

INTERNSHIP YEAR SPECIALIST-  
LEVEL PORTFOLIO

Based on 2010-2011 Training in

SCHOOL PSYCHOLOGY

Alexis Blaxberg

University of Cincinnati

## Table of Contents

Systems Change: School-Wide Implementation of The Olweus Bullying Prevention Program....	3
Tier 1 Academic: Six-Minute Solution in the 3 <sup>rd</sup> Grade.....	17
Tier 1 Behavior: Second Step Violence Prevention Program in the 4 <sup>th</sup> Grade.....	31
Tier 2 Academic: Small Group Reading Comprehension Skills Intervention.....	55
Tier 2 Behavior: Small Group Study Skills Intervention.....	72
Tier 3 Academic: Improving Reading Fluency with Repeated Reading.....	94
Initial Evaluation (Appendix E).....	109
Tier 3 Behavior: Behavior Support for a Student with an Emotional Disturbance in 6 <sup>th</sup> Grade Exhibiting Disruptive and Disrespectful Behaviors.....	117

## Systems Change in a Rural Middle School: The Implementation of the Olweus Bullying Prevention Program

Studies have established that approximately 15% of students are either bullied regularly or are initiators of bullying behavior (Olweus, 1993). The issue of bullying has become more prevalent in society and schools are starting to become more proactive about how to deal with bullying as a whole school approach. This approach is based on the assumption that bullying is a systematic problem. By targeting the entire school, the approach avoids potentially problematic stigmatization of either bullies or victims (Smith, Schneider, Smith, & Ananiadou, 2004). An intern school psychologist was invited to participate in the implementation of a school wide bullying prevention program at a middle school in rural Ohio. As a key consultant, the intern helped organize and initiate the program, as well as, measure and plan for future measuring of the effectiveness and fidelity of the program. The Olweus Bullying Prevention Program was chosen by the school district because it provides a comprehensive school program, including intervention and prevention at many levels.

The Olweus Bullying Prevention Program (Olweus, 1993) is a comprehensive whole-school intervention implemented on a large scale and systematically evaluated through data collection. Bullying is a particularly vicious kind of aggressive behavior distinguished by repeated acts against weaker victims who cannot easily defend themselves (Smith et. al., 2004). Bullying has been conceptualized as a distinct type of aggression characterized by a repeated and systematic abuse of power (Olweus, 1999). Bullying by definition occurs within a social context and is jointly influenced by individual characterization of the child and contextual characteristics of the setting (Cook, Williams, Guera, Kim, & Sadek, 2010).

Bullying has become an increasing problem for all ages, especially during adolescent years. Research shows that bullying increases during the middle school period as children enter adolescence (Cook, Williams, Guerra, Kim, & Sadek, 2010). Some research has been done to characterize bullies and the victims. Victims tend to be socially isolated, lack social skills, and have more anxiety and lower self-esteem than students in general (Olweus, 1997). They also tend to have a higher risk of depression and suicide. Cook, Williams, Guerra, Kim, and Sadek (2010) did a meta-analytic investigation to examine the predictors/factors of bullying and victimization in childhood and adolescence. They found that the typical 'bully' is one who exhibits significant externalizing behavior, has internalizing symptoms, has both social competence and academic challenges, possesses negative attitudes and beliefs about others, has negative self-related cognitions, has trouble resolving problems with others, comes from a family environment characterized by conflict and poor parental monitoring, is more likely to perceive his or her school as having a negative atmosphere, is influenced by negative community factors, and tends to be negatively influenced by his or her peers.

### **Implementation of the Program**

**Participants.** One key component of a successful whole-school intervention is that all members of the school community, including school staff, pupils, and parents, be informed with basic information about what bullying is and how to respond to it (Smith et. al., 2004). As a system wide implementation, everyone in the school and community was considered a participant.

The key consultants for implementation included the intern school psychologist, the building school psychologist, the principal, and several teachers who attended the two day training on Olweus during the summer. The team members got together every Thursday after

school to discuss the key components to successful implementation of the Olweus Bully Prevention Program.

### **School-Wide Implementation**

There are several key components that help to make bullying prevention programs more effective. A successful bullying prevention program must address not only the individual students but also the staff, school environment, and community (Whitted & Dupper, 2005). A school-wide student questionnaire was distributed to students for grades 6 through 8. The Olweus Bullying Questionnaire (OBQ) is a standardized, validated, multiple-choice questionnaire. These surveys were completed by the students to provide a baseline on the extent, severity, and locations of bullying in the school. The survey results not only provided the team with important information about the school atmosphere, it also helped tailor the program to the needs of the school. For instance, by understanding the bullying ‘hotspots’ of the school, the staff was able to increase supervision in those areas. The survey also helped to raise awareness of the bullying patterns between grades and gender.

### **Survey Results**

The diamonds on the graphs represent a national comparison. This database is composed of large and heterogeneous mix of schools within the United States.

Figure 1: Percentage of girls who have been bullied 2-3 times a month

**Graph 3a. Percentage of girls who have been bullied "2-3 times a month" or more (Q4 dichotomized)**

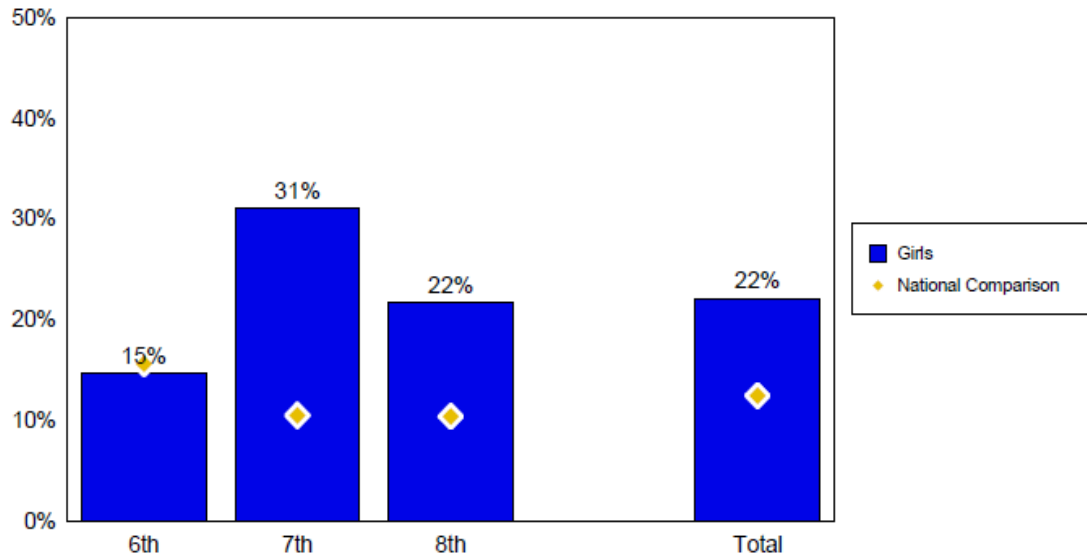
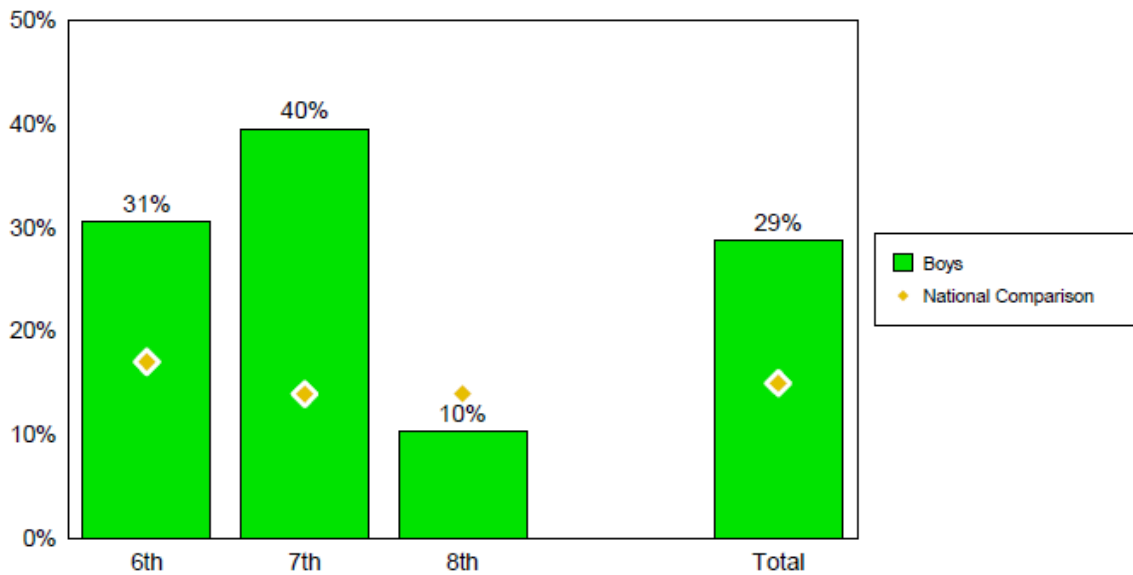


Figure 2: Percentage of Boys being bullied 2-3 times a month

**Graph 3b. Percentage of boys who have been bullied "2-3 times a month" or more (Q4 dichotomized)**



These first two graphs summarize students' responses about being bullied. Results show that 7<sup>th</sup> grade students are being bullied more often than the other grades. Not only are they being bullied at a higher rate than 6<sup>th</sup> and 8<sup>th</sup> graders, they are bullied at a much higher percentage than the national comparison.

Figure 3: Ways of being bullied for boys and girls

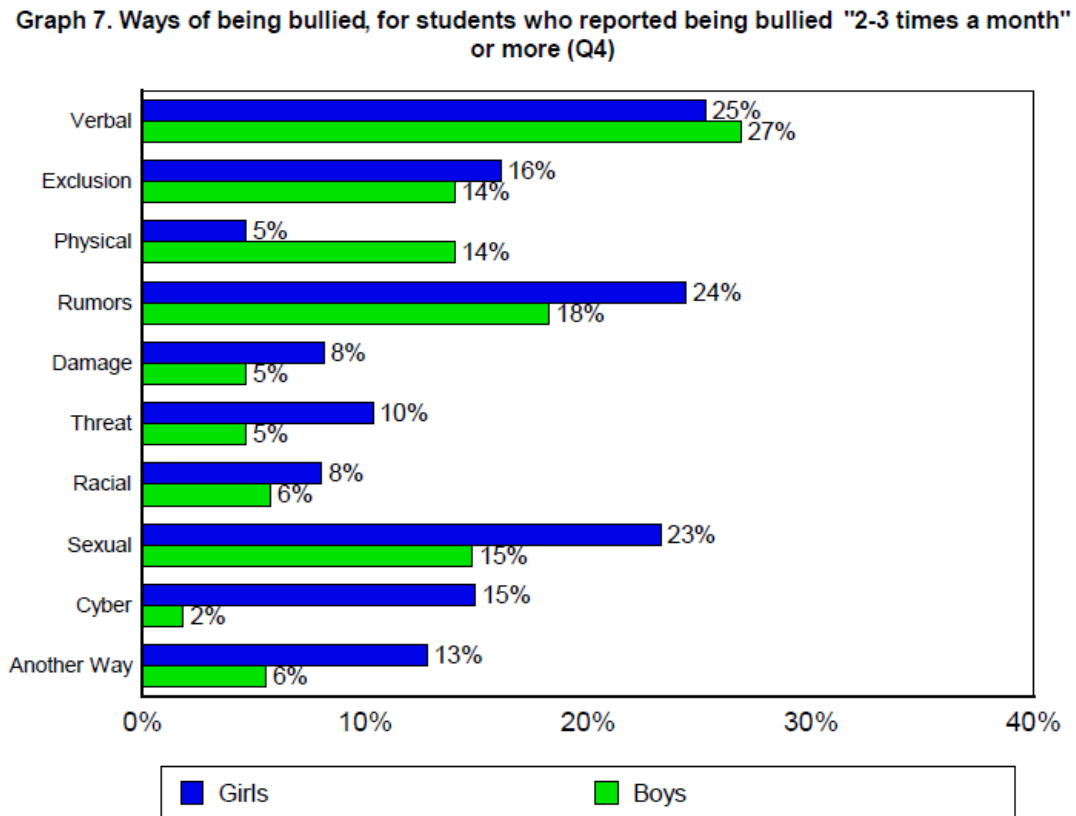


Figure 3 portrays the way students are bullying each other at the school. The top three bullying methods are rumors, sexual comments, and exclusion for both boys and girls.

Figure 4: Hotspots of where bullying has occurred

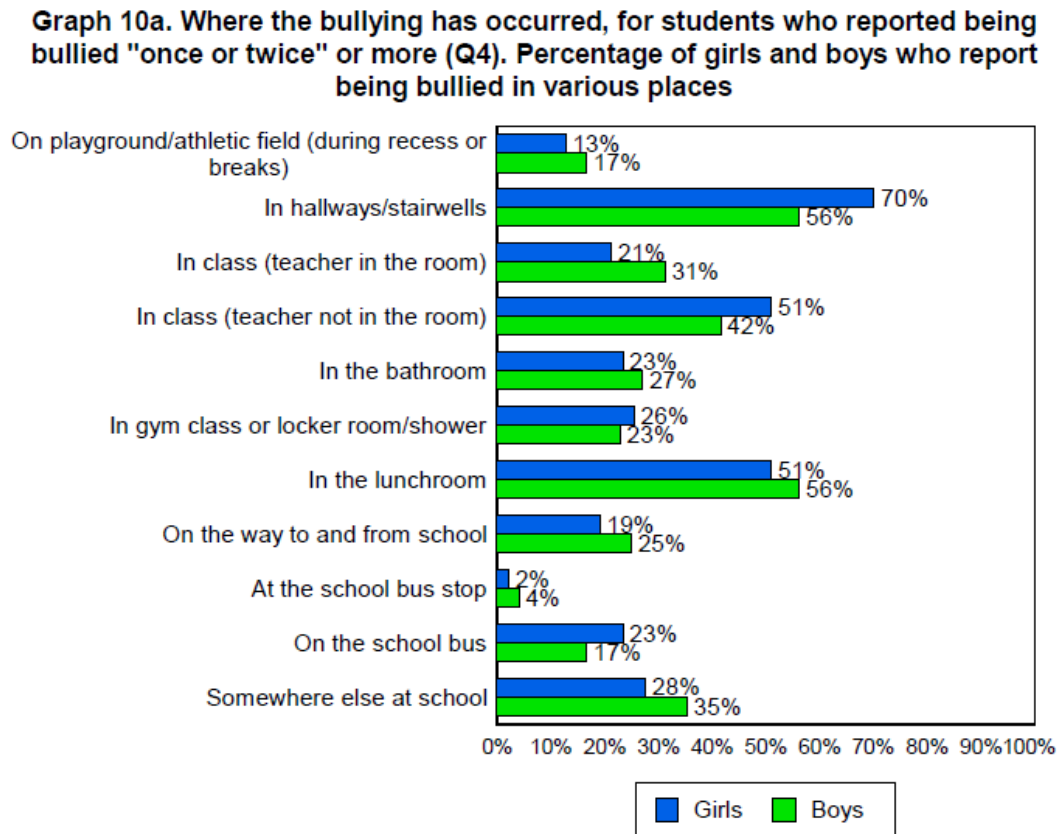


Figure 4 displays the ‘hotspots’ in which bullying occurs most often. In this school, bullying occurs mostly in the hallway/stairwells, in the lunchroom, or in the classroom with the teacher is not looking.



Figure 5: Empathy with Victims

**Graph 13. Empathy with victims. Percentage of students who responded "feel a bit sorry" or "feel sorry and want to help" to Q23: When you see a student your age being bullied at school, what do you feel or think?**

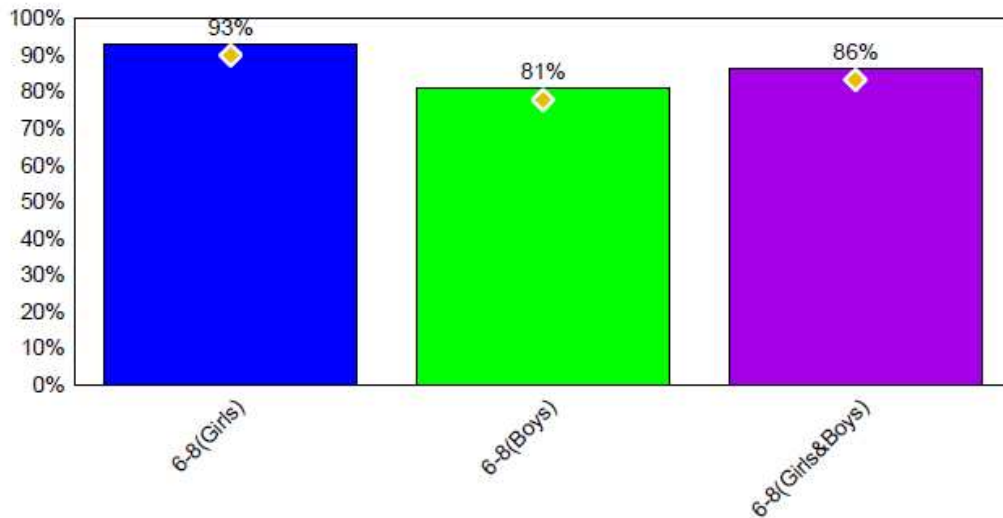


Figure 5 shows that most students in the school and nationally feel sorry and want to help the victims of bullying. This indicates that most students empathize but are unsure how to help. The Olweus program was implemented to help these students learn how they can stop being bystanders and help those who are victims of bullying.

Figure 6: Intervention by teachers or other adults at school

**Graph 15. Interventions by teachers or other adults at school Percentage of students who responded "often" or "almost always" to Q20: How often do the teachers or other adults at school try to put a stop to it when a student is being bullied at school?**

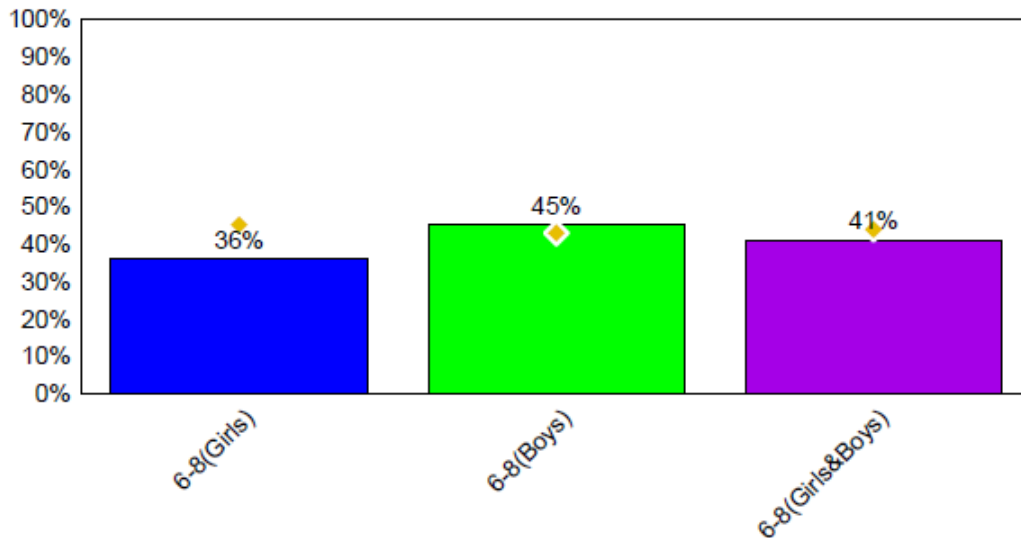


Figure 6 portrays how often students felt that teachers/adults at school tried to put a stop to bullying situations. These numbers are average when compared to the national comparison yet they are all below 50% which indicates a significant weakness in bullying interventions at the school-wide and individual level.

### **Staff Training and Kickoff**

After the surveys were returned, the intern school psychologist analyzed the data (see above graphs). The committee used the information to better tackle bullying related problems. The committee also planned training for teachers and staff to educate them on the Olweus Bullying Prevention Program. One of the most essential components of an effective bullying prevention program is the staff who will be implementing the program. Teachers will be implementing classroom, as well as individual intervention, and they are key agents of change when implementing a bullying prevention program (Hirschstein et al., 2007).

As part of this training, the team developed a new discipline plan and reporting methods to handle bullying behavior. Also the team gathered resources for the teachers, including classroom meeting scripts, reflection worksheets, and intervention ideas. At the training, the team members discussed the key components of Olweus and the intern school psychologist presented the school data in a PowerPoint to demonstrate what was really going on in the school environment. The presentation of the data led to a lot of discussion. The team then discussed and presented the building plan. In order to have consistency and uniformity in how bullying is diffused and redirected, each member of the staff had to model the individual intervention to stop bullying. After the staff training, there was two more short in-service staff trainings planned to review the building plan. After the entire staff was trained and ready to implement the program, a student kickoff event was held. At the kickoff, students were introduced to the Olweus program.

### **Building Plan**

Hirschstein, Van Schoiack Edstrom, Frey, Snell, & Mackenzie (2007) explain that prevention can take place at a school, classroom, or individual level. At the school level, interventions include training staff members and spelling out a school wide anti-bullying plan. At the classroom level, teachers can hold class meetings to teach social skills and establish an anti-bullying environment. At the individual level, bullying incidents are stopped by structured staff intervention. The building plan included school wide interventions such as posters and an anonymous bullying complaint box, classroom interventions such as bullying rules and weekly class meetings. The program also includes step by step interventions for addressing bullying incidents. Bullying incidents were tracked using a bullying incident log. Each teacher was trained on how to log bullying incidents. When students were caught bullying, they were

directed to fill out a 'think sheet' to explain why they acted that way and how it made them feel. Every month, the committee reviewed the incident log to see if there were any repeat offenders.

Bullying prevention programs should also have interventions designed to boost the school climate or culture, along with interventions designed to be used at the classroom level, and to be used to intervene during bullying incidents (Whitted & Dupper, 2005). The teachers created t-shirts to be worn on classroom meeting days and there was a creative writing contest immediately following the kickoff event. Students were advised to write 2 pages on bullying and how it affects their school. The principal chose 2 winners from each grade to take out for lunch.

### **Pre and Post Teacher Survey**

A formal pre and post needs assessment was given to all the teachers after the kickoff. The pre assessment was constructed based on memory. The survey consisted of a Likert-type scaled questions where the respondent had to provide a rating of one to five for each question, with one being strongly disagree and five being strongly agree. The questions targeted the teachers' opinions on the need for a bully prevention program and on the extent and severity of the bullying going on in the school (Appendix). When asked if the school needed a bully prevention program, an average rating of 4.5 was reported both pre and post implementation. When asked if the school needed a bullying prevention program, and average rating of 4.5 was reported before and 3.8 was reported after. These results indicate that the teachers agreed that bullying was a valid concern and that there was a need for a bullying prevention program.

In relation to whether staff felt unsure on how to handle incidents of bullying, an average of 3.2 was reported for before implementation and 4.1 was reported after. When asked if the teachers felt that the students felt comfortable reporting bullying, and average rating of 2.2 was reported for before implementation and an average rating of 3.3 was reported after. These results

show that the staff and the students became more aware and comfortable with dealing with bullying situations after the Olweus program was implemented. The staff responded with an average rating of 3.8 before implementation and 2.6 after when asked whether they would like information on how to address bullying. This indicates that staff members were informed during the staff trainings and during the kickoff event on many of the bullying issues.

This survey also asked respondents how often they witnessed bullying on a daily basis. The majority of respondents reported that they saw bullying occurring more often before the implementation of the program than after.

### **Discussion**

The failure of school change efforts can result from the absence of systemic support from persons in key leadership positions and policy makers. If an initiative is not followed by continuous communication, ongoing training, on-site coaching, and time for implementation, it is not likely to succeed (Hall & Hord, 2001). In order for the Olweus program to be successful, it is extremely important that teachers continuously consult on the bullying interventions developed in the building. This consultation has been shown to increase the level of implementation among teachers and staff (Hirschstein et al., 2007).

One thing to consider with the implementation of the program is the sudden rise of bully reports. There will be a heightened awareness of bully behavior, which may cause students and teachers to more frequently report bullying incidents at school and essentially mask a positive effect of the whole-school program. Another limitation of the program is that results are difficult to justify as an adoption of procedures as the reason bullying has decreased. There may be other factors impacting the school climate and how students are behaving.

Since the program was implemented more than half way through the year it is impossible to determine how successful the program would be for the entire year. It will be extremely important to re-train teachers and do as smaller scale kick off in the beginning of next school year to keep student interest at a high level. This will help to ensure that the interventions are being implemented with fidelity. It will also be important to continuously evaluate the program and stay up to date with the latest research on bullying. With the continued implementation of this program, it is hypothesized that bullying will continue to decrease and the sense of community at the school will continue to increase.

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## Appendix

### Appendix A: Teacher Assessment

#### Pre and Post Teacher Assessment

*When answering these questions, try to think about how you felt 6 months ago compared to how you feel now after receiving the teacher training and having the kickoff for Olweus.*

**1-Strongly Disagree   2- Disagree   3- Neutral   4- Agree   5- Strongly Agree**

**1. Bullying was/is a significant concern**

*6 months ago*

*Today*

**2. The school needed/needs a bullying prevention program**

*6 months ago*

*Today*

**3. I knew/know how to handle a bullying situation**

*6 months ago*

*Today*

**4. Students felt/feel comfortable reporting bully situations**

*6 months ago*

*Today*

**5. I would have liked/I would like more information on bully prevention**

*6 months ago*

*Today*

**6. How often did you/ do you witness bully behavior on a daily bases?**

*6 months ago*

0   1-2   2-5   > 5

*Today*

0   1-2   2-5   > 5

**7. What do you think could have been done differently for the implementation of the Olweus Bullying Prevention Program?**



### Implementation of Six-Minute Solution in the Third Grade

The research literature provides some clear directions on what to do with struggling readers. Interventions must combine modeling, repeated reading, and feedback to be the most effective (Shaywitz, 2003). Several commercial programs have been developed, including Read Naturally (Innot, 2003), the Six Minute Solution (Adams and Brown, 2006), Quick Reads (Heibert, 2002), and the Great Leaps Reading program (Campbell, 1996). Each of these programs includes at least some of the instructional components that have been shown to improve students' reading fluency and has its own approach to student engagement. The Six-Minute Solution is a peer tutoring, reading fluency building intervention for grades 3-8. In same level pairs, students engage in repeated readings of 1-minute non-fiction passages as their partners note the number of words read correctly. It builds reading fluency in only six minutes of the instructional day. An important aspect of this academic intervention is that it can be used class wide or in small groups. This program can benefit good readers as well as struggling readers in the everyday school curriculum.

Six-minute solution uses an instructional model that is based on repeated-reading research and it shares components with peer tutoring and error correction. Students are partnered by similar instructional and fluency levels. Research shows that repeated reading, error correction, and peer tutoring are effective interventions to improve reading fluency. In the 2001–2002 school year, the *Six-Minute Solution* was implemented in two upper-grade classrooms at an elementary school over a three-month period. The *Six-Minute Solution* was implemented in two classrooms: a heterogeneous fourth-grade classroom of 31 students and a combined fourth–fifth grade class. In the fourth-grade classroom, the smallest gain was 18 percent and the largest gain

was 91 percent. The average gain in oral reading fluency for the class was 38 percent (Adams and Brown, 2006).

Repeated Readings (RR), in which students reread a short passage to improve fluency on that passage, is an intervention with well documented effectiveness (Daly et al., 2005). A meta-analysis of RR studies conducted by Therrien (2004) showed that RR can produce gains in both reading fluency and comprehension for a wide variety of students, both with and without disabilities. Gains in fluency were generally greater than gains in comprehension, but gains in both measures were increased when RR was conducted with an adult rather than a peer. These gains have also been shown to transfer to overall reading ability. Based on this meta-analysis, Therrien suggests the essential components of RR include reading aloud, reading to an adult who corrects word errors, and reading until a performance criterion is reached.

Error correction procedures are important so that students practice correct reading rather than errors. Alber-Morgan, Ramp, Anderson, and Martin (2007) found that a RR intervention which incorporated performance feedback and error correction decreased errors for all four middle school students in the study and increased fluency for three. Systematic error correction during oral reading is not enough on its own, however; Nelson, Alber, and Gordy (2004) compared RR with error correction to error correction alone, and found that while both interventions decreased errors, only RR with error correction increased fluency.

## **Methods**

### **Participants & Roles**

Four third grade classrooms decided to implement the intervention as part of their curriculum. The entire third grade participated in this intervention. The intern school

psychologist trained, managed, and progress monitored with the supervision of the school psychologist of the building.

Each third grade classroom was separated into fluency partners and instructional groupings. Fall and Spring DIBELS benchmark data was used to group students appropriately.

Table 1 shows the fluency rate break down for each grade level.

**Table 1:** *Recommended Oral Reading Fluency Rates*

<b>Recommended Oral Reading Fluency Rates</b>	
<b>Grade Level</b>	<b>Suggested Oral Reading Rate (cwpm)</b>
1	40-60
2	50-95
3	80-115
4-5	120-150

### **Setting**

The intervention took place in the third grade social studies classroom in the beginning of class for the four third grade classes.

### **Materials**

One portfolio for each set of reading partners that contains 2 copies of the same practice passage in plastic sleeves, 1 water based ink pen and damp sponge in a plastic bag, and two copies of the fluency record to graph student's words per minute. The teacher used a timer device to time the class for a minute at a time.

### **Collaborative Team Training and Implementation**

The intern school psychologist had to consult with several grade levels to see what teachers were most interested in implementing six-minute solution to their classroom curriculum. Once it was found that the third grade teachers were interested, student partnering was determined for all four classrooms based on fall DIBELS benchmark scores. Several meetings

occurred during teacher planning time to determine the details of training and implementation. It was decided that one teacher would do the intervention for all four classes in her classroom.

This teacher also volunteered to have the training occur in her classroom throughout one entire school day. A training date and schedule was formed allotting 30 minutes of training for each class of students. The intern school psychologist conducted the training in order to model the correct procedures for the intervention.

Implementation of six-minute solution took place the week after training. At first the teachers wanted to do only one day a week to get the students used to it and make the intervention fit efficiently into their instructional class time. After several weeks, the teacher added two more days of implementation. Implementation occurred Monday, Wednesday, and Friday during social studies class for all third graders.

### **Target Variables**

The target variable for this intervention was reading fluency. A commonly used and well researched method for assessing students in reading fluency is curriculum based measurement (CBM). Words correct per minute (WCPM) is a measurement of oral reading fluency used in CBM procedures to also reflect reading comprehension.

### **Assessment Plan**

**Initial assessment and progress monitoring.** Benchmark data was collected on all students at the beginning, middle, and end of the school year using DIBELS.

**Goal setting.** The main goal was to have all students to improve fluency and continue to move up instructional levels.

**Decision rule.** Using the rules from Table 1, a student will go up an instructional level once a student is reading above benchmark for a grade level for three data points.

**Technical adequacy.** The school psychology intern conducted a training session for all four classes. This allowed the intern to model the correct procedures to follow. The teacher was given a script to follow. See Appendix 2 for Six-Minute Solution Procedures.

### **Accountability Plan**

Fall benchmarks for oral reading fluency (ORF), or baseline, were compared to winter benchmark scores for ORF during the intervention phase. Therefore, this intervention represents an A-B case study design for an entire grade.

### **Intervention Procedures**

The first step is to determine students' instructional reading levels. Looking at DIBELS benchmark data helped select the grade level practice passages used for a partnership.

One student reads the passage to his or her partner for one minute while the other student tracks the words read and errors model. The partners then switch roles. Each partner charted their own progress. The teacher used the assessment procedures that are scripted out in the program. See Appendix A for an overview of the Six-Minute Solution procedures.

**Behavioral incentive.** The students were having trouble getting the intervention done in 6 minutes and the intervention was taking up more instructional time than it had intended to (15-25 minutes). The teacher and the school psychology intern made up a behavior incentive for the students in order to get through the intervention under 8 minutes (6 was unrealistic due to several groups of 3). The teacher made classroom graphs to mark how long they took each time and set a goal of under 8 minutes. The teacher added points towards their classroom prize each week. This made it in into a 3<sup>rd</sup> grade competition between classes. Once the behavioral incentive was put into place the students were much more effective with the intervention and it took up less instructional time.

## Social Validity

Social validity was addressed through the collaborative development of the intervention by the team. Social validity was informally assessed throughout the intervention to make sure the teacher and student were satisfied. The intern consulted with the students and teacher weekly to make sure the intervention continued to be helpful and likable.

## Results

### Procedural Adherence

Formal checks of treatment adherence were not conducted. However, the intern would go into the class 2 times a month to observe at least one classroom doing the intervention. The steps to implement 6-minute solution are relatively easy and the guidelines were reviewed by teachers prior to implementation.

### Social Validity Results

No formal assessments were filled out, but the intern talked the teacher on a weekly basis to see how she was feeling about the intervention. The teacher felt like the intervention was simple and good practice for the students. The students found the intervention to be enjoyable. They would express their interest to the intern in the hallway. They also really enjoyed the competition between the other 3<sup>rd</sup> grade classes.

### Fluency

**Table 2:** *Movement and Averages between Tiers of Instructional Levels*

	Fall		Winter	
	Student #	Average WCPM	Student #	Average WCPM
Intensive	16	32.1	13	41.1
Strategic	15	60.8	15	78.2
Core	55	98.6	57	114.5

In Table 2, all 4 classes were looked at as a whole to see the 3<sup>rd</sup> grade average across Fall and Winter benchmark data. The data was broken up into 3 instructional levels; Intensive (T3), Strategic (T2), and Core (T1). The intensive group went from an average of 32.1 wcpm in the Fall to average of 41.1 wcpm in the Winter. The strategic group went from an average of 60.8 wcpm in the Fall to an average of 78.2 in the Winter. The core group went from an average of 98.6 wcpm to an average of 114.5 wcpm. The end of the year benchmark goal for 3<sup>rd</sup> graders is 100 wcpm.

This table also looks at movement of students through the tiered system. As a side note, many of the students in the intensive category have previously been qualified for special education. This table indicates that 3 students moved out of the intensive group and into the strategic group and 2 students moved from the strategic group into the core group.

Figure 1: Oral Reading Fluency Benchmark Class Average

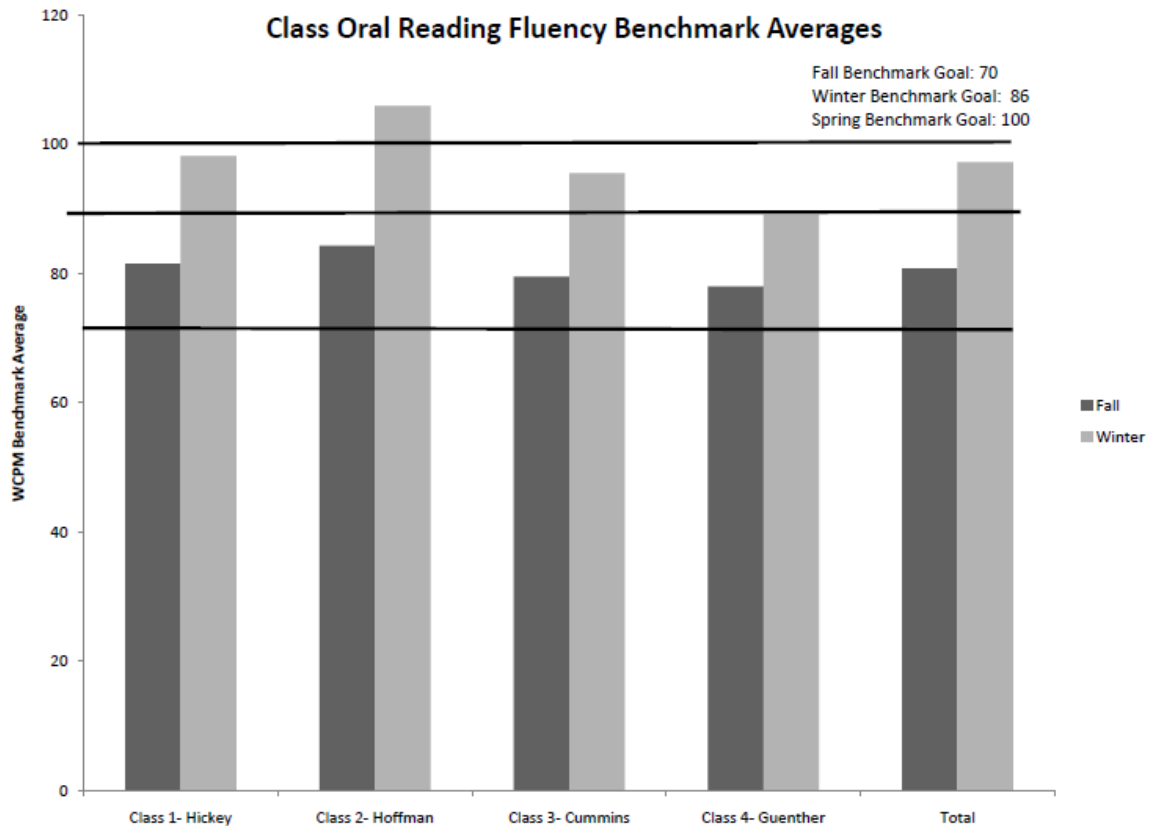


Figure 1 represents the averages of the entire 3<sup>rd</sup> grade. The lines going across represent the 3<sup>rd</sup> grade benchmark goal for Fall, Winter, and Spring. Visual analysis of the graph portrays an increase in wcpm for every class. The class average for all 4 classes met the Fall benchmark goal and the winter benchmark goal. Class 2 has already reached the Spring benchmark goal. It is hypothesized that these averages will continue to increase for the Spring DIBELs assessments.

Figure 2: Oral Reading Fluency Improvement in at All Three Instructional Levels

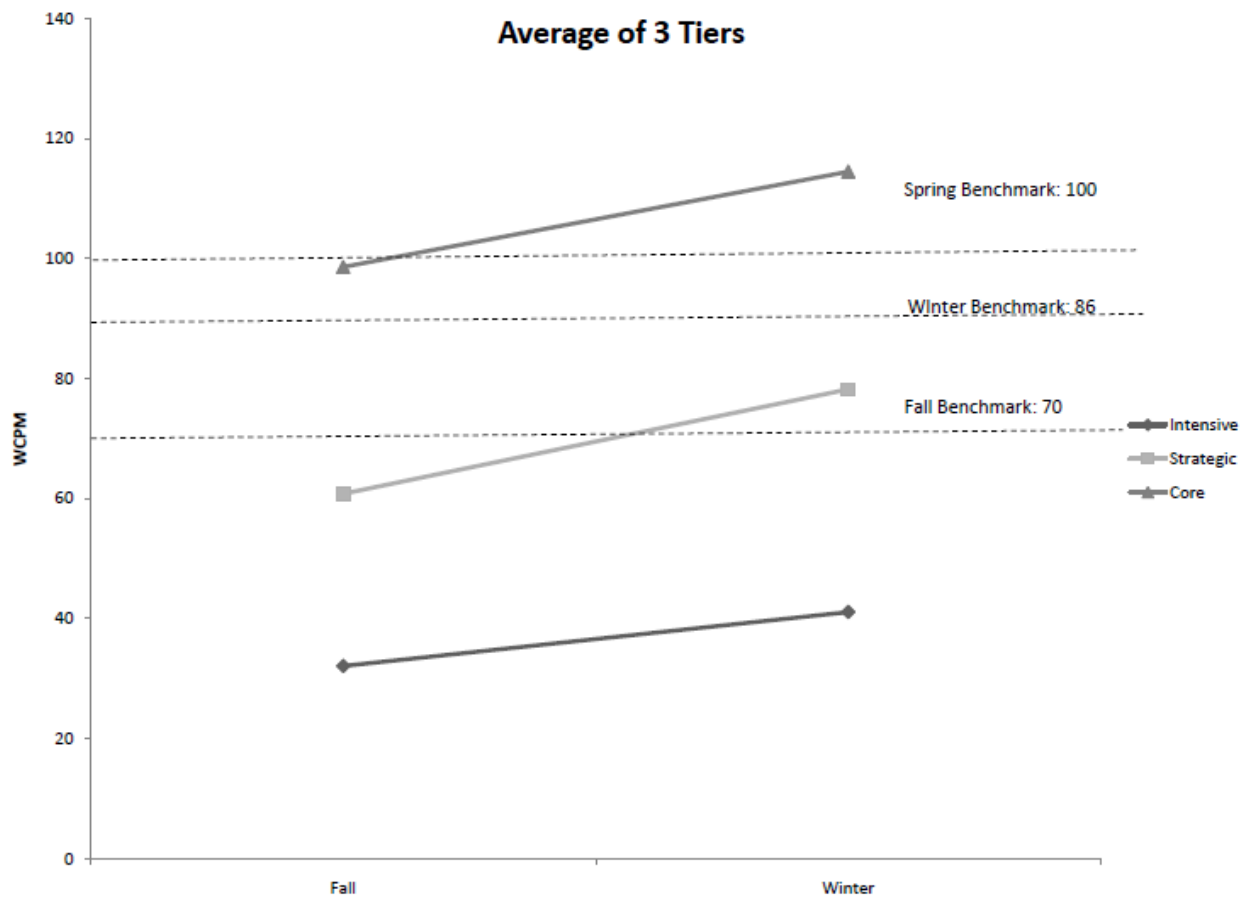


Figure 2 represents the improvement for all three instructional groups. The intensive group went from an average of 32.1 wcpm to an average of 41.1wcpm with an average increase of 1 word per week. The strategic group went from an average of 60.8 wcpm to an average of



78.2 with an average increase of 1.9 words per week. The core group went from an average of 98.6 wcpm to an average of 114.5 wcpm with an average increase of 1.8 words per week.

**Table 3:** *Summary Statistics*

	Average gain in Number of Words per Week	Mean Fall/Winter	Standard Deviation Fall/Winter	Effect Size
Class 1	1.77	79.5/95.5	31.3/30.1	.25 (medium)
Class 2	1.23	77.9/89.0	32.9/37.7	.15 (small)
Class 3	1.85	82/99.7	45.8/39.3	.24 (medium)
Class 4	2.41	84.3/106	28.2/30.5	.34 (medium)
3 <sup>rd</sup> Grade Total	1.81	80.9/97.5	34.8/34.4	.23 (medium)

Table 3 represents the summary statistics for the data. All classrooms but one had a medium size effect size. This may be because classroom 2 has more students in the intensive group that are on IEPs. Looking at the entire 3<sup>rd</sup> grade, there was a medium effect size of .23 where the average went from 80.9 wcpm to an average of 97.5 wcpm. The 3<sup>rd</sup> grade had an average increase of 1.81 numbers of words per week. Research shows that realistic and ambitious standards for weekly growth, respectively, are 1.5 and 2.0 words per week at Grade 2 and 1.0 and 1.5 words per week at Grade 3 (Fuchs & Fuchs, 1993).

### **Discussion**

The current study used evidence-based instructional components to affect the reading fluency of 4 fourth grade classrooms across a total of 6 months. Research supports the fact that students' reading skills improve when they work with peers in structured reading activities (Rosenshine and Meister, 1994). This study produced positive results with a medium effect size of .23 for the 3<sup>rd</sup> grade.

Several limitations should be noted. First, the used of empirical case designs allowed the changes to be described in measures over time, but we were not able to demonstrate a functional relationship between our implementation of the intervention components (repeated practice, error correction, and performance feedback) and the resulting change in reading fluency. Change in reading fluency could be attributed to time and extra practice in class and most students would improve with the daily curriculum in course of three months. 6-minute solution was implemented as a tier 1 intervention to be part of the daily curriculum. Students in the core strategy group may not have benefited from this intervention as much as the strategic group. Students in the intensive group had the lowest effect size in oral reading fluency throughout the year. Grouping 2 students that are significantly below benchmark may not help either student. The intensive group would have benefited more from peer tutoring. A higher lever student can adhere to the error correction phase much better than the intensive or strategic group. It is also important to note that a large percentage of the students placed in the intensive group were previously qualified for special education services of a 504. Someone with a learning disability in reading is not likely to gain as many words per week as a typical student.

Another limitation of this intervention is that it was only done once a week. Only one teacher was implementing it for 4 separate classes, so it would have been unrealistic for the teacher to take 6-10 min of instructional time away from her subject every day or even 3 times a week. This intervention may have been more effective if all 4 teachers implemented the intervention with their home rooms 3-5 times a week.

The intern would have liked to of had all 3 benchmark assessments but unfortunately the Spring DIBELS was scheduled too late in the year to be able to collect the data for this entry. It is hypothesized that all class averages would have met the end of the year benchmark of 100. It

is also hypothesized that several more students would have moved up an instructional level.

Students moving through the instructional levels are a great example of how response to intervention (RTI) works. The DIBELS screenings allow the staff to identify the students in need help. Those students in the intensive and strategic groups not only received tier 1 interventions in their daily curriculum. They were also provided with tier 2 and 3 interventions to address the need to increase their fluency. Through research and this case, 6-minute solution has proven to be an easy to implement and effective intervention for students.

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## Appendix

### Appendix A: *An Overview of the Six-Minute Solution*

<b>An Overview of the Six-Minute Solution</b>		
Time	Materials	Procedures
1 min	Timer, 1 portfolio for each set of partners that contains: <ul style="list-style-type: none"> <li>• 2 copies of the practice passage</li> <li>• 1 water based ink pen and a damp sponge</li> <li>• 2 copies of the Fluency Graph</li> </ul>	<ol style="list-style-type: none"> <li>1. Announce that the fluency timings are to begin</li> <li>2. Partners retrieve their portfolios</li> <li>3. Partners record the date on the fluency graphs</li> </ol>
1 min		<ol style="list-style-type: none"> <li>1. Set the timer for 1 minute and say “Begin”</li> <li>2. Partner 1 reads first until the timer sounds. Partner 2 marks errors and marks the stopping point</li> </ol>
1 min		<ol style="list-style-type: none"> <li>1. Partner 2 tells partner 1 how many words were read and how many errors were made and follows the error correction procedure</li> <li>2. Partner 1 records the numbers on the fluency graph</li> <li>3. Partner 2 wipes off the practice passage</li> </ol>
1 min		<ol style="list-style-type: none"> <li>1. Set the timer for 1 minute and say “Begin”</li> <li>2. Partner 2 reads first until the timer sounds. Partner 1 marks errors and marks the stopping point</li> </ol>
1 min		<ol style="list-style-type: none"> <li>1. Partner 1 tells partner 2 how many words were read and how many errors were made and follows the error correction procedure</li> <li>2. Partner 2 records the numbers on the fluency graph Partner 1 wipes off the practice passage</li> </ol>
1 min		<ol style="list-style-type: none"> <li>1. Students return their portfolios</li> </ol>

## Implementation of the Second Step Violence Prevention Program in Two Fourth Grade Classrooms

Larson, Smith, & Furlong (2002) state that when considering school violence prevention, school psychologists should intervene in a proactive manner with all students, so that negative developmental outcomes may be offset. This entry describes a tier one intervention for behavior among two fourth grade classrooms in a rural elementary school. The program's curriculum, Second Step (Beland, 1992), was chosen because it is research-based and it matched school needs.

Second Step is a classroom-based program grounded in social learning theory (Bandura, 1986). It has been found to improve children's social competence and to decrease levels of physical aggression and antisocial behaviors (Grossman et.al., 1997). It emphasizes the importance of observation, self-reflection, performance, and reinforcement in the acquisition and maintenance of behavioral repertoires. The Second Step curriculum teaches competence in empathy, social problem solving, and impulse control skills to help prevent psychosocial problems and reduce specific problem behaviors such as fighting and aggression. Research shows that competency in these areas buffers students from risks such as delinquency, school dropout, substance abuse, and criminal behavior (Leff et al., 2001).

The Second Step curriculum has 30 lessons that last 35 minutes. Lessons are typically taught twice a week in a classroom setting. At the elementary level, the lessons are structured around large black-and-white photo cards depicting various social-emotional situations. Lessons consist of class discussions, role-plays, modeling, corrective feedback, and contingent positive reinforcement. Parent letters can be designed to be sent home after every lesson or at the end of each unit.

Since the development of the program, there have been several findings of positive effects in research. Results of an experimental pre-post test study (Grossman et al., 1997) with 790 primarily white second and third grade students indicated that physical aggression decreased from autumn to spring among students who received the program. He also determined that when compared to students in the control condition, Second Step participants were observed to exhibit less physical aggression and more neutral/pro-social behaviors in the lunchroom and on the playground. Moreover, treatment effects were largely maintained over a 6-month period.

Taub (2001) did a study with a primarily rural, poor population to assess the effectiveness of the intervention. Third through fifth grade children who received the Second Step program were rated by teachers as more socially competent and less antisocial relative to those children who did not receive the program. Independent behavioral observations also showed improvements in some pro-social behaviors, such as engaging appropriately with peers. Observations did not find the same improvement in anti-social behaviors at the intervention school.

An elementary school decided to implement the Second Step Violence Prevention Program in the fourth grade. Two classrooms participated once a week. Observations and teacher assessments were collected in an effort to duplicate the positive results found in past evaluations of the program.

## **Method**

### **Participants and Roles**

The intervention took place in an elementary school located in a rural community in Ohio. All fourth grade classrooms were invited to participate and only two teachers accepted the invitation. The 2 classrooms that accepted were also the 2 classrooms with more behavioral



concerns. This reduced the burden on school staff and increased the ease of implementing and evaluating the program. Two fourth grade classrooms and 39 students were participants in this study. The other two classrooms were observed with the same observation code and used as control classrooms to look at as a comparison.

The curriculum was implemented by the school psychologist and the intern school psychologist. The school psychologist and the intern school psychologist were also in charge of program evaluation through behavioral observations, and pre/post test teacher ratings.

### **Target Variables**

Target variables were selected from Second Step research (Taub, 2001) and teacher consultation. Target variables related to the goals of the Second Step program included three social competency or prosocial behaviors: responds to directions from adults, engages appropriately with peers, and follows classroom rules; and two antisocial or negative behaviors: bothers/annoys/distracts other students and fights/argues with peers. Operational definitions were taken from evaluation research of Second Step (Taub, 2001). Another target variable was added by the school psychology intern. Second Step guidelines state that lessons must be used in combination with effective classroom-management practices (Beland, 1992). Therefore the observers also looked at positive and negative classroom-management skills by the teachers. Operational definitions for teacher variables were taken from the Instructional and Caring Contacts (ICC) observation code (Nichols & Barnett, 2005). The ICC is used to screen and monitor effective teaching and managerial strategies in the classroom. All behaviors are operationally defined (see Table 1).

**Table 1***Behavioral Observation Coding Definitions***Table 1****Behavioral Observation Coding Definitions**

Coding Item	Definitions
Engages appropriately with peers	Student talks to, works with, plays with, or otherwise engages with other students in a respectful manner.
Responds to directions from adults in appropriate manner	When any directions are given from in an staff or teachers, the student does what is requested.
Fights/argues with peers	Student physically or verbally fights or argues with one or more peers during the observation period (including hitting, pushing, or shoving).
Follows classroom rules	All classroom rules, as posted on the board, are obeyed for the duration of the observation period.
Bothers/annoys/distracts other students	Student pokes, prods, or verbally distracts other student(s) without fighting or arguing with them.

**Teacher Managerial Behavior**

<i>Positive and Instructions (TMI)</i>	<i>Teacher engages in delivering a verbal reminder to a child engaged in an inappropriate behavior where the reminder includes (1) the teacher using a firm yet pleasant tone of voice, (2) getting the child's attention by making eye contact or saying the child's name and (3) providing one of the following: Replacement behavior, Explanation, Practice, or Choice.</i>
--	--

## Non-Instructional (TMB)

Teacher engages in negative scanning of the classroom or group, or delivers a verbal reprimand (formal scolding) to a child engaged in inappropriate behavior where the interaction does not include providing a child with a verbal explanation of what he/she did that was inappropriate or an appropriate replacement behavior.

## Other Positive Attention (PA)

Adult provides verbal reinforcement such as or specific verbal feedback regarding the appropriateness or desirability of a behavior.

**Assessment Plan**

**Behavioral observations.** An observation code was developed based on the target variables. See Appendix A for observation code. Each child was observed up to two 20-second partial interval recoding. Students were observed back to back and the observation sessions lasted approximately 15-20 minutes. Behavioral observations took place 1-2 times a week over the course of 5 months. The first 4 observations served as a baseline, while all subsequent sessions served as intervention assessments. A sampling plan was developed so that observations took place in all four classrooms across the school day in different settings (instructional and non-instructional. See Table 2 for the sampling plan.

**Table 2***Behavioral Observation Sampling Plan*

Classrooms with a \* indicates that is a classroom receiving the Second Step Intervention

<b>DATE</b>	<b>TEACHER</b>	<b>TIME</b>	<b>SETTING</b>
3/2	Class A*	10:10	Instructional
	Class C	1:05	Instructional
3/4	Class B*	10:10	Instructional
3/9	Class B*	11:04	Recess
3/11	Class C	11:29	Lunch

3/16	Class A*	2:40	Specials
3/23	Class A*	12:10	Instructional
4/6	Class A*	11:04	Lunch
4/8	Class C	11:04	Recess
4/11	Class B*	11:29	Lunch
4/13	Class D	9:15	Instructional
4/9	Class C	2:40	Specials
4/15	Class B*	9:15	Instructional
4/27	Class D	1:05	Instructional

**Pre/Post teacher ratings.** Teacher rating scales were given as another evaluation tool. Teachers responded to questions regarding student ability to identify emotions, communicate feelings, impulsivity, reacting empathetically, utilizing problem-solving strategies, and using calming-down strategies. Teachers were also asked to quantify the number of fights, disruptions, and students bothering other students exhibited in the average school day.

**Discipline Data.** At the end of the intervention the intern and building school psychologist were able to get the discipline data for the entire year from the Discipline Total Detail Report. The report separates students by their homeroom class.

### **Hypothesis**

Based on past research and evaluations of the program, the intervention team hypothesized that the Second Step Violence Prevention Program will be effective in increasing social skills and decreasing antisocial behavior in a rural setting with a high proportion of low SES students and a fairly homogenous, white population.

### **Accountability Plan and Research Design**

Behavior under normal conditions, or baseline, was compared to behavior during the intervention phase. Therefore, this intervention represents an A-B case study design with a comparison group.

### **Intervention Design**

Before starting the intervention, the team sent home a letter to parents describing the program (see Appendix B). Lessons were delivered by the school psychology intern and the building school psychologist once a week. Each session lasted approximately 15-20 minutes in the morning. Students were instructed to sit on the carpet as the group leader sat in a chair in the front. Each session began with a review of the group rules and past lessons learned. The relevant photo cards were shown to the class and the lesson scripts on the reverse side of the cards were followed. Each lesson had different instructional techniques including; discussions, modeling, and role play.

The second step curriculum consisted of three units. Main ideas for units 1, 2, and 3 were as follows: Empathy training, emotion management, and problem solving. Key elements for unit 1 included: Empathy Training, Preferences and Conflicting Feelings, Identifying others' Feelings, Intensions, and Expressing Concerns. Key elements for unit 2 included: Impulse Control, Giving and Receiving Compliments, Problem Solving, Making Conversation, Keeping a Promise, Dealing with Fear, and Taking Responsibility for your Actions. Key elements for unit 3 included: Anger management, Reflection, Dealing with Put-Downs, Dealing with Criticism, and Dealing with Being Left Out. The school psychology intern developed letters to go home to parents at the end of each unit to keep the parents informed on the skills being learned each week. See Appendix C for the letter sent home after unit 1.

### **Treatment Adherence**

Formal checks of treatment adherence were not conducted. However, explicit scripts for each session were provided by Second Step. Each session had 1-2 large pictures for instruction. On the back of each picture, was a step-by-step guide for implementing the session. These guides were reviewed by group leaders prior to implementation.

### **Inter-Observer Agreement**

Inter-observer agreement (IOA) was obtained by comparing the data collected by two observers. A co-observer was present for 26% of the observation sessions. IOA for all target behaviors during behavioral observations utilized the following formulas:

Interval agreement =  $\frac{\text{agreements}}{\text{agreements} + \text{disagreements}}$

Occurrence agreements =  $\frac{\text{agreements of occurrence}}{\text{agreements of occurrence} + \text{disagreements}}$

Non-occurrence =  $\frac{\text{agreements of non-occurrence}}{\text{agreements of non-occurrence} + \text{disagreements}}$

### **Social Validity**

Teacher acceptability was formally assessed on 5/4/11 via questionnaires. On a 1-5 scale, teachers answered questions regarding the effectiveness of the program and procedures and the likelihood of using the program in the future. See questionnaire in Appendix D.

## **Results**

### **Inter-Observer Agreement**

IOA was collected for 4 out of 15 (26%) observations. Total IOA across the observations was 100%.

### **Social Validity**

Table 3 shows the results of the teacher social validity scale. The rating scale was as follows: 1: Strongly disagree, 2, 3, 4, 5, 6: Strongly Agree. Both teachers involved with the intervention returned the social validity scale. Teacher B liked the Second Step program but strongly disagreed with the statement that the program was beneficial for her students.

**Table 3***Social Validity Results*

Questions	Teacher A	Teacher B	Average
I liked the procedures used in Second Step	5	3	4
The Second Step program is a good way to teach social-emotional skills	4	4	4
Overall, Second Step is beneficial for my students	3	1	2
I would be willing to use this intervention in the classroom setting in the future	4	4	4

**Teacher Rating**

Comparisons of pre and post measures indicate some positive results. Most questions show an increase or decrease in the desired direction at post-test. Three of the fifteen questions did not show desired change. The questions were, “Students in my classroom react to others impulsivity”, “Students in my classroom react to others empathetically when appropriate”, and number of times you see “Fights/Argues (students physically or verbally fights or argues with peer, including hitting , pushing, or shoving)”. Complete rating scale results can be seen in Appendix E.

**Discipline Data**

Table 4 shows the number of incidents reported before and after the implementation of Second Step in all four classrooms. It is important to note that one student who had 14 incidents during Baseline in one of the intervention classrooms was switched into a control classroom right before the intervention started. This student’s incident reports were not added in the table below.

**Table 4***Discipline Data*

	Control Classrooms	Intervention Classrooms
Before Intervention	6 Incidents	20 Incidents
During Intervention	3 Incidents	4 Incidents

Both the control group and the intervention group had a significant decrease in incidents on the discipline report. Incidents in the control group decreased by 50%, while incidents in the intervention group decreased by 80%.

**Behavioral Observations**

Four Classrooms were observed two to four times a month. Classroom A and B were receiving the intervention, while, classroom C and D were not. Figures 1-9 show results for the target variables defined earlier. Figures 1-6 looks at student variables and Figures 7-9 looks at teacher managerial variables. Each Figure is a comparison between the classrooms receiving the intervention (SS) and the control classrooms (Control).



Figure 1: On-Task

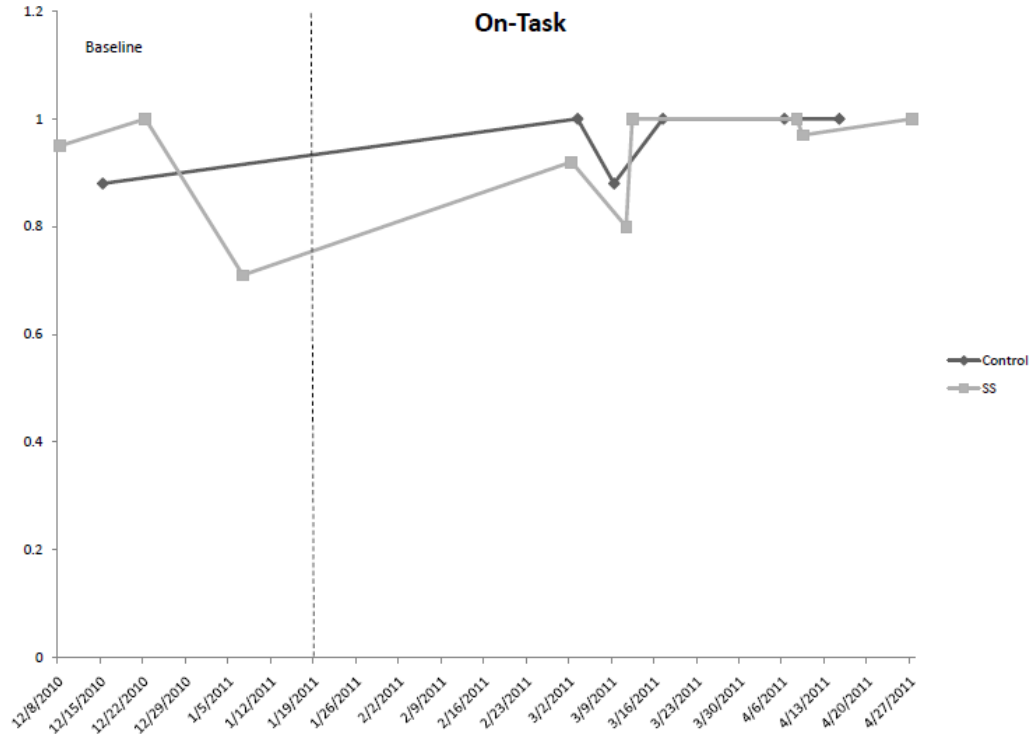


Figure 2: Engages Appropriately

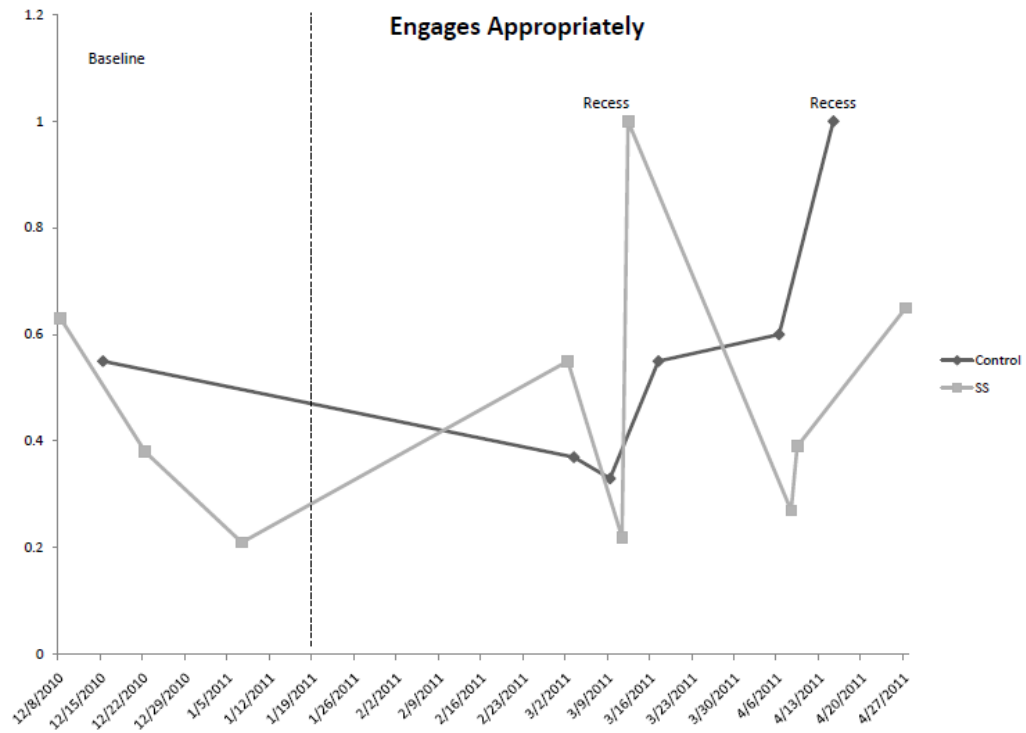


Figure 3: Responds to Directions

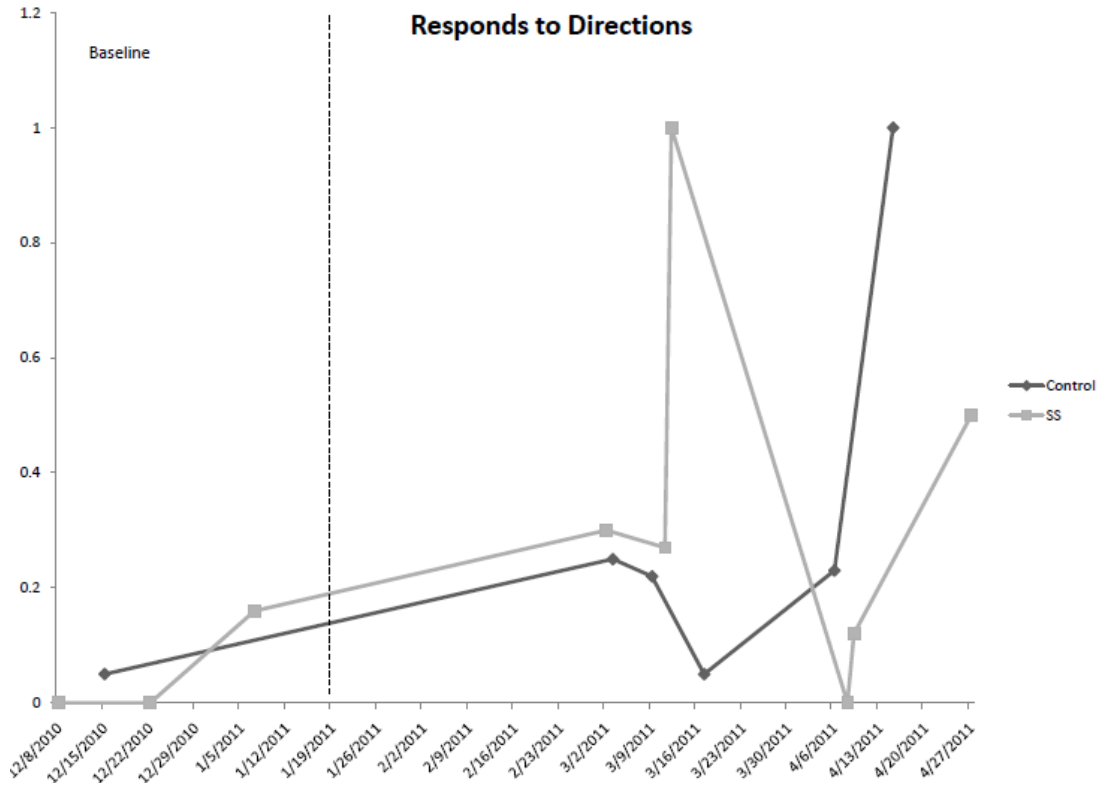


Figure 4: Follows Directions

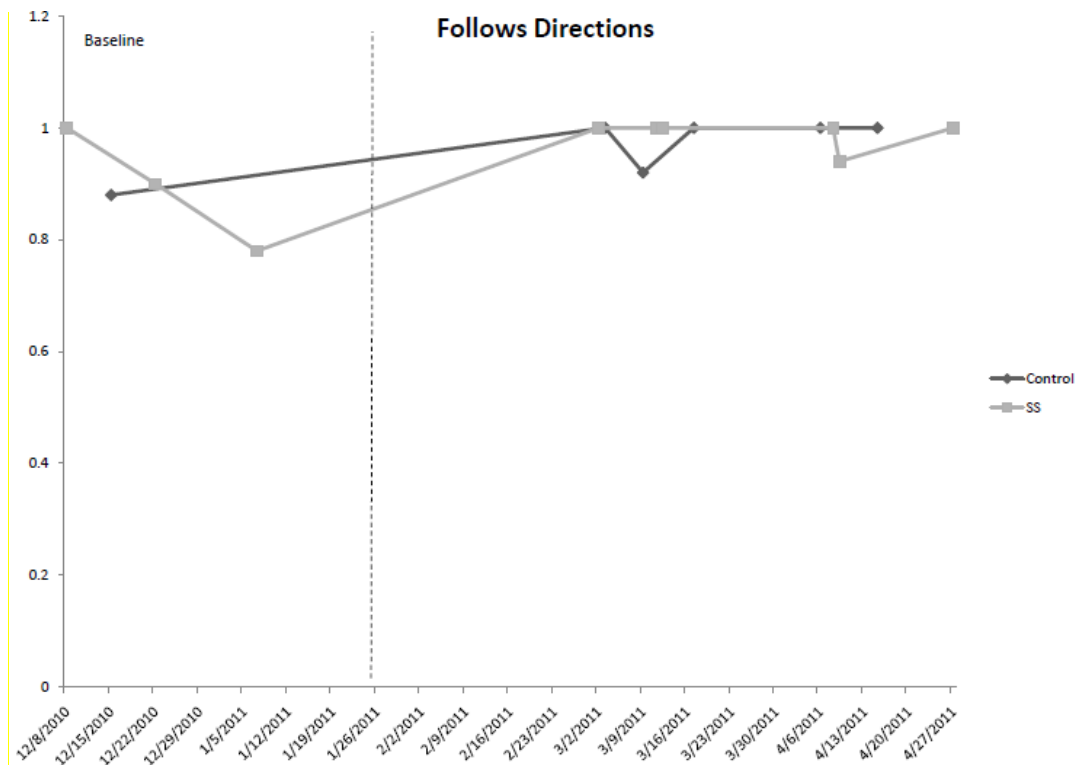


Figure 5: Fights/Argues

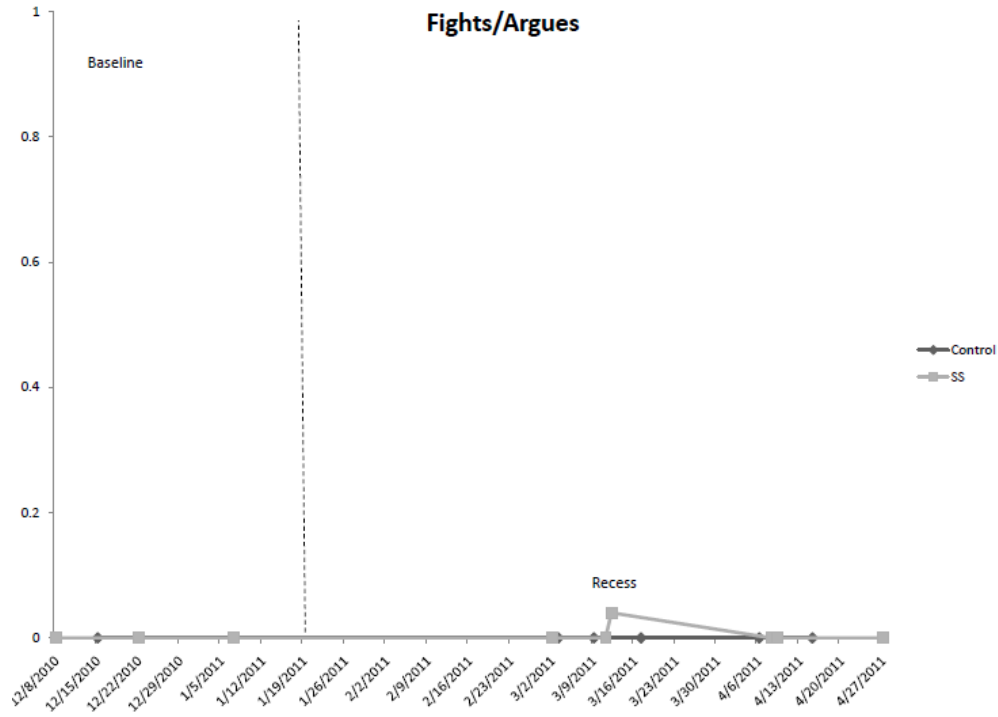
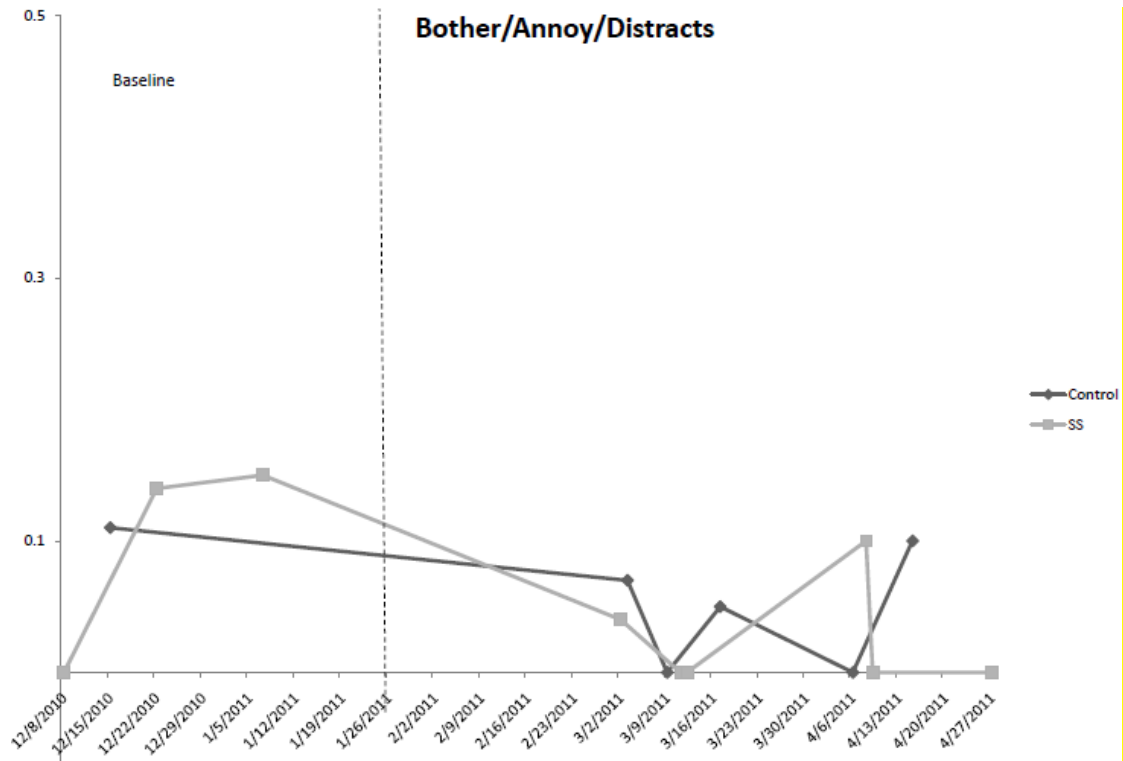


Figure 6: Bother/Annoy/Distracts



The next 3 figures look at teacher managerial skills. Visual analysis of figure 8 indicates that teachers were using more negative managerial skills with the 2 intervention classrooms. However, Figure 9 indicates that all 4 teachers started using more positive reinforcement techniques in the classroom for all classes.

Figure 7: Positive Managerial Skills

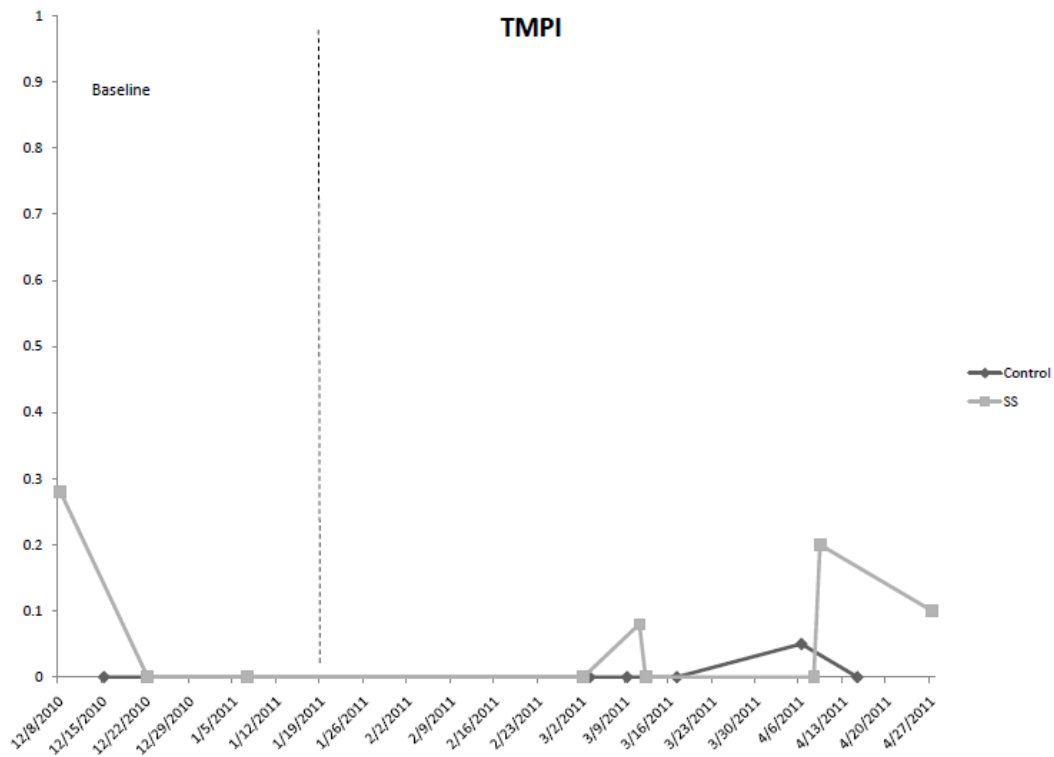


Figure 8: Negative Managerial Skills

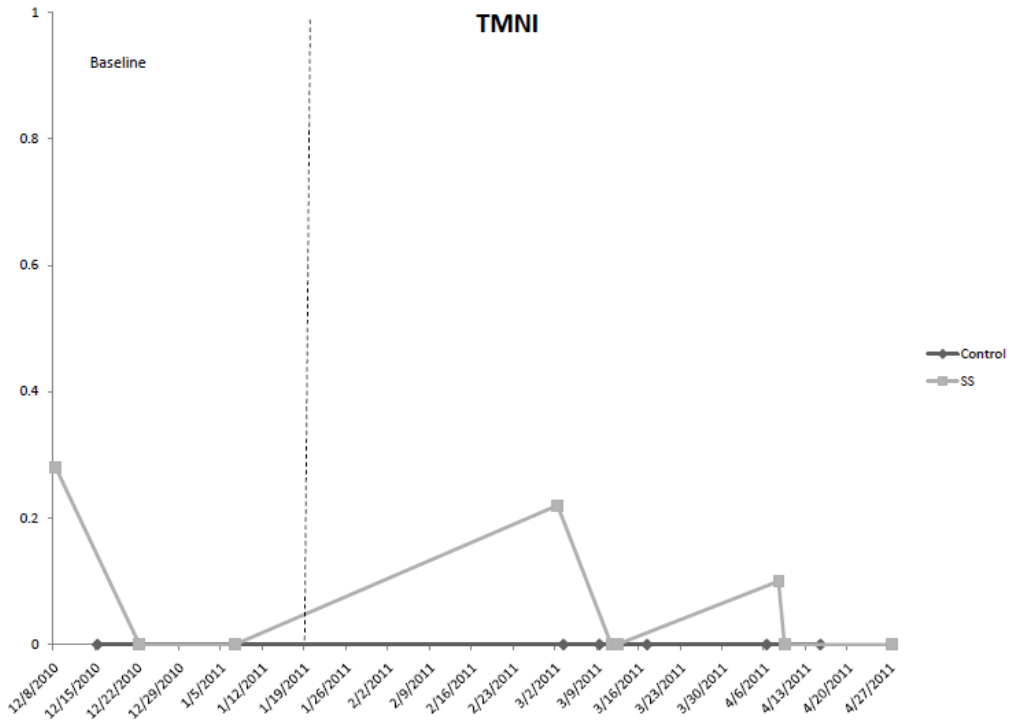
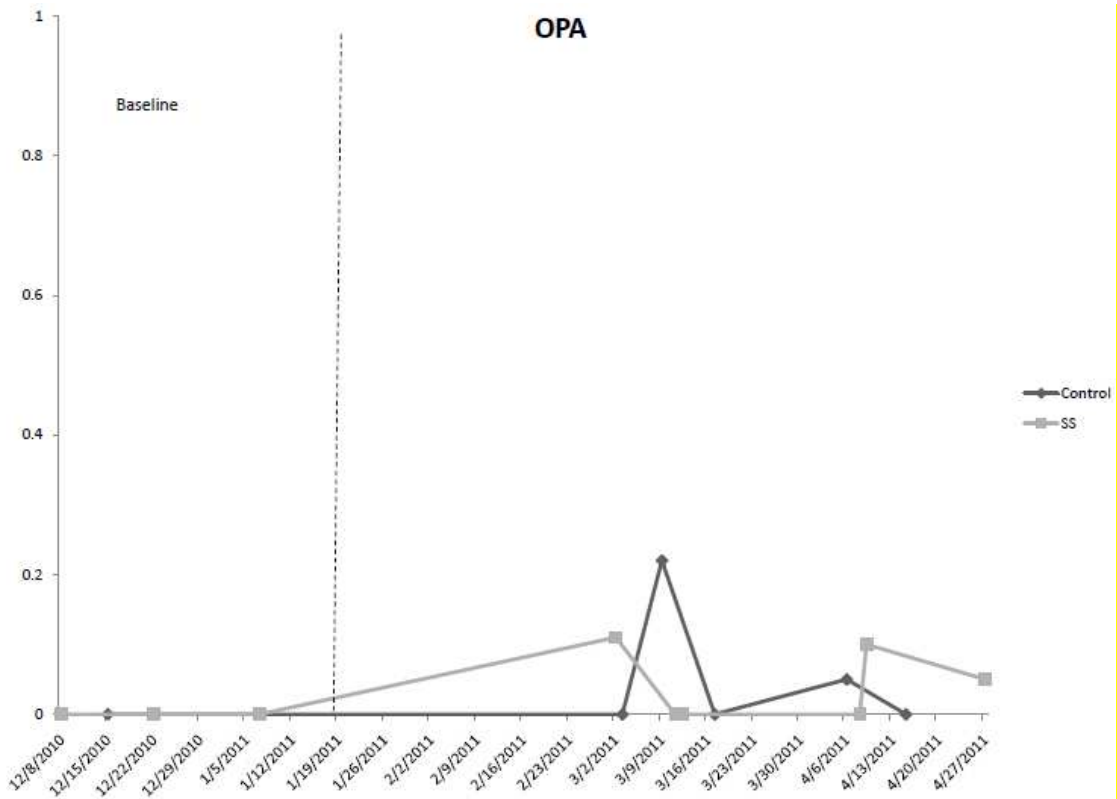


Figure 9: Other Positive Attention



**Table 4***Summary Statistics for Intervention Classrooms*

	On-Task	Engages Appropriately	Respond to Directions	Follows Rules	Fight/Argues	Bother/annoy/distracts	TMPI	TMNI	OPA
# baseline data points	4	4	4	4	4	4	4	4	4
Baseline mean	89	41	5	89	0	10	9	9	0
Baseline SD	15.5	21.1	9.2	11.0	0	8.3	16.1	16.1	0
# intervention data points	6	6	6	6	6	6	6	6	6
Intervention Mean	95	51	37	99	1	2	6	5	4
Intervention SD	7.9	28.8	35.4	2.4	1.6	4.1	8.0	9.0	5.1
Effect size	.23	.19	.52*	.53*	.4	.52*	.12	.15	.48*

**Discussion**

Reducing violence and making a school into a safer environment has been a topic receiving a lot of attention in the schools. Schools are implementing bully prevention programs and violence prevention programs to help teach students appropriate skills for peer interaction and emotional regulation. This evaluation of the Second Step Violence Prevention Program was an effort to ascertain if this researched program would be effective in increasing social skills and decreasing antisocial behaviors in the fourth grade. Results from the social validity questionnaire indicated that the teachers liked the program but they did not think the implementation was beneficial for the students in their class. However, they reported that they liked the program and would use it in the future. Even though the teachers did not think the

program was beneficial, results for the teacher pre and post assessments show desired change in student behaviors. See Appendix E for the pre and post teacher assessment results.

Improvements in an observation code would be recommended for next time. It was difficult to evaluate the classroom based on 1-2 partial intervals on each student per observation. In the Taub (2001) evaluation of this program, students were observed for up to 15 partial intervals per observation. They were able to do this because they had 6 observers, while ours only had 2 observers. In the future it would be a good idea to add in positive scanning of the classroom to get more information from the entire classroom instead of focusing on one student at a time.

Behavioral observations did not line up with teacher ratings and reports of behavior. Many target behaviors were not observed in baseline or during the intervention making it difficult to find any significant results in this study. Visual analysis of the data and summary statistics indicate that some target behaviors were at acceptable percentages during baseline observations. For example, “students arguing/fighting” was a non-issue in both classrooms with a baseline mean of 0%. Future evaluations may want the teacher to help collect data on the low occurring, yet problematic behaviors. The discipline data lined up better with the teacher reports. The discipline data gives a better representation of the behavioral improvements in all classrooms. Both classrooms had a significant decrease of incidents since the start of the program. It is hypothesized that the improvement in all four classrooms is because of generalization of the program. The two teachers participating in the intervention taught the control classrooms on a daily basis.

Another limitation of this evaluation is the experimental design. Even though there were 2 classrooms serving as a control to the intervention, there were too many unstable

characteristics to make them a strong comparison and it was impossible to conclude any causal effects. One characteristic that was unstable was the movement of a 'problem' student. One student who caused the most disruptions in a classroom that was going to receive the intervention was moved to a control classroom immediately after baseline was collected.

It is also important to note that the school in this study started implementing the Olweus Bullying Prevention Program and the Second Step Violence Prevention Program around the same time. Therefore, another cause for instability was that all 4 classrooms were receiving the Olweus classroom meetings once a week. This meant that the control classrooms were receiving an intervention on social skills and positive peer interaction. The intern school psychologist sat in on a few of the Olweus classroom meetings to find that the topics were very similar to what was being discussed in the Second Step classroom meetings.

Results from the behavioral observation data are encouraging despite the limitations discussed above. Based on the observations, the most significant data comes from students responding to directions and students following classroom rules ( $ES = .52$ ;  $ES = .53$ ). Student's bother/annoy/distract also went down significantly with an effect size of  $.52$ . Other Positive Attention went up a significant amount throughout the observations as well ( $ES = .48$ ). Behavior observations show a higher use of negative managerial skills in the two intervention classrooms. This could have affected the results of the study because the guidelines for the Second Step program specify that the lessons must be used in combination with effective classroom-management practices (Beland, 1992). In the future, it may be a good idea to do a teacher training on effective managerial skills before implementing the program.



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**Appendix B: Parent Letter**

Dear Parents,

This is a busy time for children who are learning many new skills in school. They may be reading chapter books, writing stories, or using graphs.

Another area of learning that requires specific skills is social-emotional learning. This is the realm where children learn how to understand and manage their feelings, how to make friends and be a friend, and how to solve social problems. They are learning these things throughout the day in the classroom, on the playground, and at home.

We will be using a curriculum for the fourth grade called the *Second Step* program to help us learn and practice these social-emotional skills. Children who learn and use these skills are more likely to get along with other people and to do better in school.

Families are an important part of this program. You will receive letters about what your child is learning at school and what you can do at home to help him or her understand and practice the new skills. If you have any specific questions feel free to contact one of us at Williamsburg Elementary.

Sincerely,

**Appendix C:** *Unit 1 Letter*

Dear Family:

Our class has started learning about **empathy** and identifying feelings to get along better. Below is a list of skills your child has been learning and in school.

Students will be practicing empathy skills by:

- Identifying their own and others' feelings through looking at faces, recognizing body clues, listening to voices, and watching what is happening.
- Recognizing that people may react differently to different situations.
- Predicting feeling
- Learning the difference between accidents and things done on purpose.
- Sharing feelings
- Understanding and accepting differences in others.

In general, simply listening and talking about feelings helps children be more understanding of others. It also helps create a more positive classroom environment.

Sincerely,

**Appendix D:** *Social Validity Questionnaire*

1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5- strongly agree

1. I liked the procedures used in Second Step \_\_\_\_\_
2. The Second Step program is a good way to teach social-emotional skills \_\_\_\_\_
3. Overall, Second Step is beneficial for my students\_\_\_\_\_
4. I would be willing to use this intervention in the classroom setting in the future\_\_\_\_\_

**Appendix E: Pre and Post Teacher Assessment Results**

**Using the scale below, rate your classroom's behavior/social emotional skills as best you can.**

- 1- Never occurs
- 2- 2-occurs <25% of the time
- 3- 3-occurs <50% of the time
- 4- 4-occurs <75% of the time
- 5- 5-occurs 100% to >75% of the time

Rating Scale Question	Mean Response	
	Pre	Post
Students in my classroom are able to identify emotions correctly using verbal cues	3.75	4.3
Students in my classroom are able to identify emotions correctly using nonverbal cues	3.25	3.3
When upset, students are able to communicate their feelings to me or others	3.25	4
Students in my classroom express their emotions in socially acceptable ways	3.25	3.6
Students in my classroom react to others impulsively	4.25	5
Students in my classroom react to others empathetically when appropriate	2.75	2.3
Students utilize problem-solving strategies when conflicts arise in the classroom	2	3
Students in my classroom are able to engage in perspective taking regarding others' feelings	2	2.6
When upset, students are able to use calming-down strategies	2	3.3
My instruction is interrupted by classroom disruptions	3.5	2
My class is able to follow whole group instructions the first time given	3.5	4
Overall students in my classroom interact with peers appropriately	3.5	4.3

**In an average day how many instances of this behavior do you see?**

Rating Scale Question	Mean Response	
	Pre	Post
Fights/Argues (students physically or verbally fights or argues with peer, including hitting, pushing, or shoving)	1.75	2
Disruptions	6.25	3
Bothering/annoying/distracting (student pokes, prods, or verbally distracts other student without fighting or arguing with them)	5.5	4

### Small Group Reading Comprehension Intervention for Seventh Grade Students

A Midwestern public middle school began implementing a small group intervention for reading comprehension for a group of students who were at grade level reading fluency but did not pass the state achievement test of reading. This led the team to believe that these students had a deficit in reading comprehension. Teachers identified individual children who were in need of extra assistance and referred them to a Tier 2 small group, based on the Buckle Down Book (Buckle Down Ohio Achievement Assessment 4<sup>th</sup> Edition: 6<sup>th</sup> Reading, 2009), that were conducted by an outside volunteer tutor under the supervision of the intern school psychologist.

Dewitz 2003, describes comprehension as occurring when readers can build their own mental model of the text they are reading. The model is a representation in memory of the textual information, its interpretation, and sometimes its significance. Instruction that facilitates developing the skill of comprehension includes direct instruction and reading strategies and guided discussions that help students use these strategies to make inferences. Research has shown that reading fluency deficits multiply over time and impact other areas, including vocabulary growth (Cunningham & Stanovich, 1998), enthusiasm for independent reading, as well as opportunities to practice reading and to develop strategies for understanding the meaning of text (Stanovich, 1986). As a result, additional content areas may be affected as well (e.g., history, geography, literature, economics; Espin & Deno, 1993).

Primary and elementary schools are mainly concerned with reading fluency. Much of the assessment literature available is focused on oral reading fluency, which is frequently assessed by counting the number of words that the student reads correctly in 1 minute (WCPM). Although considerable support exists for WCPM as a predictor of overall reading ability this measure does not identify students who may read fluently but who do not comprehend the text being read

(Marston, 1989). WCPM has been shown to be positively correlated with standardized measures of comprehension. However, researchers have shown that the correlation between reading fluency and comprehension declines as students' reading skills improve beyond fourth grade (Jenkins & Jewell, 1993).

The current intervention was based off a small set of Buckle Down skills deemed most important based on teacher ratings of baseline student performance. These skills were taught using lessons from the Buckle Down book but were practiced with supplemental activities derived from the tutor, intern school psychologist, activities posted on educational websites. The intervention occurred for approximately one half hour a week across 8 weeks, with an orientation, 6 skill lessons, and a closing session.

## **Method**

### **Participants**

The intern school psychologist and supervising school psychologist of the school looked at reading fluency benchmark data from Dynamic Indicators of Basic Early Literacy Skills (DIBELS) WCPM using grade level reading passages and scores from the reading state test. This data helped to select several students that read fluently but did not pass the reading state test. It is hypothesized that if they improve their reading comprehension skills, they will pass the reading state test. The intern school psychologist emailed 9 students that met the criteria for the group and then the teacher nominated five members. Out of the five nominations received, all students were accepted into the group. The five 6th grade participants included four boys and 1 girl.



**Setting**

Group sessions were conducted in the school hallway where study halls were held. The room provided tables, chairs, ample lighting, and plenty of space for 7 people to sit around a table.

**Materials**

The group leaders used materials copied or adapted from the Buckle Down book, printouts created in Microsoft PowerPoint or Word, Intervention Central ([www.interventioncentral.org](http://www.interventioncentral.org)), pencils, highlighters, and plain paper.

**Accountability Plan**

An A-B design was used to evaluate the effects of the reading comprehension intervention. The baseline looked (A) was the student's language arts grades for first quarter and their State Achievement test scores from the 5<sup>th</sup> grade. During the intervention (B), reading comprehension was continually progress monitored with DAZE and grades continued to be monitored.

**Design and Assessment**

The group leaders first conducted a needs assessment to determine which skills should be targeted. The needs assessment consisted of a teacher interview and a review of reading comprehension research. Student skills were assessed using the Daze every other week. Aimsweb Daze-CBM (curriculum based measure) passages were used to collect comprehension data. Daze passages range from 150-400 words in length. The first sentence in each passage is intact and each sentence following the first has every seventh word deleted. The deleted word is replaced with three options. The options are presented in parentheses and the student has to

circle the word that fits best into the sentence. Students were given three minutes to go through as much of the passage as they could.

The group was conducted for 8 weeks. The first week did not include a skill lesson, leaving 7 skills to be covered at one skill per week. These 7 were chosen using teacher recommendation and research on reading comprehension skills. See agenda in Appendix A.

### **Hypotheses**

The fifth grade teacher and the intern school psychologist hypothesized the low test scores in the reading state test reflected inadequate reading comprehension skills; implementation of a small group intervention in reading comprehension skills was intended to remediate these deficits.

### **Procedures**

Each group session was conducted for approximately half an hour during their intervention period around 11am. One session occurred per week. The lessons went over context clues, reading strategies, graphic organizers, inferencing, and understanding informational text. Complete agendas for each session are found in the Appendix A. The first session oriented group members, including introductions, a discussion of group purpose, and the development of group rules. Generally, each skill session involved a group rule review, teaching and practice of the reading comprehension skill according to Buckle Down guidelines, and a supplemental practice activity which usually involved newspaper graphics or articles. Varied activities were chosen to maintain interest and promote generalization. The group leaders felt the students would not complete traditional homework assignments (since they don't usually have homework in their intervention classroom) and instead handed out blank journals to practice vocabulary while they

would read. They could write down words they did not understand and look them up later or discuss them in the group session.

### **Treatment adherence**

The group leaders did not conduct formal procedural adherence checks. However, the Buckle Down book and session agendas provided clear steps to follow for each session.

Furthermore, both group leaders were present for 7 of the 8 sessions, providing a built-in self-check or backup for ensuring that key planned elements were implemented.

### **Social Validity**

During the last session, each student was given a series of questions concerning the group and asked to rate the group sessions. See Appendix B for social validity form.

## **Results**

### **Social Validity**

The student surveys were all returned at the end of the last session and indicated high satisfaction with the group. See Table 1 below for student social validity results.

**Table 1**

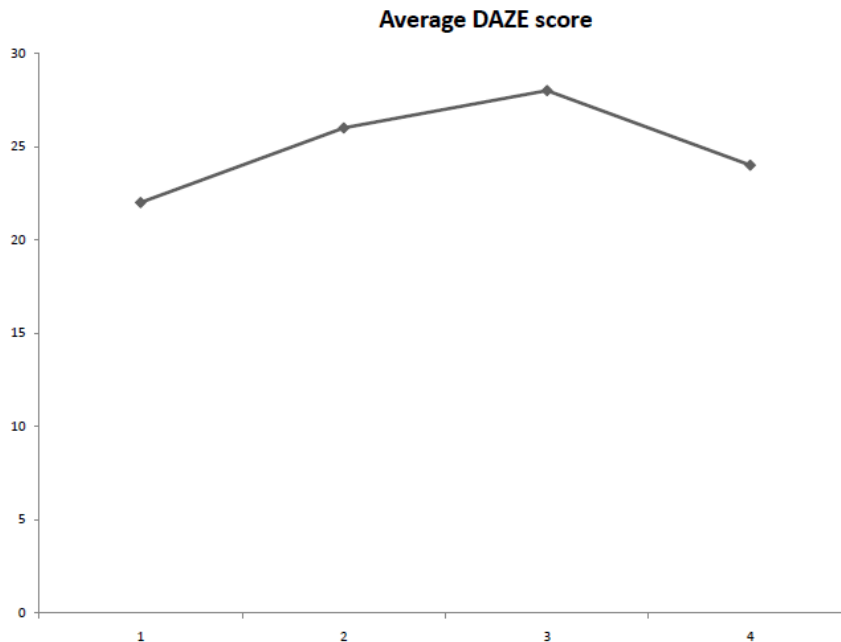
#### *Social Validity Results*

<b>Questions</b>	<b>St 1</b>	<b>St 2</b>	<b>St 3</b>	<b>St 4</b>	<b>St 5</b>	<b>Avg.</b>
<b>I enjoyed coming to group every Monday</b>	5	5	4	4	4	4.4
<b>Miss Blaxberg and Mr. Simpson made the group lessons fun</b>	5	5	5	4	5	4.8
<b>I felt comfortable being an active participant</b>	5	5	4	5	5	4.8
<b>I felt included within the group and during all the discussions</b>	5	5	4	5	5	4.8
<b>I will use the skills I learned from this group in reading and writing</b>	5	5	3	3	4	4
<b>I would like to participate in another group like this to learn more reading comprehension skills</b>	5	5	5	5	5	5

## Target Variables

Students were timed 3 minutes on a DAZE assessment every two weeks as a brief assessment of their reading comprehension skills. Graph 1 shows the average results for the DAZE assessment taken throughout the 8 weeks.

Figure 1: *Average Daze Results*



The benchmark for the DAZE in the 6<sup>th</sup> grade for the end of the year is a score of 21.

The average for all 5 students is above a score of 21 every week. It is difficult to tell if the rise in score is a result of the group training in reading comprehension skills.

Another target variable that was monitored was the student's grades in their language arts class because this is the class where they most likely had to practice reading comprehension skills and apply the knowledge they learned in the group. Spelling tests were excluded from the graphs because they do not deal with the reading comprehension skills learned in the group. A limitation of this progress monitoring tool is that the students had different teachers and different assignments to do and it was difficult to get a uniform measure for progress monitoring. The

next 5 graphs were made to look at individual student's progress throughout the first 3 quarters of school. The graphs are split into Baseline, Intervention, and a maintenance phase. For the maintenance phase, the intern continued collecting grades and would check in with the teacher once every 2-3 weeks to see how the students were doing.

Figure 2: *Student 1 LA Grades*

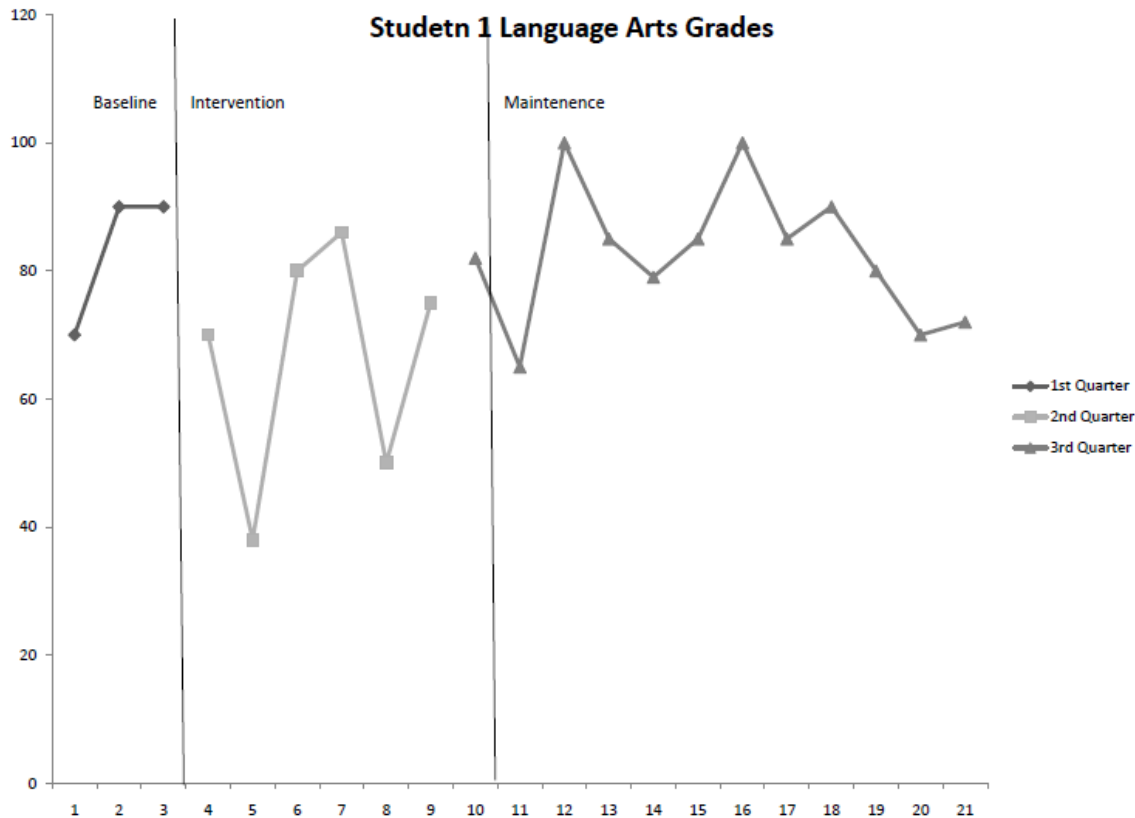
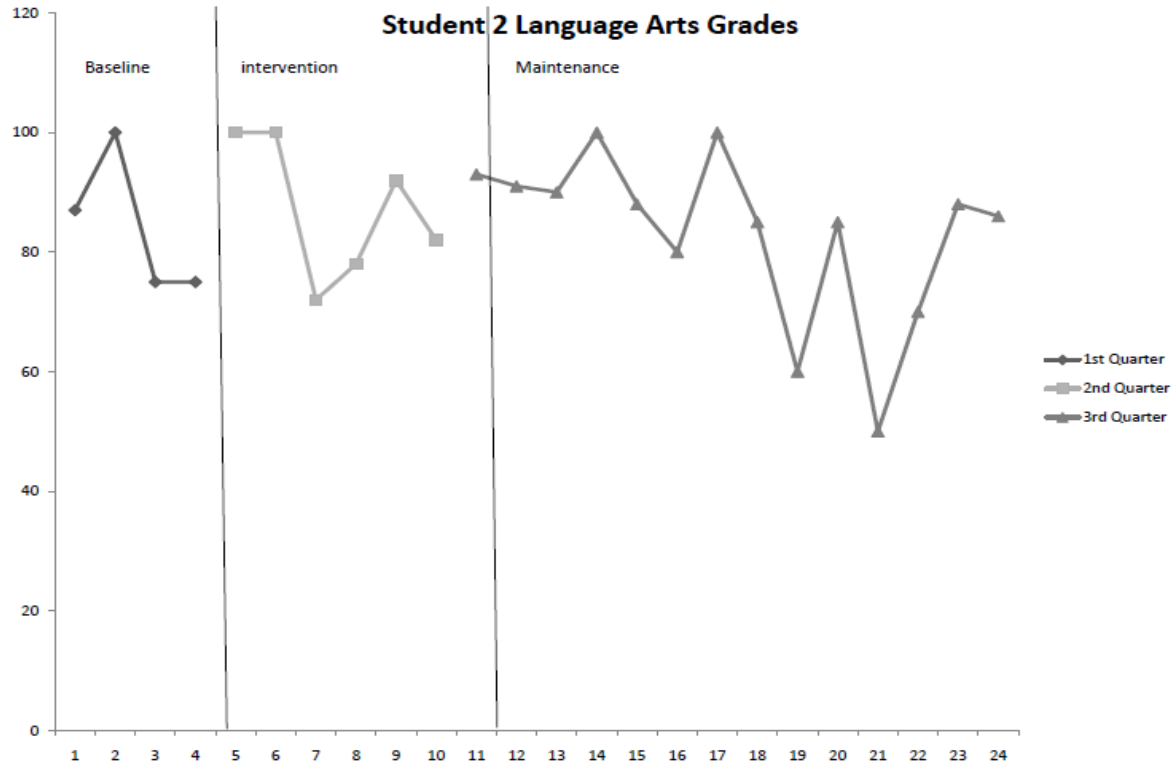
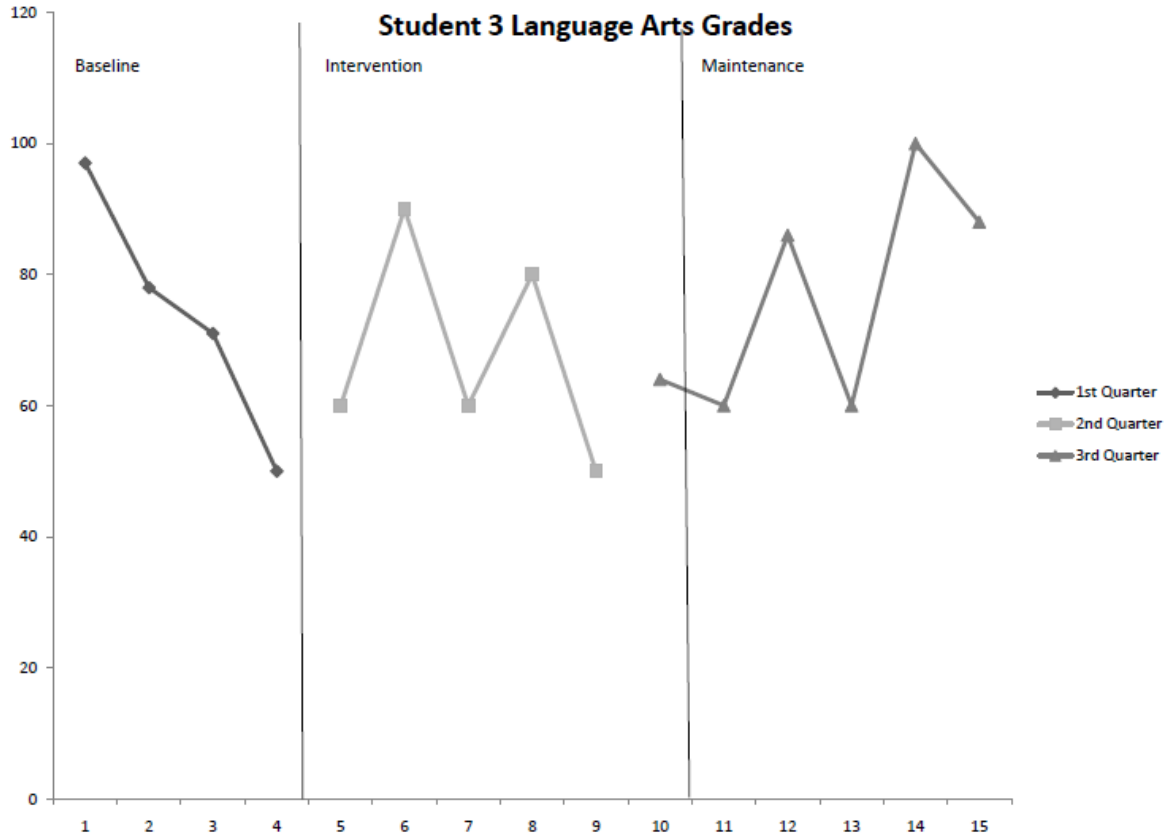


Figure 2 shows the progression of grades for student 1. Student 1 had a decrease in performance from quarter 1 to quarter 2 going from an average of 83.3 to an average of 66.5. Then the student raised their average back up to a low B (82.7). This student's grades dropped during the intervention phase and then went back up during the maintenance phase. It is impossible to figure if the raise in grades during 3<sup>rd</sup> quarter is a function of the skills learned in the reading comprehension group.

Figure 3: *Student 2 Test Grades*

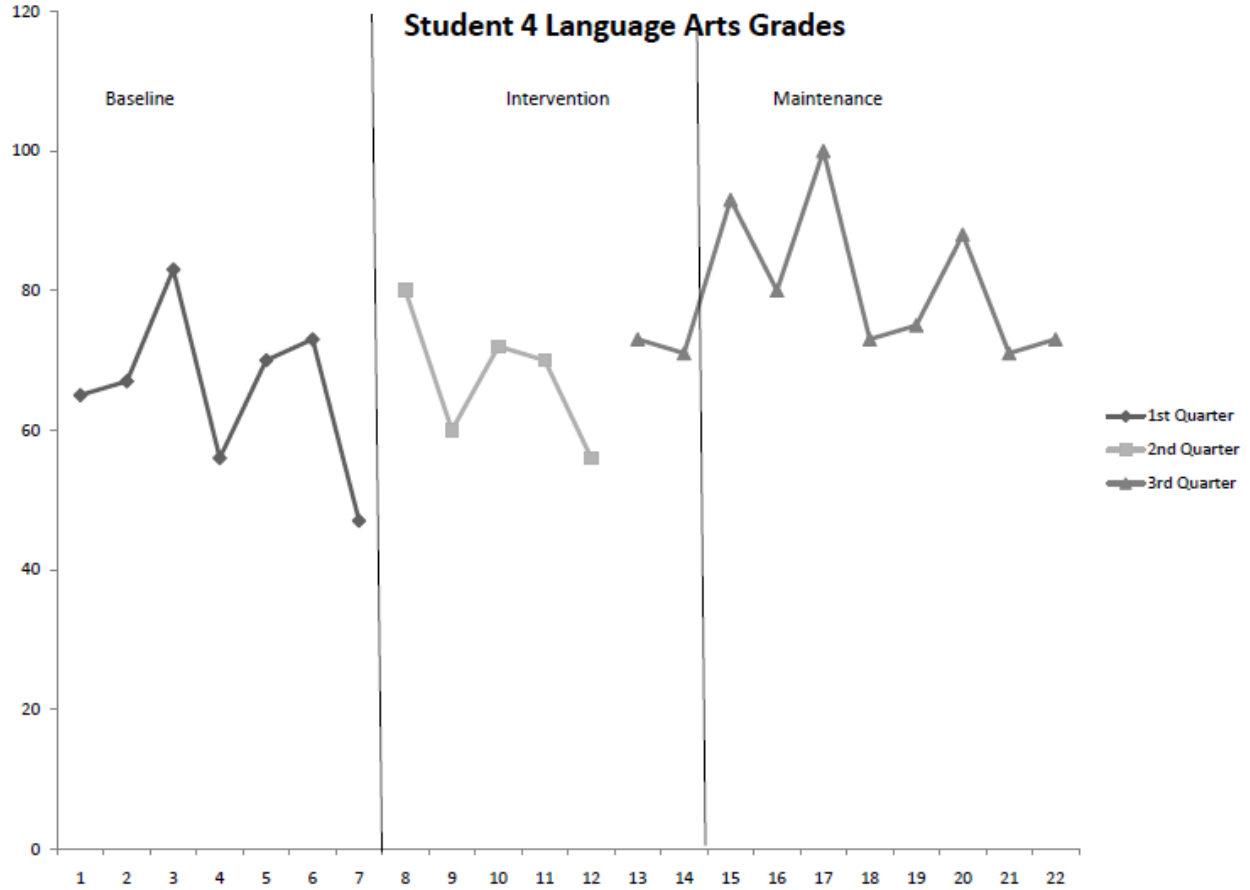
Student 2 shows a variation of grades. The grades seem to drop towards the end of each quarter.

The student went from an average of 84.2 in 1<sup>st</sup> quarter to an average of 87.3 in the second quarter. Even though the student's average was raised, they still had similar grades to first quarter. The student was doing well in the maintenance phase until the end of the 3<sup>rd</sup> quarter and their average dropped back down to 83.2.

Figure 4: *Student 3 Test Grades*

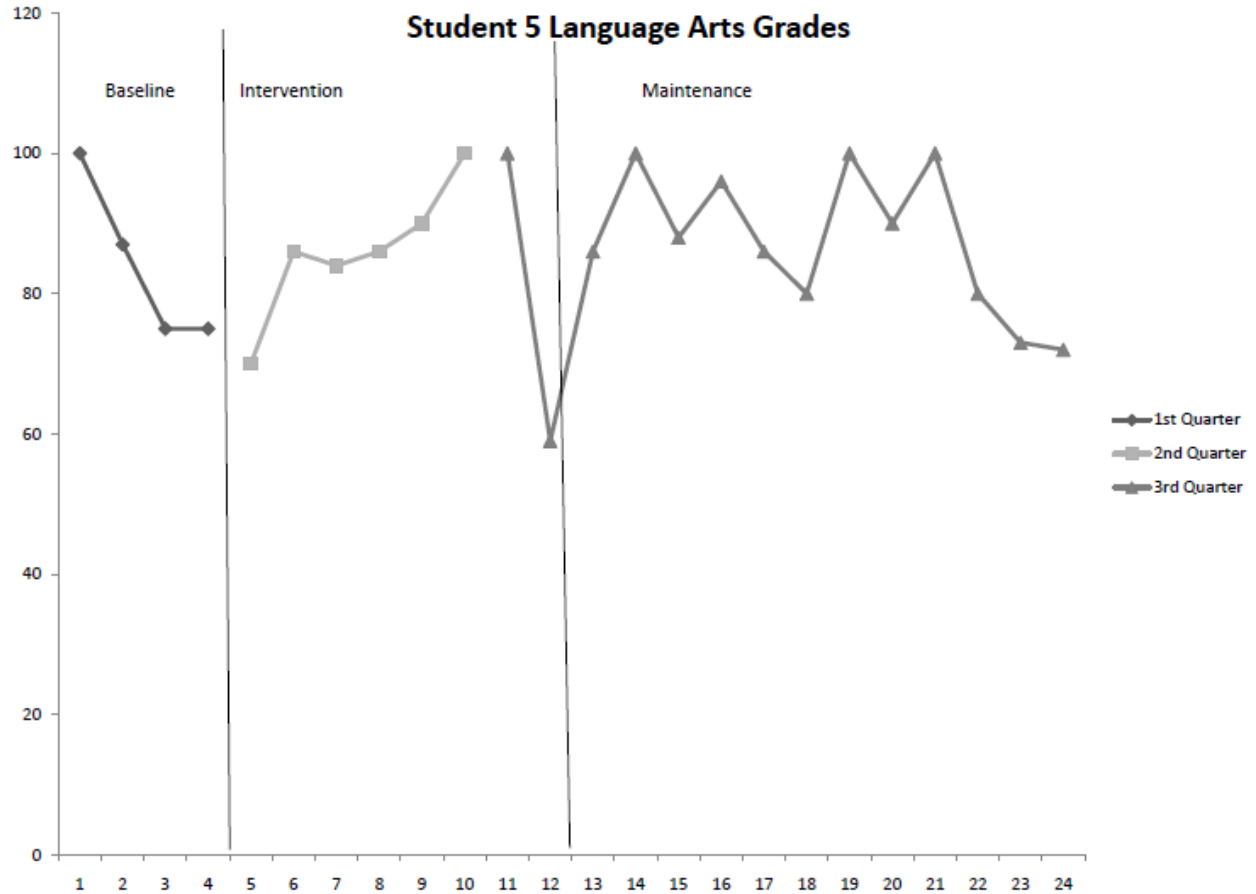
Student 3 had an average of 74 in 1<sup>st</sup> quarter but his/her grades were on a downward slope.

During 2<sup>nd</sup> quarter (intervention phase) the student's average went down to a 72 but the grades were more consistent and did not go below the lowest grade from 1<sup>st</sup> quarter. During 3<sup>rd</sup> quarter (maintenance phase), the student's grades started to go on an upward trend and ended out with an average of 76.3 with an effect size of .07.

Figure 5: *Student 4 Test Grades*

Student 4 had the most improvement going from an average of 65.8 during 1<sup>st</sup> quarter to an average of 67.6 during 2<sup>nd</sup> quarter and ending with an average of 79.7 in 3<sup>rd</sup> quarter. Visual analysis of this graph demonstrates a level change from 1<sup>st</sup> to 2<sup>nd</sup> quarter. The effect size from 1<sup>st</sup> to 2<sup>nd</sup> quarter was .53 which considered very high.



Figure 6: *Student 5 Test Grades*

Student 5's grades stayed consistently in the mid 80's throughout the 3 quarters. Visual analysis demonstrates a drop in grades during the first quarter and a rise in grades during 2<sup>nd</sup> quarter. The student's average went from an 84.2 to an 86 with an effect size of .08.

Table 2: *Summary Statistics*

<b>Student</b>	<b>Average (Q1/Q2/Q3)</b>	<b>Standard Deviation (Q1/Q2/Q3)</b>	<b>Effect Size Q1 to Q2</b>	<b>Effect Size Q1 to Q3</b>
<b>Student 1</b>	83.3/66.5/82.3	11.5/18.6/10.7	-.47	.02
<b>Student 2</b>	84.25/87.5/83.2	11.9/14.6/14.52	.13	.03
<b>Student 3</b>	74/72.5/76.3	19.4/15/12	.04	.07
<b>Student 4</b>	65.8/67.6/79.7	11.6/9.6/10.3	.08	.53*
<b>Student 5</b>	84.25/86/86.4	11.9/9.7/12.3	.08	.09

### **Discussion**

Reading fluency is important at older grades, but there is a transition of focus from fluency to comprehension. Within a Response to Intervention (RtI) model of service delivery, reading comprehension is likely to be targeted for intervention as it reflects the goal of reading and successfully understanding what one reads. This becomes more important as students enter middle and high school. Reading comprehension can affect grades in all classes (social studies, science, math, Language Arts ect.). Decoding and fluency are important foundational skills for reading and understanding, but they do not necessarily guarantee comprehension.

There are several sources of error with progress monitoring reading comprehension. A possible source of error in this intervention is that many reading comprehension measures such as the Daze require the student to read silently. Not only is the DAZE just a brief measure of reading comprehension, important information may be missed due to reading errors and it is hard to tell if a student is just guessing based on the some words in the sentence. The student has the ability to simply scan the passage or not read it at all.

Another source of error was the monitoring of language arts grades. The students had different teachers and therefore they had different assignments. Even with the same assignment, teachers can grade differently. It would have been a good idea to look into other assessment procedures for reading comprehension such as reading Daze aloud, retell strategies and comprehension question accuracy. Due to time constraints, administering the Daze every two weeks was the most efficient way to collect data for the intervention. For this data, it is not even necessary to look at the effect size because all the students were above grade level benchmark each week.

The difficulties of finding an accurate measure of reading comprehension made it difficult to see the true effectiveness of the group. One measure that would be very useful is the State Achievement test, but this information will not be available until next fall.

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## Appendices

### Appendix A: Agenda

#### Agenda

##### Lesson 1: Context Clues

Materials: Write on Track pg. 207 and 214, Word Journal, Buckle Down Lesson 1

1. Introductions and Rules (5 min)
2. Write On Track pg. 207
3. Hand out Word Journals and explain
4. Lesson 1 in Buckle Down
  - a. Do examples together (15 min)
  - b. Students do achievement practice (10 min)
  - c. Go over answers (5 min)

##### Lesson2: Reading Strategies

Materials: Be a Careful Reader, Write on Track pg. 200-205, Buckle Down Lesson 4

1. Review Rules
2. administer the DAZE
3. review writing journal
4. Go over reading strategies
5. Practice items
6. achievement practice

##### Lesson3: Main Idea, Details, Theme

Materials: Graphic Organizers, story

1. Review reading strategies
2. Go over aspects of story (Main idea, details, theme)
3. Go over graphic organizer
4. Read a story and use graphic organizer
5. Go over as a group

##### Lesson 4: Making Connection and Making Inferences

Materials: Inferential Comprehension Intervention sheet, Buckle Down Lesson 6

1. Activity: post it of a character on student's backs, students give clues and have to figure out who is on their back.
2. administer DAZE

3. lesson 6 Practice Problems

### **Lesson 5: Text and Graphic Features Part I**

Materials needed: Write on Track pg. 193-197, Buckle down Lesson 10

1. Show graphics from newspaper or magazine and make an assignment for students to bring in a graph they found for next week.
2. Write on Track lesson on graphics
3. lesson 10 practice problems

### **Lesson 6: Text and Graphic Features Part II**

Materials: Buckle Down Lesson 10

1. Go over graphic that students brought in
2. Administer DAZE
3. lesson 10 achievement practice

### **Lesson 7: Review on Reading Strategies**

Materials: Looking back at Text Strategy, Buckle Down Lesson 6

1. Review Strategies
2. lesson 6 achievement practice
3. Start going over writing prompts

### **Lesson 8: Writing Prompts and Writing Summaries**

Materials: Memorizing Facts, Write on Track pg 64, sample prompts

1. Administer DAZE
2. Memorizing facts strategy
3. Write on Track

**Appendix B: Social Validity Student Form**

**Social Validity**

Please rank the following questions on a scale of 1-5 (1-strong disagree, 2-disagree, 3-don't know, 4-agree, 5-strong agree)

1. I enjoyed coming to group every Monday
  
2. Miss Blaxberg and Mr. Simpson made the group lessons fun
  
3. I felt comfortable being an active participant
  
4. I felt included within the group and during all the discussions
  
5. I will use the skills I learned from this group in reading and writing
  
6. I would like to participate in another group like this to learn more reading comprehension skills

What was your favorite topic or activity we did during group time?

STUDENT SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_

### Small Group Study Skills for Struggling Sixth Grade Students

Several sixth-grade students were referred to be part of a Study skills group based on the multiple F report (a report that lists all student that have receive more than one F on their report card) of first quarter. The extra assistance came in the form of a Tier 2 study skills small group, which met weekly for 25 minutes for 8 weeks. One school psychology student from the University of Cincinnati, under the supervision of the school's psychologist, decided to lead the group based on weekly suggestions and input from the student's teachers and the school's guidance counselor.

Derry & Murphy (1986) define study skills as, "the collection of mental tactics employed by an individual in a particular learning situation to facilitate acquisition of knowledge or skills" (p.2). Study skills are a necessary aspect of education because they help students become increasingly independent learners. These skills can be learned early and built upon and throughout academic careers, resulting in increased performance in later grades (Gall, Gall, Jacobsen, & Bullock; 1990). Students who are able to organize their time and practice effective study habits are able to achieve higher grades in school and perform higher on standardized tests, regardless of subject area or disability (Harvey & Chickie-Wolfe, 2008). Many struggling learners are passive in their approach to studying and may benefit from targeted intensive interventions on either an individual basis or in a group setting. The goal of this intervention was to provide these passive learners with specific learning strategies in order to study more efficiently for tests.

In a review of the existing literature, study skills have included strategies that help students manage time, promote organization, and create and review materials to prepare for tests (Dawson, 2008). Harvey and Chickie-Wolfe (2008) reported that school personnel often



overlook study skills instruction as an area of need. Study skills training can occur in a universal, targeted, or individual level of support. Teaching a combination of self-monitoring, memory, cognitive, and organizational techniques have been effective in improving student achievement (Harvey & Chickie-Wolfe, 2008).

When creating a study skills intervention, best practice dictates that a variety of strategies be taught, because the most successful students use a wide range of techniques to study (Harvey & Chickie-Wolfe, 2008). Research suggests that there are numerous ways of addressing these study skill deficits, and based on our target student's needs, we have selected the following as strategies to promote skill attainment: 1) prioritizing assignments, 2) communicating with teachers; 3) organization and homework; 4) taking notes; 5) studying strategies ; 6) mnemonics and other visual mapping techniques.

### **Needs Assessment**

Best practices for study skills include collaboration between students, teachers and other stakeholders (Harvey & Chickie-Wolfe, 2008). The authors recommend interviews and review of permanent products as appropriate strategies for evaluating academic needs and to choose skills to teach and to monitor progress in developing those skills. Rose and Edleson (1987) suggest a multi-method, multi-source process for needs assessments and program evaluation. Shapiro (2004) further described the importance of examining permanent products such as homework and tests, as another source with which to compare data from teacher interviews or rating scales.

The study skills that are targeted should be aligned with the results of the needs assessment. Based on the results of surveys completed by teachers and students, and consultation with a school psychologist at the school where students in the study skills group

attended, the team decided to prioritize homework completion, teacher communication, time management, and organization as key topics for the group intervention,

## **Methods**

### **Participants and Roles**

Group members were recruited with the help of the school psychologist and the school counselor at the school in which the intervention was conducted. At the end of the first quarter, the intern school psychologist received the multiple F's list which showed every student who received more than one F in the first quarter of school. Several decisions had to be made in order to narrow down the pool of students. First it was decided to work with sixth graders because of the difficult transition of elementary to middle school. Then it was further narrowed by only looking at students with 3 or more Fs on their report card. In order to rule out a skill deficit, the intern school psychologist looked at referrals, state test scores, and DIBELS scores. Students with low OAA scores and DIBELS scores were not considered for the group. The school counselor then identified whether or not the group of students selected could work together in a small group. The last consideration to form the group was scheduling. It was decided to pull the students from their third period encore class so they would not miss any core instruction.

The group leader for the study skills intervention was a third year graduate student from the University of Cincinnati, and was supervised by the current school psychologist at the school. A permission letter was sent home to the parents by the intern school psychologist prior to the intervention with the goal of explaining the nature of the intervention and inviting their student to be a part of the group (Appendix A). The permission slips provided information regarding the purpose of the group, meeting times and group leader. Out of six students, only four received parent permission to participate in the group. However, after the third session, one boy dropped

out of the group because he moved. The final group consisted of 1 girl and 2 boys between 11 and 12 years old. All students in the group were Caucasian and from middle to upper SES families.

### **Setting Description**

Group sessions were conducted in an empty classroom inside of the school building. The room had ample space for movement activities as well as appropriate technology for some of the sessions. The group met from 7:40 AM to 8:05 AM on Tuesday mornings for 8 weeks.

### **Materials**

The group leaders used a variety of materials such as worksheets provided from the teachers, online printouts, and premade worksheets for practicing certain weekly target skills.

### **Design and Assessment**

After the participants for the group were selected, the group leaders conducted a needs assessment. The needs of each student were discussed and it was determined that all students would benefit from direct instruction and practice of specific study skills aimed at communication and organization. The students completed an individual skill assessment during the first session that was used along with past student test performance as a baseline measure (Appendix B). The same study skills assessment was given to the students after the last intervention session to monitor student progress. Student test scores also were reviewed to monitor student performance throughout the intervention and maintenance after the intervention.

**Goals.** Goals were established for the whole group prior to the start of the intervention. It was determined that the goal of the group intervention would be to increase student knowledge and utilization of study skills and ultimately, increase student test scores. Each student also was instructed to establish his or her own goals for the intervention. Their main goal was to get less

than three Fs on their report cards. The goals were monitored using the individual study skill assessment and test scores

### **Hypothesis**

It was hypothesized that the students selected for the group have the ability to do well in school but choose not to. By teaching them organization skills and study skills, the students will find it much easier to do well in school.

### **Accountability Design**

The intervention procedures were implemented using an A-B, or individual case study design. A baseline (A) was obtained from the test scores prior to the group and self-ratings from the first skills assessment. The intervention phase (B) began on February 18, 2010.

### **Procedures**

Skills and topics covered in the group focused on improving overall student performance across content areas. The main focus of the group was improving students' test taking skills, homework completion, time management and organization. Each of these variables was addressed during the group sessions by providing students with explicit instruction on specific study skills. Each session began with an ice breaker activity to facilitate group cohesion. The ice breaker activity was then followed by an introduction to the skill of the day and a related research-based activity that provided additional practice opportunities as well as feedback from group members and fellow students. Activities used included the following: teaching and applying time management skills, improving communication with teachers using post-it notes, improving note taking, using agendas appropriately, organizing assignments and materials using planners and homework folders, strategies to prepare for tests like cover, copy, compare, and

flashcards, and test taking strategies. An agenda of each session for this group is attached, and explains focus of each session as well as planned activities for that day (Appendix C).

During the first session, group rules were posted and explained to the students. The group leader encouraged students to share examples of ways to follow the rules. In addition to posting of group rules, a behavior management plan was put in place by the group leader. The plan used a token economy system, where students could earn one check mark for each of the following: keeping hands to self, completing group activities, talking when allowed, and attendance. At the end of the eight sessions, the students earned a group reward (i.e. bagels and cream cheese) if they earned at least 25 check marks.

Students were reminded at least once per session that the skills they learn during group should be used in other settings like any classroom or at home. Teachers were notified of the strategies covered during group through brief contact with the leader. Teachers, parents and group members were encouraged to prompt students to use these strategies and to praise them when the strategy resulted in positive outcomes, or given feedback about what to do differently to improve performance in a future scenario.

### **Treatment Adherence**

The group leader did not conduct formal procedural adherence checks. However, the leader followed the agenda step by step to get through all pre-planned lessons. The group leader was present for all 8 sessions, providing a built-in self-check or backup for ensuring that key planned elements were implemented.

## Results

### Social Validity

There was no formal social validity forms filled, however informal social validity was collected by the students and the teachers. The teachers felt that the student learned how to organize their agendas a little bit better, however, they believe the students still struggled with work completion and studying for tests. The students enjoyed the group, however, it was unclear if they enjoyed it as an escape from class or if they learned something. When going over their grades, the students understood why they were failing certain classes and knew how to do better yet it was difficult to motivate them to go about using the skills they learned in the group.

### Target Variables

This intervention was designed to help improve study skills so that a group of students with more than 3 failing grades during 1<sup>st</sup> quarter could improve in their grade. Even though the group leader got consent for all students to be in the group, only 1 consent form was received to be in this write up. Therefore, only student 1 has data revealed and the rest of the data is averaged from all 3 students.

**Table 1**

*Average Grades*

	<b>Quarter 1</b>	<b>Quarter 2</b>	<b>Quarter 3</b>
<b>Science</b>	52.75	45.58	70.33
<b>Social Studies</b>	75.26	68.33	71.08
<b>Language Arts</b>	67.48	79.68	76.32
<b>Math</b>	62.57	64.31	68.10

Figure 1: *Average Grades*

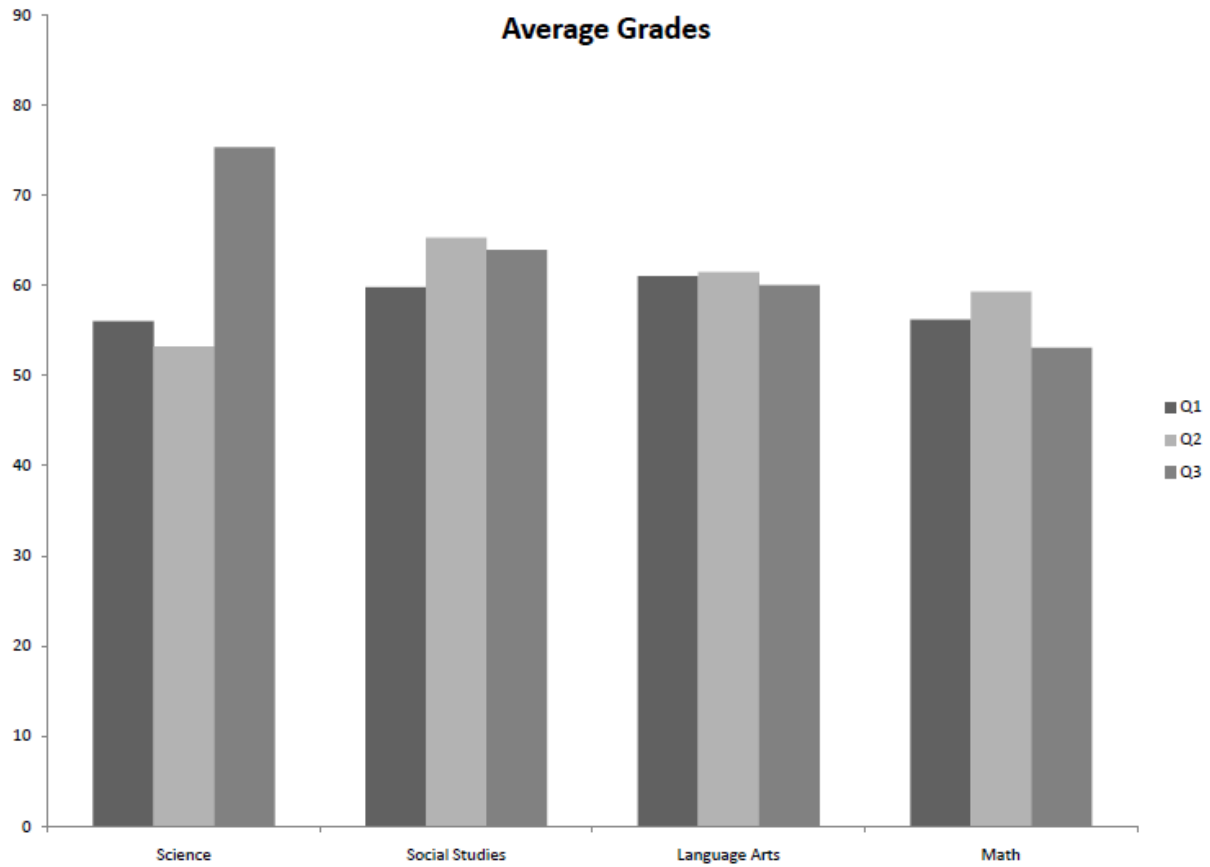
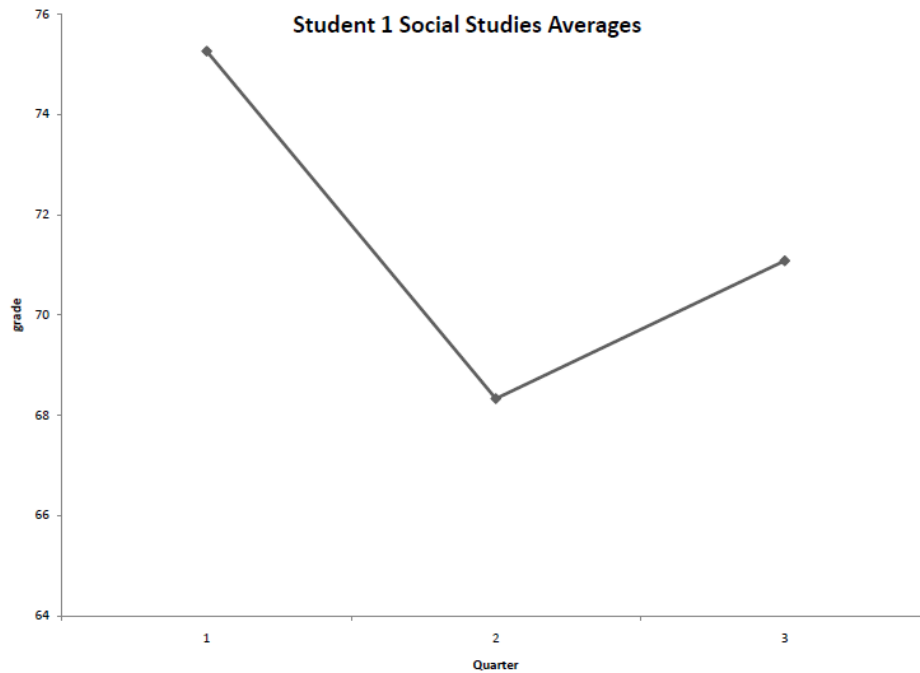


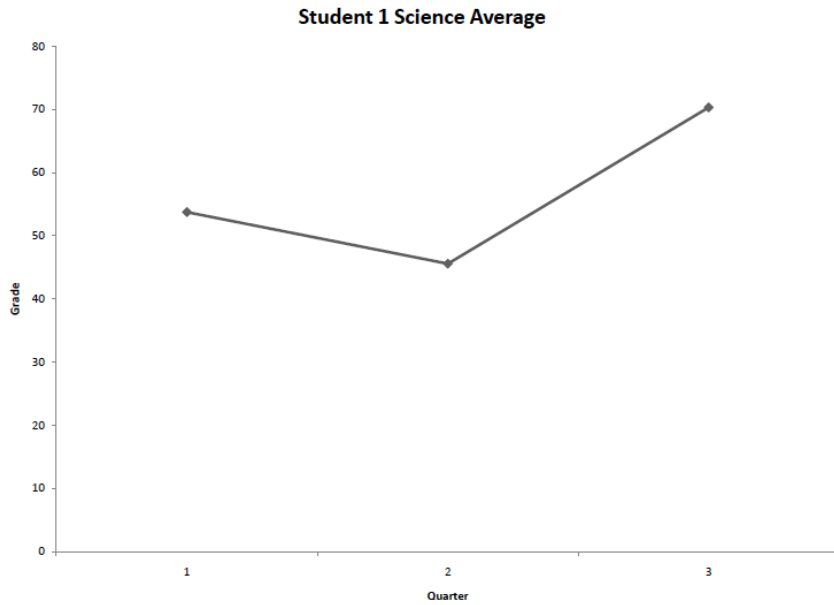
Table 1 and Graph 1 represent the average Quarterly grades for all 3 students. Visual analysis shows that only Science had an increase in level while the other subjects stayed consistently low.

Figure 2: *Student 1 Quarterly Average in Social Studies*

Graph 2 represents student 1's quarterly averages for Social Studies. This graph depicts that his average dropped significantly second quarter from an average of 75 to an average of 68 and then got better during 3<sup>rd</sup> quarter with an average of 71. It is difficult to say if there is a functional relationship between these grades and the intervention during 2<sup>nd</sup> quarter. One limitation is the material may get more difficult or the teacher may grade harder as the year progresses.

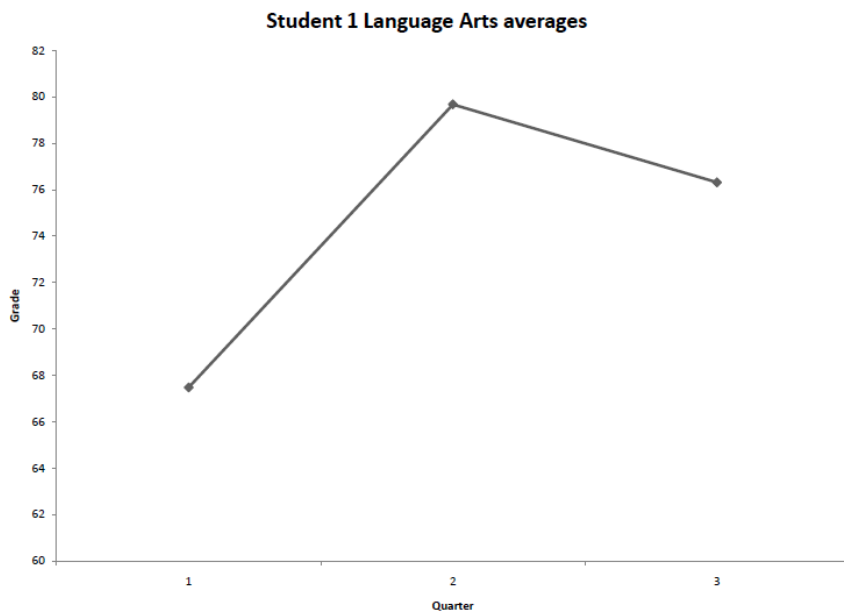


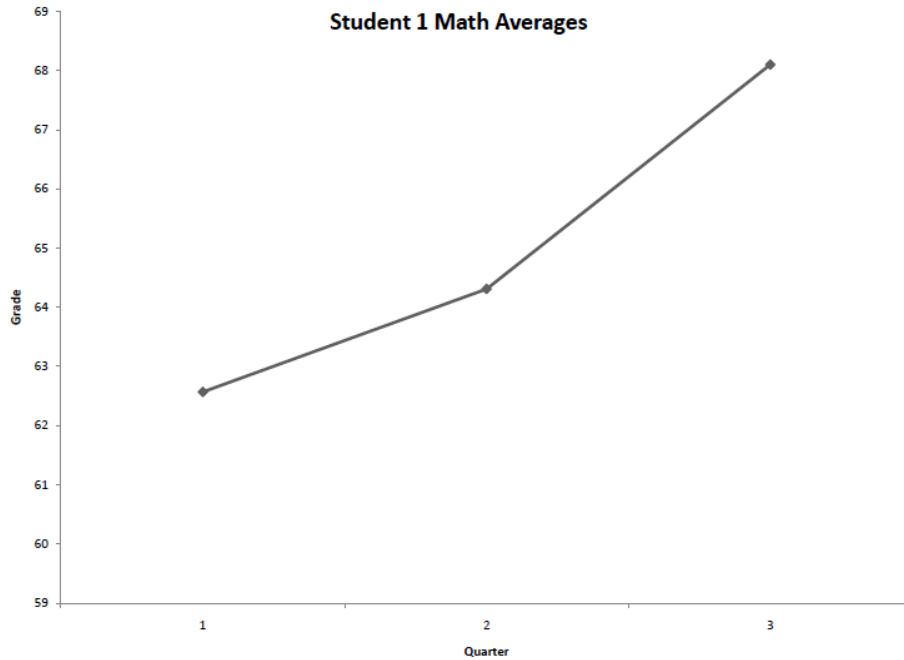
Figure 3: *Student 1 Quarterly Average in Science*



In graph 3 the student’s grade in science drops after first quarter from an average of 53 to an average of 45 (receiving 2 failing grades). After quarter 2 the student raised his average to a 70 to receive a C-.

Figure 4: *Student 1 Quarterly Language Arts*



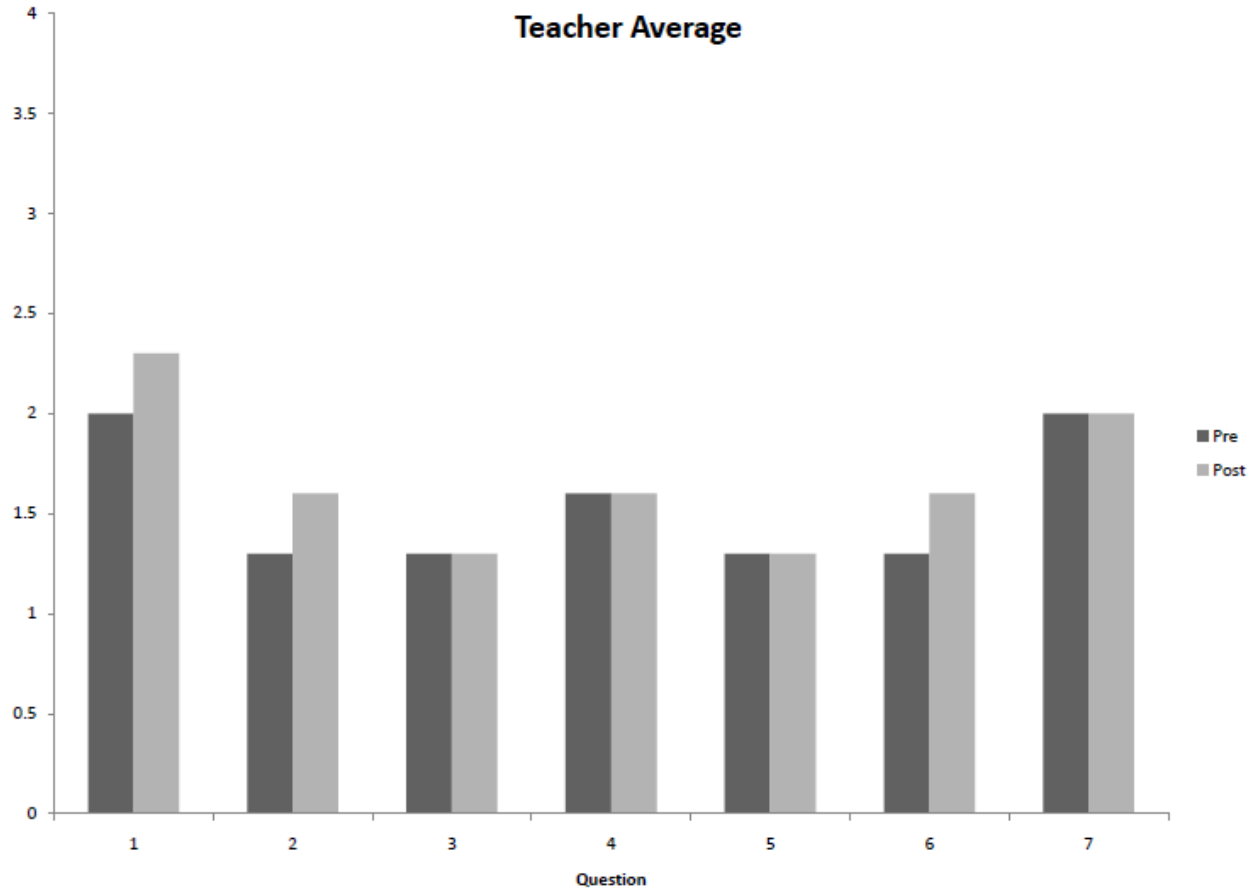
**Figure 5:** *Student 1 Quarterly Average in Math*

Graph 4 and 5 show increases in the student's grades in Language Arts and Math. In Language Arts the student goes from an average of 67 in 1<sup>st</sup> quarter to an average of 79 in 2<sup>nd</sup> and an average of 76 in 3<sup>rd</sup>.

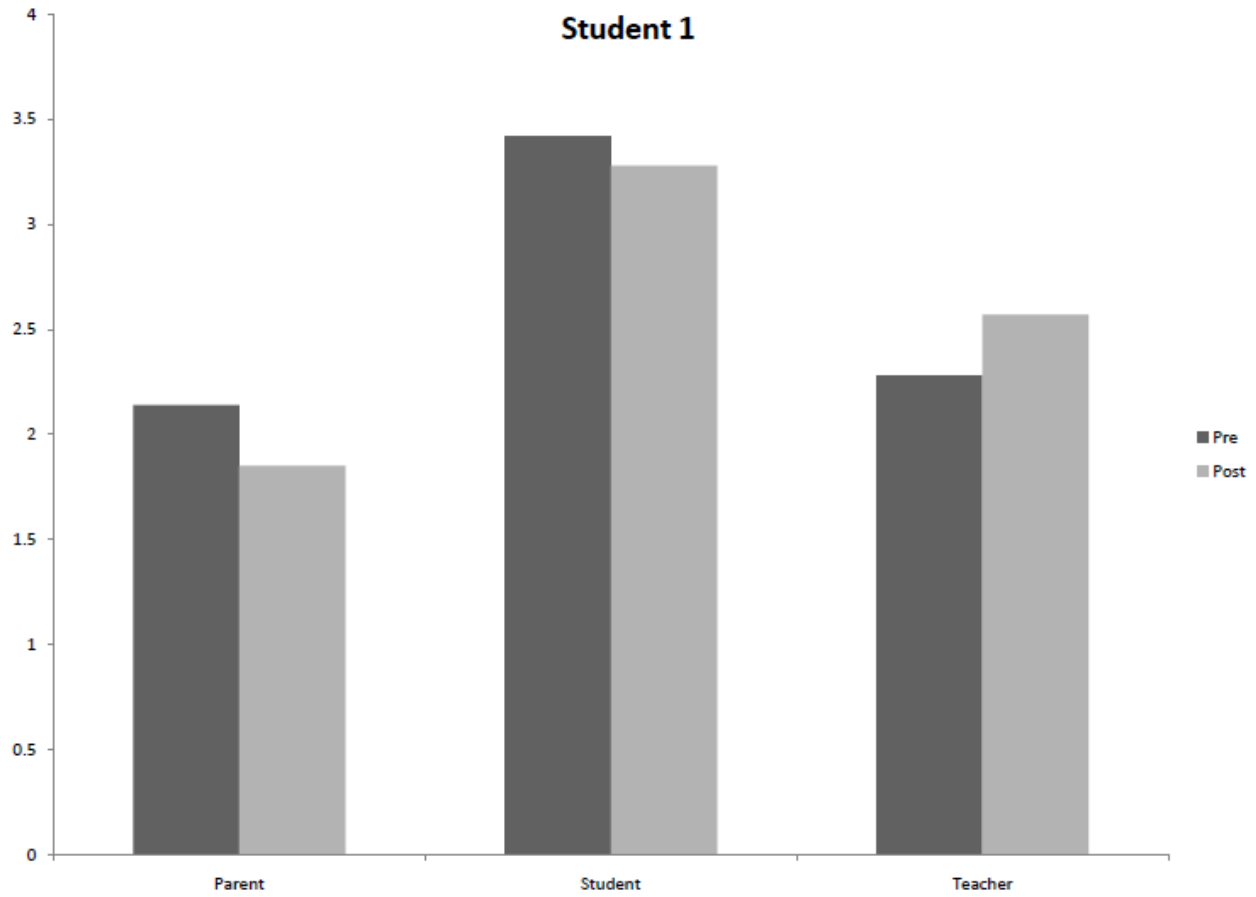
### Rating Scales

The teachers, parents, and students were given a pre and post assessment to fill out about the student's study skills. The likert-type scale asks questions about organization, attitude, work completion, and how the student studies. The scale is rated by circling 1 if you really disagree with the statement, 2 if you somewhat disagree with the statement, 3 if you somewhat agree with the statement, or 4 if you really agree with the statement. Graph 6 are the average results from the teachers, Graph 7 represents student 1, and Graph 8 represents all students in the group.

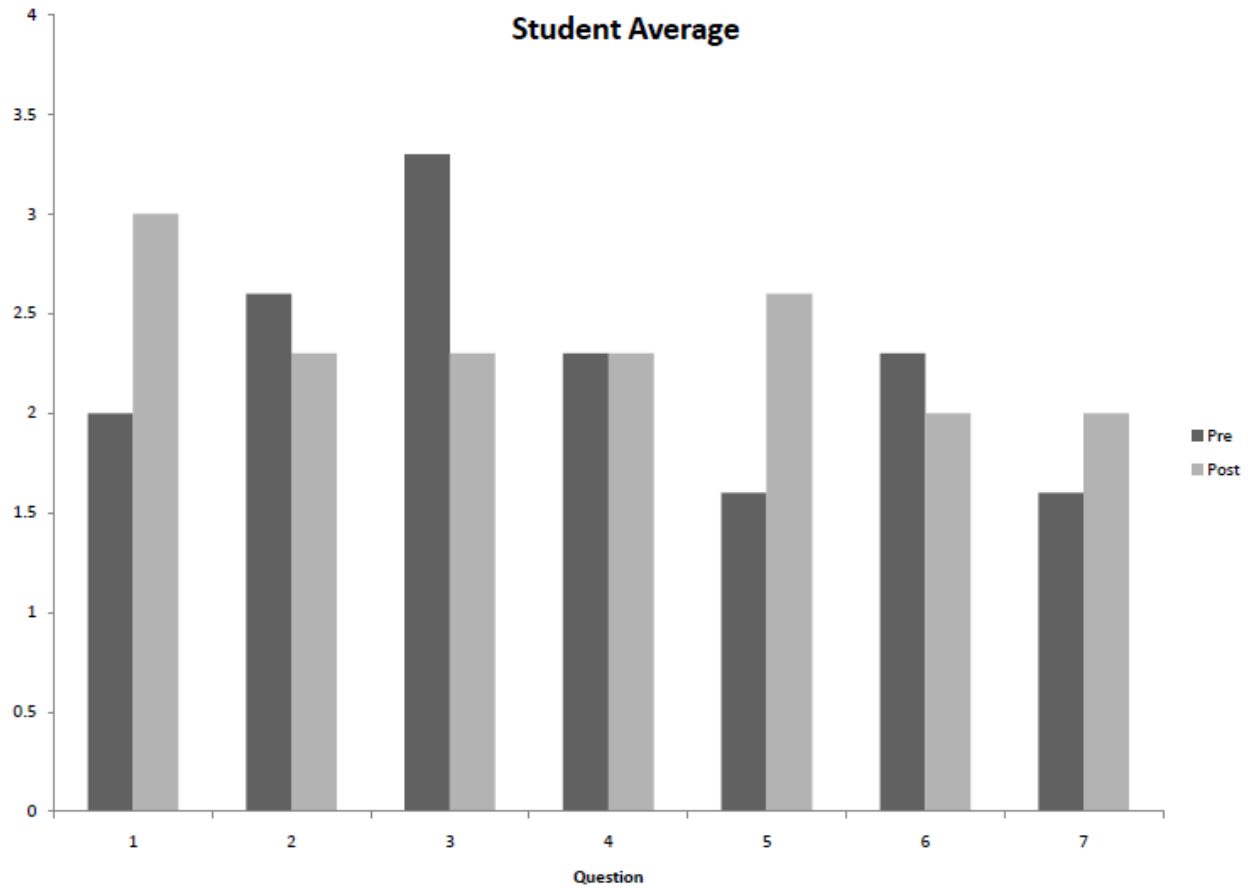
Figure 6: *Teacher Assessment Results Pre & Post*



Teacher ratings of the students stayed the same except for question 1 and 6; 1) This student does what is asked in class and 6) This student knows how to take a test and does their best.

Figure 7: *Pre & Post Assessments for Student 1*

Student rated himself lower after the intervention than he did before and so did his parents. The only assessment that showed improvement came from the teacher. Even if the child was not getting good grades, the teacher may have seen a change in attitude, or better organization skills from the student.

Figure 8: *Student Average on Pre & Post Assessment*

Graph 8 represents how the students rated themselves on each question before and after the intervention. Student rated themselves with a higher score in 3 out of the 7 questions. This shows that the students did not believe their skills improved enough to get good grades.

**Table 2**

## Summary Statistics

	Averages Q1/Q2/Q3	Standard Dev. Q1/Q2/Q3	Effect Size Q1 to Q2	Effect Size Q1 to Q3
Science	56.1/53.2/75.3	12.5/9.4/6.2	.12	.69*
Social Studies	59.8/65.3/63.9	13.4/2.6/7.6	.27	.18
Language Arts	61.0/61.4/60.6	19.1/21.5/23.8	.01	-.01
Math	56.2/59.2/53.0	5.5/7.7/13.8	.21	-.15

**Discussion**

Overall, the intervention appears to have been somewhat successful in improving student study skills and communication skills with their teachers as indicated by informal assessment with the teachers and students, though the results are not supported by the grade data. Even though there were significant effect sizes for Science ( $r = .69$ ), there was actually a negative effect size for Language Arts and Math ( $r = -.01$ ;  $r = -.15$ ). These contradictory results indicate that the grades may not have been an appropriate assessment of the study skills group. It is highly unlikely that the group was detrimental to the student's performance in Language Arts and Math. What is more likely is that the changes in student's performance were due to factors such as time or difficulty in material. In the future, a more accurate grade assessment besides final trimester scores should be used to assess the effectiveness of the intervention.

The students consistently reported that they felt the group was beneficial and that they enjoyed participating. Of greatest importance was the fact that the students indicated they would be likely to use the skills in the future. They especially liked using post-its to communicate

questions with teachers and to make reminders in their agendas. This suggests that the intervention was generalizable to the students' daily lives. However, in the future, follow-up data across settings should be collected to demonstrate that the skills actually were used as the students reported.

Several factors also existed which may have contributed to results of the group. First, the group only met 8 times, for 25 minutes each session, and the first and last sessions were for orientation and wrap up (so no study skills were covered). This means that only 6, 25 minute sessions were conducted. While time spent in the group did promote study skills for the students, in order to see positive effects of a study skills group, each session should last longer, and there should have been more sessions. However, due to time constraints of the intern school psychologist running the group alone, as well as time constraints for the students in the group, it was not conceivable to have the groups last longer, or have more sessions.

Another limitation of this study was that the students had different teachers who gave different tests and graded on a different scale. Students could also be affected by test difficulty or novelty throughout the year. There was no way to quantify these test characteristics across assessment periods. One way to increase the reliability of this measure in the future would be to gather average performing peer data for the general assessment questions. Regarding the item about study time, that the results demonstrate a reported amount of time only increasing slightly and then remaining stable at the end of the intervention may reflect a ceiling effect on studying. It would also be a good idea to get a sample of peers to compare grades with the group in the intervention.

A final way to increase the reliability of assessment survey would be to receive more regular feedback from the parents. Because most of the studying behavior occurred at home,

parents would have been the perfect source of data on the use of study skills. It was very difficult to get input and consent from the parents in this group. The other difficulty was the students had difficulty remembering to bring things home to their parents. Lack of collaboration with the parents may have affected the results. Teacher observational data could have been obtained throughout the intervention as well, to provide another perspective of the integrity of the results.

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Appendices

Appendix A: Parent Consent Letter

Dear Parent/Guardian:

As you may know, throughout the school year, we offer students small group counseling to support and enhance their development of personal social skills, problem solving skills, and to support and promote educational success. Your child was selected to participate in a study skills group because he or she was referred by a guidance counselor or has received more than 3 failing grades on last quarter's report card.

The purpose of this group is to provide students with effective strategies for how to organize, comprehend material, take notes, take tests, memorize, and do homework, which can improve their performance in school. The group will meet weekly on Tuesdays for 8 weeks starting on 11/23/10. The group will occur during an encore time and students will not miss core instruction

This group will be lead by [redacted], the intern school psychologist. Throughout the group, we will send home a newsletter indicating what we did in group that day so that you can continue to watch for and reinforce positive behaviors at home.

Please indicate your permission to have your child participate in this group by completing the consent form at the bottom of this page and returning it to me in a sealed envelope as soon as possible. Permission is voluntary and at any time you may withdraw your consent. However, written permission is needed in order for your child to participate. If you chose not to have your child participate, please check the line denying consent and return the form as well.

Thank you for the opportunity to work with your child. Your questions are always welcome. Please feel free to contact

[redacted] at [redacted] Middle School at [redacted] or by email at [redacted]

Sincerely,

[redacted]-Intern School Psychologist



Please complete and return this portion of the letter indicating your interest in having your child participate in this study skill group. **Please return this form by Monday, November 22<sup>nd</sup>.**

\_\_\_\_\_ Yes, I give permission for my child \_\_\_\_\_ to participate in the small group offered. I understand my permission is voluntary and that I can withdraw my child from the group at any time.

\_\_\_\_\_ No, I do not give permission for my child \_\_\_\_\_ to participate in the small group.

\_\_\_\_\_

**Appendix B: Rating of Study Skills**

On this page rate how well you agree with each of the 7 statements. Circle the number that best matches how you think this student rates on each statement.

1=If you really disagree with the statement

2=If you somewhat disagree with the statement

3=If you somewhat agree with the statement

4=If you really agree with the statement

1. This student does what is asked in class.    1        2        3        4
2. This student pays attention and listens carefully in class 1 2        3        4
3. This student is organized 1 2        3        4
4. This student knows how to study and learn 1        2        3        4
5. This student completes homework and turns it in on time 1 2        3        4
6. This student knows how to take tests and does their best 1 2        3        4
7. This student has a positive attitude about school 1 2        3        4

Other

comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



**Appendix D: Agenda**

**Study Skills Group**

**Orientation**

- Intro to group and rationale
- Rules
- Behavior Incentive
- Study Skill Inventory
- Self Rating of Study Skills
- Ice Breaker→Snow Ball Game
- Hand out extra permission slips and Parent Rating Scales

**Session 1: Prioritizing Assignments**

- Review Rules and Behavior Incentive
- Ice Breaker→ 2 Truths and a Lie
- Organization and Prioritizing Assignments (pg. 278 in Write on Track)
- Look at assignment notebooks together and talk about different ways to organize and remember

**Session 2: Communicating with Teachers and Students**

- Review Rules and Behavior Incentive
- Ice Breaker →My name is \_\_\_\_and I will bring\_\_\_\_ (memory game)
- Post it Trick
- Pg. 239 in Write on Track
- Role Play

**Session 3: Organization and Doing Homework**

- Review Rules and Behavior Incentive

**Session 4: Taking Notes**

- Review Rules and Behavior Incentive
- Study Strategy #5 in folder
- Compare and contrast activity

**Session 5: Studying**

- Review Rules and Behavior Incentive
- Study Strategy #7 in folder
- Go over different strategies (CCC, flashcards, ect.)

**Session 6: Memorizing information and taking tests**

- Review Rules and Behavior Incentive
- Activity: "This is a Test"
- Pg. 284 in Write on Track
- Study Strategy #8
- Continue going over strategies (mnemonics, rehearsing, visualizing, ect.)

**Session 7: Bagel Party and Reflection**

### Reading Fluency Support Tiered Intervention to Evaluation for Specific Learning Disability

Tom was referred by the school psychologist and teacher for intensifying interventions due to academic concerns. Tom, a second grade student attending an Ohio Public Elementary School had a history of academic problems in reading. A school psychology intern student from the University of Cincinnati was invited to help with the case. The school psychology student conducted preliminary assessments in reading to find his instructional level. The student was found to be below the second grade reading benchmark. His instructional level was found to be Fall of first grade. Consultation and problem solving with the school psychologist, the teacher, and the student's grandmother helped to find a way to provide more intensive services than he was already receiving making this a Tier 3 Academic case. Literature on reading fluency validates the concern as a worthy target variable. The school psychology student developed an intervention to target reading fluency that would be as low-intensity as possible, making it easy for the teacher and the grandmother to implement in the classroom and at home.

Daly, Chafouleas, and Skinner (2005) define reading fluency "as the number of correctly read words per minute when an individual is asked to read a passage of connected text aloud for 1 minute" (p. 74) requiring both accuracy and speed. They argue that fluent readers are more likely to comprehend what they read and therefore, chose to read. Reading can be a difficult activity for slow readers while rapid readers have a better opportunity to understand, and therefore enjoy what they read. There are many research based interventions for reading fluency such as Repeated Reading and Peer Assisted Reading that have been proven to increase reading fluency (Daly, et.al, 2005). Tom was already receiving Tier 2 services 5 days a week for reading. The team working on Tom's case wanted to choose an intervention that had evidence supporting its effectiveness and could be implemented at home to further intensify his services.

One way to achieve this was through the use of a repeated reading and error correction to help increase reading fluency for Tom.

### **Repeated Readings**

Repeated Readings (RR), in which students reread a short passage to improve fluency on that passage, is an intervention with well documented effectiveness (Daly et al., 2005). A meta-analysis of RR studies conducted by Therrien (2004) showed that RR can produce gains in both reading fluency and comprehension for a wide variety of students, both with and without disabilities. Gains in fluency were generally greater than gains in comprehension, but gains in both measures were increased when RR was conducted with an adult rather than a peer. These gains have also been shown to transfer to overall reading ability. Based on this meta-analysis, Therrien suggests the essential components of RR include reading aloud, reading to an adult who corrects word errors, and reading until a performance criterion is reached.

Error correction procedures are important so that students practice correct reading rather than errors. Alber-Morgan, Ramp, Anderson, and Martin (2007) found that a RR intervention which incorporated performance feedback and error correction decreased errors for all four middle school students in the study and increased fluency for three. Systematic error correction during oral reading is not enough on its own, however; Nelson, Alber, and Gordy (2004) compared RR with error correction to error correction alone, and found that while both interventions decreased errors, only RR with error correction increased fluency.

## Methods

### Participants & Roles

**Target student.** Tom is a second grade, 8-year-old Caucasian male attending a rural public elementary school in Ohio. He was referred by the teacher and the grandmother to the School Psychologist for reading concerns.

**Collaborative team.** The team consisted primarily of the School Psychologist, the teacher, the principal, the grandmother, and the school psychology intern, and the intervention specialist. The team made a collaborative decision to intervene in Tom's reading fluency. The intern was supervised by the school psychologist of the school. Parental informed consent and student assent were obtained for the intern's involvement.

### Setting

The repeated reading intervention took place at home. The student brought all his materials to school every Wednesday for the intern to go over with him. Tom continued getting the tier two services he was getting before the addition of repeated reading.

### Materials

The intern provided the student with a folder of stories at the first grade instructional level. The stories were provided from the Reading-Tutor program. The grandmother was also given a folder with a script for repeated reading and error correction (see Appendix A) along with all the same stories. The student was also given laminated high frequency word cards to practice at home. These came from the Dolche High Frequency word list.



**Target Variable**

After initial assessments, the team decided that reading fluency as measured by words read correctly per minute on grade-level curriculum-based assessments (CBA) would be targeted by the intervention, with the goal of increasing fluency on instructional and grade level assessments.

**Functional Hypothesis**

Baseline data and teacher report suggested that Tom had some fluency skills and understood how to use phonics to link sounds together, but was much slower than his peers. He could read simple words, but at second grade he should be reading more challenging words at a rate of 60-80 words per minute. The team hypothesized that his low reading fluency was a result of insufficient practice. Increased practice with repeated reading and corrective feedback should help Tom learn more words and read at a faster rate.

**Assessment Plan**

**Initial assessment.** The school psychology intern initially assessed Tom using the fall DIBELS benchmark. His benchmark score of 7 indicated that he needed intensive instruction. Before setting up an intervention, he was assessed to find out his instructional reading level. The assessments were scored by counting how many words read correctly in 1 minute. The fluency scores on the second grade assessments were well below the second grade benchmark scores, providing support for the referral concern.

**Baseline.** Baseline consisted of reading fluency probes DIBELS at the first and second grade level. Assessment probes were administered for 1 minute each using a script with specific directions.

**Progress monitoring.** Progress monitoring during the intervention phase occurred once per week using the DIBELS progress monitoring assessments at grade level and instructional level. Administration occurred every Wednesday after checking in on the intervention adherence. Shapiro (2008) reports that progress monitoring at the level of individual students plays a major role in deciding when a student needs to be moved to a different level of instruction and that goals [should] be established at the level of the individual student so that the outcomes of his or her progress can be measured against appropriate expectations (Shapiro, 2008).

**Goal setting.** Initial goal setting was done by the team on the basis of Tom's baseline performance and the grade benchmark norms for the second grade. The benchmark norms for reading fluency is 52 words a minute in the fall, 72 words a minute in the winter, and 87 words a minute in the spring. A student who is functioning below his grade level will demonstrate little progress over time if monitored at levels that exceed his instructional level (Shapiro, 2008). Since Tom was barely making more than 18-20 words per minute in baseline, goals were to be adjusted as needed by the team based on Tom's performance. After the first consultation meeting with the teacher and the grandmother, a goal was set for Tom. The goal was that given randomly selected passages at the second grade level, Tom will read aloud 50 words per minute by the end of January (or in 8 weeks) as measured by a valid curriculum-based measurement. His rate of improvement would have to be much greater than his average peer to catch up to the second grade benchmark. Even if he reaches this goal of 50, there will still be a large gap between him and his peers and he will still be behind in the third grade.

**Decision rule.** At the time of the consultation meeting, Tom had already been receiving Tier 2 interventions 5 times a week in the literacy center. The team meeting discussed adding

the repeated reading intervention to see if Tom could reach the goal of 50 words per minute in 8 weeks time. Once the goals were set, an aim line was created which connected the median baseline score for the first baseline point to the goal of 50 words per minute. Decision rules for modifying the intervention were developed collaboratively by the intern school psychologist, teacher, and the school psychologist of the school. A decision rule was made that if Tom fell below the aimline consistently (more than 3 points below) for 8 weeks the team would consider an evaluation. The student was suspected of qualifying for special education under that category of Specific Learning Disability (SLD).

### **Accountability Plan**

An A-B design was used to evaluate the effects of the repeated reading and error correction intervention. During baseline (A), Tom's reading fluency was assessed with DIBELS while he was receiving Tier 2 intervention. During Intervention (B), Tom's reading fluency was continually progress monitored with DIBELS assessments.

### **Intervention Procedures**

A take home intervention was developed to increase practice opportunities for reading fluency. For repeated reading both the grandmother and the student had a copy of the reading passage. The student was asked to read aloud at their normal reading pace. As the student read aloud at their normal reading pace, the grandmother marked misread words. After the student finished reading the entire passage, the grandmother would go over the misread word for error correction. After the error correction procedure, the student was instructed to read the passage aloud again (see Appendix A for script). The grandmother was supposed to sign and date every time they practiced a story at home (see Appendix B for signature sheet).

**Adherence data.** The intervention was kept in check by a folder that went home and got signed by Tom’s grandmother every time they worked on reading and followed the repeated reading script at home. The school psychology intern would call home to make sure the grandmother was doing the intervention accurately.

### **Social Validity**

Social validity was addressed through the collaborative development of the intervention by the team. Social validity was informally assessed throughout the intervention to make sure the teacher and student were satisfied. The intern consulted with the student and his grandmother twice a month to make sure the intervention continued to be helpful and likable. Although there was a high likeability to the interventions from the teacher, the grandmother, and the student, after the intervention and data collection ended, it was perceived that the increasing intensity of Tom’s interventions was not effective and need to move to evaluation.

## **Results**

### **Procedural Adherence**

Procedural adherence was 100%. The grandmother reported that Tom practiced at least 1-3 times a week. The teacher and the data report that the amount of practice was continuous and steady throughout the 8 weeks of data collection. See Table 1 below:

Table 1

#### *Technical Adequacy Data*

---

<b>DATE</b>	<b>Repeated Reading Story/Part</b>	<b>Word Practice</b>	<b>Parent Signature</b>
11-8-10	F1/P1	Y	Y
11-9-10		Y	Y
11-10-10	F1/P2	Y	Y
11-11-10	F2/P1	Y	Y
11-14-10	F2/P2		Y

11-20-10	F2/P1		Y
11-22-10	F2/P2	Y	Y
11-29-10	F3/P1		Y
11-3-10	F3/P1	Y	Y
12-1-10	F3/P2	Y	Y
12-3-10	F3/P2		Y
12-5-10	F4/P1		Y
12-6-10	F5/P1	Y	Y
12-10-10	F5/P2	Y	Y
12-11-10	F6/P1	Y	Y
12-13-10	G1/P1	Y	Y
12-17-10	G1/P2	Y	Y
12-19-10	G2/P1	Y	Y
12-22-10	G2/P2	Y	Y
12-27-10	G3/P1	Y	Y
1-2-11	G3/P1	Y	Y
1-6-11	G3/P1	Y	Y
1-8-11	G3/P2	Y	Y
1-16-11	G3/P2	Y	Y
1-17-11	G3/P2	Y	Y

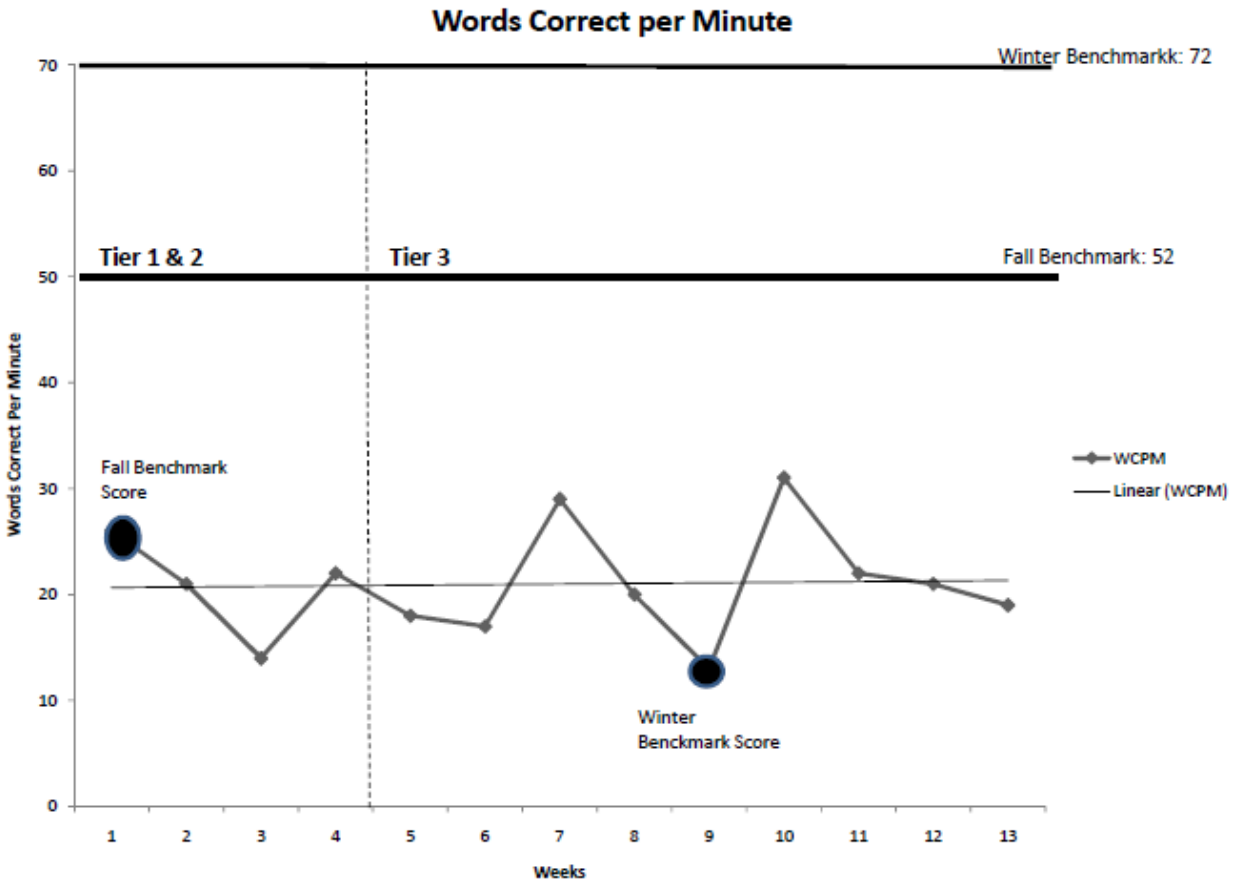
### **Social Validity Results**

The intern school psychologist consulted with the student's grandmother several times throughout the intervention to see how things were going at home. The grandmother was pleased with the intervention and thought it was simple to use.

The reading lists and passages were deemed acceptable to the student because the student was willing to practice them weekly. Teacher comments and the reported frequency of implementation suggest that the teacher did not find the procedures too burdensome. The teacher indicated that she was satisfied with the collaboration process. Tom indicated that he liked the intervention and didn't mind the assessment procedures. He also indicated that he wouldn't mind doing it again in the future.

## Fluency

Figure 1. Reading Fluency Graph



Visual analysis of Figure 1 shows the tier 3 interventions had no immediate effect on Tom's reading fluency. He went from a mean of 20.75 cwpm in baseline to a mean of 21.1 during intervention period. The linear progression of data points indicates stagnancy throughout the intervention. Despite Tier 3 intervention, Tom continued to struggle and perform significantly lower than his peers.

Figure 2. Reading Fluency Graph

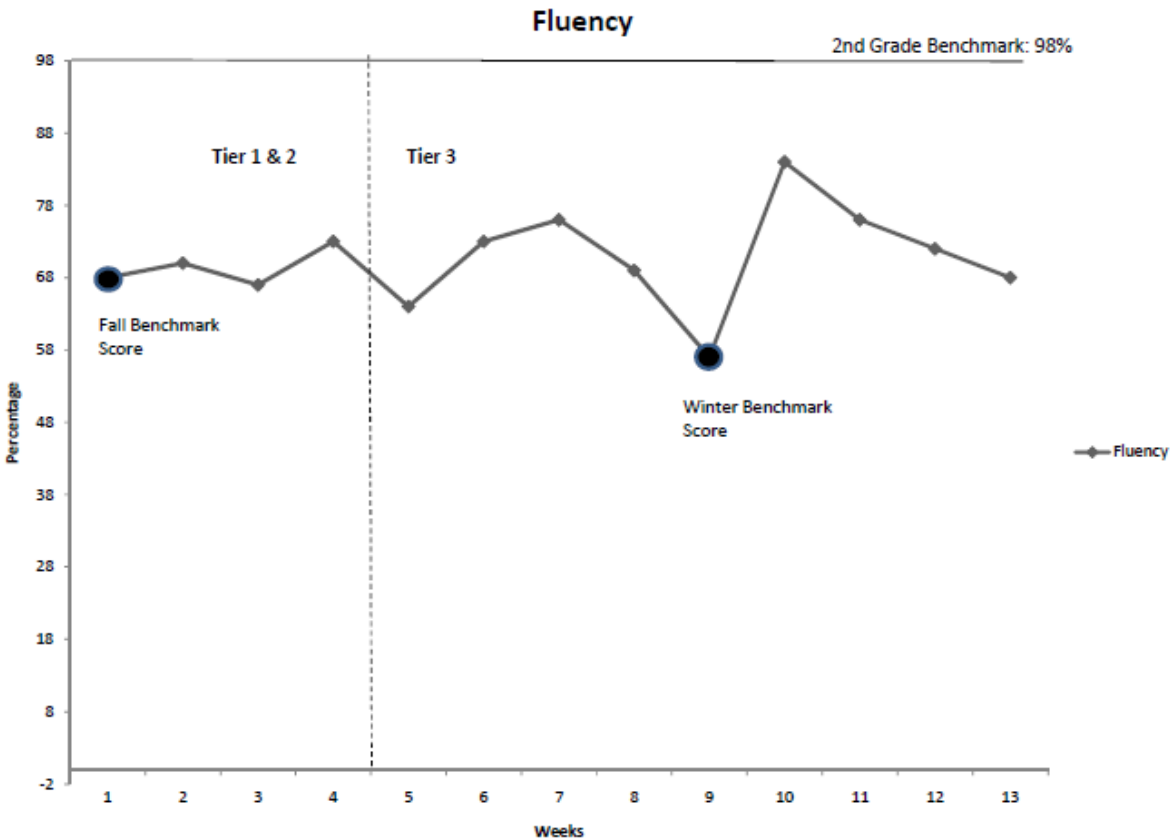


Figure 2 portrays Tom’s reading accuracy (how many words read correctly divided by total words read). The data points on this graph show a similar pattern of stagnancy. He went from a mean of 69.5% accuracy in baseline to a mean of 70.0% accuracy during tier 3 intervention.

Table 2  
Summary Statistics

	<b>Tier 1 &amp; 2 CWPM/ Accuracy</b>	<b>Tier 3: CWPM/ Accuracy</b>
<b>Mean</b>	20.75/ 69.5%	21.1/ 71 %
<b>Standard Deviation</b>	4.99/2.64	5.68/7.31
<b>Effect Size</b>		.032/ .13

Both figures indicate that Tom continued to fall significantly below grade level benchmarks. This information was used for the decision to move him to evaluation with the suspected disability of a Specific Learning Disability (SLD). See Appendix C for the multi factored evaluation report.

### **Discussion**

Figure 1 & 2 shows no improvement in reading fluency or accuracy. Studies have shown that approximately 75% of students identified with reading problems in the third grade continue to have severe reading disabilities in the ninth grade (Shapiro, 2008). Formal and informal social validity checks showed that the teacher, grandmother, and student appreciated the reading intervention. The grandmother mentioned that the repeated reading intervention led her to read more with her grandson at home.

There were several limitations to this study. One limitation of the study is the design. An A-B design is a practical accountability design; however, it does not effectively depict experimental control. Despite the lack of internal validity, the team felt that the interventions used demonstrate an increasing amount of intensity to try and close the gap between the student and his peer. This, along with the ease of implementation and high acceptability of the intervention, suggest it could be a useful option for any future referrals for reading fluency.

Response to Intervention (RTI) require valid and reliable measures to assess students' progress within the curriculum and their response to changes in the instruction. The intervention team had monthly meetings and continued to intensify the student's interventions. Collecting data on the student's progress throughout the year helped the team make a data-based decision. Despite interventions the student continued to struggle and fall below grade level peers in



reading fluency and therefore it was suspected the student would qualify for special education services as a student with a specific learning disability.

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## Appendices

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### Appendix A. Parent Script

#### **Sight Words & Repeated Reading Script at Home**

1. 5-10 Sight Words should be practiced 3 to 5 times a week.
2. Repeated reading script should be followed 3 to 5 times a week.
  - a. Have student read a story out loud
  - b. While student reads mark errors student makes on your copy of the story
    - i. Errors are mispronounced words or does not know a word within 3 seconds
  - c. For each word error
    - i. Tell student the word missed
    - ii. Have the student repeat the word back to you
    - iii. Have student re-read the sentence that contained the missed word
3. Fill out record sheet- (first page in student folder - sign and date next to the story you practiced)

#### **Optional Activity**

**Playing a word game:** Choose a game board (in the back of student folder). Cut out the word cards. Shuffle and spread out the game cards face down. Have the child draw a card and read the word. If the child reads the words correct, they get to move that many spaces on the game board. If the child reads the word incorrectly, correct the word and put it back in the pile.



*Appendix C. Initial Evaluation Team Report (the original name has been changed)*

**1**

**INDIVIDUAL EVALUATOR'S ASSESSMENT**

Section to be completed by each individual evaluator.

Evaluator Name: Alexis Blaxberg

Position: Intern School Psychologist

**AREAS OF ASSESSMENT:**

Indicate the area(s) that were assessed by the evaluator in accordance with the evaluation plan.

- OBSERVATIONS
  SCIENTIFIC, RESEARCH-BASED INTERVENTIONS
  NORM-REFERENCED ASSESSMENTS
- INTERVIEWS
  CURRICULUM BASED ASSESSMENTS
  CLASSROOM BASED ASSESSMENTS
- REVIEW OF RECORDS AND RELEVANT TREND DATA (SCHOOL RECORDS, WORK SAMPLES, EDUCATIONAL HISTORY)
  OTHER (Specify)

**ASSESSMENT INFORMATION**

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

**SUMMARY OF ASSESSMENT RESULTS:**

**BACKGROUND**

Tom is a second grade student at Williamsburg Elementary. He has been enrolled in the district for four years. Tom was first referred for interventions in kindergarten due to concerns with early literacy skills. Tom repeated kindergarten and was referred again in first grade for struggling with reading fluency. Interventions were implemented and intensified over the course of the 1<sup>st</sup> and 2<sup>nd</sup> grade. Tom has not made adequate gains with these interventions in place and was referred for special education services in January of 2011. The team suspected a Specific Learning Disability.

Tom lives at home with his identical twin brother and his grandmother. Tom does not take any medications but it is suspected that he has dyslexia. At the time of the planning meeting there were no concerns with vision or hearing, however, Tom has reported that he wore glasses in pre-school.

**CURRICULUM-BASED ASSESSMENTS**

Tom was assessed on 2/3/2011 using a process called Curriculum-Based Measurement (CBM). CBM is a process used to assess a student's current performance in comparison to that of same-grade peers.

**Fluency/ Comprehension**

Tom was given several passages to assess reading fluency, as well as looking at the early literacy skill of phonemic awareness by using *Dynamic Indicators of Basic Early Literacy Skill* Nonsense Word Fluency (NWF). This task requires students to read Consonant-Vowel-Consonant words (i.e., *zim*). To assess comprehension, Tom was given reading passages which were monitored for comprehension. In addition to assess comprehension a grade level DAZE passage (every seventh word is replaced with 3 words inside parenthesis and students must choose the correct word) was given. Tom's results can be seen below:

Assessment	Tom	Peers	Implication
Nonsense Word Fluency	48 Correct Letter Sounds 0 Whole Words Read	54 CLS 13 WWR	Below Average
1 <sup>st</sup> grade ORF	18 69% Accuracy	47 90% Accuracy	Significantly Below Average
2 <sup>nd</sup> grade ORF	21 72% Accuracy	52 90% accuracy	Significantly Below Average
2 <sup>nd</sup> grade DAZE	2 28% accuracy	4 58% accuracy	Below Average Below Average
2 <sup>nd</sup> grade level Comprehension Independently Read	3/6		Frustrational Reading Level
2 <sup>nd</sup> grade Comprehension Read Aloud	6/6		Average

In comprehension, a lot of prompting and word corrections were necessary for both reading passages. Tom was able to read a few sentences independently for the independent reading, however, much of the passage was read aloud.

### Math Computation

Tom's math skills were also assessed using a 2 minute timed mixed skill probe. Answers were recorded as the number of correct digits. On this assessment Tom scored 16 correct digits and peers scored 11 correct digits, indicating that Tom is performing average compared to peers.

Tom was also given a math reasoning worksheet in order to identify areas of skill strength and skill weakness. On this assessment Tom was able add and subtract 10s, as well as being able to match picture representations of fractions with the written number. He struggled with counting money and identifying an odd and even number. Tom was able to skip count by 2s, 5s, and 10, place value, ordering from greatest to least, identifying a pattern, obtain information from a graph, identifying the time to the hour but struggled with identifying the hour to the five minute interval (e.g. 1:55). Tom was able to state the months of the year and days of the week, but unable to spell them correctly. He could not identify how many seconds in a minute, minutes in an hour, or months in the year. He was able to identify hours in a day and days in a week. Tom also struggled with identifying shapes such as a hexagon and an octagon.

### Writing

Tom was also assessed on his writing skills. He was provided a prompt and instructed to write for 3 minutes. Tom was observed to start writing right away and his scores can be seen below:

Assessment	Tom	Peers	Implication
3- minute writing prompt	TWW= 11	TWW = 29	Significantly Below Average
	WSC = 48%	WSC = 90%	Significantly Below Average
	CWS = 1	CWS = 21	Significantly Below Average

Tom struggled with trying to convey his ideas in written form, as well as spelling words correctly and using correct grammar.

### Intervention Implementation

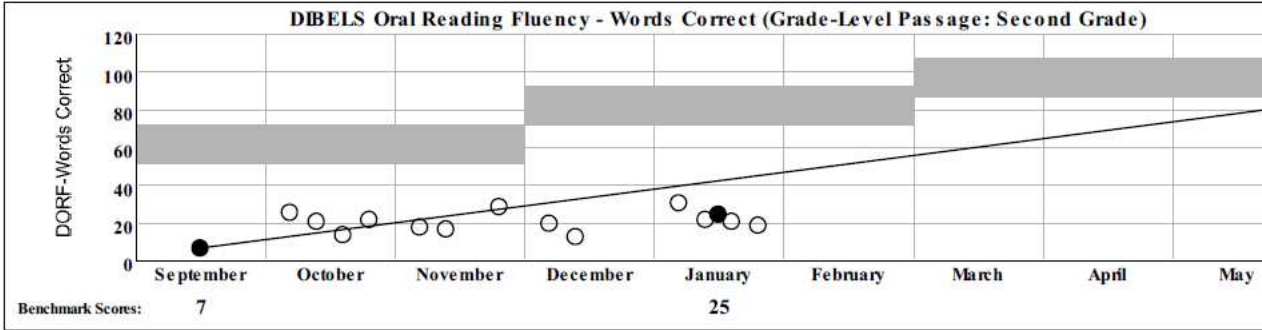
- I. **10/2007 –letter tile practice, extra practice using magna doodle, sand, and shaving cream (3-4xs a**

- week)
  - A. Targeted small group direct instruction
- II. **5/2010 – Literacy Center (5x a week)**
  - A. Small group instruction on literacy skills
- III. **5/2010- After school tutoring (2x a week for 1 hour)**
  - A. One on one or small group instruction
- IV. **5/2010 – Parent volunteer (1x a week)**
  - A. Repeated Instruction with Grade Level reading material
- V. **12/2010 – teacher read aloud questions in math and language arts**
- VI. **12/2010– CSI and PALs (5xs a week)**
  - A. Small group and one on one specialized instruction in phonics
- VII. **12/2010 – Repeated Reading (4x per week)**
  - A. Repeated reading with error correction in instructional level readings
- VIII. **12/2010- modified spelling words with Cover Copy Compare (daily)**

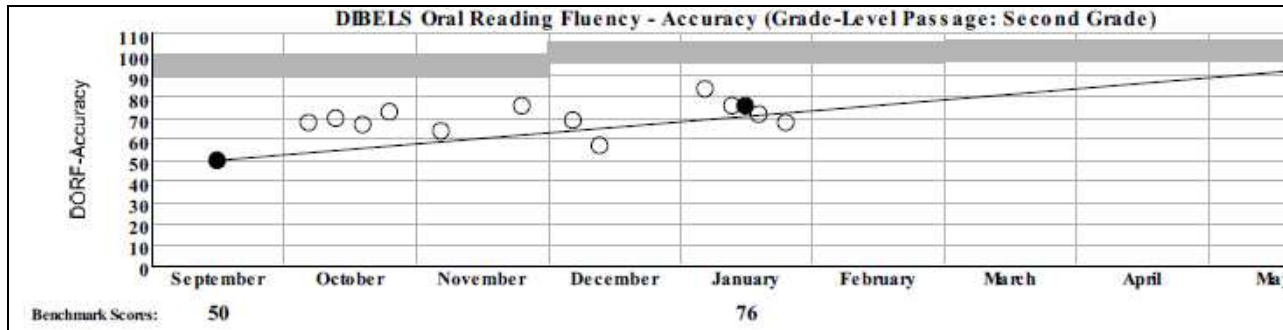
**Tom’s Response to Intervention (Plan Evaluation)**

**Reading**

Tom’s progress on reading fluency was assessed through school-wide screenings using *Dynamic Indicators of Basic Early Literacy Skills* (DIBELS) measure of Nonsense Word Fluency and Oral Reading Fluency. Tom’s progress can be seen below.



<u>Progress Monitoring Scores</u>				
Week 1	26	18	20	31
Week 2	21	17	13	22
Week 3	14			21
Week 4	22	29		19



Benchmark Scores: 50 (September) 76 (January)

Progress Monitoring Scores

Week	Score 1	Score 2	Score 3	Score 4
Week 1	68	64	69	84
Week 2	70		57	76
Week 3	67			72
Week 4	73	76		68

As can be seen from the first graph, Tom has not reached benchmark for 2<sup>nd</sup> grad oral reading fluency, and has not made adequate gains from the beginning of the year.

**Observation**

Tom was observed on 1/28/11 at 1:30pm during reading using the *Behavioral Observation of Students in Schools (BOSS)* system. This system involves observing the student and comparison students during 15-second intervals; within these intervals, engaged time (on-task behavior) and off-task behavior (motor, verbal, and passive) are recorded. During this time, the class was transitioning from math to reading and then the teacher was reading a story out loud and asking the class questions about the story. Results indicated that Tom was on-task at a rate slightly higher than his peers (89%; 82%). His off-task behavior consisted of mostly passive in nature or playing with the materials at his desk. Tom did a good job raising his hand and asking a question about the story. Another observation took place on 1/31/11 during Spelling time (9:30am). During this class time, the teacher instructed the students on the different letters that can make the 'aw' sound. Then she had the students work independently on a worksheet before going over it together as a class. Results indicated that Tom was on-task at a rate slightly higher than his peers (91%; 85%). Once again, off-task behavior was mostly passive in nature such as looking around while he was supposed to be working independently. Tom did a good job paying attention to the teacher while she was explaining the lesson.

Class	Total Engaged Time	Active Engaged Time	Passive Engaged Time	Total Off-Task Time	Off-task Motor	Off-task Verbal
1/7/11	Tom= 91% Peers = 85%	Tom =13% Peers =22 %	Tom=78% Peers =62 %	Tom =18 % Peers=24%	Tom =4 % Peers =11 %	Tom = 0 % Peers =7 %
1/13/11	Tom= 89% Peers =82 %	Tom = 8% Peers =5%	Tom = 81% Peers =80 %	Tom = 18% Peers=26%	Tom = 3% Peers = 5%	Tom = 0% Peers =8 %

**DESCRIPTION OF EDUCATIONAL NEEDS:**

Tom demonstrates below average skills in the area of reading fluency, comprehension, writing, and math reasoning. He demonstrates strengths in on-task behavior and basic math computation skills. Tom needs to be able to read fluently and demonstrate an understanding of materials read. He also needs to improve is math reasoning skills. Tom needs to be able to write complete sentences with correct spelling, grammar, and punctuation.

**IMPLICATIONS FOR INSTRUCTION AND PROGRESS MONITORING:**

Tom would likely benefit from direct instruction in reading skills such as repeated readings to increase fluency. He



would also likely benefit from direct instruction in comprehension skills, such as self-monitoring comprehension checks, and highlighting of materials. Tom would also benefit from direct instruction in writing, provided with prompts, models and feedback regarding correct sentence structure, and the use of spelling resources. Tom would likely be more successful from direct instruction in math reasoning skills, having word/multistep problems broken down into smaller steps or long word problems read aloud. He might also benefit from the use of manipulatives to provide a visual feedback for math problems.



**TEAM SUMMARY**

Combine all Part 1’s Individual Evaluator’s Assessment from all evaluators into team summary.

**INTERVENTIONS SUMMARY**

Provide a summary of all interventions done prior to the child’s referral for an evaluation or done as part of the initial evaluation. For all reevaluations provide a summary of interventions routinely provided to this child.

<b>Intervention Implementation</b>	
IX.	<b>10/2007 –letter tile practice, extra practice using magna doodle, sand, and shaving cream (3-4xs a week)</b> B. Targeted small group direct instruction
X.	<b>5/2010 – Literacy Center (5x a week)</b> B. Small group instruction on literacy skills
XI.	<b>5/2010- After school tutoring (2x a week for 1 hour)</b> B. One on one or small group instruction
XII.	<b>5/2010 – Parent volunteer (1x a week)</b> B. Repeated Instruction with Grade Level reading material
XIII.	<b>12/2010 – teacher read aloud questions in math and language arts</b>
XIV.	<b>12/2010– CSI and PALs (5xs a week)</b> B. Small group and one on one specialized instruction in phonics
XV.	<b>12/2010 – Repeated Reading (4x per week)</b> B. Repeated reading with error correction in instructional level readings
XVI.	<b>12/2010- modified spelling words with Cover Copy Compare (daily)</b>

**REASON(S) FOR EVALUATION:**

Tom continues to struggle despite numerous research-based interventions.

**SUMMARY OF INFORMATION PROVIDED BY PARENTS OF THE CHILD:**

Please refer to the Referral for Evaluation.

**SUMMARY OF OBSERVATIONS: (only required for preschool and SLD)**

Observations indicate that Tom was on-task at a rate similar to peers. He was able to follow the classroom routine and displayed non disruptive behaviors. His off-task behavior was mainly passive in nature.

Class	Total Engaged Time	Active Engaged Time	Passive Engaged Time	Total Off-Task Time	Off-task Motor	Off-task Verbal
1/7/11	Tom= 91% Peers = 85%	Tom =13% Peers =22 %	Tom=78% Peers =62 %	Tom =18 % Peers=24%	Tom =4 % Peers =11 %	Tom = 0 % Peers =7 %

<b>1/13/11</b>	<b>Tom= 89%</b> <b>Peers =82 %</b>	Tom = 8% Peers =5%	Tom = 81% Peers =80 %	<b>Tom = 18%</b> <b>Peers=26%</b>	Tom = 3% Peers = 5%	Tom = 0% Peers =8 %	Tom = 16% Peers = 10%
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**MEDICAL INFORMATION:**

Tom was evaluated at children’s hospital but at this time has not medical diagnosis. See attached Children’s Hospital report.  
Tom failed his vision and hearing screening. He needs to be evaluated and treated for apparent amblyopia in the Right eye (near-sightedness) and his hearing is borderline at 1000 mHz in the right ear.

**SUMMARY OF ASSESSMENT RESULTS:**

Tom performed below average on assessments of reading fluency, comprehension, writing, and math reasoning. Tom’s teacher reported that he is below average in math and reading. The teacher also reported no concerns about emotional behavior.

**DESCRIPTION OF EDUCATIONAL NEEDS:**

Tom demonstrates below average skills in the area of reading fluency, comprehension, writing, and math reasoning. He demonstrates strengths in on-task behavior and basic math computation skills. Tom needs to be able to read fluently and demonstrate an understanding of materials and vocabulary read. It is reported that Tom needs to work on his phonics. He also needs to improve in math reasoning skills. His teacher reports that he needs to practice basic math facts for subtraction and multiplication. Tom needs to be able to write complete sentences with correct spelling, grammar, and punctuation.

**IMPLICATIONS FOR INSTRUCTION AND PROGRESS MONITORING:**

Tom would likely benefit from direct instruction in reading skills such as repeated readings to increase fluency. He would also likely benefit from direct instruction in comprehension skills, such as self-monitoring comprehension checks, and highlighting of materials. Tom would also benefit from direct instruction in writing, provided with prompts, models and feedback regarding correct sentence structure, and the use of spelling resources. Tom would likely be more successful from direct instruction in math reasoning skills, having word/multistep problems broken down into smaller steps or long word problems read aloud. He might also benefit from the use of manipulatives to provide a visual feedback for math problems.



**DOCUMENTATION FOR DETERMINING THE EXISTENCE OF SPECIFIC LEARNING DISABILITY**

**REQUIRED NOTIFICATION**

If the child has participated in a **process that assess the child’s response to scientific, research based intervention**, indicate if the parents were notified about the following prior to the evaluation:

The state’s policies regarding the amount and nature of student performance data that would be collected and the general services that would be provided. (See Procedures and Guidance for Ohio Educational Agencies serving Children with Disabilities)  Yes  No

Strategies for increasing the child’s rate of learning  Yes  No

The parents right to request an evaluation  Yes  No

Section A must be completed.  
Either Section B or Section C must be completed.

**A. IDENTIFIED AREAS**

Identify one or more of the following areas in which the team has determined that the child is not achieving adequately for the child's age or state-approved grade-level standards when provided with learning experiences and instruction appropriate for the child's age or state-approved grade level standards.

- Oral Expression       Reading Fluency Skills       Written Expression       Mathematics Calculation  
 Listening Comprehension       Reading Comprehension       Basic Reading Skill       Mathematics Problem Solving

**B. RESPONSE TO SCIENTIFIC, RESEARCH-BASED INTERVENTION**

Assessment information should be summarized in this section if the evaluation team used a process based on a child's response to scientific, research-based interventions to determine whether the child has a specific learning disability in one or more of the areas identified in Section A.

Interventions implemented have focused on phonics and reading fluency. Despite intensive interventions in place, Tom has not made adequate gains in the areas checked above and has not made adequate progress.

**C. PATTERNS OF STRENGTHS AND WEAKNESSES**

Assessment information should be summarized in this section, if the evaluation team used alternative research-based procedures to determine if the child exhibited a pattern of strengths and weaknesses in performance, achievement or both, relative to age, state-approved grade-level standards or intellectual development that the team determined to be relevant to the identification of a specific learning disability in one or more of the areas identified in section A.

**D. EXCLUSIONARY FACTORS**

The evaluation team has determined that its findings are NOT primarily the result of:

- A Visual, Hearing, or Motor Disability       Limited English Proficiency  
 Mental Retardation       Environmental or Economic Disadvantage  
 Emotional Disturbance       Cultural Factors

**E. DOCUMENTATION-UNDERACHIEVEMENT NOT DUE TO A LACK OF APPROPRIATE INSTRUCTION**

Regardless of the process used to identify a child as having a specific learning disability, the team must ensure that the child's underachievement is not due to a lack of appropriate instruction in reading or math by considering the following information:

1. Data that demonstrate that prior to, or as part of the referral process, the child was provided appropriate instruction in general education settings, delivered by qualified personnel.

Summarize the data used by the team to document this requirement:

Tom has been taught by highly qualified teachers and has had adequate attendance.

2. Data-based documentation of repeated assessments of achievement at reasonable intervals, reflecting formal assessment of student progress during instruction that was provided to the child's parent.

Summarize the data-based documentation used by the team to document this requirement:

Classroom assessments are recorded as grades and are sent home quarterly and at interims.

**F. OBSERVATION**

Summarize the child's academic performance and behavior in the areas of difficulty as observed in the child's learning environment including the regular classroom setting.

Please see Team Summary.

**F. MEDICAL FINDINGS**

Describe the educationally relevant medical findings, if any:

Tom is suspected of having Dyslexia. Tom failed his vision and hearing screening. He needs to be evaluated and treated for apparent amblyopia in the Right eye (near-sightedness) and his hearing is borderline at 1000 mHz in the right ear.

**4**

**ELIGIBILITY**

**ELIGIBILITY DETERMINATION**

It is the determination of the team that:

The determining factor for the child’s poor performance is not due to a lack of appropriate instruction in reading or math or the child’s limited English proficiency. For the preschool-age child the determining factor for the child’s poor performance is not due to a lack of preschool pre-academics.  Yes  No

The child meets the state criteria for having a disability (or continuing to have a disability) based on the data provided in this document  Yes  No

The child demonstrates an educational need that requires specially designed instruction  Yes  No

If the response is **NO** to any question, then the child is **NOT** eligible for special education. If the response to all three questions is **YES**, then the child **IS** eligible for special education.

The child is eligible for special education and related service in the category of: Specific Learning Disability

**BASIS FOR ELIGIBILIY DETERMINATION:** (or Continued Eligibility)

Provide a justification for the eligibility determination decision, describing how the student meets or does not meet the eligibility criteria as defined in OAC 3301-51-01 (B) (10) (Definitions) and OAC 3301-51-06 (Evaluations). Include how the disability affects the child’s progress in the general education curriculum.

Tom meets the criteria for a student with a Specific Learning Disability. Despite numerous research based interventions, Tom continues to perform significantly below his peers in reading, comprehension, writing, and math. These deficits are likely to negatively impact his progress in the general education curriculum without special education supports.

### Tier 3 Behavior Support for a Student with an Emotional Disturbance in 6<sup>th</sup> Grade Exhibiting Disruptive and Disrespectful Behaviors

Alex is a student who has been identified as a student with an Emotional Disturbance. A referral for Alex was made by his intervention specialist and the principal to address his ineffective behavior plan that is currently on his IEP. The referral was made to decide whether or not the school was able to provide Alex with the supports he needed or if he needed a change in placement. Through a teacher interview the problem behaviors were defined and prioritized and the target variable of disruptive behaviors were selected. The current behavior plan was evaluated through several observations and team meetings. Throughout baseline progress monitoring, Alex exhibited disruptive and disrespectful behaviors which resulted in multiple office referrals and in-school suspensions. The office referrals and in-school suspensions led to a team decision to conduct a functional behavior assessment and bring in an ED itinerate. The results of the FBA were used to modify and improve the already implemented behavior plan to reduce the disruptive behaviors. The behavior plan was further modified to target and monitor Alex's disrespectful behaviors, which were defined and prioritized. A school psychology intern, under supervision, worked collaboratively with the intervention specialist, principal, ED itinerant, and the 6<sup>th</sup> grade teachers to conduct an FBA, design, implement and monitor an intervention, and to decrease the disruptive and disrespectful behaviors of the student, and to make an effective data-based decision on the student's placement in the school.

Every behavior a person exhibits serves a function (Cooper, 2007). Four functions of behavior are to obtain attention, to escape an aversive situation, to obtain tangibles, and to obtain sensory stimulation (Cooper, 2007). Determining the function of the problem behavior is the first step in designing an effective intervention. Changing the behavior of a disruptive child can

be time consuming and frustrating, but if given enough time systematic behavior management procedures have shown to be effective (Walker, 1979).

Researchers have identified several effective strategies to increase engagement. These strategies can be used alone or together as components of an intervention package. One strategy is the Daily Behavior Report Card (DBRC). The DBRC is appealing because it can serve as both a monitoring device and an intervention component in an applied setting. Chafouleas, Riley-Tillman, and McDougal (2002) report that daily report cards can be used to effectively decrease problem behaviors at schools, and proper use of this intervention can lead to positive outcomes for students. As a monitoring or intervention technique, a measure of a DBRC should specify a behavior that is rated at least daily, and the information should be shared with someone other than the rater (Chafouleas et al., 2002). There are several different types of DBRC, but they all have four characteristics in common. First, the behavior of interest is operationally defined. Second, the observations are conducted under standardized procedures to ensure consistency in data collection. Third, the DBRC should be used in a specific time and place, and with a predetermined frequency. Fourth, the data must be scored and summarized in a consistent manner (Riley-Tillman, Chafouleas, & Briesch, 2007).

When students are expected to engage in independent seatwork for extended periods of time (e.g., 30 or 45 min), they are more likely to disengage from the task at hand (Rock & Thead, 2009). Another approach to increasing engagement is to use differential reinforcement of an alternative behavior (DRA) and non-contingent breaks. Rock & Thead (2009) suggest that student motivation can wane during independent seatwork if efforts to complete the assigned task go unrecognized. DRA is a procedure for decreasing problem behavior in which reinforcement is delivered for a behavior that serves as a desirable alternative to the behavior

targeted for reduction and withheld following instances of the problem behavior (Cooper et al., 2007). The idea is that if other behaviors result in more or easier reinforcement than the undesired behavior, Alex will choose the other behaviors instead of the disruptions currently maintained by escape and attention. DRA incorporates new, desired replacement behaviors that can help Alex in school and later in life. For example, the alternative behavior could be a form of rule following, participation, or communication. Along with a differential reinforcement schedule, interventions for escape-maintained behavior usually involve providing non-contingent breaks (i.e. escape) (Lalli et al., 1999).

The principles of a behavior report card and differential reinforcement were utilized in planning a packaged intervention to reduce Alex's disruptive and disrespectful behaviors. The intervention was implemented by all of Alex's teachers throughout the entire school day. The ED itinerant also provided a minimal amount intervention implementation to review Alex's point sheets with him once a week. The disruptive and disrespectful behaviors were recorded daily to assess the effectiveness of the intervention package in reducing his problem behaviors.

## **Method**

### **Participants and Setting**

The student, Alex, was a 12-year-old, Caucasian male. Alex was eligible for special education services under the category of ED when he was 9 years old. His most current behavioral goals on his IEP are for him to demonstrate appropriate school behavior 9 out of 10 school days. His goals include; staying in his own space, using appropriate or positive language, following directions, and having positive peer and staff relationships.

The consultation took place in a rural public middle school where the student attended the 6<sup>th</sup> grade. The school already had an extensive behavior plan to reduce disruptive and

disrespectful behavior (See Appendix A). The functional assessment of his behavior could potentially be used to supplement his pre-existing behavior plan.

The consultants for this case consisted primarily of the intervention specialist, school principal, ED itinerant, teachers, and the school psychologist intern, who acted as a consultant under the supervision of the building school psychologist.

### **Target Variables**

Variables were selected through consultation with the teachers, based on the initial referral, to reflect Alex's behavior and make observations manageable. Once a "pool" of eligible target behaviors has been identified, decisions must be made about their relative priority (Cooper, Heron, & Heward, 2007). Through a teacher referral and consultation, assessment of Alex's behavior, and collaboration among the team, the target variables were selected. The teacher consultation revealed concern regarding Alex's disruptive behaviors. Because student behavior can be under the discriminative control of multiple antecedent events or reinforced by multiple variables (e.g., teacher and peer attention, access to preferred materials, breaks from work), it is important to examine a combination of factors that may be maintaining problem behavior in the classroom (Sarno, Sterling, Mueller, Dufrene, Tingstrom, & Olmi, 2011).

This behavior was prioritized based on all the instruction Alex was missing from being sent to the office. Disruptive behaviors were further defined into callouts/interruptions, disregarding teacher requests, and being disrespectful towards students or adults. The interviews, teacher assessments, and observations supported the concern of these behaviors. The desired replacement behaviors were to find more appropriate ways to communicate his wants and needs in class.



Alex's disrespectful behaviors were defined as disregarding the feelings of others and displaying inappropriate interactions with a peer or teacher. Examples of these behaviors include behaviors such as blatant defiance, arguing, name calling and rolling his eyes. The teacher interview and recording of the behaviors indicated they occurred at all times during the day and the observations in his classrooms supported the concern. The alternative behaviors were cooperating with peers and the teacher, saying positive statements, and listening to others.

### **Functional Behavior Assessment Procedures**

Crone and Horner (2003) describe FBAs as a way to learn about situational factors that predict and maintain problem behaviors. When we know why a behavior is occurring, we can develop interventions that target its function and therefore have a better chance of changing that behavior. It is important to identify and understand relationships between behavior and aspects of the environment that reinforce behaviors. To determine the function of Alex's behaviors, the consultant conducted an FBA consisting of a staff interview, indirect assessments, a record review, and direct observations of student behavior to evaluate hypotheses and determine potential environmental targets for intervention planning.

### **Record Review**

A record review indicated that Alex had previously qualified as a student with an Emotional Disorder (ED) three years ago.

### **Interviews and direct observation**

The consultant began by interviewing the intervention specialist assigned to Alex using questions from the Functional Assessment Checklist for Teachers and Staff (FACTS, Crone & Horner, 2003). The interview was conducted to assess the scope of concerns; identify and define the problem behaviors; and estimate problem frequency and/or intensity. The interview

collected information about the student and his problem behaviors and helped to narrow and clarify concerns, summarize and prioritize the problem behaviors, and develop an initial functional hypothesis. During this initial interview, problem behaviors were identified as well as most likely times that these behaviors would occur. Additionally, possible antecedents and consequences were discussed.

In order to get information from all other teachers involve, each teacher was administered the Motivation Assessment Scale (MAS) (Duand, 1986) as a semi-structured interview in order to further define target behaviors and their immediate antecedent and consequent events. The MAS is a user friendly indirect questionnaire designed to identify situations in which an individual is likely to behavior in certain ways. From this information, more informed decisions can be made concerning the selection of appropriate reinforcers and treatments. The MAS consists of 16 questions which describe situations in which the behavior might occur. The results on the scoring sheet suggest what the function (or functions) of the behavior are (sensory, tangible, attention, or escape)

Table 1

*Results from Teacher Assessments*

<b>Function</b>	<b>Sensory</b>	<b>Escape</b>	<b>Attention</b>	<b>Tangible</b>
<b>Teacher Ranking</b>	2	3	1	4
	3	2	1	4
	4	1	2	3
	3	1	4	2
<b>Average Rank</b>	<b>3</b>	<b>1.75</b>	<b>2</b>	<b>3.25</b>

Escape and Attention had the highest rank (1.75; 2) suggesting that Alex's disruptive and disrespectful behavior was probably escape and attention motivated. When he was disruptive or disrespectful the teacher would come over to him and reprimand or remove him from the class. This was a motivating or rewarding situation for Alex and his behavior ensured that his teacher

would interact with him or he would be sent to the office. Both teacher assessments and direct observations suggested escape from academic demands or attention (from teachers or peers) might be reinforcing the target behaviors identified for the student. See table 2 below for baseline direct observations:

Table 2

*Baseline Observation Results*

<b>Date</b>	<b>Period</b>	<b>On-Task</b>	<b>Disruptive Call Outs</b>
12/2/10	6 <sup>th</sup>	67%	22
12/2/10	7 <sup>th</sup>	97%	1
12/9/10	3 <sup>rd</sup>	90%	0
12/9/10	4 <sup>th</sup>	61%	11
12/9/10	5 <sup>th</sup>	97%	1
1/6/11	5 <sup>th</sup>	77%	5
1/7/11	6 <sup>th</sup>	67%	32

From my observations, Alex seemed to be most disrespectful and distracting in 6<sup>th</sup> and 4<sup>th</sup> period. As a side note, many of the other teachers came after the observations to say that he became much more disrespectful and disruptive towards the end of class.

**Reward Preference Survey**

The ED itinerant conducted a reward preference survey using a modified version of the Dunn-Rankin reward preference inventory (Appendix B). This was to gain insight into what kind of things were reinforcing to Alex. The results indicated peer approval and adult approval was the most reinforcing. Consumable reward awards were not as reinforcing.

**Hypothesis**

Interviews, records, and direct observations were used to generate a hypothesis and identify the function of Alex's disruptive behavior. The team hypothesized that escape from task demands and access to teacher and peer attention were the main functions of his disruptive

behavior. From the meetings and interviews, it was made clear that Alex had the skills to complete his assignments throughout the school day; therefore, he was engaged in “won’t do” rather than “can’t do” behavior during independent work time.

The results of the FBA were used to make a competing behavior pathway (Crone & Horner, 2003) that summarized the current (actual) behavior and compared it to the antecedents and consequences for expected behavior. These paths were used to propose an acceptable alternative behavior that would replace the problem behavior and be maintained by the same consequences (see Table 2). The competing behavior pathway was used to find ways to reduce the problem behavior. The problem behaviors could be reduced by addressing antecedents (making content more accessible and decreasing waiting time for attention and activity), behaviors (teaching and prompting new behaviors), and consequences (making desired or alternative behaviors).

Table 3

*Competing Behavior Pathway*

<b>Motivating operations</b>	<b>Antecedents →</b>	<b>Behavior →</b>	<b>Consequences</b>
Unable to determine	Teacher Request	<b>Expected:</b> Be On-task during task demand	verbal praise
		<b>Actual:</b> call-outs and interruptions, disrespectful behavior and disregarding teacher requests	Attention in the form of verbal or reprimand or prompting. Brief escape through ignoring. Sent to the office.
		<b>Alternative:</b> <ul style="list-style-type: none"> <li>• Ask for a break</li> <li>• Positive way to communicate wants and needs</li> </ul>	Receive a short structured break from the task. Verbal praise.

## **Accountability Plan**

An A-B design was used, which consists of a baseline phase and an intervention phase. This design allows for assessment of intervention effectiveness by comparing the baseline phase data to the intervention phase data.

## **Intervention Procedures**

An intervention was developed to target a sixth grade student's disruptive behavior in the school setting. The components of the intervention were research based and the intervention was developed collaboratively with the teachers, intervention specialist, ED itinerant, building principal, and school psychology intern. The intervention was designed using the principles of a daily behavior report card and differential reinforcement for appropriate behavior.

**Behavior report card.** The team implemented a 4 week point system with Alex's teachers. Each teacher was expected to fill out a day by day point sheet which includes 3 behaviors based on his IEP goals. The point system was in the form of a likert-type scale where the teacher had to provide a rating of zero to three for each category in each day with zero being behavior was not observe and three being behavior was seen consistently throughout the class period. The three categories Corey was rated on each day were interrupting/callouts, disregarding teacher request, and displaying disrespectful behavior towards adults or other students. The below graphs represent the points received in behavior, weekdays, and the weekly total. See Appendix C for the behavior report card.

**Differential reinforcement.** The reward preference inventory indicated that positive adult approval was most reinforcing to him. The team planned on differential reinforcement for good behavior and good grades in class. Alternative behavior such as rule following, participation, and positive communication were reinforced.

A 3 step warning system was added after week 4 to help Alex get a visual rather than a verbal prompt. The teacher would use 3 cards (red, yellow, and green) and on the third warning, Alex would be sent to a quiet area to cool down.

**Goal setting.** For the sake of making a data-based decision, a goal was set for less than or equal to 20%.

### **Intervention Adherence**

An intervention is only effective if the procedures are adhered to. All of Alex's teachers were expected to turn in the daily behavior report cards at the end of the week. In the first 2 weeks all the teachers adhered to the intervention. After the first two weeks a reminder had to be sent out to the teachers because only 2 teachers (out of 5) were handing in the point sheets.

Table 4

#### *Adherence*

	<b>Week 1</b>	<b>Week 2</b>	<b>Week 3</b>	<b>Week 4</b>	<b>Week 5</b>	<b>Week 6</b>
<b>Adherence</b>	100%	100%	40%	60%	80%	60%

### **Results**

Part of the plan was to teach Alex more appropriate ways of getting his needs met or more appropriate way of avoiding difficult situations. The ED itinerant made the table below to follow Alex's progress with the behavior interventions.

Table 5

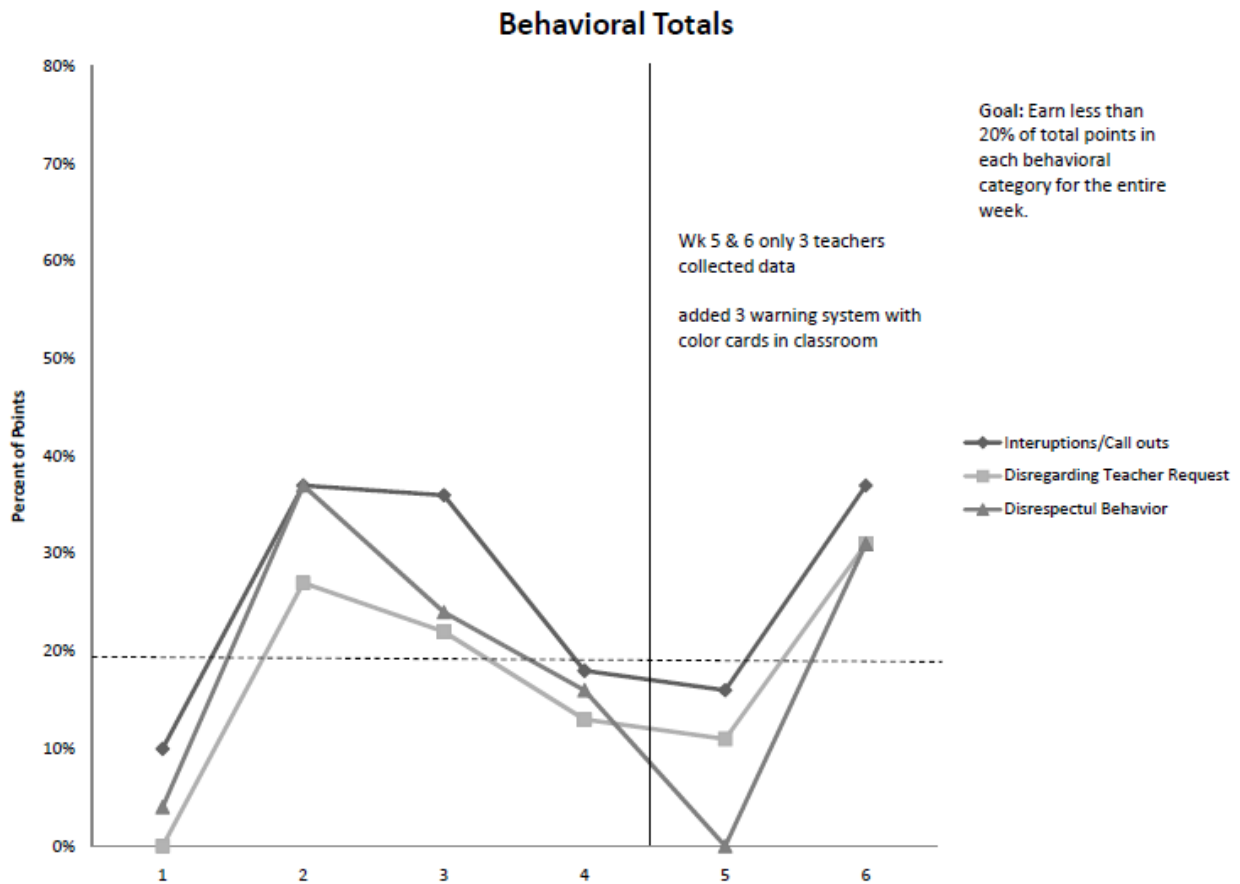
#### *IEP Goals and Objectives*

IEP Goals and Objectives	Goal	February	March
1. Student will demonstrate appropriate school behavior 9 out of 10 school days.	9/10	7/10	8/10
1.1 student will demonstrate appropriate school behavior by staying in his own space 9 out of 10 school days	9/10	8/10	9/10

1.2 students will demonstrate appropriate school behavior by using appropriate/positive language 9 out of 10 school days.	9/10	6/10	6/10
1.3 students will demonstrate appropriate school behavior by following directions 9 out of 10 school days.	9/10	8/10	8/10
1.4 student will demonstrate appropriate school behavior by having positive staff/peer relationships 9 out of 10 school days.	9/10	7/10	8/10

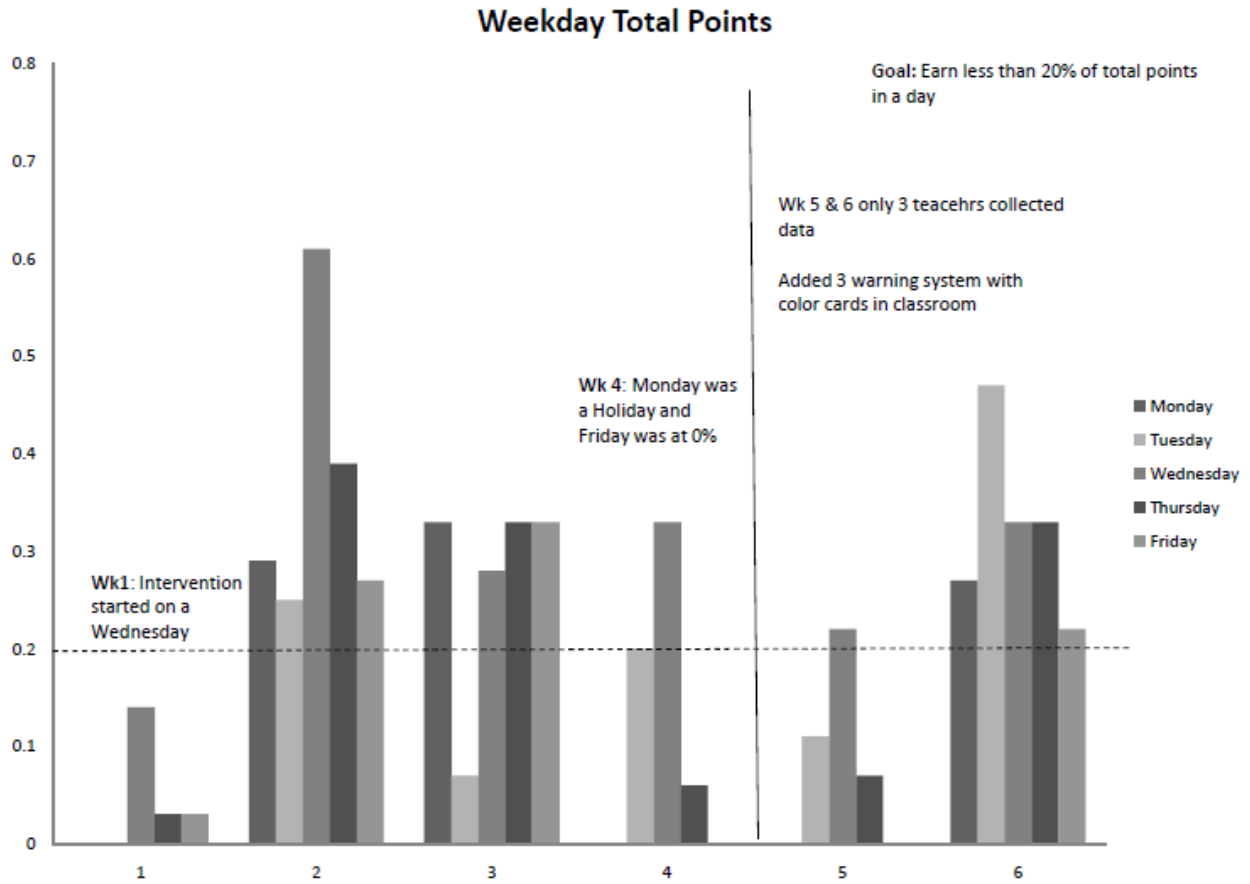
The school psychology intern graphed Alex’s progress based on the daily percentage of points earned from the teachers.

Figure 1: Behavior Totals Per Week



Visual analysis indicates that Interruptions/ Call outs seems to be the biggest concern in the classroom. Keep in mind Week 1 was only 3 days of data.

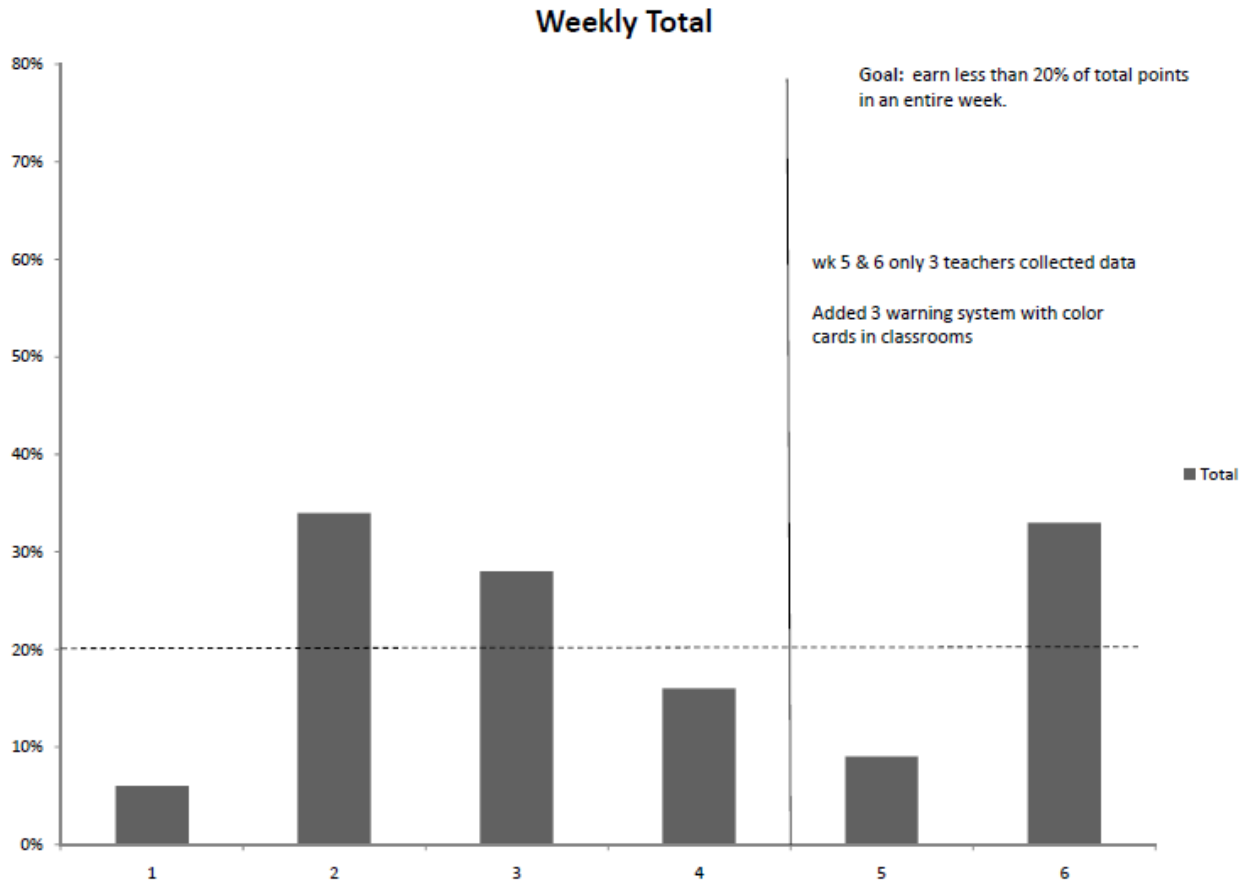
Figure 2: Weekday Total Points



Wk 1 Alex seemed to do very well, although we were missing one or teacher point sheets. It is portrayed that Corey escalated in week 2. Wk 4 looks like a good week. He earned all zeros on Friday making a total of 0% (perfect).



Figure 3: Weekly Total



This bar graph is a good summary of the total points earned for bad behavior each week. It is clear that he did well the first 3 days of the intervention, escalated in week 2 and then did well again in week 4 and 5. Behavior escalated again in week 6. Based on the inconsistent data it is unclear if the point sheets and the ED itinerant have made a positive impact on Alex's behavior.

Figure 4: On-Task Behavior

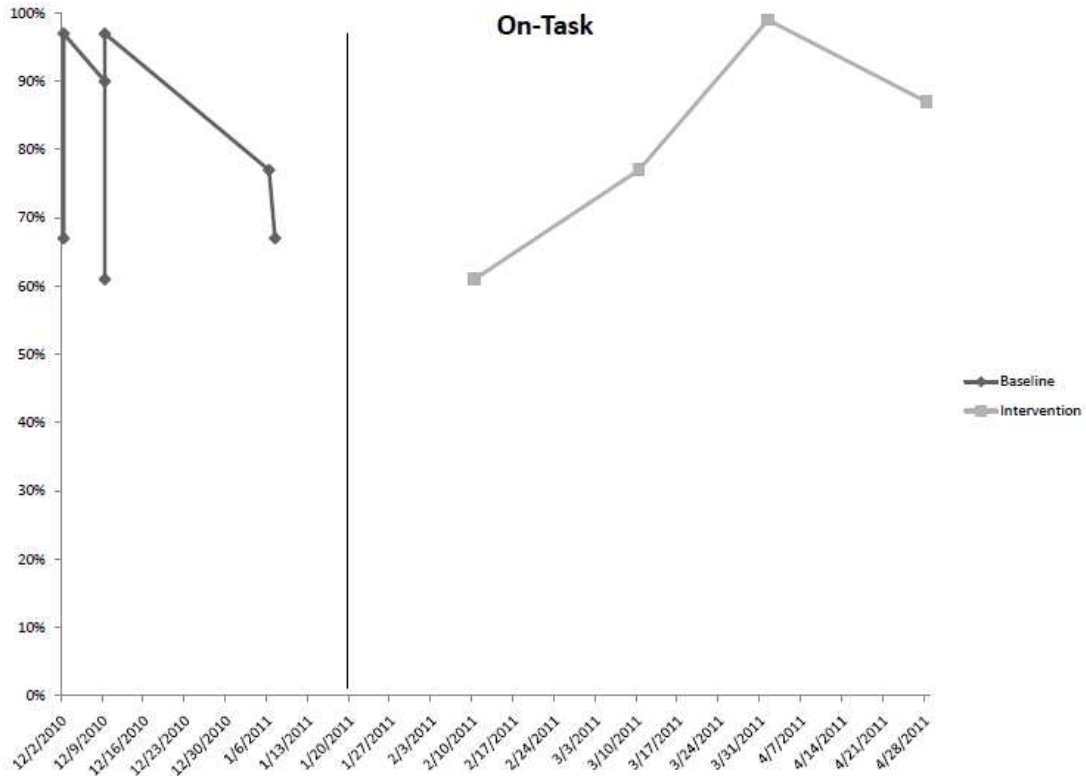
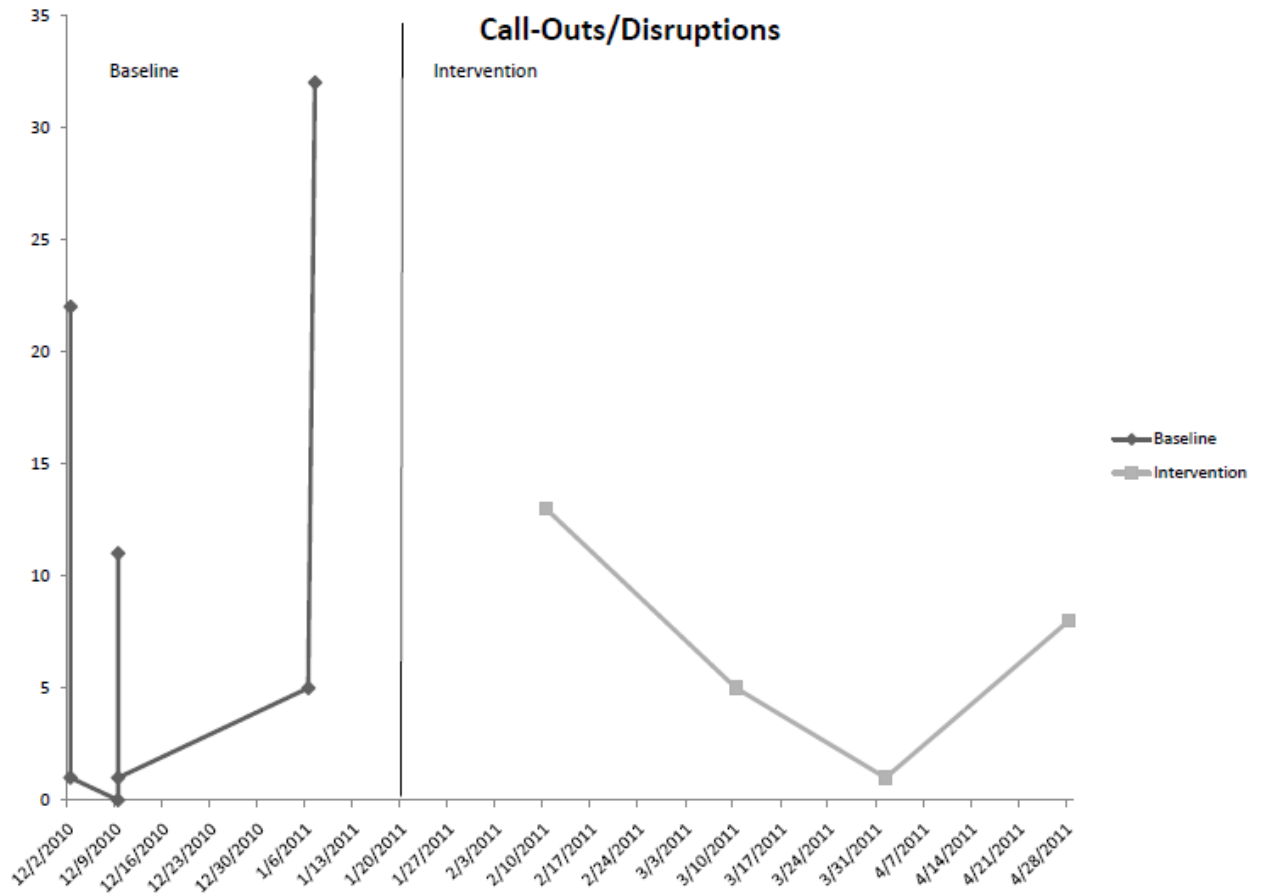


Figure 4 indicates an unsteady baseline. Once the intervention was implemented the Intern school psychologist or ED itinerant observed the student in only once a month. There is an upward trend, but it is impossible to tell if this is a function of the intervention. It is very possible that the observations were done during a good day or a good class period.

Figure 5: Call Outs/Disruptions



Once again, Figure 5 shows an variable baseline that goes up and down in the amount of callouts in one class. Visual analysis indicates that callouts and directions decreased during the intervention.

Table 6  
Summary Statistics

	Average BL/Intervention	Standard Deviation BL/Intervention	Effect Size
On-Task	79%/81%	15/16	.06
Call-Outs/Disruptions	10.28/67.5	12.35/5.05	.18

	Average Wk1/Wk6	StDev W1/Wk6	Effect Size	Average Wk2/Wk6	StDev W2/Wk6	Effect Size
Goal 1	14/47	10/34.2	.54	41/47	24.7/34.2	-.08
Goal 2	0/26	0/16.1	.75	26/26	10.8/16.1	0
Goal 3	5/31	9/16.1	.65	40/26	11.3/16.1	-.44

### **Discussion**

The current intervention will continue to be implemented for the remainder of the year. The frequency of disrespectful behaviors will continue to be progress monitored. The teachers will begin monitoring how many times Alex is sent out of the classroom. The intervention may continue to be modified to find a plan that will work for the following school year.

The results of the frequency of aggressive behaviors indicate the goal was met but did not remain consistently above 20% for 2 weeks. The A-B accountability design does not allow one to be certain the intervention was the sole cause of the reduction of behaviors. Removing the intervention to see if the behavior increased towards baseline would demonstrate verification for the intervention.

A few limitations in this case are worth noting. Data collection was incomplete because of in-school- suspension and failure for all teachers to fill out the point sheets each week. It may have been a good idea to meet with the teachers on a weekly basis to go over their interpretation of the point sheet and his behavior for the week. For behavioral observations, there should have been more consistent observations every week to get a better picture of the on-task and disruption data in class. IOA was not collected due to time constraints and scheduling issues. This would have been an important issue to discuss before starting the baseline data collection.

The functional behavior assessment provided additional insight into the student's behaviors but additional components could have been done to create a stronger functional hypothesis. Obtaining permission for a bus observation earlier on or observations during lunch would have allowed an assessment of Alex's self reported behavior and interactions with peers in a non academic setting. A parent interview also could have provided insight into Alex's experiences at home; however, many difficulties were encountered in getting in contact with the parent.

Reinforcers are only successful if they are high quality and received immediately (Cooper, 2007). The results of the reward preference inventory indicated peer and adult attention were the most desired forms of reinforcement. The current intervention provided Alex with adult attention during each of his classes and also on Thursdays with the individual meetings with the ED itinerant; however, the intervention did not specifically provide Alex with peer attention. Alex may benefit from a social skills group or the intervention could have included rewards such as choosing a group to work with, eating lunch in the classroom with a peer of choice, having an extra 10 minutes to play a game with a peer, or being the line leader.

In the future, adherence checks and inter-observer agreement should be conducted more frequently. Weekly check-ins with the teachers and recordings of the times sent out of class would have been useful information. Another form of adherence checks could have been conducted such as the student filling out reports regarding his behavior in class and how he feels about the extra positive attention. A behavior code could have been developed for the psychology intern to also use to progress monitor with the new behavior plan in place. This would have been difficult due to the student's knowledge of being watched. His behavior would change when the intern watched him in class. Other resources within the school could have also been utilized to conduct adherence checks.

Formal social validity was not collected because the intervention was still being implemented. However, verbal social validity was given on multiple occasions by the 6<sup>th</sup> grade teachers. During the team meetings several of the teachers would show up and offers some very useful suggestions that will be implemented in the next school year.

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## Appendices

### Appendix A: *Current IEP Plan*

#### Target Goals

1. Alex will abide by classroom and school-wide rules.
2. Alex will improve social skills by less reported conflict with peers. This includes staying in his own space and using positive/appropriate language.
3. Alex will improve relationships with adults by less reported conflicts. This includes following teacher directions and using positive/appropriate language.
4. Alex will experience academic success.

#### Interventions

1. Alex will receive liberal praise for all completed work and compliance in the classroom.
2. Alex will be seated near the front of the classroom to assist with attentiveness and compliance.
3. Alex will receive free time as a reward when he has completed all work with compliance to teacher instructions.
4. Alex will view his grades once a week and he will use support period or extra help to make up or make corrections to assignments.
5. Alex's grades will be based on sliding grade scale.
6. Alex will be provided with 2 escape passes per week if he is feeling overwhelmed or overly frustrated.

### Response to Inappropriate Behaviors

1. If Alex is not cooperating, following rules or being disruptive then the staff will use verbal redirection.
2. If the verbal redirection fails, the teacher will initiate a one-on-one conference outside the classroom in attempt to have Alex regroup or change his behavior.
3. If the conference fails, allow Alex a safe space to get himself together. At this point the teacher may contact the intervention specialist to meet with Alex.
4. If #3 fails, the principal will be called and further action will be taken.



Appendix B: *Dunn-Rankin rewards preference survey***DUNN-RANKIN REWARD PREFERENCE INVENTORY (MODIFIED FROM ORIGINAL)****CHECK WHICH ONE OF EACH PAIR YOU LIKE BETTER**

1. \_\_\_\_\_ The teacher writes "100" on your paper  
\_\_\_\_\_ You are the first to finish your work.
2. \_\_\_\_\_ A piece of candy.  
\_\_\_\_\_ Other students ask you to be on their team.
3. \_\_\_\_\_ Extra time playing a game of choice.  
\_\_\_\_\_ Teacher writes "100" on your paper.
4. \_\_\_\_\_ Other students ask you to be on their team.  
\_\_\_\_\_ Be the first to finish your work.
5. \_\_\_\_\_ Extra time playing a game of choice.  
\_\_\_\_\_ A piece of candy.
6. \_\_\_\_\_ Teacher writes "100" on your paper.  
\_\_\_\_\_ Other students ask you to be on their team.
7. \_\_\_\_\_ Be the first to finish your work.  
\_\_\_\_\_ Extra time doing an activity of choice.
8. \_\_\_\_\_ A piece of candy.  
\_\_\_\_\_ Teacher writes "100" on your paper.
9. \_\_\_\_\_ Other students ask you to be on their team.  
\_\_\_\_\_ Extra time doing an activity of choice.
10. \_\_\_\_\_ A piece of candy.  
\_\_\_\_\_ Be the first to finish your work.
11. \_\_\_\_\_ Teacher writes "A" on your paper.  
\_\_\_\_\_ Be the only one who can answer a question.
12. \_\_\_\_\_ A candy bar  
\_\_\_\_\_ Friends ask you to sit with them
13. \_\_\_\_\_ Be free to play on the computer.  
\_\_\_\_\_ Teacher writes "A" on your paper.
14. \_\_\_\_\_ Friends ask you to sit with them.

- \_\_\_\_\_ Be the only one who can answer a question.
15. \_\_\_\_\_ Be free to play on the computer.  
\_\_\_\_\_ A candy bar.
16. \_\_\_\_\_ Teacher writes "A" on your paper.  
\_\_\_\_\_ Friends ask you to sit with them.
17. \_\_\_\_\_ Be the only one who can answer a question.  
\_\_\_\_\_ Be free to play on the computer.
18. \_\_\_\_\_ A candy bar.  
\_\_\_\_\_ Teacher writes "A" on your paper.
19. \_\_\_\_\_ Friends ask you to sit with them.  
\_\_\_\_\_ Be free to play a game of choice.
20. \_\_\_\_\_ Be the only one who can answer a question.  
\_\_\_\_\_ A candy bar.
21. \_\_\_\_\_ Teacher writes "Perfect" on your paper  
\_\_\_\_\_ Have only your paper shown to the class.
22. \_\_\_\_\_ A soft drink.  
\_\_\_\_\_ Classmates ask you to be the class leader.
23. \_\_\_\_\_ Be free to play a game of choice.  
\_\_\_\_\_ Teacher writes "Perfect" on your paper.
24. \_\_\_\_\_ Classmates ask you to be the class leader.  
\_\_\_\_\_ Have only your paper shown to the class.
25. \_\_\_\_\_ Be free to play a game of choice.  
\_\_\_\_\_ A soft drink.
26. \_\_\_\_\_ Teacher writes "Perfect" on your paper.  
\_\_\_\_\_ Classmates ask you to be the class leader.
27. \_\_\_\_\_ Have only your paper shown to the class.  
\_\_\_\_\_ Be free to play a game of choice.
28. \_\_\_\_\_ A soft drink.

- \_\_\_\_\_ Teacher writes “Perfect” on your paper.
29. \_\_\_\_\_ Classmates ask you to be the class leader.  
\_\_\_\_\_ Be free to play a game of choice.
30. \_\_\_\_\_ Have only your paper shown to the class.  
\_\_\_\_\_ A candy bar.
31. \_\_\_\_\_ Teacher writes “Excellent” on your paper.  
\_\_\_\_\_ Have your paper put on the bulletin board.
32. \_\_\_\_\_ A soft drink.  
\_\_\_\_\_ Friends ask you to work with them.
33. \_\_\_\_\_ Be free to work on something you like.  
\_\_\_\_\_ Teacher writes “Excellent” on your paper.
34. \_\_\_\_\_ Friends ask you to work with them.  
\_\_\_\_\_ Have your paper put on the bulletin board.
35. \_\_\_\_\_ Be free to work on something you like.  
\_\_\_\_\_ A soft drink.
36. \_\_\_\_\_ Teacher writes “Excellent” on your paper.  
\_\_\_\_\_ Friends ask you to work with them.
37. \_\_\_\_\_ Have your paper put on the bulletin board.  
\_\_\_\_\_ Be free to work on something you like.
38. \_\_\_\_\_ A soft drink.  
\_\_\_\_\_ Teacher writes “Excellent” on your paper.
39. \_\_\_\_\_ Friends ask you to work with them.  
\_\_\_\_\_ Be free to work on something you like.
40. \_\_\_\_\_ Have your paper put on the bulletin board.  
\_\_\_\_\_ A soft drink.

Please use the following key:

**0** – Behavior was not observed  
TWICE

**2-** Behavior was observed at least

**1** – Behavior was observed ONCE  
was seen consistently throughout the class

**3** - Behavior

Teacher \_\_\_\_\_ Period \_\_\_\_\_

	<b>Interruptions/Calling Out</b>	<b>Disregarding Teacher Requests</b>	<b>Disrespectful Behavior Toward Adults/Students</b>
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
<b>Total</b>			