

EFFECT OF CONTRACTS IN DECREASING INAPPROPRIATE BEHAVIOR OF
STUDENTS WITH EMOTIONAL/BEHAVIORAL DISABILITIES

by

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Students with emotional and behavioral disabilities (EBD) often demonstrate inappropriate behaviors in the classroom and these behaviors have shown to predict poor academic achievement, rejection from peers, and an increased chance of a student dropping out of school (Wilkinson, 2005). The purpose of this research was to investigate the use of behavior contracts to decrease the inappropriate behaviors of students with EBD in their middle school classrooms. Three male 7th and 8th grade students who have been school-identified with EBD and exhibit inappropriate behaviors in their general education classrooms were identified to participate in this research. A multiple baseline across participant design was used to implement behavior contracts for one inappropriate behavior for each participant. Using the behavior contracts, all three students demonstrated a decrease in their targeted inappropriate behavior. Behavior contracts were seen to be a very effective and an easy to use intervention for these three students. These results suggest that behavior contracts can be used with EBD students as a tool to allow their successful inclusion in the general education classroom without disrupting the learning environment.

EFFECT OF CONTRACTS IN DECREASING INAPPROPRIATE BEHAVIOR OF
STUDENTS WITH EMOTIONAL/BEHAVIORAL DISABILITIES

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CHAPTER 1: INTRODUCTION

Students with emotional and behavior disabilities (EBD) often exhibit a wide range of inappropriate behaviors including disruption, disobedience, destruction, and aggression (Cullinan & Sabornie, 2004). Inappropriate behaviors can be detrimental to the success of students with EBD in the classroom. Patterns of disruptive behavior have been shown to predict poor academic achievement, rejection from peers, and an increased rate of drop-out for students with EBD (Wilkinson, 2005).

Not only does inappropriate behavior cause problems for students with EBD, but this type of conduct is also disruptive to the learning environment of other students within the general education classroom. It requires teachers to use academic time to deal with control and discipline rather than academics (De Martini-Scully, Bray, & Kehle, 2000; Wilkinson, 2005). General education teachers often respond to inappropriate Student 2ehavior with a punitive and inconsistent approach. Although many behaviors of students with EBD occur in a patterned manner, the reactions of a general education teacher typically change from day to day (Jull, 2008). For example, a student may verbally interrupt the lesson multiple times a day, but the teacher may respond differently to each interruption depending upon his or her frustration level and only follow through with a disciplinary action after 10 days of disruptions. This creates a cycle of negative behavior from the student paired with negative attention from the teacher (Cook, 2005).

Unlike other manifestations of behavior problems, such as depression and self-harming behaviors, inappropriate behaviors are disturbing to other students in the general education classrooms and encourage the need for exclusion of students with EBD (Jull, 2008). However, exclusion from general education is in opposition of the inclusion trend advocated by current

laws (Yell, 1995).

Students with EBD must be given access to inclusive settings while teachers continue to provide optimal learning environments to nondisabled students. Teachers must be trained to properly manage inappropriate behaviors in their classrooms in order to achieve both goals. According to Lassman, Jolviette, and Wehby (1999), teachers who work with students with EBD need continuing support, training in specific behavior management strategies, and opportunities to develop positive relations with students. One research-based strategy that has been shown to decrease inappropriate behaviors and provide the positive interactions that students with EBD need is behavior contracting. According to Cook (2005), behavior contracts are able to disrupt the negative cycle that often occurs between a student with EBD and a teacher. Behavior contracts replace negativity with positive teacher attention, which in turn increases student self-esteem. This positive teacher behavior provides students with EBD reinforcement and attention for good behaviors rather than bad behaviors. Furthermore, it brings better communication and a deeper relationship between the teacher and Student 1nd continues to allow the teacher to keep his or her attention focused on the entire class.

The middle school students who were invited to participate in this study were school-identified with EBD and, during the previous school year, demonstrated substantial problems with inappropriate behaviors in inclusion classrooms. Teachers complained about consistent daily disruptions from these students including wandering around the classroom, touching and poking peers nearby, and making unrelated verbal comments during instruction. Although each of their behaviors differ, all of them caused disruption to their learning and the learning of other students in their classrooms. During the fall semester, these students were in 7th and 8th grade general education classrooms. In the past, teachers have been frustrated with the behaviors these

students displayed and argued with the resource teacher for their exclusion from the general education classroom. These teachers felt that the students would best be served in a self-contained classroom, where each Student 3 could have more individualized attention and their behaviors would not interrupt other students in the general education classroom.

Although students with EBD struggle with inappropriate behaviors similar to the three participants in this study, there is a lack of research for using behavior contracts with students with EBD in the general education classroom because they have not been the clear focal point in studies. The purpose of my action research was to use behavior contracts to decrease inappropriate behaviors of students with EBD in their general education classrooms.

CHAPTER 2: REVIEW OF LITERATURE

Behavior contracts have been seen to be effective in reducing inappropriate behavior in inclusion settings, although few studies targeted middle school students with EBD. Allen, Howard, Sweeney, and McLaughlin (1993) used an ABAB single subject replication design to investigate the use of contracts for three elementary-age students with no identified disability who exhibited inappropriate classroom behavior and were off-task throughout the day. The use of individualized behavior contracts caused an immediate and noteworthy increase in on-task behaviors for all three students. The implementation of these contracts included a daily time that was set aside for the student and teacher to meet and review contract goals, a valuable component to the building of a positive relationship. After the contracts were removed, their on-task behaviors remained high, indicating maintenance of this intervention. Allen and his colleagues commented on the minimal amount of time needed from the teacher to effectively implement the contract, a very important characteristic of an intervention to a busy classroom teacher.

Mruzek, Cohen, and Smith (2007) agreed with the ease of using behavior contracts in their study of two elementary school boys in a self-contained classroom, one with Asperger Syndrome and another with an emotional disability. The boys exhibited inappropriate behaviors in the classroom including aggressive tantrums and disruptive verbalizations. Using a changing criteria design, Mruzek and colleagues implemented a behavior contract which required the teacher and students to meet two times a day to review the contract, agree upon rewards, problem solve, and talk about successful interactions. Both participants demonstrated an immediate increase in successful behaviors during the intervention phases, despite the fact that their contracts changed on a weekly basis to focus on different behaviors. Mruzek and colleagues

commented that the contracts were neither obvious nor interfering to other students in the classroom. Furthermore, they noted that a positive relationship between the student and teacher resulted from the contracts because of the increase in communication.

Navarro, Aguilar, Aguilar, Alcade, and Marchena (2007) also researched the use of behavior contracts with three students without disabilities in the general education using a multiple baseline research design. As in previous studies, these students demonstrated inappropriate behaviors including lying on desks, refusing to work, making verbal complaints, and making noises. They found that all students had a significant reduction in their personal targeted behavior problems as the contracts were implemented.

Wilkinson's study (2003), focused on a nondisabled 7-year old female, exhibited the same successful results in an AB research study. A behavior contract was put in place to decrease the student's disruptive and off-task behaviors in the general education classroom. Both the teacher and student were happy with the behavior contract as an intervention and felt that it was beneficial to them.

Further studies have been conducted using behavior contracts paired with other interventions. Flood and Wilder (2002) paired contracts with functional communication training (FCT) in a study of an 11 year old male diagnosed with ADHD who exhibited off-task behavior and poor academic performance. Researchers assessed the student's rewards with a verbal survey and gave access to these desirable items with successful intervals of on-task behavior. They found a marked decrease in off-task behavior when the contract was in place and the student was taught functional communication. This research was conducted in a one-on-one setting in a therapy room, but the researchers noted that it continued to be successful in the general education classroom, although no data were collected.

Ruth (1996) paired behavior contracts with goal setting instruction to increase appropriate classroom behaviors for a large group of self-contained students in first through sixth grade. Using an AB design, she found that these students, diagnosed with ED, LD, and dual ED/LD, were successful in consistently meeting their behavior goals on a daily and weekly basis during the contract phase. Four principles were incorporated into these formal contracts: the use of specific goals, the use of leveled goals for daily, weekly, and monthly time periods, the allowance of the goal and incentive negotiation by the student, and the consistency of performance feedback in charting, posting, and weekly conferences. The use of behavior contracts and goal-setting was very successful in decreasing inappropriate behaviors.

De Martini-Scully, Bray, and Kehle (2000) paired behavior contracts with the use of precision requests to study two 8 year old students in the general education setting. Using a multiple baseline reversal single subject design, they determined that precision request and contracts were very successful for these two students and they were able to decrease their disruptive behavior in the classroom.

Stage et al. (2006) also worked with three different students diagnosed with ADHD or developmental disabilities in Kindergarten, 1st grade, and 9th grade in their research. They used an informal contingency intervention with individualized contingencies for decreased disruptive behavior in the classroom. Despite their differences in age, disability, and setting, all three students decreased their problem behaviors when contingencies were in place. Unfortunately, the high school student did not demonstrate as significant of an increase as the other two. The authors speculated that this was due to a lack of treatment fidelity since the general education teacher did not implement the contract that was being used by the resource teacher.

In summary, behavior contracts have been shown to be very effective interventions to

reduce inappropriate behaviors (see Appendix B). They provide students and teachers with a positive and meaningful relationship, they are easily implemented, and they are not intrusive to other students in the general education environment. The majority of research on this intervention focused on students who were not identified with a disability and who participated in general education classes. My study answered the research question: Will implementing behavior contracts in the general education class increase the positive behaviors and decrease the inappropriate behaviors of a middle school student with EBD?

CHAPTER 3: METHOD

Participants and Setting

Three Caucasian male students were targeted for this research study. All of the students were in 7th and 8th grade and were school-identified with EBD. I conducted a record review of each student to learn more information about them, focusing on achievement scores, behavior rating scales, and behavior assessments. The students' IQ scores ranged from 80-84 and all achievement scores fell within normal functioning ranges of their IQ. This demonstrated that the students were academically capable of completing work in the general education classroom. See Table 1 for demographic and academic characteristics.

Table 1

Student Demographic and Academic Characteristics

STUDENT	Gender	Race	Disability	Grade	IQ	Broad Reading Skills	Reading Comp.	Math Calc.	Math Reas.
Student 1	M	White	EBD	7 th repeat	80	76	66	76	82
Student 2	M	White	EBD	7 th	88	73	75	85	91
Student 3	M	White	EBD	8 th	84	87	74	80	70

The Emotional and Behavior Problem Scale – Second Edition (EBPS-2; McCarney & Arthaud, 2001), a norm-referenced rating scale completed by classroom teachers, was also reviewed to identify standard scores and percentiles for each participant. This scale is divided into five different subscales: learning problems, interpersonal relations, inappropriate behavior, unhappiness/depression, and physical symptoms/fears. Inappropriate behavior was among the lowest scored subscale for all three participants. The standard scores on the EBPS-2 ranged

from 23 to 36 and percentiles ranged from 5% to 12%. These data indicated that all of the participants demonstrated significant emotional and behavior problems in the general education classroom. See Table 2 for behavior characteristics.

Table 2

Student Behavior Characteristics

STUDENT	EBPS-2 Sum of Standard Score M = 100 SD = 15	EBPS-2 %ile	Inappropriate Behavior (from EBPS-2) Standard Score M = 10 SD = 3	Strengths (from FBA)	Problem Behaviors (from FBA)	Possible Reasons for behavior (from FBA)
Student 1	36	12 th %	7	Wants to be loved, helpful	Makes impulsive comments to teacher, makes rude comments to friends, makes noises, gets out of seat, reacts negatively to men	Escape being made fun of by peers, gain positive peer attention, gain peer respect
Student 2	36	12 th %	6	Wants to help, polite, funny	Gets out of seat, off-task, talks to peers during instruction, refuses to work	Avoid a demand or request, avoid an activity or task, gain peer attention
Student 3	23	5 th %	2	Attendance	Makes noises, picks and touches other students, denies all behaviors, makes rude comments to students	Avoid a demand or request, avoid an activity or task, escape the classroom, gain desired activity, gain adult and peer attention

Note: The EBPS-2 is a norm-referenced test. Mean (M) and standard deviation (SD) are given for both sets of numbers. These scores indicate that all of the participants fall significantly below the average percentile on this measure.

Finally, the functional behavior assessment for each student revealed that they all exhibited different types of inappropriate behaviors including refusing to work, making noises, and talking out in class. Teachers hypothesized that all of these students displayed these behaviors to gain attention from peers or adults and to avoid tasks, requests, or demands. This

information indicated that teachers did not believe the students displayed inappropriate behavior due to lack of understanding.

The behavior contract for each student was implemented during his language arts class. All three students were in different language arts classrooms. Each of the teachers had a master's degree. Student 2 and Student 3's teachers were female, while Student 1's teacher was male. These three teachers had very different teaching styles, but all of them were consistent in implementing their classroom rules and procedures. Although the intervention was implemented with the general education teacher, the resource teacher was also involved in the intervention. This female teacher worked with all of the participants for a minimum of one year and had a very good rapport with each student. She also worked with the general education teachers for at least 3 years. She was involved in the initial meeting to write the contract and determine incentives. Furthermore, the resource teacher met with each participant daily to issue rewards and discuss any problems that occurred during the day.

Finally, I was involved in all phases of the research as an observer. I was a resource teacher for students with autism at my school. Therefore, I had never worked with any of the participants and they were unfamiliar with me as a teacher. The lack of relationship between me and each Student 1 allowed me to function solely as an observer rather than a helper in the classroom. I attended meetings with students to ensure that contracts were completed correctly. Furthermore, I collected data during all observation sessions and reviewed the treatment fidelity checklists daily to ensure the intervention was implemented correctly.

Dependent Variable

The dependent variable measured was *inappropriate behavior*. Inappropriate behavior was defined as any type of physical behavior or vocalization that goes against common

classroom and school rules and is not suitable for a learning environment. It did not include physical behavior or vocalizations that align with school and classroom rules and encourage a good learning environment. This vague definition of inappropriate behavior was more specifically defined for each participant in the study. One distinct inappropriate behavior was identified and measured for each participant. This targeted behavior came directly from their functional behavioral assessments.

Student 1 and Student 2's targeted behavior was *talking to peers*. Talking to peers was defined as making a verbal comment to another student during a time when peer interaction is not acceptable, such as lecture or independent work. Talking to peers had to occur during a time when other students were not talking. Therefore, it was a distraction that the identified student was creating for both himself and other students. A minimal amount of talking to peers was very disruptive to learning in the classroom because it not only distracted learning during the moment it occurred, but it was often followed by a verbal reprimand from the teacher and a short period of transition back to the task. Occasionally, the teacher's verbal reprimand turned into a lecture, interrupting work for an even longer period of time.

Student 3's targeted behavior was *refusal to work*. Refusal to work was defined as any moment when the student verbally or nonverbally declined to complete work or interact in the lesson. Refusal to work is different from off-task behavior because it is a purposeful decision made by the student not to complete the work and it is not combined with any other behavior. Off-task behavior might include talking to peers, doodling, or looking around while refusal to work usually includes a "shut-down" response or from the student. Often times, this behavior was not a momentary behavior and continued for extended periods of time during the class period. Examples of this behavior were refusing to answer a question, refusing to attempt an

assignment, and refusing to sit up during a lecture or class discussion.

Although different behaviors were targeted for each student, these behaviors were determined to occur for a similar function. According to each student's FBA, these inappropriate behaviors were exhibited to gain peer and/or adult attention. Both talking to peers and refusal to work required a reaction from the teacher in an attempt to regain appropriate behavior from the student.

Independent Variable

The intervention used to decrease these inappropriate behaviors was a behavior contract. The implementation of this behavior contract required each student to hold several mini-meetings throughout the school day with either the resource teacher or the general education teacher. Each participant began the day by collecting his contract from the resource teacher and briefly discussing his goal for the day. At the beginning of the language arts class period, the student met with the general education teacher to review his goal and discuss any concerns. At the end of that same class period, the teacher and student met again to discuss if the student met or did not meet the goal and the teacher marked the contract accordingly. Finally, at the end of the school day, the student reconvened with the resource teacher to discuss how the day went, mark the graph, and collect any incentives earned for the day. Each contract was created and signed by the student, general education teacher, and resource teacher. As stated before, the goal was different for each participant, focusing specifically on the targeted inappropriate behavior. Incentives were also individualized for each student. Each student was provided with a reinforcement menu during the writing of the behavior contract so that he could choose incentives that were meaningful to him.

Instruments

During the 2009-2010 school year, general education teachers completed a functional behavior assessment for each student to determine what disruptive behaviors he exhibited in the classroom and which were more prevalent. A blank copy of this functional behavior assessment is included as Appendix C. This assessment was used to determine specific inappropriate behaviors that each student demonstrates and possible reasons for these behaviors.

Figure 1 is an example of the reinforcement menu that was provided to each student prior to starting the intervention. This menu helped both teachers and students in writing the contract by providing incentive options. Figure 2 is a sample contract. This contract allowed the student to receive incentives on a daily, weekly, and long term basis.

Activity Rewards	Social Rewards	Tangible Rewards
<i>Short Term</i>		
Get a 5 minute break from class work	Spend 5 minutes with another teacher	Piece of gum
Work on your own activity for 5 min during class (read, draw, crossword)	Work with a friend or in a small group to complete an assignment	Can of soda
Run an errand	Take a positive note home	Item out of the snack machine
Help the teacher complete a task	Spend homeroom with another teacher	
Leave class 5 minutes early		
Complete work for extra credit		
No homework		
Sit at the teacher's desk to complete work		
<i>Long Term</i>		
Movie ticket	Go out to lunch with teacher	Get take-out for lunch
Gift card to _____		

Figure 1. Reinforcement Menu. *Items can be added to the menu by a student upon team approval during the contract meeting.

CONTRACT

My long term goal is to increase my appropriate behavior in my language arts class. I want to do this because it will help me learn more and it will help the students in my class learn more too.

MY GOAL	Strategies to help me reach this goal	+ or -
I will refrain from talking to peers during	Think before I speak Ask the teacher for a break	

** Each + earns 2 points

Every day:

If I get 2 points, I get: _____ a piece of gum _____

Every week:

If I get 6 points, I get: _____ a candy bar _____ (Yellow Week)

If I get 8 points, I get: _____ to leave class 5 min early on Friday _____ (Green Week)

If I get 10 points, I get: _____ to spend homeroom with Mrs. Hughes _____ (Green Week)

Overall:

When I get 50 points, I get: _____ a movie ticket _____

When I have 4 consecutive green weeks, I get: ___ to go out to lunch with Mrs. Hughes _____

I, _____, agree to the following:

- 1) I will meet with my language arts or math teacher at the beginning and end of class.
- 2) I will work to meet my goal for the day.
- 3) I will meet with my resource teacher at the beginning and end of each day.

Signed: _____ (student)

I, _____, agree to the following:

- 1) I will meet with this Student 1t the beginning and end of each day.
- 2) I will not punish for a (-) on the contract.
- 3) I will give him the awards agreed upon above.

Signed: _____ (resource teacher)

I, _____, agree to the following:

- 1) I will meet with this Student 1t the beginning and end of each class period.
- 2) I will explain why this student received a (+) or (-) at the end of each class period.
- 3) I will not punish for a (-) on the contract.

Signed: _____ (general education teacher)

Figure 2. Contract.

Research Design and Data Collection

I used a multiple baseline across participants design (Horner et al., 2005). Initially, I chose this design because previous research has shown that behavior contracts can have long term effects after the contract is removed. Therefore, using multiple baseline procedures allowed me to demonstrate control over the dependent variable without removing the intervention. Furthermore, it would have been unethical to remove the intervention (i.e., reversal design) if the students demonstrated a decrease in problem behaviors with the contract.

Baseline and intervention data for each inappropriate behavior were measured using partial interval recording (Alberto & Troutman, 2006). Partial interval recording was appropriate for both of these behaviors because talking to peers and refusal to work were continuous behaviors that occurred frequently and for a duration of time. Interval recording was able to identify an approximate percent of time that the students were disrupted due to the inappropriate behaviors.

I observed each student daily for 15 minutes with 30 second intervals cued by tape recording. The data recording form has been included in Appendix D. While observing the student, if the inappropriate behavior on the contract occurred at any time during the 30 seconds, a plus (+) was indicated on the recording form. If this behavior did not occur during the 30 second interval, a minus (-) was marked on the form. I then determined what percent of observation time the student spent engaged in the targeted inappropriate behavior. These data were recorded throughout the study in the same general education classroom for each student.

Interobserver reliability measures were collected for 24% of the sessions. These observations were conducted by Rebekah Pennell, the Caldwell County behavior specialist. She was well trained in using observation forms and observing inappropriate behaviors in the

classroom. During these sessions, both Ms. Pennell and I were present to observe the participant during the 15 minute session. We sat at different areas in the classroom and reviewed the data after the session ended. Interobserver reliability agreement was 98%.

A treatment fidelity checklist was also completed on a daily basis for each participant-by both the regular education teacher and the resource teacher to ensure that the same intervention was consistently followed. I reviewed the treatment fidelity checklist every day to ensure the treatment was being conducted correctly. The treatment fidelity was 100% across all intervention sessions.

Action	Participants	+ = completed - = not completed S – completed for some of the time
HOMEROOM MEETING	Student, Resource Teacher	
1. Read through contract goals and strategies		
2. Review any problems or concerns from yesterday		
3. Review previous progress on goals		
FIRST CLASS	Student, Gen. Ed. Teacher	
1. Review goals and strategies at start of class		
2. Place contract on desk during entire class		
3. Teacher taps contract when student needs a reminder of goals		
4. End of class meeting a. Do you think you met this goal? b. Why or why not? c. Mark contract d. Praise and encouragement if goal met/ reinforce strategies for goals not met		a. b. c. d.
END OF DAY MEETING	Student, Resource Teacher	
1. Review of goals a. Did you meet this goal? b. Why or why not? c. Why - How did you use your strategies? d. Why not - How could you change what you did to meet this goal tomorrow?		goal 1 a. b. c. d.
2. Mark progress on chart		

Figure 34. Treatment Fidelity Checklist.

Social Validity

A teacher acceptance form and student acceptance form are included in Figures 4 and 5. These social validity assessments were completed at the conclusion of the data collection to determine how happy both teachers and students were with the use of behavior contracts to decrease inappropriate behaviors. These forms contain both quantitative and qualitative information.

Teacher Post-Intervention Acceptability and Importance of Effects Survey

Date:

Name:

Intervention Goals:

The intervention:	Disagree	Neutral	Agree
1. fit into my regular schedule	1	3	5
2. did not take too much time	1	3	5
3. taught important skills	1	3	5
4. was a fair way to handle the behavior	1	3	5
5. was appropriate given the behavior	1	3	5
6. was suitable given the classroom culture	1	3	5
7. was easy to implement and maintain	1	3	5
8. was within my skill level to implement	1	3	5
9. quickly improved the student's skill	1	3	5
10. was acceptable to other students	1	3	5
11. will have lasting positive effects	1	3	5
12. improved student's overall behavior	1	3	5
13. is one I will use again when needed	1	3	5
14. is one I will recommend to others	1	3	5

A feature I really liked was ...

A feature that was very time consuming was ...

One thing I would change was...

The most important feature of the intervention was ...

Other comments:

Figure 4. Teacher Acceptance Form. Adapted From: Lane, K. L., & Beebe-Frankenberger, M. (2004). Social validity: Goals, procedures, and outcomes. In *School-based interventions: The tools you need to succeed* (85- 127). Boston: Pearson.

Student Post-Intervention Acceptability and Importance of Effects Survey

Date:

Name:

I reached my goal: Yes _____ No _____ Some _____

The intervention:	Disagree	Neutral	Agree
1. was easy for me to stick with	1	3	5
2. was approved by my parents	1	3	5
3. taught me important skills	1	3	5
4. was fair to me	1	3	5
5. helped me change in important ways	1	3	5
6. made a different in my behavior	1	3	5
7. helped me feel better about myself	1	3	5
8. gave me things I liked to earn	1	3	5
9. helped me do better in school overall	1	3	5
10. is one I would tell other kids about	1	3	5
11. is one I would use again if I had to	1	3	5

My favorite part was ...

The hardest thing was ...

I would change...

I can use the contract in...

Other things I liked or did not like:

Figure 5. Student Acceptance Form. Adapted from: Lane, K. L., & Beebe-Frankenberger, M. (2004). Social validity: Goals, procedures, and outcomes. In School-based interventions: The tools you need to succeed (85- 127). Boston: Pearson.

Procedure

At the beginning of the school year, I distributed and collected parental consent forms. Then, I asked each student for his verbal assent to participate in the study. Next, I collected baseline data on the targeted inappropriate behavior for each student. Once Student 1 demonstrated an ascending trend of inappropriate behavior, the team met to write the contract. This team consisted of the student, the language arts general education teacher, the resource teacher, and me.

During this meeting, we discussed the student's problem behavior and some useful strategies that he could use to attempt to self-regulate the behavior. Next, the student reviewed the reinforcement menu and discussed what incentives he would like to earn. He was given the option to add incentives to the list with the team's approval. Student 1 added the option to each lunch outside rather than in the cafeteria. Finally, we drafted the contract with his targeted problem behavior, the list of strategies that the student wanted to include, and the incentives he chose for each level achieved. The meeting was held in the morning and the contract was implemented in the language arts class that same day.

After the contract was implemented for Student 1, I began conducting intervention observations on Student 1 and continued conducting intermittent baseline observations on Student 2 and 3. Once Student 1 showed a decreasing trend in his inappropriate behavior, I implemented the contract for Student 2. Once again, the contract for Student 3 was implemented once Student 2 demonstrated a decreasing trend in inappropriate behavior. Both Student 2 and Student 3 did not choose to add anything to the reinforcement menu during their meetings.

After the contract was initiated for each student, he went to the resource teacher's classroom at the beginning of each day to collect his contract and review the strategies that he should be using in class to decrease the targeted behavior. Furthermore, the language arts teacher and the student briefly met at the start of each class to review his goal. They also met at the end of class to mark *met* or *not met* next to the goal for that class period. The student returned to the resource teacher's classroom at the end of the day to track his progress on a graph and receive rewards. This daily schedule continued through the duration of the intervention. The data collection continued until all three students were using the intervention. At that time, the teachers and students completed the intervention acceptance form.

CHAPTER 4: RESULTS

Over the course of the study, all students exhibited a decrease in inappropriate behavior with the use of the behavior contract. Each student's results were graphed and presented in Figure 6. Visual analysis (Alberto & Troutman, 2006) shows a decrease in the mean percent of time involved in inappropriate behaviors, indicating an increase in appropriate behaviors.

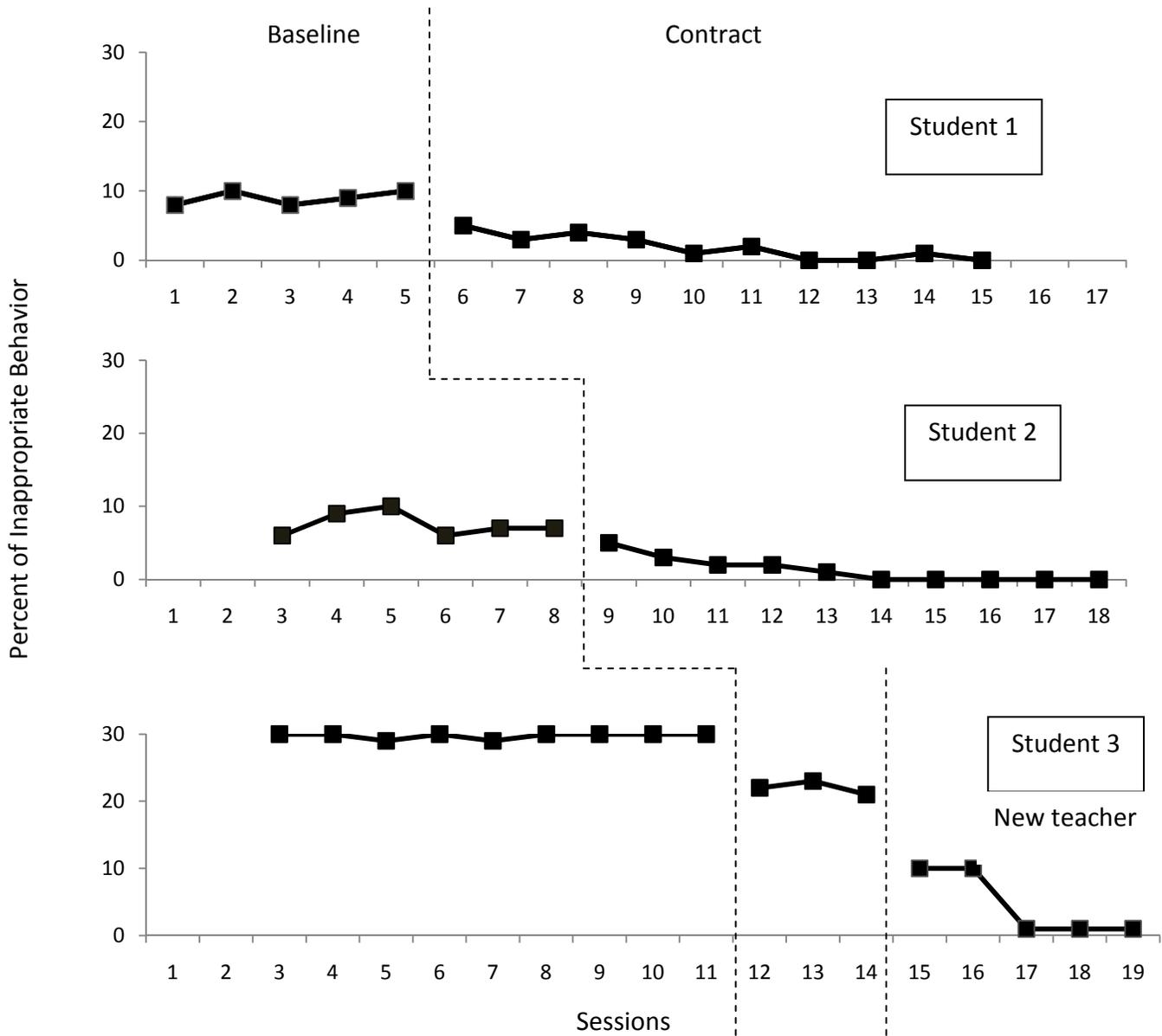


Figure 6: Percent of Inappropriate Behaviors

Student 1

Student 1's mean percent of interval with inappropriate behavior during baseline was 9% with a range of 8% to 10%. Although this does not seem like a significant percent of inappropriate behavior, the consistency of the disruption on a daily basis was of high concern to the teacher. He demonstrated a very stable and slowly increasing percent of inappropriate behavior and the intervention was implemented after only 5 baseline observations. Student 1's percent decreased 7.1% to a mean of 1.9% during the contract phase, ranging from 0%-5%. Towards the end of the contract phase, Student 1's average percent of inappropriate behavior was 0.25% with no behaviors during three of the four last observations. These data do not include observation session 12. There was a substitute teacher in the language arts classroom on this day and Student 1's percent of inappropriate behavior returned to 8% for this session. His behavior decreased back to 0% the following day when the regular teacher returned.

There is a marked change in the level of performance for Student 1 from baseline to intervention. A slight ascending trend was seen during the baseline phase. With the initiation of the contract, the inappropriate behavior began a descending trend and continued to hold a low, stable trend for the remainder of the observation session. There is 0% of overlapping data point between baseline and contract phase, not including observation session 12. Furthermore, there is a rapid decrease in inappropriate behavior with the initiation of the contract. Student 1 decreased from 10% of intervals with inappropriate behavior to 1% in five days.

Student 2

Student 2 demonstrated a baseline mean of 7.6%, ranging from 6%-10% over 7 sessions, and a contract mean of 1.3%, ranging from 0% to 5%. This is a mean decrease of 6.3% over the

course of the study. His mean percent of talking to peers was 0% during the observation sessions on the last 5 days of data collection, indicating no occurrences. Student 2's baseline mean percent does not seem to be substantial. However, talking to peers was a daily disruption caused by this student.

Visual analysis of the data shows that Student 2 demonstrated similar trends as Student 1 (see Figure 6). There was a slight ascending trend during baseline and a flat, steady trend during the contract phase. Further similarities exist with no overlapping data points and a rapid decrease in the targeted inappropriate behavior with the initiation of the contract. Inappropriate behavior for student 2 decreased from 7% to 1% in five days.

Student 3

The baseline mean for percent of inappropriate behavior of Student 3 was substantially higher than both Student 1 and Student 2. His mean percent of inappropriate behavior was 29.8%, ranging from 29% to 30% over baseline data collection. When the initial contract was implemented with Student 3, his percent of inappropriate behavior decreased 7.8% to a 22% average over the following three sessions. Although this was a decrease in inappropriate behavior, it was not as substantial as the team had hoped for. Student 3 did not seem to connect with the resource teacher in his morning and afternoon meetings and would not discuss his day with her. After the third day using the contract, the team decided to have a male teacher conduct the morning and afternoon meetings with Student 3. After only two sessions, Student 3 became more conversational with this new teacher and his percent of inappropriate behavior decreased another 17.4% to an average of 4.6%, ranging from 1% to 10%. The last 3 observation sessions yielded a mean of only 1%.

As shown in Figure 7, Student 3 demonstrated a high level and flat trend of inappropriate behavior during baseline, but a slower, descending trend after the initiation of the contract. Data collection ended at a low level, with a steady trend after the change made in his intervention. Despite the slower rate of decrease, Student 3 exhibits a very rapid decrease of inappropriate behavior in six days, from 30% to 1%. His data also show no overlapping data points.

Social Validity

After the observation sessions ended, the teachers and students completed the intervention acceptability surveys. Both teachers and students gave the highest possible quantitative scores on the surveys, a score of 70 for teachers and 55 for students. This indicates that the teachers and students enjoyed the intervention and found it helpful to make a positive change in behavior (Lane & Beebe-Frankenberger, 2004). Because the intervention was accepted by teachers, it is more likely to be continued with the students beyond the research. Furthermore, it is more likely that the teachers will implement further behavior contracts with other students demonstrating similar behaviors. Because the intervention was accepted by students, it indicated that they felt it was beneficial to them as learners.

Teachers and students were also given the option of making qualitative comments concerning the use of behavior contracts. Two teachers commented that they liked the ability to give consistent and quick daily feedback to each student. They both felt that these meetings were the most important feature of the intervention. One teacher also liked that that resource teacher handled all of the longer meetings and the issuance of rewards as she felt she would not have had time to correctly implement this portion of the intervention. Two of the students indicated that their morning and afternoon time with the resource teacher was their favorite part

of the intervention. The third student was happiest with the ability to receive rewards for positive behaviors. Furthermore, one student expressed an interest in using this contract in all of his classes. These comments further show that both the teachers and students felt that the intervention was successful and beneficial to all.

CHAPTER 5: DISCUSSION

The purpose of my research was to use behavior contracts to decrease inappropriate behaviors of students with EBD in their general education classrooms. Overall, my hypothesis was supported with these three students. All three of them demonstrated a decrease in their targeted inappropriate behavior with the implementation of the behavior contract.

Analysis

Although I planned to begin collecting baseline data for all students concurrently, Students 2 and 3 were suspended from school during the first two days of observation. Because of this, baseline data collection started two days later for Student 2 and 3. Although a nonconcurrent multiple baseline design can present threats to the experimental control and internal validity of a study, neither was a problem in this study (Christ, 2007). The first day of baseline data collection differed by only two days. During these two days, there were no major alterations to the school or the environment of the students. Furthermore, Student 1 did not show any substantial change in his baseline with the initiation of contracts for Students 2 and 3. The results have been graphs to show the lag in the start of baseline.

Upon initiation of the behavior contract, the students in this study not only decreased their mean percent of inappropriate behavior, and demonstrated a decreasing trend throughout the contract phase. This indicates that the intervention was successful and that the inappropriate behavior will continue to stay low and stable in the future. Figure 7 shows this decrease in of inappropriate behavior exhibited by all three students. Furthermore, the absence of overlapping data points between baseline and contract phases signifies that the behavior contracts had a strong impact on the target behaviors. This rapid change of level, occurring for all students within six days of the implementation of a contract, indicates that the behavior contracts had a

clear and immediate effect on the inappropriate behavior. Overall, these data suggest that a strong functional relationship exists between behavior contracts and a decrease in the inappropriate behavior of these three middle school students diagnosed with EBD.

Although Student 1 and Student 2 only demonstrated a decrease of 7.1% and 6.3%, this decrease almost completely removed the inappropriate behavior from occurring in the classroom. Because of the ease of implementing this intervention, the teachers of Student 1 and Student 2 were very happy with the change in behavior. Both of these students, despite the seemingly low level of inappropriate behavior, were the only disruptive students in each classroom. This targeted them for negative attention from both peers and adults and increased discipline from administration. Even with continual discipline, the behaviors did not decrease prior to the implementation of the behavior contract.

One integral part of this intervention was the consistent daily contact that teachers had with each participant. Both students and teachers commented on their happiness with these meetings. Furthermore, throughout the study, the students developed a stronger relationship with the resource teacher. I noticed that the students began visiting the resource teacher throughout the day to check in with her and tell her of their positive behaviors in the classroom. They obviously felt a connection to her, which may have been a cause for the decrease in problem behaviors.

Student 3 was the only student who did not demonstrate a connection to the resource teacher, and also did not demonstrate a substantial decrease in inappropriate behavior until a new male teacher began meeting with him. Once this change was made, he did begin to converse and connect with the male teacher. This suggests that the Student 3 connection to a teacher through the implementation of the behavior contract could account for the positive changes. This would

seem plausible when reviewing the functional behavior assessment. All three of these students were hypothesized to act inappropriately to gain adult or peer attention. The initiation of the behavior contract allowed them increased adult attention in a positive manner. This increase in adult attention at appropriate times may have decreased their need for attention during academic time. There is a possibility that the positive data were caused by the building relationship between the students and teacher rather than the contract itself.

Initially, I had a difficult time convincing the general education teachers of the value of implementing the behavior contract for these students. All three general education teachers began the study with a very negative view of the targeted student. They were skeptical of implementing the contracts and the effect that it could have on the behavior of the student. As the contracts were implemented, the attitude of each teacher significantly changed. They began interacting with the student more throughout the class period, and throughout the day as a whole. They also began making more positive comments to the students. This change in attitude and positive behavior from the general education teacher could have caused an increase in the positive effect of the behavior contracts. As with building relationship, there is no way to determine if the positive effect of the contract caused the teacher's behavior change or if the teacher's behavior change caused the positive effect of the contract.

Comparison with Previous Research

Previous studies reported positive results with decreases in inappropriate behaviors and increases in appropriate behaviors with the implementation of a behavior contract. However, they rarely focused solely on students with EBD. Although all of the mentioned studies focused on inappropriate behavior, only research by Mruzek et al. (2007) and Ruth (1996) included students with EBD.

Although students with EBD have not been the focus of past studies researching behavior contracts, implementing this intervention in the general education classrooms of my targeted students encouraged these students to control their behavior. This study corroborated the comments of Mruzek et al. (2007) and Allen et al. (1993) of the importance of a daily meeting time between the Student and teacher to review behaviors and progress and encourage the development of a positive relationship. Furthermore, the use of Ruth's (1996) four principles within this study allowed students to have clearly defined short term and long term goals and to have equal control over choice of incentives. These elements seemed to be very important in the continuing success of the contracts.

Limitations

The study had several limitations. One limitation was the length of observations. Due to practicality, observations were limited to 15 minutes per student per day. However, there were days during both baseline and intervention phases when students increased their inappropriate behavior after I left the classroom. To produce a more valid assessment, observation should have continued for the duration of the class period. This would have allowed me to view the behavior across multiple teaching techniques, including large group instruction, small group instruction, and independent work. I attempted to conduct all of my observations during large group instruction and independent work, when teachers indicated that behaviors were at their worst. However, I feel that the data may not be extensive enough to capture problems that occurred during the whole period due to the length of observation planned.

Because of the limited observation time, another limitation was the inconsistency in the classroom activities during observation times. Talking to peers is not an inappropriate behavior during small group work or partner work. When these types of activities took place during an

observation, I was unable to accurately collect data on the targeted behaviors.

Finally, the lack of a maintenance phase to decrease the teacher/student meetings and increase independence with the behavior contracts was a limitation in this study. The meetings seemed to be very important for the students to develop a deeper relationship with both the resource teacher and the general education teacher. If the number of meetings were decreased in an attempt to increase self-monitoring, the adult attention would also decrease and could affect the success of the behavior contract.

Implications

Behavior contracts can make a difference in the experience that students with EBD have in their classrooms. A decrease in inappropriate behaviors could allow the students with EBD to learn more in their general education classroom because more of their time will be focused on academic work (De Martini-Scully, Bray & Kehle, 2000; Wilkinson 2005). This may lead to better grades and increased success for the student in school. Furthermore, the contracts may help the students develop a better rapport with their teachers. The interaction between teachers and students required by the implementation of the contract and the positive attention associated with successful behavior allow students to build a more meaningful relationship with school staff (Cook, 2005).

Without the disruptive behaviors, the general education teachers may not make a case for these students to be removed from the general education classroom (Jull, 2008). Because of this, students may be included in general education classrooms, an important part of their success in school (Yell, 1995). Implementing behavior contracts for students with EBD can better the learning environment in the general education classroom as a whole.

Overall, this research increased the state of knowledge on using behavior contracts with

middle school students with EBD. In the future, behavior contracts can be manipulated in a variety of ways for further research. This contract could be extended to multiple classes or a full day contract. This would encourage the students to extend their appropriate behaviors to more than one class and receive rewards for increased positive behaviors. In addition, the general education teacher can implement this intervention independent of a resource teacher. Behavior contracting requires minimal amounts of time to implement effectively, allowing it to be done by just one general education teacher or a team of teachers. Future research could also be conducted to include a self-monitoring phase, with a decrease of meetings between the student and teacher, to investigate the importance of the daily contract meetings with students.

Although the lack of control over teaching styles and classroom management did not affect this study, it is a caution for future researchers. This study included three male students in three different language arts classrooms with different teachers. Although all of the students demonstrated a decrease in inappropriate behaviors, the difference in teaching styles between general education teachers could account for varying results. All three of the teachers participating in this study were consistent with rules and classroom procedures. However, if an inconsistent teacher were implementing this same intervention, it may not have the same strong results.

In conclusion, teachers need to learn effective and easy ways to manage inappropriate behaviors within their general education classrooms (Lassman et al., 1999). This knowledge allows them to focus classroom time on academics instead of behavior (De Martini-Scully et al., 2000). Behavior contracts have proven to be an effective behavior management technique with many different types of students. This research furthered the knowledge base on how effective behavior contracts can be for students with EBD.

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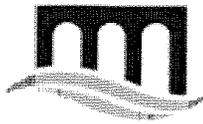
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Appendix A

IRB Approval Letter



EAST CAROLINA UNIVERSITY

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

Date: September 21, 2010

Principal Investigator: Brandy Cutrell
Dept./Ctr./Institute: 27 Forest Hill Ct.
Mailstop or Address: Granite Falls, NC 28630

RE: Exempt Certification *KK*
UMCIRB# 10-0495
Funding Source: Unfunded

Title: "Effect of Contracts in Decreasing Inappropriate Behavior of Students with Emotional/Behavioral Disabilities"

Dear Brandy Cutrell:

On 9.20.10, the University & Medical Center Institutional Review Board (UMCIRB) determined that your research meets ECU requirements and federal exemption criterion #1 which includes research conducted in established or commonly accepted educational settings, involving normal educational practices, such as research on regular and special education instructional strategies, or research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

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

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

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

Sincerely,

Chairperson, University & Medical Center Institutional Review Board

Attachments:

- Informed Consent (dated 9.14.10)
- Minor Assent (received 9.14.10)

Cc: Dr. Chan Evans

Appendix B

Literature Using Contingency Contracts for Behavior Management

Article	Research Design	Participants				Dependent Variable	Independent Variable	Results
		N	Age/Grade	Disability	Setting			
Allen et al. (1993)	ABABA SS replication	3	2 nd gr 3 rd gr	None	Gen. ed.	On-task behavior	Contingency Contracts	Increase on task behavior when using contingency contracting; reductions of on task when contracts removed; final baseline : performance remained high for all three pupils (indicating maintenance of treatment and transfer of training)
De Martini-Scully et al. (2000)	Multiple baseline/ reversal SS across individuals	2	8 yr old	None	Gen. ed.	Disruptive behavior	Precision requests for teacher; contingency contracts for students	Student 1: baseline 46%, treatment 15%, reversal 24%, reinstatement 21% Student 2: baseline 35%, treatment 24%, reversal 25%, reinstatement 18% Control student: 16% constant for all phases
Flood et al. (2002)	AB	1	11 yr old	ADHD	One-on-one therapy room	Off-task behavior	Functional Communicatio	Baseline: 86% off-task, 5% attempted problems;

							n Training and contingency contract	treatment: 11% off task, 24% attempted problems; utilized FCT 2-4 times per session; decrease in off-task behavior and increase in work production
Mruzek et al. (2007)	Changing Criteria	2	10 yr old 9 yr old	ED, ADHD, Asperger, AU	Self-cont.	Appropriate behaviors: sit nicely, use respectful language, touch people and object appropriately, follow teacher directions	Contingency Contract	Marty: baseline 33%, Crit 1 67%, Crit 2 88%, Crit 3 and 4 held same. Chad : baseline 44%, Crit 1 - 70-77%, Crit 2 wk1 67%, Crit 2 wk2 and wk3 79-83%, Crit3 and 4 - 90%; substantial and immediate increase during intervention
Navarro et al. (2007)	Multiple Baseline	3	14 yr old 8 yr old	None None None	Gen. ed	Inappropriate behaviors: laying on desk, refusing to work, complaining, making noises, verbally aggressive comments	Contingency contract	Significant reduction in targeted inappropriate behaviors for all students

Ruth (1996)	A-B	43	1 st gr thru 6 th gr	ED LD ED/LD	Self-cont.	Goal attainment (daily, weekly, and total); Goals included both appropriate classroom behaviors and inappropriate classroom behaviors	Behavior contract and goal-setting	High and consistent goal attainment for daily (75%), weekly (72%), and total (86%) contract goals
Stage et al. (2006)	Changing Criteria	3	K 1 st gr 9 th gr	ADHD DD ADHD	Gen. ed. Self-cont. Resource	Disruptive behavior: out of seat, refuse to work, talking out, disrespectful, verbally and physically aggressive	Contingencies (no formal contract)	Will: Contingency with choice of preferred activity, decrease in disruptive behavior, bigger decreases when paired with prompting to ask for help. Joshua: Contingency with additional free time decreased disruptive behavior, bigger decreased when paired with increasing verbal approval from teacher Gale: Contingency with choice

Wilkinson (2003)	A-B	1	7 yr old	None	Gen. ed	Disruptive behavior and poor classroom performance: off-task, arguing, tantrums, refusing to follow rules	Behavior Contract	of preferred activity decreased disruptive behavior significantly Significant decrease in disruptive behavior during contract
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Note: Gen. Ed. = general education; Self-cont. = self-contained

Caldwell County Schools

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Lenoir, NC 28645

Telephone: 828-728-8407

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Dr. Steve Stone, Superintendent

Functional Behavioral Assessment

Student: _____ **School:** _____

Date: _____

Definition: A Functional Behavioral Assessment is a method to identify the nature and function of a problem behavior and recommend interventions to correct it. It is required as part of a Manifestation Determination prior to the 11th cumulative day of suspension or any change of placement for any Exceptional or Section 504 student with apparent behavior problems. It may also be useful for regular education students as well.

Functional Assessment:

I. What are the student's strengths (academic and behavioral)?

A.

II. Problem Behavior Concrete definition of Behavior Frequency Intensity Duration

Problem Behavior: Identify the problem behaviors that most interfere with the student's functioning.

Concrete Definition: Define behavior in concrete terms that are easy to communicate, record and measure.

Frequency: Examples: every 10 minutes, 4 of 5 days, 4 x per hour, 1 x per day, etc....

Intensity: On a scale of 1 to 10 (1 being low intensity and 10 high intensity). Example: 3=touched kid gently, 10=gave kid a black eye.

Duration: How long does the entire episode last? Example: Fred gets upset, leaves class and runs through the halls yelling and screaming. The episode begins when Fred gets upset and ends when he is able to get control of himself. Duration=approximately 35 minutes.

B. **Circle of highlight the problem behavior**, from the concrete definition list, that the committee would like to work on changing. This will most likely be the behavior that is highest in frequency, intensity, and duration.

C. From the list below, indicate the **triggers** (antecedents), **concurrent events**, **medical/home factors**, **consequences used**, and **functions of the behavior** (does the student want to escape, gain attention or control) that seem to be supporting the problem behavior by placing a check mark in the appropriate space.

Problem Behavior: _____

What triggers the behavior? What consequences have been implemented for problem behavior?

_____ Lack of social attention _____ Behavior ignored

_____ Demand/Request _____ Reprimand/Warning

_____ Does not understand task _____ Stated expectation

_____ Transition between task _____ Time-out

_____ Transition between settings _____ Loss of privileges

_____ Interruption in routine _____ Sent to office

- _____ Negative social interaction with peers _____ Communications with home
 - _____ Consequences imposed for negative behavior _____ Discipline referral
 - _____ Inability to process directions _____ In-school suspension
 - _____ Other (specify): _____ out-of-school suspension
 - _____ Other (specify): _____
-

During what concurrent event(s) does the behavior occur?

Does the student try to escape when he/she misbehaves? If so, why?

- _____ Independent seat work _____ Avoid a demand or request
- _____ Large group instruction _____ Avoid an activity/task (if known)
- _____ Small group instruction _____ Avoid a person
- _____ Crowded setting _____ Escape the classroom/setting
- _____ Unstructured activity _____ Escape the school
- _____ Structured activity _____ Other (specify): _____
- _____ Specific time of day _____
- _____ Specific day of week _____
- _____ With a specific teacher(s) _____
- _____ A specific subject _____
- _____ Other (specify): **Does the student try to gain attention or control**

When he/she misbehaves? If so, why?

- _____ Get desired item/activity
 - _____ Gain adult attention
 - Are there any Medical/Home factors that are** _____ Gain peer attention
 - contributing to this behavior?** _____ Get sent to preferred adult
 - _____ Medication (change/not taking) _____ Gain power
 - _____ Change in home/family dynamics _____ Gain revenge
 - _____ Medical conditions _____ Other (specify): _____
 - _____ Other (specify): _____
-

III. Develop a **hypothesis** (best guess) about the function or purpose of the student's problem behavior. This hypothesis predicts the general conditions under which the behavior is most and least likely to occur (antecedents), as well as probable consequences that serve to maintain it.

Hypothesis Statement:

Appendix D
Partial Interval Recording Form

Behavior Recording Form

Student Name: _____ Time: from ___ to _____ Date: _____
 Class Activity (Circle): transition/direct instruction/guided practice/independent/small group
 Recorder: _____

(+) indicates that the behavior occurred at any point during the interval
 (-) indicates the behavior did not occur at any point during the interval

Operational Definitions and Examples/Non-examples
 Behavior:

Time	+ or -
:30	
1:00	
1:30	
2:00	
2:30	
3:00	
3:30	
4:00	
4:30	
5:00	
5:30	
6:00	
6:30	
7:00	
7:30	

8:00	
8:30	
9:00	
9:30	
10:00	
10:30	
11:00	
11:30	
12:00	
12:30	
13:00	
13:30	
14:00	
14:30	
15:00	
TOTAL	