range. The educational team at XXXXX does not have significant concerns regarding XXX cognitive functioning at this time. Therefore, it was decided by the team that a formal assessment would not provide any additional, significant information as to how to best address XXXX academic needs.

Data from Interventions: 
XXXXX has had highly qualified teachers provide scientifically based core instruction (Journey's) in reading and math. 3rd grade interventions: XXXXX received some intervention supports in 3rd grade. She received 40 minutes per day of small group Oron-Gillingham based intervention, a research based multi-sensory approach to reading instruction, from approximately September-November of 3rd grade. After XXXXX passed the fall reading OAA, she was no longer able to receive these supports, however her 3rd grade ELA teacher indicated that XXXXX continued to struggle significantly in 3rd grade.
INTENSIVE READING COMPREHENSION AND FLUENCY SUPPORTS

Evaluation Team Report

Child's Name: [Redacted]
Evaluator Name: Keara Sherman, M.Ed

Summary of Assessment Results, cont.

4th grade interventions: 9/26/13 XXX was referred to the intervention assistance team in September of 2013 because of concerns with attention, reading comprehension, and math skills, based on universal screening data, assessments, and teacher observations. The team decided to implement a daily check in check out sheet where her teachers rated her on teacher-selected and self-selected weekly goals. To address XXX reading comprehension, a repeated reading intervention with comprehension questions was also implemented at home 4X/week.

11/5/13: In looking at XXX reading comprehension data, collected using the DAZE, XXX was making progress towards the goal and the team decided to continue the home repeated reading intervention 3X/week (See attachment for graph of XXX DAZE progress). XXX had been inconsistent with the Check in Check out sheet but the team felt it could still be effective so it was continued. The team was also concerned with XXX progress in Math so she was switched to the intervention class and began receiving intervention support from the intervention specialist in Math and Reading. She received about an hour daily of reading support and an hour daily of math support (about half in class and half in small groups). Math interventions utilized multi-sensory methods with manipulatives, doing problems on the board, graph paper, math notes, and flashcards. She also began receiving modifications, extended time, preferential seating, proximity control, and was seated by a peer tutor in the classroom.

1/13/14: Looking at XXX comprehension, she was making some progress in comprehension, and was almost reaching the grade average, but needed continued intensive supports to maintain and continue that growth. XXX was not using the Check in Check out sheets consistently, and her attention in class had made some improvements so that was discontinued in December. The intensive math supports also increased her skills in math, as evidenced by her math grades compared to the grade average (See attachment for graph of XXX math grades). However, at the point the team felt the intensive supports for XXX constituted individualized instruction, and that she needed these continued supports to accelerate her academic progress. The team suspected XXX had a disability and decided to evaluate her to determine if she qualified for special education services.

Academic Skills: XXX academic skills were assessed with curriculum based measures in reading fluency and comprehension, written expression, math computation, and math concepts and applications. Assessments were completed on 2/19, 3/5, and 3/10. Throughout all assessments, XXX willingly completed all required tasks. She seemed to understand directions given and put forth her best effort. Results are believed to be an accurate representation of her present levels of academic skills.

Reading Fluency: XXX was presented with multiple reading passages at a 4th grade reading level. She was asked to read each passage out loud for one minute. In the time provided, she obtained a median oral reading fluency of 67 correct words per minute, with one error (AIMSweb passages). Norms for students in the fall of 5th grade are 120 correct words per minute, and the grade average was 100 word correct per minute. XXX fluency with grade level reading materials is below grade level and peer norms, however she reads with sufficient accuracy.

Reading Comprehension: XXX reading comprehension was assessed with a maze-style reading assessment, which was timed for three minutes. In the time provided, she selected 11 correct words, and 1 that was incorrect. This resulted in a score of 11. The target for students in the winter of 4th grade is a score of 17+, and the grade average score was 14.5. XXX score on this assessment indicates that she may struggle to adequately comprehend information that she reads. See attached graph for progress monitoring data for comprehension.

Written Expression: XXX completed a three minute timed writing prompt, which was assessed for the amount she wrote, words spelled correctly, and her correct use of grammar and punctuation. In the time provided, she wrote a total of 18 words, 18 of which were correctly spelled. Her sample contained 17 correct writing sequences, which are two consecutive words that contain correct spelling, grammar, and punctuation. Norms for students in the winter of 4th grade are 39 total words written, with 33 correctly spelled words and 32 correct writing sequences. XXX wrote significantly less words than the norm and may not have been able to generate enough ideas to write about. Overall she spelled correctly, although there was no capitalization and some missing punctuation.

Math Computation: On two 4th grade math computation assessments, XXX was given 8 minutes to complete addition, subtraction, multiplication, and division problems, some with fractions or decimals. She was very accurate overall and correctly added and subtracted multi-digit problems and fractions and decimals. She also correctly multiplied 1X1 and 2X1 digit problems, and completed 1X2 digit division problems. XXX made an error on a 3 digit addition and a 3 subtraction problem, and skipped one 2X1 division problem. Overall, XXX scored a 45 and a 44 on the assessments, compared to the winter target of 42.

See Psych Report continued.
In order to continue progressing in the general education standards, XXX needs to increase her oral reading fluency and comprehension with grade level text. Current assessment data indicates that she reads with sufficient accuracy at a 4th grade level, but is well below grade level, and below her peers in oral reading fluency and reading comprehension. She will require specialized instruction to increase fluency in addition to comprehension strategies. XXX also needs to improve written expression skills, the length of the writing as well correct grammar and punctuation. She will require specialized instruction in order to address effective communication through writing.

Math computation is a strength for XXX. She does need to develop skills math concepts and applications such as subtracting fractions, finding an answer from a chart, selecting number sentences based on a pictorial representation, and solving for a missing number.

XXX may continue to benefit from language arts and math instruction in a small group, pull-out format. She requires further assistance to build reading fluency and comprehension skills. Comprehension skills can be increased by asking what, if, why, and how questions as well as completing story maps and engaging in strategies such as guided imagery.

XXX may benefit from co-editing writing pieces with an adult, with feedback on grammar and punctuation. She should be encouraged to write frequently, with multiple attempts to edit her written work. She may benefit from monitoring her own writing length and graphing how much she has written. She may also benefit from support in developing prewriting and brainstorming skills. Additionally, XXX requires assistance with some advanced math skills. If possible, previous concepts that have not been mastered should be reviewed. If possible, models for math problems should be provided with immediate corrective feedback provided to the greatest extent possible.

Frequent use of curriculum based measurement probes allow for the examination of small changes in achievement throughout the year. Progress may also be measured through grades, standardized test results, homework performance, performance indicators, and district-wide assessments.

Evaluator's Signature: Keara Sherman
Date: 03/14/14
Academic Skills continued:
Math Calculation and Problem Solving: On two calculation and problem solving assessments, XX was given 8 minutes to complete word problems, graph problems, and sequencing problems. She correctly answered problems from a bar graph, added three numbers, measured the lengths of objects, subtracted a fraction from a word problem 50% of the time, answered a problem from a chart 50% of the time, and selected number sentences based on a pictorial representation. XX did not correctly solve for a missing number. Overall, she scored a 4 and an 8, compared to the winter target of 15.

Observation:
XX was observed twice. In the first observation, XX mother indicated her prescription had run out so she was not taking any medication. On 2/10/14 XX was observed during a transition and large group instruction in math using the Behavioral Observation of Students in Schools protocol (BOSS). The BOSS assesses a student's rate of academic engagement (active and passive) as well as off task behaviors (motor, verbal, passive). The target student's behaviors are compared to a peer in the classroom to determine if their behaviors occur at a higher or lower rate than classroom peers. According to the research, 80% or more of total on-task time is considered to be a “good” total on-task time. During the 15 minute observation XX demonstrated the following: active engaged time: 18% (peer 10%), passive engaged time: 45% (peer 80%), off task motor: 15% (peer20%), off task verbal: 5% (peer 20%), off task passive: 40% (peer 10%). In the observation she frequently was staring off and said once “This is hard.” Overall, when XX was in a large group and had not taken her medication she displayed a lower rate of on task behaviors and a much higher rate of passively off task behaviors than peer comparisons.

XX was also observed when she had taken her medication for ADHD. On 3/10/14 XX was also observed in language arts in a small group setting again using the BOSS protocol. During the 15 minute observation XX demonstrated the following: active engaged time: 60% (peer 42%), passive engaged time: 31% (peer 33%), off task motor: 5% (peer 25%), off task verbal: 2% (peer 16%), off task passive: 8% (peer 8%). She was very engaged and seemed to be working hard during this observation. Overall, when XX was in the small group and had taken her medicine she was displayed a higher rate of on task behaviors and a lower rate of off task behaviors than peer comparisons.

Motor Skills:
XX handwriting is legible, and she recognizes letter and number reversals. She is able to copy printed material from the board and used an appropriate pencil grasp. There are no significant concerns with fine motor skills at this time. XX displays appropriate gross motor skills such as balance, sequencing of body movements, and coordination. XX can participate in physical education activities without modifications or restrictions.
Math Assessment Data

- 10/10/13 Barn
- 10/23/13 Repeated Reading Intervention and CICO
- 11/10/13 Added small group instruction for Reading and Math

4th Grade Average

Reading Comprehension

- RAAC Intervention at home 3X per week + CICO + Intervention Specialist Support and modifications
- Goal of 24 by End of year

Baseline

Date: 8/28/2013 to 4/30/2014
Implementing an Intensive Intervention Targeting Organization, Homework Completion, and Time Management Skills

The following describes a Tier 3 intervention that was developed to help Jaylen, a fifth grade student improve his organization, homework completion, and time management. Jaylen was referred to the school psychologist for Tier 3 supports because he had been receiving intense academic and behavior supports and there were continuing concerns from the teacher and his intervention specialist. The primary behavior concerns from the teacher and principal were that Jaylen was frequently disorganized, missing homework, and missing out on instruction because of these concerns. He has had an Individualized Education Plan under the category of Specific Learning Disability since first grade. Jaylen has two general education teachers and one intervention specialist. The initial target variables the team decided on were organization and homework completion. Following the Homework, Organization and Planning Skills (HOPS) intervention, the target of time management was also added as a target variable. These variables were progress-monitored using permanent product, teacher report, and his grades.

This intervention took place in an urban elementary school in Jaylen’s classroom and in the psychologist’s office. It utilized the Homework, Organization and Planning Skills (HOPS) Intervention in addition to the current special education supports. Based on a preference assessment prior to intervention implementation, Jaylen found adult attention and tangible items highly reinforcing. By meeting goals, he earned points and could pick from a reward menu that targeted his preferred reinforcement. Support is ongoing but results indicate that Jaylen’s overall organization increased and his homework completion also improved.

Method

Participants and Roles
A fifth grade student was referred for additional Tier 3 intervention support partway through the year because he had been receiving intense academic supports and behavior supports, but teachers had continuing concerns. His intervention specialist had set up a system where Jaylen would check in with his teachers and be rated on various behaviors, including organization and homework completion, at the beginning of the year. However, since his teachers were unwilling to remind him daily, and Jaylen was not able to remember to check in, partly because of his struggles with organization, it was not used consistently. This support was not improving his behavior or organization so the school team and his parent requested additional support.

Jaylen initially qualified for special education as a student with a Speech and Language Impairment in kindergarten. He was referred to the Intervention Assistance team in first grade for academic concerns, specifically in reading, and qualified for special education services as a student with a Specific Learning Disability at the beginning of second grade. He has been receiving support from an intervention specialist in class and in small group instruction since then. On Jaylen’s initial evaluations, a report from Children's Hospital diagnosed Jaylen with Post Traumatic Stress Disorder secondary to witnessing violence and Chronic Encephalopathy, a brain based Neurological Disorder affecting behavior and learning, but the school has no updated diagnosis since then.

The intervention was implemented in collaboration with Jaylen’s general education teacher, intervention specialist, the school psychologist, the intern school psychologist and Jaylen’s mother. The intervention was implemented by the teachers, the intervention specialist, the intern school psychologist, and Jaylen’s mother. The intern school psychologist met with Jaylen twice a week for approximately 20 min each day to teach the organizational skills,
determine what points he earned, give any rewards earned, and collect intervention adherence. The classroom teachers and intervention specialist signed his planner and wrote if he had any missing assignments. His mother gave rewards based on Jaylen writing his assignments in his planner and not having missing homework. Permissions were obtained from Jaylen’s mother and Jaylen.

**Setting**

The intervention took place in an urban PreK-6 elementary school in the Midwest. Jaylen met with the intern school psychologist on Mondays and Fridays from 1:00-1:20. The materials for the organizational components and rewards were provided by the school psychologist and the intern school psychologist. The intervention was implemented throughout the day in Jaylen’s classrooms, the school psychologist’s office, and at his home.

The school, and Jaylen’s classrooms implement positive school culture, with the goal of creating an environment where teaching and learning can prosper. The school teaches and posts the behavioral expectations across settings, has three positively stated rules that are recited daily (be safe, be respectful, be responsible), and has a token economy, where students receive “eagle dollars” for positive behaviors and can spend them at a monthly store.

**Target Variables**

The intervention targeted improving Jaylen’s organizational skills, increasing homework completion, and improving Jaylen’s planning and time management skills. These variables were chosen through consultation with Jaylen’s teachers and parents as the primary behavioral concerns. Daman was also struggling academically but was receiving intensive intervention supports as part of his individualized education plan, so this intervention was focused on these behavioral targets.
Organizational skills. One target of this intervention is organizational skills, which was measured through permanent product using the binder checklist that is part of the HOPS program (Appendix A). It was also measured based on the percent of weekly assignments Jaylen recorded in his homework assignments in his planner. Children who experience problems with organization are more likely than peers to not know what was assigned, procrastinate when completing homework and fail to bring in assignments (Langberg et al., 2010; Power, Werba, Watkins, Angelucci & Eiraldi, 2006). Providing students with direct instruction in study, organization, and time management skills prior to entering high school, when the student had more responsibility for their learning, is crucial and can improve student’s success (Mizelle, 2005). As the current district has high school buildings for 7th-12th grade, it is critical that Jaylen receive intense supports in improve his organizational skills before beginning high school. In addition, organizational skills continue to be extremely crucial in postsecondary school and are key for successful occupational functioning (Barkley, 2006; Norwalk, Norvilitis & MacLean, 2009).

Homework completion. Homework completion was measured through permanent product using the school’s online grade book. It was also thought Jaylen’s grades would reflect increases in homework completion, so was another method used. His teachers agreed to write in Jaylen’s planner when he did not complete or turn in a homework assignment. This is a target variables because a research synthesis on the topic has found that time spent on homework is positively associated with grades in school and academic achievement (Cooper, Robinson, & Patall, 2006). In addition, completing homework increases the amount of time and practice opportunities spent on academics, which has been found to improve academic skills (Daly, Chafouleas & Skinner, 2005).
**Planning and time management.** Another target of this intervention was planning and time management. This target was measured through permanent product of planning for assignments in Jaylen’s assignment notebook, and his completion of daily schedules. Being able to plan is similar to organization, and is also critical and related to procrastinating when completing homework or long term projects (Langberg et al., 2010; Power et al., 2006). Directly showing students how to manage time has a positive impact on students, and is important as these skills are not often considered common knowledge (Andrews & Bishop, 2012). Time management and planning behaviors have also been found to be significantly associated with grades (Langberg et al., 2011). In addition, the transition to junior high school is frequently a difficult period for students with organization and planning difficulties because of the increase number of teachers and student responsibilities (Langberg, Epstein & Graham, 2008).

**Inter-observer Agreement**

As this was a highly structured program, IOA could be assessed when the school psychologist was in the room during several sessions. As the psychologist had previously implemented the intervention, she was able to ensure the intervention was completed accurately.

**Goals and Decision Rules**

The goal for the intervention was to increase Jaylen’s organization and time management skills, and see them implemented in school and at home. The goal for the Jaylen’s organization was to be consistently receiving 80% of points on the organizational skills checklist, and increase his consistency in writing in his planner (Appendix B). One goal for time management was to weekly record at least one test and indicate when and how it would be studied at least one day in advance based on the time management checklist (Appendix C). Another goal for time management was to have Jaylen complete an evening schedule at least four days a week based
on the time management checklist (Appendix D). The homework assignment goal was set at having Jaylen write down and turn in at least 90% of homework assignments as seen in his planner and in the online gradebook, and improve his overall grades to passing levels. These goals were long-term goals that were considered attainable, yet meaningful and socially significant to the team (O’Neill, McDonnell, Billingsley & Jenson, 2011). If the intervention was implemented without a significant increase in his performance above baseline with the targeted skills, the intervention was modified. The intervention was set to build and encompass more skills throughout, so decision rules were only based on those skills that were currently targeted. Informal meetings occurred frequently, and if Jaylen did not show progress towards the goal, or if it was below the goal line for three or four points, modifications were made (Hixson, Christ, & Bradely-Johnson, 2008).

Functional Hypotheses

Based on teacher and parent referrals and consultation with the team, as well as observations, it was hypothesized that Jaylen’s disorganization and lack of planning and time management was because he did not have the skills necessary, or motivation become organized. In addition, while his homework completion was maintained partially by the lack of planning skills, the team felt it was also maintained by escaping from unwanted work. This intervention focused on teaching Jaylen the skills he needed, and providing reinforcement for utilizing them.

Accountability Plan

The intervention plan was an A/B/ design, where data on the target variables were collected in the baseline phase (A) as well as in the HOPS intervention phase (B). This design was appropriate in an applied setting and can be used for data-based decision making by teams.

Intervention Procedure
Baseline. Prior to the HOPS intervention beginning, Jaylen’s intervention specialist had set up a system where Jaylen would check in with his teachers and be rated on various behaviors, including organization and homework completion, at the beginning of the year. As this was not implemented successfully and no improvements were seen, the school team and his parent requested additional support. Baseline data were collected on each target prior to it being targeted, or was constructed retroactively. During this phase, an informal preference assessment was given to Jaylen, which indicated adult attention and tangibles were the most preferred reinforcers.

Homework, Organization and Planning Skills. Based on the target variables the team was concerned about, the decision was made to use the HOPS system (Langberg, 2011). The HOPS intervention program is a targeted intense intervention that focuses on improving organization, homework, and time management skills. This structured program has been found to effectively improve student’s organization, maintain these increases, improve parent perception of their child’s academic functioning, increase classroom grades, and improve homework completion and planning skills (Langberg, Epstein, Becker, Girio-Herrera, Vaughn, 2012; Langberg, Epstein, Urbanowicz, Simon, & Graham, 2008).

Research has also found that if there is a concern with organization and materials management, this behavior should be targeted and maintained first, before implementing interventions targeting more complex skills such as time management, planning, and study strategies (Langberg et al., 2011). This is because if a student cannot reliably transfer assignments to home and school, they will not be turned in and grades will not improve, even if the student is planning more effectively. Thus, the HOPS intervention targets the material organization first with a binder system. The HOPS system uses one binder to organize and keep
together the students planner, pencil bag, homework folder, subject folders and subject notebooks. Keeping all supplies together in one binder decreases the opportunity for the student to lose items, and has been found to be an effective organization set-up (Hatcher & Pond, 1998). This part of the intervention began on 11/18/2013. Once Jaylen’s materials had been cleaned out and organized, and the binder system was in place, it was assessed twice a week with the organizational skills checklist (Appendix A). In addition, his desk and backpack were also assessed. Jaylen received points based on the checklist, to spend towards something on the reward menu.

Once the materials organization was introduced, the next component added is consistency of use with the planner. This part of the intervention began on 12/2/13. Utilizing an academic planner or assignment notebook has been found to improve organizational skills and work completion, and help students come more prepared for tests (Bryan & Burstein, 2004; Fertig, 2006). The HOPS intervention asks the student to fill out their planner completely daily, and have it initialed by the teachers daily to ensure accuracy. This was also assessed twice a week with the teacher initials checklist. Once he became consistent in using it, he was not required to receive initials anymore. During this phase, his teachers were also asked to write down if he was missing homework assignments in his planner, although he did not earn any points for this.

After this stage was implemented, the intern school psychologist and Jaylen met with his mother on 12/16/2013 to go over the program. Jaylen was asked to explain the binder system and the rewards to her. He also explained that his teachers were writing if he was missing any homework in his planner. Based on this, his mom agreed that Jaylen’s after school activities would be contingent on his planner. If he had all his assignments written down and no missing assignments, Jaylen would be allowed an hour or two of free time before having to complete his
homework. If Jaylen had his teachers record his missing assignments, and had one or more missing assignment, then he had to complete 30 min of work before being allowed to have any free time. If Jaylen did not have his teachers write the missing assignment, or did not have his planner, then he would be required to complete one hour of homework before being allowed to engage in any other activities.

Once Jaylen was relatively proficient in using the binder system, and tracking his missing assignments in his planner, the time management interventions were implemented, beginning on 2/13/14. In this phase, Jaylen received points based on recording tests and quizzes in advance, and writing down how long, and in what way he would study for them on the Time Management checklist (Appendix C). He also could receive points based on recording long term projects in advance, but he could never recall any long term projects, and the 5th grade curriculum did not seem to have many. On 3/21/14, the program introduced the evening schedule, which was meant to help Jaylen plan his days after school. Utilizing techniques like adhering to a schedule and making to do lists in conjunction with organization systems is an important part of time management. For the purposes of this portfolio, data collection on this intervention had to be terminated while the supports are still ongoing.

Adherence Data

Adherence to the intervention can be seen in the permanent product of the checklists utilized in this intervention. Adherence of the contingency at home based on missing assignments was assessed with several phone calls to Jaylen’s mother. These conversations indicated that indicated it was adhered to at least 80% of the time. Reinforcement administration was delivered by the intern school psychologist when Jaylen earned it. Because there were several closings and delays due to weather in January, the teacher’s adherence of writing his
missing assignments in his planner was lower than 80%. Through discussions and consultation, Jaylen’s interventions specialist took over that responsibility, and adherence was increased to be over the necessary 80%.

Social Validity

The intervention and targets were developed through collaboration with the classroom teachers, intervention specialist, his mother, the school psychologist, and the intern school psychologist. The social validity of the intervention can also be seen in Jaylen’s improvement in the socially valid targets. In addition, frequent consultation and communication with the team was made to ensure the intervention was both effective and acceptable, and changes were made if necessary. Jaylen’s homeroom teacher completed a social acceptability questionnaire at the end of the year (Appendix E). The teacher evaluated the intervention supports with ratings of 4 and 5, that she “agreed” and “strongly agree”, respectively, with the statements on the survey, indicating she found the intervention acceptable and successful.

Results

Baseline and progress monitoring for Jaylen’s organizational skills, homework completion, and time management are depicted in Figures 1-5. As demonstrated in the figures, organizational skills, homework completion, and time management have all improved and have been meeting the goals.

Figure 1 shows the percentage of weekly points Jaylen received on the organizational skills checklist (Appendix A). Jaylen received an average of 18% in baseline that was slightly increasing as the intern psychologist helped him clean out his desk ($SD=15.56$). With the HOPS intervention in place it immediately improved above over baseline. It was somewhat variable,
but overall is consistently above the goal line with 65% of the intervention points above the goal ($M=79.77$, $SD=18.59$).

Figure 1. Baseline and progress monitoring for organizational skills displayed by Jaylen.

Figure 2 shows the percentage of weekly assignments Jaylen wrote in his planner. Jaylen, with support from his intervention specialist and teachers, wrote down an average of 6.5 assignments each week in baseline that was significantly variable ($SD=5.15$). With the HOPS intervention in place it immediately improved above over baseline, then became variable and at a level consistent with baseline. ($M=10.25$, $SD=4.27$). On average, the number of assignments written increased over baseline. In addition, and, his teachers wrote his assignments down frequently in baseline, while Jaylen became more independent at writing his assignments down during the intervention. This indicates a successful increase in the assignments Jaylen independently wrote down.
Figure 2. Baseline and progress monitoring for Jaylen’s organizational skills via his assignment notebook.

Figure 3 displays the grades Jaylen received on his reading homework assignments, to demonstrate his homework completion. In baseline Jaylen had an average grade of 31.76 (SD=45.07). In this period, Jaylen did not complete and turn in 64.71% of homework. With the HOPS intervention in place the grades were higher but still variable (M=60.3, SD=33.87), however Jaylen was only missing 11% of homework, and turned in 89% of his homework. At this point, the data indicate Jaylen has been consistently successful at completing and turning in his homework.
Table 1 displays Jaylen’s grades for each quarter in his academic subjects. The intervention began about three weeks before third quarter so Quarter 1 and 2 grades are considered baseline. With the HOPS intervention in place, his reading grade remained an F, his writing grade improved to a D, his math and social studies grades remained the same from the second quarter, and his science grade improved to a D. The goal was to improve all grades to passing, so while two grades improved, Jaylen only has one passing grade, indicating that Jaylen has not yet met the goal and supports should continue.

*Figure 3.* Baseline and progress monitoring for reading homework grade and homework completion.
Table 1

*Letter Grades for Quarters 1, 2, and 3*

<table>
<thead>
<tr>
<th>Subject</th>
<th>Quarter 1 (baseline)</th>
<th>Quarter 2 (baseline)</th>
<th>Quarter 3 (intervention)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>F</td>
<td>F</td>
<td>F</td>
</tr>
<tr>
<td>Writing</td>
<td>D</td>
<td>F</td>
<td>D</td>
</tr>
<tr>
<td>Math</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Science</td>
<td>D</td>
<td>F</td>
<td>D</td>
</tr>
<tr>
<td>Social Studies</td>
<td>F</td>
<td>D</td>
<td>D</td>
</tr>
</tbody>
</table>

Figure 4 shows number of weekly points Jaylen received on the time management checklist-test and quiz recording and studying sections (Appendix C). Jaylen received an average of 0% in baseline as he did not have any tests or quizzes written down in advance ($SD=0$). With the HOPS intervention in place it immediately improved above over baseline. It was somewhat variable, but overall is consistently above the goal of writing at least one test or quiz down in advance each week, with 75% of the intervention points meeting the goal ($M=3.75$, $SD=3.06$).
Figure 4. Baseline and progress monitoring for time management through test and quiz recording.

Figure 5 shows number of weekly points Jaylen received on the time management checklist-daily schedule section (Appendix C). Jaylen received an average of 0% in baseline as he never made a daily schedule ($SD=0$). With the HOPS intervention in place it immediately improved above over baseline and was consistent. This support had only been in place a week when the data collection was terminated for this portfolio but indicates promising results ($M=7$, $SD=0$).

![Time Management Utilizing Daily Schedule](Figure5.png)

Figure 5. Baseline and progress monitoring for time management utilizing the daily schedule.

In support of this visual analysis, summary statistics were calculated when possible and applicable, and can be seen in Tables 2-4. The percentage of non-overlapping data were determined based on how many data points did not overlap with highest baseline point. The effect size was also calculated, which was found by dividing the difference of the baseline mean
and the intervention phase mean by the standard deviation of the baseline. Goal attainment 
scaling (GAS) at the time data collection ceased for the purposes of this portfolio was also 
reported (where “0” corresponds to no progress towards the goal, “1” indicates progress made 
towards the goal, and “2” indicates the goal was met).

Table 2

*Mean and Standard Deviations of Graphed Variables (Baseline Phase)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of Baseline Data Points</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization Skills Checklist</td>
<td>2</td>
<td>18</td>
<td>15.56</td>
</tr>
<tr>
<td>Organization-Planner</td>
<td>8</td>
<td>6.5</td>
<td>5.15</td>
</tr>
<tr>
<td>Homework Completion</td>
<td>17</td>
<td>31.76</td>
<td>45.07</td>
</tr>
<tr>
<td>Time Management-Test/Quizzes</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Time Management-Daily Schedule</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 3

*Mean and Standard Deviations of Graphed Variables (Intervention Phase)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of Intervention Data Points</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization Skills Checklist</td>
<td>17</td>
<td>79.77</td>
<td>18.59</td>
</tr>
<tr>
<td>Organization-Planner</td>
<td>16</td>
<td>10.25</td>
<td>4.27</td>
</tr>
<tr>
<td>Homework Completion</td>
<td>8</td>
<td>60.3</td>
<td>33.87</td>
</tr>
<tr>
<td>Time Management-Test/Quizzes</td>
<td>8</td>
<td>3.75</td>
<td>3.06</td>
</tr>
<tr>
<td>Time Management-Daily Schedule</td>
<td>4</td>
<td>7</td>
<td>0</td>
</tr>
</tbody>
</table>
Table 4

*Percent of Non-overlapping Data over the Baseline Mean, Effect Size, and GAS for Graphed Variables*

<table>
<thead>
<tr>
<th>Variable</th>
<th>PND</th>
<th>Effect Size</th>
<th>GAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization Skills Checklist</td>
<td>100%</td>
<td>3.92</td>
<td>2</td>
</tr>
<tr>
<td>Organization-Planner</td>
<td>31.25%</td>
<td>.73</td>
<td>1</td>
</tr>
<tr>
<td>Homework Completion</td>
<td>-</td>
<td>.63</td>
<td>2</td>
</tr>
<tr>
<td>Time Management-Test/Quizzes</td>
<td>75%</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Time Management-Daily Schedule</td>
<td>100%</td>
<td>-</td>
<td>2</td>
</tr>
</tbody>
</table>

**Discussion**

Progress monitoring of the target variables indicate progress towards or meeting of all goals. While the intervention supports are still ongoing, Jaylen is currently on track or has been consistently above the goal for both measures of organizational skills, homework completion, and both measures of time management. Jaylen increased his grades slightly, but support, in collaboration with his intervention specialist needs to continue.

There were several limitations present throughout this case. During the initial part of the intervention, it took Jaylen too long to earn the rewards for organization. Because of this, we decreased the number of points he had to receive to earn a reward about 4 weeks after beginning. In the future, I would prefer to start with a lower goal, then increase it when the student is successful, because the beginning is when students need the highest rate of reinforcement.

Another limitation of this intervention occurred because there extreme inclement weather this year in January and February. There were a significant number of days off of school, or delays, because of snow or sub-zero temperatures. This resulted in missing several sessions with
Jaylen, as the intern was only at the school two days per week. In addition, the teachers also did not consistently initial Jaylen’s planner at this time, which definitely impacted his home contingencies. Once that responsibility moved to his intervention specialist, it became much more consistent and productive for Jaylen.

A final limitation is that I feel this structured intervention may have been successful as a Tier 2 group intervention with Jaylen as a participant. However, because Jaylen’s needs were felt by the team to be so significant, the more intense one-on-one support was determined to be necessary. The one-on-one setting allowed for alterations to the intervention timeline that were critical to Jaylen’s success, such as increasing the time spent on organization and homework completion before moving on to time management. This setting also allowed for a stronger relationship to be formed with the intern school psychologist, which may have been beneficial for Jaylen as he enjoys adult attention but may not receive sufficient positive attention in class.

This case provided me with many valuable experiences in implementing a research based intervention, and using multiple data collection methods to determine progress. In addition, the consultative team for this student was composed of a variety of different individuals, allowing me to grow in my consultative and collaborative skills with parents, teachers, and other school personnel. Overall, while support is on-going, I was able to see how helping Jaylen improve his organization and time management can make a significant impact as he moves to high school and beyond.
References


INCREASING ORGANIZATION AND HOMEWORK COMPLETION


Appendices

A. Organizational Skills Checklist

B. Teacher Initials Checklist

C. Time Management Checklist

D. Evening Schedule

E. Intervention Acceptability Questionnaire
## Organizational Skills Checklist

Enter the date at the top of the column and then go down the checklist and for each item. Write a Y (for yes) if the student meets the criteria fully or an N (for no) if the student does not meet the criteria fully. Follow the directions to determine the percentage for each area.

### Criteria | Date
---|---

### Binder
- The student brought their binder to organization group (if no have student get binder but mark N for criteria #1)
- The assignment notebook is secured by the three-rings
- There are no loose papers or folders in the binder (i.e. all folders are secured by the three-rings and cannot be pulled out without opening the bindings and all papers are either secured by the three-rings or in folders)
- There is a section where the student keeps his/her homework to be done and homework to be handed in
- There is a section for each subject the student is taking in the student’s binder (e.g. Math, Science, English/Reading, Social Studies, etc.)
- For each subject, only that subject’s papers are in that section
- There are no papers that are not school related in the binder (i.e. drawings, scrap paper, notes, etc.)
- Percentage of criterion met for that day (# of Y's ÷ 7)*100

### Bookbag
- The books that are needed to complete the homework for the next day are in the book bag
- There are no books in the book bag that are not needed to complete the homework for the next three days or long-term assignments
- There are no loose objects in the book bag (papers, pencils, pens, toys, etc.)
- Percentage of criteria met (# of Y's)*100

### Lockers/Desks
- The books are neatly stacked (or shelved) with the spines facing out so that the student can easily grab one in between classes or after school
- There are no loose objects (papers, pencils, pens, toys, magazines, etc.)
- There is no unnecessary clothing
- Percentage of criteria met (# of Y's)*100
Appendix B

Teacher Initials Checklist

- The first 5 days of homework recording (shaded section) are for establishing a baseline. Please record the number of classes where the student had anything written down over the total number of core classes.
- Once the counselor/psychologist introduces the expectation that the student receive teacher initials, record the number of teacher signatures received over the number of teacher signatures expected.
- If a student receives 90% or better teacher signatures over a two week period (cumulative) please circle the end date and the student can stop getting teacher initials. The student should continue to record homework and the counselor/psychologist should record assignments written down over the number of core classes.

<table>
<thead>
<tr>
<th>Date</th>
<th>Recorded/Expected</th>
<th>Percentage</th>
<th>Points Earned</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Recorded/Expected</td>
<td>Percentage</td>
<td>Points Earned</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Recorded/Expected</td>
<td>Percentage</td>
<td>Points Earned</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Recorded/Expected</td>
<td>Percentage</td>
<td>Points Earned</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: 0-49% = 0 points, 50-74% = 2 points, 75-89% = 3 points, 90-100% = 5 points*
## Appendix C

### Time Management Checklist

**Time Management Checklist**

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>POINTS</th>
<th>RECORD DATE &amp; CLASS SUBJECT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tests &amp; Quizzes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Student recorded an upcoming test or quiz in his/her agenda book at least one day in advance.</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>2. Student recorded an upcoming test or quiz in his/her agenda book at least one day in advance and recorded specific details about what the test/quiz will cover.</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>3. Criterion 2 is met and the student recorded that he/she is going to study for an upcoming test or quiz on a particular day at least one day in advance (e.g., wrote &quot;study for test&quot;).</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>4. Criterion 3 is met and student recorded the amount of time that he/she is going to study for an upcoming test or quiz at least one day in advance.</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>5. Criterion 3 is met and the student recorded the method that he/she will use to study for an upcoming test or quiz at least one day in advance.</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>6. Criterion 3 is met and the student recorded both the amount of time and method of studying he/she is going to use for an upcoming test or quiz at least one day in advance.</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td><strong>Projects</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Student recorded in his/her agenda book an upcoming project at least one week in advance.</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>8. Student recorded a specific day to work on a long term project at least 1 day in advance of due date. Work on project recorded in &quot;general terms&quot;</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>9. Student recorded a specific day to work on a long term project at least 1 day in advance of due date. Work to be completed is recorded in &quot;specific terms&quot;. e.g., research topic on computer.</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>10. Student broke down an upcoming project into smaller pieces (at least 2 separate tasks) and entered due dates for each task in the planner. For example, the student recorded &quot;complete computer research&quot; on one date and &quot;write rough draft&quot; on a later date in the agenda book.</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td><strong>Evening Scheduling</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Student completed an evening schedule.</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>12. Student recorded a specific amount of study time or homework time on his/her evening schedule.</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>13. Student recorded the specific amount of study or homework time and the study method on his/her evening schedule.</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>
Appendix D

Evening Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4:30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5:30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6:30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7:30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix E

Intervention Acceptability Questionnaire

Purpose: The purpose of this questionnaire is to get feedback concerning your overall satisfaction with the intervention(s) implemented in your classroom.

Directions: Please read the following statements and circle the number (1-6) that best describes your agreement or disagreement with each statement.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Not sure</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I had adequate input in developing the intervention script</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>The intervention script was easy to follow</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I liked the procedures used in this intervention</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>The intervention was easy to include in my daily routine</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I would be willing to use this intervention in the future</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Overall, this intervention was beneficial for the student(s)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Please make any additional comments below:

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
Increasing the Implementation of Multi-Tiered Systems of Support in an Elementary School

The following describes the process of increasing the implementing of multi-tiered systems of support (MTSS) in an urban elementary school. Previously, the school has had varying implementation of MTSS, but it was not implemented in a systematic way. This school year, there were many new staff members at the school, so there was little continuity with previous supports. Due to the school wide impact, on teachers, students, and administrators, this was considered to be a systems-wide case.

Implementing MTSS requires systematic targeted intervention supports. This systems-wide case was focused on implementing stronger Tier 2 supports that were research based, collecting progress monitoring data on critical reading targets, and making data based decisions with that data. Data from previous years at this school are inconsistent but new Ohio legislation requiring students in kindergarten, first, second, and third grade to be screened at the beginning of the year. Based on these screenings, any students considered not on track is required to be on a reading plan and receive intense interventions until they are on track. In addition, any student in third grade that does not pass the Ohio Achievement Test (OAA) will be retained and repeat third grade until they successfully pass. Further implementation of MTSS enables the school to have targeted interventions in place, and support early literacy beginning in kindergarten, not just in 3rd grade.

Utilizing fall benchmark data, the school team targeted students who were considered at risk, to receive addition reading supports. The kindergarten students received teacher-directed adaption of Kindergarten Peer-Assisted Learning Strategies by graduate student tutors three times per week for 30 min. The first and second grade students initially received Paths to Achieving Early Literacy Success three to four times per week for 30 min. Partway through the
year, a decision was made to switch and implement SRA Early Interventions in Reading for both the first and second grade students. The third grade students received intervention based in Orton-Gillingham for 45 min four to five days per week from the school’s reading specialist. Results indicate that students in the majority of grades made improvements from the fall to winter benchmark. While there were limitations, especially because of inconsistency of progress monitoring, overall this systems-wide case was successful at increasing the implementation of multi-tiered systems of support, as seen through meaningful outcomes.

Methods

Participants and Roles

Every student in this urban Preschool-6 elementary building participates in fall, winter, and spring benchmark assessment with the Dynamic Indicators of Basic Early Literacy (DIBELS). The total participating student population was 364 students. There were approximately 50 students per grade. The school also had three autism classrooms, and two multiple disabilities classrooms. 77.7% of the student population are black non-Hispanic, 11.4% of the student population are white non-Hispanic, 6.7% of the student population are multiracial, and 3.4% of the student population are Hispanic. 85.9% are considered economically disadvantaged, and 27.4% of the student population are students with disabilities.

This systems-level case specifically targeted the students in kindergarten through third grade. The fall benchmark assessments were collected by the school psychologist, the intern school psychologist, reading specialist, and graduate student volunteers. The assessment data were analyzed during meetings with the reading specialist, school psychologist, intern school psychologist, and the teachers at each grade level. The students selected for Tier 2 supports were considered below benchmark or well below benchmark for one or more grade level target. Based
on that data, they were formed into intervention groups of 3-5, to receive the strategic supports. The interventions with the kindergarten students were implemented and progress monitored by graduate student tutors, who were trained in their intervention by the school psychology practicum student. The interventions with the first and second grade students were implemented and progress monitored by the paraprofessionals from the first and second grades, and the interventions with the third graders were implemented and progress monitored by the reading specialist. The paraprofessionals were trained in their intervention by the reading specialist. Official and impromptu meetings were held with team members to discuss the students’ progress and make changes to the group interventions throughout the year.

**Setting**

This systems level case took place in an urban elementary school in the Midwest. The school has students from preschool through 6th grade. Each grade has two classes, and there is an additional first and second grade split classroom. The school day lasted from 7:45am to 2:15pm. The district curriculum is Journey’s Common Core, and it is used in all grades. The school utilizes a tiered intervention model, which is primarily implemented through utilizing an Intervention Assistance team. All assessments and progress monitoring measures were administered to students individually in a classroom or in the extended learning areas. Group interventions occurred in the Reading specialist’s classroom or the extended learning areas.

The districts implements positive school culture in each building, which has the goal of creating an environment where teaching and learning can prosper. This school teaches the behavioral expectations across settings, has three positively stated rules that are recited daily (be safe, be respectful, be responsible), and has a token economy, where students receive “eagle dollars” for positive behaviors to spend at a monthly store.
Needs Assessment

The increased implementation of MTSS was considered a need based on the overall low fall benchmark scores across the grades, as well as the increased emphasis on early intervention, and ensuring children are proficient readers by the third grade. Because of new Ohio legislation, any student in 3rd grade who does not pass the Ohio Achievement Test (OAA) will be retained and repeat third grade until they successfully pass. In 2012-2013, 70.3% of third graders at this school were proficient, and is 2011-2012, 70.4% of third graders were proficient. This is compared to the 3rd grade district proficiency average of 75.9% and the 3rd grade state proficiency average of 81.4% in 2012-2013. In addition, growth based on K-3 literacy is going to be reported on the Ohio school report card beginning in the 2014-2014 school year, so there is a targeted focus on this population that previously did not impact the state report card. As research also supports targeting early intervention supports, it was considered critical to increase these early literacy supports. In addition, there were many new staff members at the school, including the school psychologist, principal, and three intervention specialists, so there was little continuity of previous supports. Based on this data, in conjunction with the low fall benchmark data, there was a clear need for increased implementation of MTSS through Tier 2 supports.

Target Variables

While the overall focus of the systems-level case was increasing implementation of MTSS, the outcome variables targeted were student reading outcomes. The target variables for the Tier 2 interventions were letter naming fluency, first sound fluency, phoneme segmentation fluency, nonsense word fluency, and oral reading fluency. Depending on the grade, one or more of these variables were targeted and progress monitored with the increased intervention supports. These were selected based on research that these academic skills are significantly related to
future academic success (Burke et al., 2009; Gillon, 2004; Stage et al., 2001; Stahl & Murray, 2006). In addition, these targets are all components of the Five Big Ideas in Reading: Phonemic Awareness, Alphabetic Principle, Fluency, Comprehension, and Vocabulary (National Reading Panel, 2000). Fluency measures have been shown to be a stronger predictor of future reading ability than accuracy, and are more time efficient so all measures targeted fluency (Ritchey & Speece, 2006). Students who do not master the basic reading skills may struggle later with reading fluency and comprehension because they have not become proficient with the basic reading and decoding skills essential to developing the higher-order skills (Hudson, Isakson, Richman, Lane & Arriaza-Allen, 2011). Through early intervention, future reading problems may be prevented and students will be set back on the track to reading success (Joseph, 2008). Universal screening of all students occurred in September, 2013 and the students selected for the intervention supports were below or well below benchmark on one or more of the targeted variables. The students were progress monitored on the appropriate target variables weekly or biweekly.

**Letter naming fluency.** Letter naming fluency (LNF) is the number of correct letter names identified in one min from an array of numbers on a page with 100 uppercase and lowercase letters. Letter knowledge in kindergarten has been found to be a powerful predictor for reading skills at the end of fourth grade (Burke et al., 2009; Leppänen, Aunola, Niemi, & Nurmi, 2008; Stage et al., 2001). In this assessment, the student is asked to say each letter name on an array, and the number of letters they correctly name in 1 min is the score. This assessment was a target for students in kindergarten through the fall of first grade.

**First sound fluency.** First sound fluency (FSF) is the number of correct initial sounds identified when presented words orally. This is an important part of phonological awareness that
is highly related to reading acquisition and reading achievement (Stahl & Murray, 2006; Yopp, 1988). In this assessment, the student is read a list of words orally and asked to produce the first sound in the word. The number of first sounds correctly identified in 1 min is the students’ score. This assessment was a target for students in the fall and winter of kindergarten.

**Phoneme segmentation fluency.** Phoneme segmentation fluency (PSF) in the number of correct phonemes the student segments when presented words orally. This assessment is a brief measure of phonemic awareness, which is awareness that spoken words are made up of individual sounds or phonemes (Good & Kaminski, 2011). Research has found that phonemic awareness is highly predictive of success in learning to read (Gillon, 2004; Stahl & Murray, 2006). In addition, effective instruction in phonemic awareness can lead to significant improvements in reading achievement (Ehri, 2004; National Reading Panel, 2000). In this assessment, the student is told a word and asked to say each of the sounds in the word, and the number of correct segments made in one min is the score. This assessment was a target for students in kindergarten and in the fall of first grade.

**Nonsense word fluency.** Nonsense word fluency (NWF) is the number of correct letter sounds read from an array of nonsense words, correct letter sounds (NWF-CLS), and the correct whole words read (NWF-WWR) (eg. nim). NWF targets the alphabetic principle and basic phonics through letter-sound correspondence. Letter sound knowledge in kindergarten has been shown to significantly predict students’ growth in first grade oral reading fluency scores and future reading ability (Stage et al., 2001). In addition, development of the alphabetic principle is critical for decoding unknown words (Adams, 1990; Ehri, 2002). The overall goal of this measure is to promote the reading of unfamiliar words as whole words and not merely individual letter sounds. The student is presented a page of nonsense words, generally consonant-vowel-
consonant, and asked to read as many sounds or whole words as they can. The scores reported for NWF are correct letter sounds, the number of correct letter sounds read in 1 min, and whole words read, the number of correct nonsense words read. This assessment was a target for students beginning in the winter of kindergarten and through the in the fall of second grade.

**Oral reading fluency.** Oral reading fluency (ORF) is the number of correct words read in One min on a grade level passage. ORF a very strong predictor of overall reading skills, is strongly linked to comprehension, and is one of the five “big ideas” in reading (Jenkins & Jewell, 1993; National Reading Panel, 2000). In addition, research has found that students with poor reading fluency are less likely to understand their reading material (Hawkins, Hale, Sheeley, & Ling, 2011). In this assessment the student is asked to read the grade level passage for one min, and the errors made are tracked. The number of errors is subtracted from the total words read to obtain the number of correct words per min, which is the reported oral reading fluency.

**Progress Monitoring Measures**

Students receiving these Tier 2 interventions were progress monitored on a weekly or bi-weekly basis using the DIBELS measures that aligned with the student’s age and ability (.Dynamic Measurement Group, Inc., 2010) Most students were progress monitored on the assessments at their grade level, however the second and third grade students were monitored on their grade level for oral reading fluency, and also monitored at their ability level. For example, if a second grade student had not met the end of year goal on the first grade level, they would also be monitored alternately on the first grade level until they met the goal, as it would be sensitive to show improvement. When students met the end of year goals, progress monitoring on that measure was discontinued. Baseline measures were the initial fall benchmark assessment data collected, and additional points collected if possible.
Inter-Scorer Agreement

The intern school psychologist trained the graduate students and the paraprofessionals in DIBELS Next assessment procedures (See Appendix A for training PowerPoint). They practiced and had at least 90% reliability prior to beginning the interventions. The reading specialist had already been trained on DIBELS. The graduate students who tutored the kindergarteners were monitored and inter-scorer checks were made in approximately 25% of administration sessions. The paraprofessionals were monitored on occasion to ensure sufficient IOA. Inter-scorer agreement was calculated by dividing the smaller observer score for the measure by the larger observer score for the measure and multiplying this by 100. All inter-scorer checks were above 90%.

Goals

Looking at these supports at a systems wide level, the goal was set to have K-3 benchmarking averages improve or continue to a level above the benchmark targets. Because implementation of MTSS was considered a multi-year process, the systems level goal was also to begin increasing the percentage of students needing solely core curriculum. Based on fall benchmark data, none of the target variables in K-3 had 80% of the students at the Tier 1 level. In a true multi-tiered system, the majority of students should be at the core support level, so the goal this year was to see progress made through increasing the number of students at Tier 1. The student’s individual goals for all measures were set at the end of the year DIBELS benchmark (Dynamic Measurement Group, Inc., 2010). The benchmark goals are empirically derived target scores that indicate a level of skill at which the student is 80-90% likely to achieve later reading outcomes when receiving research-based instruction from a core classroom curriculum (Good & Kaminski, 2011). In addition, the third grade students had an additional
goal, to pass the third grade OAA. Because of the Third Grade Reading Guarantee, if they did not meet the passing level on the OAA they would have to repeat at least third grade reading.

**Decision Rules**

Since this was a system-wide initiative, group and individual decision rules were set. If improvement was not seen in student progress as seen by three consecutive data points below the aim line for an individual student, the intervention was intensified or adapted to better help the student or students grow (Hixon, Christ & Bradely-Johnson, 2008). If the students in the group were not making progress by the winter benchmark, the interventions would be adapted or increased to ensure improvements. If adherence was less than 80%, additional steps would be taken to ensure improvement. If a student met or exceeded the goal on a measure three consecutive times, progress monitoring on that measure was discontinued. If a student met the goals on all measures, they would graduate from the additional intervention supports.

**Functional Hypotheses**

Based on the fall benchmark data, it was hypothesized that the students had limited exposure and lacked practice opportunities with the targeted academic skills. The interventions were all targeted to increase practice opportunities and give immediate corrective feedback to acquire these critical literacy skills.

**Accountability Design**

This intervention was set up as an A/B design, where data on the target variables were collected in the baseline phase (A) as well as in the intervention phase (B). In the intervention phases, the students were progress monitored weekly or biweekly on the targeted skills. This design was appropriate in an applied setting and can be used for data-based decision making by teams.
Intervention Procedures

**Baseline.** The previous year, there were some intervention supports in place. It was the first year the building had a reading specialist, so she was able to pull students who were below benchmark in grades 1-3, although it was primarily third grade students. In addition, the previous year was the first year graduate students from the University of Cincinnati school psychology program implemented K-PALS in with students below benchmark in kindergarten.

**Increased implementation of MTSS.** Each grade participated in interventions that targeted the identified area of concern. All interventions utilized explicit instruction, increased practice opportunities, and immediate feedback, all practices shown to increase learning outcomes and help students gain acquisition and fluency (Burns, VanDerHeyden, & Boice, 2007; Daly, Chafouleas & Skinner, 2005; Phillips, Clancy-Menchetti & Lonigan, 2008; Simonsen, Fairbanks, Briesch, Myers & Sugai, 2008). Each program also utilized feedback that was specific, positive, frequent, and immediate, which has been found to increase interventions effectiveness (Daly et al., 2005). In addition, research on early literacy interventions found that direct, explicit instruction in alphabetic and phonics are effective in reducing risk for reading failure, which the kindergarten, first, and second grade interventions utilized (Kamps, Abbott, Greenwood, Wills, Veerkamp, Kaufman, 2008). In addition, teacher directed small groups have been found to be more effective at improving early literacy skills than peer-assisted instruction, so both K-PALS and PALS were teacher directed (Mathes et al., 2003; Slavin, Lake, Davis & Madden, 2011).

**Kindergarten Peer-Assisted Literacy Strategies (K-PALS).** All kindergarten students selected initially demonstrated deficits in the area of phonemic awareness, so the intervention chosen targets this. K-PALS was adapted to be used in a small group tutor led session with
kindergarten students (Mathes, Torgesen & Clancy-Menchetti, 2004). When used in classrooms as a peer-assisted instruction, K-PALS has been found to improve early literacy skills in kindergarten students and students with disabilities (Fuchs, Fuchs, Al Otaiba, Thompson, Yen, McMaster, Svenson, & Yang, 2001; Rafdal, McMaster, McConnell, Fuchs & Fuchs, 2011). Following scripted instructions, tutors directed the students through a series of literacy games that targeted letter identification, phonological awareness, phonemic awareness, and letter-sound correspondence. The students participated in this intervention, led by graduate students, three days a week for 30 min each day beginning in October.

**Teacher Directed- Paths to Achieving Early Literacy Success (PALS).** The targeted first and second grade students initially demonstrated deficits in the areas of phonemic awareness, the alphabetic principle, and fluency, which were targeted by PALS (Mathes, Allor, Allen, Torgesen, 2001). PALS has been found to improve the reading achievement with students struggling significantly, as both a peer-assisted and teacher-directed strategy (Mathes et al., 2003; Mathes et al., 2001; National Reading Panel, 2000). Following scripted instructions, the paraprofessionals directed the students through a series of literacy games that targeted phonemic awareness and word recognition, while focusing on fluency development, vocabulary development, and comprehension. The students participated in this intervention, led by paraprofessionals, three to four days a week for 30 min each day beginning in November.

**SRA-Early Interventions in Reading.** After the winter benchmark, due to some concerns with adherence of PALS implementation, and the overall improvement in targeted skills with the first and second graders, the intervention was switched to SRA-Early Interventions in Reading (Mathes & Torgesen, 2012). This is a Tier 2 program that utilizes scripted, direct instruction that to address phonemic awareness, letter-sound correspondences,
word recognition and spelling, fluency, and comprehension. It utilizes all the components of strong academic interventions. This intervention was used with small groups of students in first and second grade beginning after the winter benchmark. It also began being used in the first grade classrooms at the teacher’s station after the winter benchmark.

**Orton-Gillingham.** The third grade student demonstrated deficits in the areas of fluency and comprehension based on the fall benchmark. The supports put in place by the reading specialist targeted both fluency and comprehension as well as vocabulary, using a multisensory Orton-Gillingham method. This method has been found to be successful in supporting students with reading difficulties, and was implemented to give students increased practice opportunities, immediate feedback, and explicit instruction (Joshi, Dahlgren & Boulware-Gooden, 2002; Ritchey & Goeke, 2006). Because of the Third Grade Reading Guarantee, all elementary schools in the district were able to hire a reading specialist beginning the previous year. However, they were there to work solely with the third grade students, and help them pass the OAA. Thus, the students targeted by the reading specialist were based on the fall benchmark, beginning in September. However, when the results of the third grade fall reading OAA were released in November, the reading specialist was required to target the specific students who had not passed the OAA, even if their fall benchmark data had not indicated they needed support. The students participated in this intervention, led by the reading specialist five days a week for 45 min each day beginning in September.

**Adherence Data**

In order to ensure that the interventions were being implemented as intended, several adherence checks were conducted over the course of the year. Since all programs used were scripted, adherence was collected by going through the programs with the groups. If the
Interventions were not being implemented as intended, problem solving occurred to ensure the interventions were understood and carried out correctly. All intervention sessions that were observed had sufficient adherence. However, in December, the paraprofessionals in the first and second grade said they had only been able to pull their small groups 2-3 times each week, instead of 3-4 times, because of changing classroom schedules and insufficient support from their teacher. When the decision was made to switch to the SRA intervention, the team discussed the importance of the students consistently receiving 3 days each week of the group at a minimum, and how critical it was for the students at risk to receive this additional practice. Adherence of progress monitoring was seen through permanent product from the progress monitoring booklets. The paraprofessionals who implemented supports in first and second grade were very inconsistent with their progress monitoring assessments, making it challenging to use the data collected to make data-based decisions. When adherence was less than 80%, consultation and discussion with individuals and teams occurred to problem solve how it could be increased.

**Social Validity**

Social validity of these supports can be seen in the increased implementation of MTSS, and the students increase in critical reading targets by the spring benchmark. Due to portfolio time constraints, the spring benchmark data has not yet been collected. The target variables were chosen based on the research linking them to future academic success, so social validity can be seen in the students’ progress towards the goals, and decreased future risk for the students. Intervention acceptability was assessed ongoing throughout the school year, and will be discussed with the team more formally at the end of the year, to determine what modifications will be made for the following year and set goals to improve supports. Frequent formal and
informal meetings were held to address any concerns that arose and to discuss the students’ progress.

Results

Benchmark data of graphed literacy variables, and the percentage of students at each level of DIBELS support during each benchmarking period are displayed in Figures 1 through 14 below. The only variables graphed were those that were screened in both fall and winter, although other variables were monitored, and used to determine progress.

Figure 1 demonstrates the average score of students in kindergarten on FSF at each benchmark period. It also indicates the benchmark goals and the Tier 2 cutoff for fall and winter. The mean in the fall was just above the Tier 2 cutoff scores. With core support and Tier 2 support, the mean in winter rose significantly to above the winter benchmark target. This indicates a rate of growth that is above what is expected from the fall to winter benchmark, showing the core support and Tier 2 support were successful at accelerating the students’ growth.
Figure 1. Mean FSF score for kindergarten during each benchmarking period, benchmark goals, and Tier 2 cutoffs.

Figure 2 demonstrates the percentage of students requiring intensive, strategic, or core support based on their FSF scores at each benchmark period for all students in kindergarten. The percentage of students at the intensive level decreased significantly, from the fall to winter benchmark periods in kindergarten, while the percentage of students at the core levels significantly increased. There was a slight increase in the percentage of students requiring strategic supports from fall to winter. This data indicates significant progress was made in increasing the number of students at Tier 1, and that the intervention supports were extremely successful.

Figure 2. Percentage of kindergarten students requiring intensive, strategic, or core support based on benchmark FSF scores.
Figure 3 demonstrates the average score of students in first grade on NWF-CLS at each benchmark period. It also indicates the benchmark goals and the Tier 2 cutoff for fall and winter. The mean in the fall was just below the benchmark score. With core support and Tier 2 support, the mean in winter rose to just above the winter benchmark target. This indicates a rate of growth that is slightly above what is expected from the fall to winter benchmark, demonstrating that the core support and Tier 2 support were effective at increasing the students’ growth in NWF-CLS. Since data collection for the purposes of this portfolio ceased before spring benchmarking occurred, these data were not reported.

Figure 3. Mean NWF-CLS score for first grade during each benchmarking period, benchmark goals, and Tier 2 cutoffs.

Figure 4 demonstrates the percentage of students requiring intensive, strategic, or core support based on their NWF-CLS scores at each benchmark period for all students in first grade. The percentage of students at the intensive level and the strategic levels decreased slightly, from fall to winter benchmark periods in first grade, while the percentage of students at the core levels
increased. This data indicates some progress was made in increasing the number of students at Tier 1, and that the intervention supports were to some extent successful.

**Figure 4.** Percentage of first grade students requiring intensive, strategic, or core support based on benchmark NWF-CLS scores.

Figure 5 demonstrates the average score of students in first grade on NWF-WWR at each benchmark period. It also indicates the benchmark goals and the Tier 2 cutoff for fall and winter. The mean in the fall was above the benchmark score. With core support and Tier 2 support, the mean in winter rose to even more above the winter benchmark target. This indicates a rate of growth that is higher than what is expected from the fall to winter benchmark, demonstrating that the core support and Tier 2 support were effective at maintaining and increasing the students’ growth. Since data collection for the purposes of this portfolio ceased before spring benchmarking occurred, these data were not reported.
Figure 5. Mean NWF-WWR score for first grade during each benchmarking period, benchmark goals, and Tier 2 cutoffs.

Figure 6 demonstrates the percentage of students requiring intensive, strategic, or core support based on their NWF-WWR scores at each benchmark period for all students in first grade. The Tier 2 cutoff in the fall benchmark was 0 so there were no scores that require intensive supports on this assessment in the fall. The percentage of students at the strategic intervention level decreased significantly, from fall to winter benchmark periods in first grade. Also, even though the percent of students at the intensive level was present in winter, the percentage of students at the core levels significantly increased. This data indicates significant progress was made in increasing the number of students at Tier 1, and that the intervention supports were successful at improving NWF-WWR.
Figure 6. Percentage of first grade students requiring intensive, strategic, or core support based on benchmark NWF-WWR scores.

Figure 7 demonstrates the average correct words per min (cwpm) of students in second grade on ORF at each benchmark period. It also indicates the benchmark goals and the Tier 2 cutoff for fall and winter. The mean in the fall was just above the Tier 2 cutoff. With core support and Tier 2 support, the mean in winter rose to but remained below the winter benchmark. However, visual analysis indicates a rate of growth that is slightly above what is expected from the fall to winter benchmark level, demonstrating that the core support and Tier 2 support were effective at increasing the students’ expected growth. Since data collection for the purposes of this portfolio ceased before spring benchmarking occurred, these data were not reported.
Figure 7. Mean ORF score for second grade during each benchmarking period, benchmark goals, and Tier 2 cutoffs.

Figure 8 demonstrates the percentage of students requiring intensive, strategic, or core support based on their ORF scores at each benchmark period for all students in second grade. The percentage of students at the intensive supports level decreased, from the fall to winter benchmark periods in second grade. The percentage of students at the core levels increased, while the students requiring strategic support stayed about the same. This data indicates that some progress was made in increasing the number of students at Tier 1, and that the intervention supports were somewhat successful at improving ORF.
Figure 8. Percentage of second grade students requiring intensive, strategic, or core support based on benchmark ORF scores.

Figure 9 demonstrates the average percentage of students in second grade on ORF accuracy at each benchmark period. It also indicates the benchmark goals and the Tier 2 cutoff for fall and winter. The mean in the fall was just below the Tier 2 cutoff score. With core support and Tier 2 support, the mean in winter rose to the Tier 2 cutoff. This indicates a rate of growth that is expected from the Tier 2 cutoff in fall to the Tier 2 cutoff in winter, and is not at a sufficient rate to meet the end of year benchmark. This demonstrates that the core support and Tier 2 support were not effective at increasing the students’ growth sufficiently for ORF accuracy and additional supports need to be in place. Since data collection for the purposes of this portfolio ceased before spring benchmarking occurred, these data were not reported.
Figure 9. Mean ORF accuracy percentage for second grade during each benchmarking period, benchmark goals, and Tier 2 cutoffs.

Figure 10 demonstrates the percentage of students requiring intensive, strategic, or core support based on their ORF accuracy scores at each benchmark period for all students in second grade. The percentage of students at the core level of support and intensive level of support increased slightly, from the fall to winter benchmark periods in second grade. The percentage of students requiring strategic support decreased slightly. This data indicates that very little progress was made in increasing the number of students at Tier 1, and that the intervention supports were not very successful at improving ORF accuracy.
Figure 10. Percentage of second grade students requiring intensive, strategic, or core support based on benchmark ORF accuracy scores.

Figure 11 demonstrates the average score of students in third grade on ORF at each benchmark period. It also indicates the benchmark goals and the Tier 2 cutoff for fall and winter. The mean in the fall was just above the Tier 2 cutoff score. With core support and Tier 2 support, the mean in winter rose to above the Tier 2 winter cutoff. Visual analysis indicates a rate of growth that is expected from the fall to the winter benchmark, which is not at a sufficient rate to meet the end of year benchmark because the class average started at the Tier 2 cutoff. This demonstrates that the core support and Tier 2 support were not effective at increasing the students’ growth sufficiently to meet the fall benchmark for ORF and additional supports need to be in place. Since data collection for the purposes of this portfolio ceased before spring benchmarking occurred, this data were not reported.
Figure 11. Mean ORF score for third grade during each benchmarking period, benchmark goals, and Tier 2 cutoffs.

Figure 12 demonstrates the percentage of students requiring intensive, strategic, or core support based on their ORF scores at each benchmark period for all students in the third grade. The percentage of students at the intensive supports level decreased, from the fall to winter in third grade. The percentage of students at the core levels slightly increased, while the students requiring strategic support increased slightly about the same. This data indicates that very little progress was made in increasing the number of students at Tier 1, and that the intervention supports were not very successful at improving ORF.
**Figure 12.** Percentage of third grade students requiring intensive, strategic, or core support based on benchmark ORF scores.

Figure 13 demonstrates the average percentage of students in third grade on ORF accuracy at each benchmark period. It also indicates the benchmark goals and the Tier 2 cutoff for fall and winter. The mean in the fall was at Tier 2 cutoff percent. With core support and Tier 2 support, the mean in winter rose to just below the benchmark goal. Visual analysis indicates a rate of growth that is higher than what expected from the fall benchmark to the winter benchmark, indicating it may be at a sufficient rate to meet the end of year benchmark. This demonstrates that the core support and Tier 2 support were somewhat effective at increasing the students’ growth sufficiently for ORF accuracy. Since data collection for the purposes of this portfolio ceased before spring benchmarking occurred, these data were not reported.
Figure 13. Mean ORF accuracy percentage for third grade during each benchmarking period, benchmark goals, and Tier 2 cutoffs.

Figure 14 demonstrates the percentage of students requiring intensive, strategic, or core support based on their ORF accuracy scores at each benchmark period for all students in the third grade. The percentage of students at the strategic supports level decreased, from the fall to winter in third grade. The percentage of students requiring both the core level of support and the intensive level of support slightly increased. This data indicates that some progress was made in increasing the number of students at Tier 1, but because the percent of students at Tier 3 also increased, the intervention supports were not very successful at improving ORF.
Figure 14. Percentage of third grade students requiring intensive, strategic, or core support based on benchmark ORF average scores.

Goal attainment scaling (GAS) measures can be seen in Table 1 (where “0” corresponds to no progress towards the goal, “1” indicates progress made towards the goal, and “2” indicates the goal was met).

Table 1

*Goal Attainment Scale for Systems Level Targets*

<table>
<thead>
<tr>
<th>Target</th>
<th>K</th>
<th>1st</th>
<th>2nd</th>
<th>ORF</th>
<th>ORF Accuracy</th>
<th>ORF</th>
<th>ORF Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class Mean</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Increased % requiring Tier 1 supports</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Discussion
Results indicate that increased implementation of multi-tiered systems of support was successful at improving student academic performance in most of the grades targeted. Visual analysis of the data demonstrate that the Tier 2 literacy supports increased the rate of improvement in a majority of grade level scores for the targeted literacy variables. In addition, the Tier 2 reading supports increased the percentage of students that require core supports in the majority of grades.

This case illustrates the importance of universal screening and targeted literacy support in schools. While this school, and the district has implemented varying degrees of MTSS in past years, consistency has been a significant hurdle. This building had a new principal, psychologist, three new interventions specialists and many new teachers and paraprofessional, so many things that had been put in place previously were unknown, or not feasible this year. It was critical to start this year focused on the foundations of MTSS in the early grades, and I think that in coming years it will continue to grow and improve. In addition, since the most of the staff will be returning next year, it would be very helpful for the whole team to meet at the end of this year or beginning of next year and self-evaluate the implementation of MTSS, and determine specific measurable goals to continue improving.

In the future, one main target of MTSS implementation in the building should be a focus on data. While reading benchmarking has been done in previous years, because the district does not have a data management system for this data, it is generally maintained on paper or excel spreadsheets. While it is critical that the school collect reading benchmarks, much of the value is lost because it is not consistently utilized and shared over years. This played a role because last year’s winter and spring benchmarks were never compiled electronically, and were not able to be found this year in their paper form. If we had those, we could compare growth rates between
years for grade levels, as another way to determine effectiveness. In addition, previous year’s data would help in determining movement between tiers, and support or add information to special education decisions.

The lack of data management supports also played a role in monitoring progress with the students who received additional supports this year. While students were progress monitored, in first, second and third grade it was solely on paper, and graphs were drawn on the monitoring booklets. This can be used to look at student’s trend and growth, but does not allow others to access that data, or allow it to be easily compiled and used in the future. In addition, some of the individuals administering the interventions, and responsible for progress monitoring were very inconsistent with it, making it impossible to consistently graph the aggregated group data as I would have liked. Although they were prompted repeatedly, there was very little accountability for consistent progress monitoring, which makes individual decision rules challenging to follow.

In order to fully implement MTSS, progress monitoring needs to be consistent, which is another goal that could be set in future years. More frequent intervention adherence checks, both scheduled and unscheduled, may have been beneficial in improving adherence to the interventions, and in progress monitoring. While each intervention was checked for adherence at least one time, checking in on a more frequent basis, as was done with the kindergarten, may have more thoroughly ensured both adherence to the intervention procedures, and to the number of days implemented weekly.

While results of this systems level case are promising, there are several ways that it can be expanded and intensified to more fully implement MTSS. This case was focused on grades K-3 only, and did not expand to grades 4-6. While there is a tutoring program in place for these students with community volunteers, it is not highly structured, and could be aligned much more
with best practices in academic interventions. Last year was the first year the kindergarten and 3rd grade had systematic Tier 2 supports, so it is promising that these interventions supports were expanded, and can continue to expand. Also, more regularly scheduled data meetings specifically for the purpose of looking at this data would have been beneficial. While the plan was to have monthly data meeting, in practice they happened less frequently and were generally informal. Another component of MTSS that needs to be further implemented is the most intense intervention level. Currently, Tier 3 is generally when a student has been referred to the Intervention Assistance Team, or is receiving special education. This is a teacher or parent referral directed level of support, instead of being driven by data and response to intervention supports at a lower intensity level.

Being part of the team increasing implementation of MTSS in this elementary was an excellent and rewarding experience. This was a great experience in collaborating with many individuals, who have very different knowledge of intervention supports. This also showed me how working at a systems level, especially in further implementing MTSS, may require setting goals that expand over more than one school year. It was very exciting to see that the grade that was most successful when the fall benchmark was collected was the first grade. Last year was the first year the students in kindergarten received small group K-PALS, so their continued progress indicates improvements past kindergarten. This data truly shows the benefits of early intervention support, because the kindergarten and first grade students were able to increase their rate of growth more than the second and third graders, even though third grade supports were the most intense. Through continued collaboration and communication with all members of the intervention team, students at this school can continue improving and achieve even more
academic successful.
References


National Reading Panel. (2000). *Teaching Children to Read: An Evidence-Based Assessment of the Scientific Research Literature on Reading and Its Implications for Reading Instruction*. Washington, DC: National Institute of Child Health and Human Development, National Institutes of Health


Appendix A

DIBELS Training PowerPoint
INCREASING THE IMPLEMENTATION OF MTSS

Scoring Rules

1. Assign one point for each correct sound segment. Students receive 1 point for each correct sound segment of the word.
2. Put a slash (\/) through sound segments pronounced incorrectly.
3. Circle entire words.
4. Leave sound segments that are omitted blank.
5. Write, "\(\)\)" next to any self-corrected sound segments that had been previously dashed.

Letter Naming Fluency (LNF)

<table>
<thead>
<tr>
<th>Basic Early Literacy Skill</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration Time</td>
<td>1 minute</td>
</tr>
<tr>
<td>Administration Schedule</td>
<td>Beginning of kindergarten to beginning of first grade</td>
</tr>
<tr>
<td>Score</td>
<td>Number of letters named correctly in 1 minute</td>
</tr>
<tr>
<td>Wait Rule</td>
<td>If the student does not name a letter within 3 seconds, mark a slash (/) through the letter and say the correct letter name</td>
</tr>
<tr>
<td>Discontinue Rule</td>
<td>No letters named correctly in the first minute</td>
</tr>
</tbody>
</table>

Letter Naming

- Letter naming is not a basic early literacy skill.
- The skill of knowing letter names is not essential to reading outcomes.
- Letter naming is a strong and robust predictor of later reading performance and is used in COGS as an additional indicator of risk.

Letter Naming Fluency (LNF)

- Assessor shows the student the page of letters.
- Student says the names of the letters.
- Score: Number of letters correctly named in 1 minute.
- Video example

Administration Directions

- Put the student copy of the materials in front of the student and say:
  - I am going to show you some letters. I want you to point to each letter and say its name. (Put the page of letters in front of the student.)
  - Begin testing. Start here: point to the first letter at the top of the page. Do this way (move your finger across the first two rows of letters) and say each letter. Put your finger under the first letter (point). Ready, begin.
Score and Scoring Rules

The student receives 1 point for each correct letter named in 1 minute.
1. Leave letters named correctly blank.
2. Slash (/) any letter that the student omits or names incorrectly.
3. Write "X" above any letter that had previously been slashed and was self-corrected within 2 seconds. Count that letter as correct.
4. Draw a line through any row the student skips and do not count that row in scoring.

Nonsense Word Fluency (NWF)

- **Basic Early Literacy Skill**: Alphabetic Principle and Basic Phonics
- **Administration Time**: 1 minute
- **Administration Schedule**: Middle of kindergarten to beginning of second grade

**Score**: Number of correct letter sounds (CLS) and number of whole words read without sounding out (NWF)

- **Wait Rule**: If the student responds sound-by-sound, reads sounds and words, or sounds unit and notes, allow 3 seconds, then provide the correct letter sound.
- **Continue Rule**: No correct letter sounds in the last row

**DIBELS Nonce Word Fluency (NWF)**

- **Assessor**: Shows a page of nonsense words to student. Student reads the words.
- **Scores**:
  - Number of correct letter sounds (CLS) student reads in 1 minute
  - Number of whole words read (NWF) without first being sounded out

**NWF Practice Item**

- **Scoring Rules**:
  1. Underline each letter sound the student says correctly, either in isolation or practiced together with other sounds in the word.
  2. Put a slash (/) over each letter sound read incorrectly.
  3. Leave blank any omitted letter sounds or words. When the student is reading sound-by-sound, leave blank any inserted letter sounds. When the student is reading whole words, slash the underlines to indicate any omitted letter sounds. This does not count as WWR.
  4. Write "X" above any letter sound or word that had been previously slashed and was self-corrected within 2 seconds. Count that letter sound or word as correct. Credit is only given for WWR, when the student reads the whole word completely and correctly the first time, and only reads the word once.
  5. Draw a line through any row the student skips. Do not count the row when scoring.
Scores

- **Correct Letter Sounds (CLS):** the number of letter sounds produced correctly in 1 minute. For example, if the student reads off as [k] for /f/, the score for Correct Letter Sounds is 2. If the student reads off as [k] for /f/, the score is also 2.

- **Discontinued Rule:** the number of make-believe words read correctly as a whole word aloud, first being sounded out. For example, if the student reads off as [k] for /f/, the score is 2 points for G3, and a point for VHI, but if the student reads off as [k] for /f/, the score is 2 points for G3 but 6 points for VHI.

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**DIBELS® Oral Reading Fluency**

- **Basic Early Literacy Skill:**
  - Advanced Phonics and Word Attack Skills
  - Accurate and Fluent Reading of Connected Text

- **Administration Time:**
  - 1 minute plus 1 minute maximum for Retest

- **Administration Schedule:**
  - Made at first grade through end of sixth grade

- **Score:**
  - Median number of words correct per minute, median number of words per minute, and median number of correct words in the Retest

- **Wait Rule:**
  - On DORF, 3 seconds, on Retest, 1st hesitation 3 seconds

- **Discontinued Rule:**
  - If no words are read correctly in the first line, say, **Stop**, record a score of 0, and do not administer Retest.

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**Automaticity (the point) and Speed Reading (NOT the point)**

- **Our goal is to have children comprehend what they are reading.**
  - If a child is struggling with decoding, automaticity is their strategy of what they are reading.

- **Developing automaticity with word recognition will have more attention available for comprehension.**

- **Developing automaticity with word recognition increases a child’s reading aptitude:** increased reading rate is a function of word recognition.

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**DIBELS® Oral Reading Fluency (DORF)**

- **Assessor shows the reading passage to the student. The student reads the passage.**

- **Scores:**
  - The number of words read correctly in 1 minute.
  - The percentage of words read accurately in 1 minute.

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**Directions**

- I would like you to read a story to me. Please do your best reading. If you do not see a word, I will read the word for you. Keep reading until you are done with the story after you finish.

- Begin reading. Put your finger under the first word point. The first word of the passage. Read. Begin.
Directions
During schoolwide assessment, three passages are administered if the student reads 10 or more words correctly on the first passage. When administering the second and third passages, use the following abbreviated directions:

1. Have the student read the directions.
2. Ask the student if they understand the directions.
3. Administer the passage.

Scoring Rules
1. Leave blank any words the student reads correctly.
2. Put a dash (−) through any errors.

Summary
- CISSEL Read provides reliable and valid indicators of the basic early literacy skills.
- Knowing whether or not a school or student is on track for future reading success allows timely and critical changes to instruction to get back on course.
- When given and scored according to standardized procedures, CISSEL Read is a powerful tool for improving reading outcomes.

Dynamic Measurement Group
- Visit this website [https://www.cissec.org](https://www.cissec.org) for information on:
  - Training Opportunities
  - Becoming a CISSEL Read Mentor
  - Research projects
  - Ordering products