The Effectiveness of Function-Based Classroom Interventions using Functional Behavior Assessments and an In-School Suspension Program

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THE EFFECTIVENESS OF FUNCTION-BASED CLASSROOM INTERVENTIONS USING FUNCTIONAL BEHAVIOR ASSESSMENTS AND AN IN-SCHOOL SUSPENSION PROGRAM

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THE EFFECTIVENESS OF FUNCTION-BASED CLASSROOM INTERVENTIONS USING FUNCTIONAL BEHAVIOR ASSESSMENTS AND AN IN-SCHOOL SUSPENSION PROGRAM

by

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Abstract


Every day administrators and teachers issue increasing numbers of disciplinary referrals that document problematic behaviors in the classroom. When placed in in-school suspension (ISS) because of disciplinary reasons students lose valuable academic instruction time and their academic achievement is negatively impacted. ISS produces little, if any, meaningful behavior change at the expense of the academic achievement of students. Although the Individuals with Disabilities Education Improvement Act (2004) makes provisions for conducting functional behavior assessments (FBA) for students with disabilities, best practices would allow using the same process for at-risk students without disabilities who have behavioral issues in the classroom. Yet many schools do not use FBAs for these at-risk students and continue to utilize ISS as a consequence for problem behaviors although research indicates this has not been effective. The current study investigated the effects of implementing function-based interventions developed from functional behavior assessment data for students who have been assigned ISS. The purpose of this study was three-fold: (1) to compare the effects of function-based classroom interventions derived from a FBA and an ISS program on the duration of ISS placement, to the number of office discipline referrals (ODR), and academic grades for at-risk middle school students who display problematic behaviors in school; (2) to determine if the function-based classroom interventions derived from a functional behavior assessment that was implemented by teachers would improve classroom disruptive behavior; and (3) to compare pre-test and post-test results on a universal
screening tool, the Student Risk Screening Scale (SRSS), for students who received function-based interventions and those who did not receive the interventions. The study found that using function-based interventions with information derived from FBAs reduced the time a student served in ISS, decreased ODRs, but had little effect on academic grades. The study also showed that function-based interventions helped participants reduce problematic behaviors in the classroom thereby increasing academic instruction time in the classroom. The study also showed that there was no meaningful difference in the pre-test and post-test scores of the SRSS for students who received function-based interventions and those who did not receive function-based interventions.
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Key to Abbreviations

Antecedent – Behavior - Consequence ................................. ABC
Attention Deficit Hyperactivity Disorder ...................................... ADHD
Behavior Intervention Plan ......................................................... BIP
Board Certified Behavior Analyst ................................................. BCBA
Check-In/Check-Out ................................................................... CICO
In-Grade Intervention .................................................................. IGI
In-School Suspension ................................................................... ISS
In-School Detention ................................................................... ISD
Functional Behavior Assessment .................................................. FBA
Motivational Assessment Scale ................................................... MAS
Obsessive Compulsive Disorder .................................................... OCD
Office Disciplinary Referral ......................................................... ODR
Out of School Suspension ............................................................. OSS
School Wide Positive Behavior Support ........................................ SWPBS
Student Risk Screening Scale ..................................................... SRSS
Chapter 1

Introduction

One of the challenges that school administrators and classroom teachers deal with daily are discipline issues. According to yearly surveys in *Phi Delta Kappa*, discipline is consistently rated as a very significant issue in schools (Rose & Gallup, 2006). Every day administrators and teachers issue increasing numbers of disciplinary referrals that document problematic behaviors in the classroom. Sprague, Sugai, Horner, and Walker (2000) found that the top 5% of elementary students with the most disciplinary referrals account for 59% of the disciplinary referrals, while the top 5% of middle school students with the most disciplinary referrals account for 49% of office disciplinary referrals.

Fenning et al. (2008) reported that 37% of school administrators deal with daily or frequent discipline issues and that over 75% of school leaders believe that discipline issues are increasing in importance as part of their administrative practice. School administrators spend a lot of their time dealing with discipline issues that occur in the classroom. Administrators spend an average of 20 minutes per student per referral (Sugai & Horner, 2002). Students may miss up to 45 minutes of academic instruction due to a discipline referral. These disciplinary referrals often result in reactive and punitive actions such as corporal punishment, detention, in-school suspension (ISS), out of school suspension (OSS), or expulsion. Frequently, major disciplinary issues such as fighting, gang-related problems, weapons, and drugs are dealt with by issuing out of school suspensions, placement in alternative settings, or even expulsion from school.

A suspension can be defined as “disciplinary action that is administered as a consequence of a student’s inappropriate behavior, requires that a student absent
him/herself from the classroom or from the school for a specified period of time” (Costenbader & Markson, 1998, p. 59). The Tennessee Department of Education (2009) reported that 7.7% of all students were suspended from school and 0.5% of all students were expelled from school.

Codes of conduct are mandated under the No Child Left Behind Act (2001) and in the Individuals with Disabilities Education Improvement Act (2004). These codes of conduct are the main sources referred to by administrators when making a decision about the consequences resulting from noncompliance (Fenning & Bohanon, 2006). These codes of conduct are based on a selection of reactionary and exclusionary procedures such as suspension and expulsion (Fenning, Parraga, & Wilczynski, 2000).

In a survey conducted by Fenning et al. (2008) codes of conduct that administrators used to make disciplinary decisions were examined. The survey found that the majority of the discipline decisions were punitive in nature by having an emphasis on suspension and expulsion. Reactionary and punitive consequences, such as suspension and expulsion, were issued for mild behaviors such as tardies, truancies, and class disruptions. The same consequences were also issued for more moderate and severe behaviors that included bullying, fighting, vandalism, drug possession, weapons possession, and gang behavior. Table 1 shows suspensions and expulsions issued by school administrators for violations of codes of conduct in their schools (Fenning et al., 2008).
In the state of Tennessee, the state law lists codes of conduct for which out-of-school suspension or expulsion may be issued. These reasons include willful and persistent violation of school rules or truancy, immoral or disreputable conduct or profane language; violence or threatened violence against school staff; vandalism; possession of firearms, knives, or drugs on school property; and assaulting school professionals with vulgar, obscene, or threatening language (T.C.A. § 49-6-3401). Less minor offenses and disruptive behaviors such as arguing with staff and teachers, horse-playing, bullying, cursing, not following classroom rules, and other minor offenses are

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<td>66%</td>
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<td>Fighting</td>
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<td>Vandalism</td>
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<td>Drug Possession</td>
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<td>Weapons Possession</td>
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dealt with by using disciplinary actions that include warnings, fines, parent conferences, detentions, time-outs, corporal punishment, and in-school suspension (Skiba & Peterson, 2000).

Instead of using OSS, a common disciplinary action that most school administrators use is ISS. ISS is a widely used approach to school discipline that relies on the practice of excluding a student from access to the classroom and peers as a consequence for student misbehavior. The National Center for Education Statistics stated in their 2006 School Survey on Crime and Safety that seventy-seven percent of administrators used in-school suspension as a form of discipline during the 2005-2006 school year. Behaviors that have led to students being assigned to ISS included disruptive classroom behaviors, lack of cooperation, and skipping class (Diem, 1988; Johnston, 1989; Pare, 1983).

In the state of Tennessee, students can be assigned ISS for behavior which adversely affects the safety and well-being of other students; behavior which disrupts a class or school-sponsored activity; and disorderly conduct or lack of discipline in a class, school-sponsored activity, or on the school campus. Students assigned an ISS in excess of one day must either go to special classes only for students guilty of misconduct or be placed in an isolated area appropriate for study (T.C.A. § 49-6-3401).

Sheets described in-school suspension as a “program to which a student is assigned because of disruptive behavior for a specific amount of time” (Sheets, 1996, p. 87). One goal of ISS, according to Short (1989), is to exclude the problem student from the general education classroom while continuing to provide some type of educational experience. Sullivan believed that the fundamental purpose of ISS is “to provide remedial
treatment that identifies the underlying problem and eventually improves or corrects the
misbehavior and not simply to inflict a penalty that temporarily extinguishes the
undesirable behavior” (Sullivan, 1989, p. 33).

However, in many cases this is not how ISS occurs or is perceived. For example, a high school student describes her experience in ISS:

As I reflect on my experiences in In-School Suspension, I wonder what my vice principal meant when he announced that students should consider being punished by him as a learning experience. What does a student learn by being thrown into a room all day with dictator-like supervisors watching our every movement and listening to our every breath? The only things that one will learn from being placed in In-School Suspension is to resent the people that put them there, to feel powerless and humiliated, and perhaps, not get caught doing whatever they did that put them there in the first place. On the occasions that I have been placed in In-School Suspension, nobody has ever talked to me about what I have done wrong. They simply saw that I skipped a class and announced that I had to serve the time. (Norris, n.d.)

Regrettably, the use of ISS has not been effective in most schools (Costenbader & Markson, 1998; Mendez & Sanders, 1981; Stage, 1997; Yancey, 2001). When placed in ISS because of disciplinary reasons students lose valuable academic instruction time and their academic achievement is negatively impacted. ISS produces little if any meaningful behavior change at the expense of the academic achievement of students as well as valuable school resources. Unfortunately, there is little empirical research to support the effectiveness of ISS.

One researcher observed the following about students being removed from academic instruction time as a punishment:

It is ironic and telling that schools typically punish children who are behind academically by depriving them of instructional time. Particularly if the misbehaving student is behind academically or missing school frequently, it would seem illogical that the punishment for misbehavior should be denial of school time. But more often than not, schools treat the removal of students as
though it were the only form of punishment available. In so doing, the factors that give rise to misbehavior go unexplored, ignored, and unaddressed, while the penchant to punish proceeds with little thought given to the long-term consequences on students. (Noguera, 2003)

One method that may be used to examine the misbehavior of a student and may help to reduce a student’s time spent in ISS is a functional behavior assessment. Although, the Individuals with Disabilities Education Improvement Act (2004) makes provisions for conducting functional behavior assessments for students with disabilities, best practices would allow using the same process for at risk students without disabilities who have behavioral issues in the classroom. Yet many schools continue to utilize ISS as a punitive consequence for problem behaviors and students are exposed to the risks of missing academic instruction time, low academic achievement, and potentially becoming a school dropout (Diem, 1988; Mendez & Sanders, 1981; Skiba, Peterson, & Williams, 1997). Schools would be wise to catch the at-risk students who may exhibit problem behaviors in the classroom early by implementing a universal screening process to identify those at-risk students, conducting functional behavior assessments, and developing function-based behavior intervention plans to help curtail the in-school suspension rates in their learning environments.

The purpose of this study was to examine the effectiveness of implementing function-based interventions developed from functional behavior assessment data for students who have been assigned ISS as a disciplinary measure for problematic behavior in the classroom.
ISS came into existence after studies in the early 1970’s showed that out of school suspension (OSS) was not effective and contributed to failing grades, lower attendance, and higher numbers of students dropping out of school (Blomberg, 2004; Costenbader & Markson, 1998; Mendez & Knoff, 2003). Because of the concerns of the negative effects of OSS on students, ISS emerged as one of several in-school alternatives to OSS (Garibaldi, 1978). However, ISS was an alternative to OSS and did not focus on prevention of discipline problems. The focus of ISS was to keep students in school instead of at home during an OSS. Another reason that ISS became popular was due to the 1975 Supreme Court decision, Goss v. Lopez, which made suspending students from school more difficult for administrators because administrators now had to provide due process to the students in order to suspend them out of school (Adams, 2002).

The implementation of ISS did address the various issues of the method of suspending students out of school. ISS placed students into classrooms at schools instead of sending them home for behavior issues (Mizell, 1978). By using an ISS program, schools attempted to help modify student misbehavior and protect the overall learning environment by isolating problematic students (Sheets, 1996). Another issue addressed by creating in-school alternatives, such as ISS, prevented students from being unsupervised in the community and kept them off the streets. By implementing ISS as an in-school alternative to suspension, student absences decreased which affected schools funding, the amount of money received for the education of each student, based on the Average Daily Attendance formula (ADA). Third, by creating in-school alternatives to
OSS, the criticisms were fewer from parents and community members about the willingness of school officials to develop a system of remedies and techniques to deal with minor disciplinary offenses (Mizell, 1978).

Theoretical Background of ISS

One of the early researchers in ISS research, Mizell (1978), proposed a philosophical framework for ISS that focused on solving and preventing student discipline problems instead of removing a student from a classroom due to a discipline problem. He stated, “The problem with many disciplinary practices is that they are designed more as an expedient response to real or perceived student misbehavior than as an effort to identify and remedy the cause(s) of behavior”, (p. 216). He proposed that discipline and the schools and ISS should go beyond punishment and control by helping students manage their problem behaviors.

Mizell (1978) suggested that an effective ISS program should be developed for the purpose of (1) helping the child; (2) identifying and remedying the root problem or problems responsible for the disciplinary offense; (3) helping the student develop self-discipline; (4) gaining knowledge about the factors that contribute to discipline-related problems as well as initiating preventive measures to reduce those problems; (5) eliminating the use of OSS for all offenses except for those which clearly threaten the security of the school community; and (6) providing a framework within which school personnel can work to achieve the first five goals while enabling students to continue in the school’s instructional process. Mizell also believed that it was important for school personnel to understand their philosophy behind the ISS program, why it was created, and how it works.
Models of ISS

Mizell (1978) considered that an effective ISS programs should include several key components. First, there should be certain criteria and procedures during the ISS referral process with a “gatekeeper” to justify the assignment to ISS. Another component of an effective ISS program is the length of the ISS assignment. Mizell suggested that one to three days is appropriate to help identify the problem and to develop a process to deal with the problem effectively. The location of the ISS room is also a key component. The ISS room should be removed from the normal activities of the school day. Fourth, the ISS room should not provide the visual stimulation that is found in general education classrooms. The room should include access to all study materials needed to complete academic tasks. The ISS room may become a place for students to work on specific academic skills while removed from the general education classroom. Parental involvement is also a key component for an effective ISS program. One of the most important aspects, according to Mizell, is the staff person who will work with the students who are assigned ISS. This person should be able to communicate with students with problematic behaviors as well as communicate with the school staff regarding the student, have strong diagnostic and instructional skills, and be able to utilize a variety of resources to help the students. Another component that should be included in an effective ISS program is an opportunity for students to receive individual or group counseling. This counseling should involve the student in identifying, analyzing, and accepting responsibility for the problematic behavior and how to manage their behavior in the future. Finally, Mizell suggested that it is important to have some type of follow-up process to help the student once they go back to general education class.
Another type of ISS program is the punitive model. This model is one of the most popular models used in schools today (Morris & Howard, 2003; Sheets, 1996; Short, 1988). This model is based on the belief that “punishment” will help reduce the misbehavior in a classroom. Some components of this model are students are assigned to ISS from a period of one to ten days, there are extremely restrictive classroom rules, and students spend entire time completing assignments or are involved in punitive duties such as picking up trash or cleaning the cafeteria.

The academic model is another type of ISS program (Sheets, 1996). This model suggests that behavioral issues exist due to frustration from academic problems in the classroom. This model attempts to improve the academic skills of the student by providing individual instruction as well as measuring and assessing progress for academic goals. Students are provided tutoring, goal setting, and structure in this format (Sheets, 1996).

Another type of ISS program is the therapeutic model (Mendez & Sanders, 1981). The emphasis of this model is the student. The therapeutic model focuses on the reasons the students are placed in ISS by engaging in conversations with the student about their misbehavior. The goal of this model is to help students to accept the responsibility for their behavior after they have had a time to reflect and discuss the issues. The therapeutic model also provides a follow up component to help the student transition back into the general education classroom.

The individual model developed by Sheets (1996) is another type of ISS model. In this model, the reasons for the student being assigned ISS are varied and a combination of the previously discussed models should be adopted and implemented to help change
behavior. A key component to this model is an evaluation phase that helps school administrators to determine the best type of program for the needs of the student.

Other components suggested for an effective ISS program are providing social skills instruction (Elliot & Gresham, 1993; Morris & Howard, 2003), having a supportive ISS teacher that develops positive relationships with students and who thinks that the students are worthwhile (Gootman, 1995), and counseling (Guindon, 1992; Hochman & Worner, 1987; Mendez & Sanders, 1981; Mizell, 1978; Morris & Howard, 2003). Morris and Howard (2003) suggested that a combination of the individualized and therapeutic models can be the most effective design for an ISS program.

*Characteristics of Students Assigned ISS*

Studies have shown that most students who are suspended are males from low socio-economic households who are minorities and have been identified as having a disability or as having low academic achievement (Morisson, Anthony, Storino, & Dillon, 2001; Nichols, Ludwin, & Iadicola, 1999; Skiba et al., 1997). Results from Morrison et al. (2001) conducted a study of the characteristics of students assigned in-school suspension. Results indicated that 50% of all students had been referred previously to the office for discipline issues and almost 27% had previous in-school suspensions. These students also had lower grade point averages than students who had not been assigned in-school suspension. In a study conducted by Mendez and Knoff (2003), results concluded that students who have been assigned ISS have been shown to have high rates of recidivism. The results of this study agree with earlier findings by Mendez and Sanders (1981) about the recidivism rates of students assigned to ISS.
**Effectiveness of ISS**

ISS is frequently used in schools but not effectively (Costenbader & Markson, 1998; Mendez & Sanders, 1981; Stage, 1997; Yancey, 2001). There are very few empirical studies examining the effectiveness of ISS on behavior. Extensive published data on effectiveness of suspension programs is generally not available (Morrison et al., 2001).

In a study by Harvey and Moosha (1977), they found that an ISS program was more effective than an OSS program in changing student behavior. When the student was referred to ISS, the ISS coordinator gathered information about the student’s current academic and behavioral performance as well as collected information the academic and discipline records. Upon entry to the ISS room, the student reviewed the rules of conduct for the ISS room and signed a contingency contract that outlined the assignments that were to be accomplished during ISS. The class work assigned during ISS was not the academic class work that the student would be missing in their general education classes. Instead, it was a folder that contained several inventories, activities that covered basic English and math skills, reading comprehension, writing business letters, filling out a job application, and budget making. This folder was usually given to students assigned to ISS for the first time. For those who were sent to ISS a second time, there was a second folder that contained 12 exercises on social activities and values clarification exercises, reading and writing exercises, consumer activities, and basic math exercises. For those students suspended for more than three times, a third folder was issued that included more in-depth activities of the first two folders.
However, the student did not receive any credit for his classes for this work. When the folder was completed during the time the student was assigned to ISS, a conference would be set up with the student, teacher, administrator, and the ISS coordinator. Their conclusion was that the ISS Coordinator was an invaluable asset to the ISS program by involving parents of the students who had been assigned ISS. Their results showed that there was a 42% reduction in OSS assignments at Bayside Junior High School and a 29% reduction in OSS assignments at Bayside High School. They also found that the number of students suspended four or more times decreased by 94% and 78% respectively. However, it must be noted that the percentages of ISS assignments was not noted and there were no results reported of changes in student behavior.

Mendez and Sanders (1981) conducted a study that investigated two ISS programs in schools that had each had more than 1,300 students. Many of the students who were assigned ISS were placed there because of problems with truancy or poor attendance. Results found that poor attendance by these students continued and that ISS was not effective in improving attendance for students. This study also found that recidivism, repeated assignments to ISS, did not decrease. In both schools recidivism rates were almost 50%. This study also examined graduation rates in both schools. The study found that there was a 40% difference in rates of graduation for those students who were assigned ISS and those who were never assigned ISS.

Chobot and Garibaldi (1982) studied 10 school districts who implemented an in-school alternative to out of school suspension over a 2-year period. They visited two elementary schools, five junior high schools, and eight high schools. They examined
program characteristics such as history, philosophy and goals, structure, staffing, emphasis, support, referral process, daily program, follow-up and evaluation, and student characteristics. The results of this study indicated the reasons these districts had begun ISS programs. These reasons included reducing the juvenile crime rate, decreasing truancies, and to attempt to decrease the number of increasing of OSS assignments by schools. They found that full-time ISS programs that isolate students from their peers for up to a period of 10 days tended to be effective against disruptive behavior in the classroom. They also concluded that evaluation of ISS programs was atypical in the various districts they visited. They noted that the evaluations had little effect on the ISS program. They also noted that parents preferred ISS over OSS.

Diem (1988) conducted a descriptive study on the effectiveness of ISS in an urban middle school. Of the 556 students placed in ISS, 85% of the students were placed in ISS for lack of cooperation, classroom disruption, and being disobedient or disrespectful to an adult authority figure. He noted a correlation between repeat ISS offenders and potential school dropouts. He also noted that the ISS program seemed to be a “dumping ground” for teachers to send for disruptive students when they did not want to handle the problem in their classroom or they could not handle the problem in the classroom. Diem also concluded that there was little counseling available to the students which did not give the students an opportunity to learn about alternative behaviors or how to use interpersonal strategies.

Short and Noblit (1985) conducted a descriptive study of ten ISS programs in North Carolina in 1983. They found that 9 of the 10 programs were punitive type programs. These nine programs had the essential components of a punitive program: (1)
students are isolated while working on assignments and at lunch; (2) average length of
ISS assignment is three to five days; (3) students have restricted privileges and talking
was not allowed; and (4) teachers sent academic assignments to the ISS room. The tenth
program that was examined incorporated a therapeutic approach to ISS. This program
derived its ISS classroom management from behavioral principles as well as
implemented counseling for the students. This program implemented positive behavioral
expectations throughout the entire school. This program is similar to the School-Wide
Positive Behavior Support model that is seen in schools throughout the country today.
This program reduced OSS assignments from 160 students to 1 student in the first six
months of the program while only 50 students were referred to ISS.

A descriptive study conducted by Hochman and Worner (1987) at Newport News
High School in the fall of 1984 found that the ISS program, “Beat It – Taking Charge of
Your Life” reduced recidivism in ISS, academic grades stabilized, and attendance was
higher for those in the experimental group (N = 30) than the control group (N = 30) who
received no intervention. This program used documented group counseling objectives
and techniques that helped students gain more self-direction, purpose, and meaning in
their lives. Ten students were randomly assigned to one of three guidance counselors.
Each group met for 40 minutes once per week for six weeks and participated in group
counseling sessions that included discussion groups and structured activities to assist the
students to springboard the interest level of the students.

Results showed that the students in the control group were 15 times more likely to
be referred to the principal’s office, 13 times more likely to be returned to ISS, and more
likely to be assigned OSS, and more likely to repeat the behavior that led them to be
assigned a suspension in the first place. Students in the experimental group had higher academic scores while the academic scores of the students in the control group declined. Attendance and tardiness was also better for those in the experimental group than the control group. Teachers perceived that those in the experimental group who received the counseling intervention were seen as likely to continue with behavior problems (6.7%) than those in the control group (83.3%). This program utilized the counseling component into their ISS program. This study showed that ISS could have a positive impact on student behavior.

A large study conducted by Opuni (1991) in the Houston Public Schools found that Student Referral Centers, which housed the ISS program in separate buildings, had a positive impact on teacher attitudes towards ISS. The results of this program also showed a high percentage of non-repeaters to ISS that ranged from 55% in one center to 85% in the highest scoring school.

One published study on the effectiveness of in-school suspension was conducted by Stage (1997). In this study, the effectiveness of three in-school suspension programs with 36 participants with emotional and behavioral disorders was examined. The three ISS programs were time out, time out plus academic tasks, and problem solving. The results showed that there was no significant difference between the in-school suspension and the rate of classroom disruptive behavior. It should be noted that this study was conducted in a residential school setting and not in a public school setting.

A study conducted in an ISS classroom in a small rural high school setting utilized only a camera that monitored the students who were in ISS (Turpin & Hardin, 1997). School administrators or school secretaries monitored the camera in the ISS
classroom. There was no staff member in the ISS classroom. School administrators or secretaries usually intervened when students were observed to violate the ISS classroom rules. The results of this study showed that while ISS in this setting may have proven to be a viable alternative to out of school suspension by the perception of the staff, the effect of ISS on student behavior was insignificant. There was no change in the number of lost instructional days or days issued ISS or OSS.

In his unpublished dissertation, Leapley (1997), observed twenty school districts with similar suspension rates and the effect that an ISS program would have on the rate of violent acts committed by students. The results showed that the intervention offered by a trained ISS teacher helped reduce the number of violent acts in schools. These results of this study are important because it shows that ISS can have an impact on student behavior.

Diem (1988) studied an ISS program in a middle school located in a large urban/suburban area. This study found that students who have repeated in-school suspensions did not improve their rates of school attendance or decrease their rate of recidivism. He also noted that there was a strong correlation between repeat ISS offenders and potential school dropouts. He also noted that the counseling or behavior modification program in place was ineffective and little information about alternative behaviors was offered to the students or to the teachers.

Yelsma, Yelsma, and Hovestadt (1991) have shown that the academic achievement of students who spend time out of the classroom has been correlated to suspension. They conducted a study with 127 high school students. Fifty-one of the students were categorized as externally disciplined. Externally disciplined meant that the
students were assigned ISS for a period of time. Seventy-six of the students were categorized as self-disciplined. Self-disciplined students were students who were never assigned ISS. The grade point averages were collected from student records. Results of this study showed that the grade point averages of the externally disciplined students were significantly lower than those of the self-disciplined students.

Silvey (1995) conducted a study that examined the academic grades of 32 ninth-and tenth-grade students who had spent a minimum of 5 days in an ISS program during a 6-week grading period. Results showed that the academic achievement of students who have been assigned ISS did not increase. The results showed no significant difference in the academic achievement of students in science and English classes before and after being assigned to ISS.

Costenbader and Markson (1998) surveyed 620 high school students. Of those students, 241 had been either internally (e.g., ISS) or externally suspended (e.g., OSS). The results also found that ISS does not increase academic achievement in students because students miss out on instructional time. These results also concurred with the findings of Yelsma et al. (1991) and Silvey (1995). The results of this study found that students who have been issued ISS also have less interest in school activities. Another finding from this study was that males from all racial groups and African American students were more likely to experience a suspension than where Caucasian or Hispanic students. Another finding was that rates of suspension increased greatly from elementary school to middle school. Another interesting point that this study brought out was that students who received ISS also had more difficulty with rule compliance than students who never received ISS.
The goal of ISS should be to understand why an inappropriate behavior is occurring, to develop effective interventions, to eliminate future occurrences of inappropriate behavior, and incorporate a rehabilitative focus that assumes misbehavior is a symptom of an underlying problem that must be identified and solved (Mendez & Knoff, 2003; Sullivan, 1989). Sullivan (1989) suggested that an effective (ISS) program should involve some aspect of a functional behavioral assessment and teach replacement behaviors.

A lot of time and energy is spent in implementing ISS. When students are assigned to ISS, they are primarily placed in this setting as a punitive measure. There is little regard to understanding the function, or the why, of the problematic behavior. If ISS is not effective then students are losing instructional time and are not learning how to behave appropriately. Using ISS alone does not often curb inappropriate behavior (Henderson & Friedland, 1996).

Although the literature does not show many results for the effectiveness of ISS there is a substantial amount of literature on ISS that consists of descriptions of successful ISS programs in various schools as well as how to design effective ISS programs (Mizell, 1978; Morris & Howard, 2003; Sheets, 1996; Sullivan, 1989). However, it must be noted that this literature does not provide much in the way of empirical evidence to support the effectiveness of these ISS programs.

Effective interventions should emphasize building positive prosocial behaviors rather than by merely punishing inappropriate behaviors (Knoff, 2000; Skiba & Peterson, 2000). In a descriptive study, Morrison et al. (2001) conclude that to effectively implement disciplinary actions, behavior programming that matches the needs and
characteristics of students is needed to effectively implement disciplinary actions. However, this is seldom the case in most schools, especially for typically developing at-risk students. Studies have shown that the use of negative consequences, such as suspensions, appear to prevail over the use of positive reinforcers in general education because teachers and administrators want to rid the classroom environment of problematic students (Costenbader & Markson, 1998; Shores, Gunter, & Jack, 1993).

A study conducted by Tobin, Sugai, and Colvin (1996) hypothesized that if the consequences of suspensions (both in and out of school) were effective punishers, they would result in a reduction of office referrals. The study included students (N = 18) who were referred repeatedly throughout their middle school career. They suggested that suspensions are not effective and may aggravate problematic behaviors by students because students prefer being sent out of the classroom as a way to escape academic tasks or to gain the attention of their peers. This study showed that 10 students who were given some type of suspension during their first semester as a sixth grader had more discipline referrals as time progressed.

One study by Atkins et al. (2001) showed that suspensions were not effective and may have served as rewards for both students and teachers. Disciplinary records for students in grades 3 – 8 (N = 314) in an inner-city public school were examined to assess the variation in response to discipline. Students who had received one or more ODRs in the fall and spring semesters (N = 75) increased in the amount of ODRs they received across the school year which suggested the possibility that detentions and suspensions were functioning as rewards because the students escaped from an aversive environment to a more reinforcing environment (e.g., school to home). Results from this study
suggested that teachers were also rewarded by the fact that the students were removed from their classroom.

In fact, ISS does not function as punishment for problematic behavior instead it acts as a reinforcer as most students that are exposed to ISS are repeat offenders (Dickinson & Miller, 2006). Using FBA’s to determine the function of behavior and then develop function-based interventions may be a more effective method that will positively teach students what to do thereby decreasing inappropriate behaviors in the classroom.

Functional Behavior Assessment

One method that could be used to help reduce a student’s time spent in ISS and determine why a student misbehaves is a functional behavior assessment. A functional behavior assessment is a variety of techniques and strategies to diagnose the causes, or function of behavior, and to identify likely interventions intended to address problem behaviors, including consideration of biological, social, affective, and environmental factors as possible functions of behavior that can be used to maximize the effectiveness and efficiency of behavioral support (McIntosh & Av-Gay, 2007; O’Neill et al., 1997; Quinn, 1991; Tobin et al., 1996). The function of behavior refers to the purpose that the behavior serves for the individual. Functions of behavior are identified as attention, escape, access to tangibles or preferred activities, and automatic or sensory stimulation (Cooper, Heron, & Heward, 2008).

Functional based assessments are derived from applied behavior analysis that is grounded in operant learning theory (Gresham, Watson, & Skinner, 2001). Applied behavior analysis is the science in which principles of behavior are applied to improve socially significant behavior (Cooper et al., 2008). Applied behavior analysis uses the
FBA procedure to identify antecedent and consequent events to design interventions to change socially significant behavior (Wolf, 1978).

The FBA and intervention literature for students with disabilities is extensive. Initially, FBAs were developed in clinical settings for individuals with developmental disabilities for self-injurious behavior (Iwata, Dorsey, Slifer, Bauman, & Richman, 1992). Since then, numerous studies conducted in special education settings have shown that FBAs have been used across various ages, grade levels, and populations. FBA’s have been used in a wide range of settings and grade levels in the special education setting in preschools (e.g., McLaren & Nelson, 2009; Wood, Blair, & Ferro, 2009), elementary schools (e.g., Crone, Hawken, & Bergstrom, 2007; Neef, Bicard, Endo, Coury, & Amen, 2005), middle schools (e.g., Kinch, Lewis-Palmer, Hagan-Burke, & Sugai, 2001), and high school classrooms (e.g., McKinney, Campbell-Whatley, & Kea, 2005). FBA’s have been shown demonstrated success with students with a wide range of disabilities including children and adults with mild disabilities (e.g., Blakeslee, Sugai, & Gruba, 1994; Sugai, Horner, & Sprague, 1999), Attention Deficit Hyperactivity Disorder (e.g., Ervin, Kern, Clark, DuPaul, Dunlap, & Friman, 2000; Neef et al., 2005; Stahr, Cushing, Lane, & Fox, 2006; Umbreit, 1995), emotionally and behaviorally disturbance (e.g., Blood & Neel, 2007; Kerns, Childs, Dunlap, Clarke, & Falk, 1994; Murdock, O’Neill, & Cunningham, 2005; Newcomer & Lewis, 2004; Stage et al., 2006; Todd, Horner, & Sugai, 1999; Trussell, Lewis, & Stichter, 2008), and autism (e.g., Peterson, Caniglia, & Royster, 2001; Wheeler, Baggett, Fox, & Blevins, 2006).

An FBA can begin with a review of the student’s records (e.g., individualized education program, discipline records, cumulative academic records, etc.). Typically a
combination of indirect assessment, direct assessments, and descriptive assessments are used to gather data and analyze the function of the student’s disruptive behavior and to identify intervention components that will help the student reduce problem behaviors.

**Indirect Assessments**

Indirect assessments can include interviews and rating scales (LaRue, Weiss, & Ferraioli, 2008). Indirect FBA methods assess behavior that is removed from the actual occurrence of the behavior (Gresham & Noell, 1999). Indirect assessments are advantageous because they are easy to conduct and do not require much time to complete (Gresham, Watson, & Skinner, 2001).

Interviews should be conducted with people in direct contact (e.g., special education &/or general education teacher, teacher assistants, related service providers, administrators, parents, and if relevant, the student) and who are knowledgeable of the student. There are several published interviews that include the Functional Assessment Interview (FAI) and the Student FAI (O’Neill et al., 1997). However, those conducting the FBA interviews can develop their own questions as a form of indirect assessment.

There are several published indirect assessment rating scales such as the Motivation Assessment Scale (MAS) (Durand & Crimmins, 1992), Functional Assessment Screening Tool (FAST) (Iwata & DeLeon, 1996), and the Problem Behavior Questionnaire (PBQ) (Lewis, Scott, & Sugai, 1994) to assist teachers in collecting relevant information to identify possible functions of behavior.

Using multiple sources and methods may increase the accuracy of indirect measures (Stage et al., 2006). If there is an agreement among the assessment measures, there is a greater possibility of the accuracy of the results (McIntosh, Brown, &
Borgmeier, 2008). The indirect assessment data then can be used to identify an operational definition of target behaviors and provide information and guide further assessment procedures, such as direct observations (LaRue et al., 2008; Sugai, Lewis-Palmer, & Hagan, 1998). The target behavior should be an objective description of the behavior that is specific, observable, and measurable to facilitate a more accurate descriptive assessment (Barnhill, 2005).

Descriptive assessments should be conducted in the natural setting to gather detailed information about the target behaviors (Gresham et al., 2001). The antecedent-behavior-consequence (ABC) method involves the direct observation of the target behavior as well as the events that occur before (antecedent) and after (consequence). Although this type of assessment can identify variables that may be associated with the target behavior and suggest functional relationships without isolating and manipulating environmental variables, it can provide more accurate information and help develop a precise hypothesis about the function of the behavior (McComas & Mace, 2000; Miltenberger, 2001).

**Direct Assessments**

Direct assessments in the natural setting are one of the most essential methods to assess behavior (Cone, 1997; Johnston & Pennypacker, 1993). These assessments can be used to confirm the information obtained during indirect and descriptive assessments. The direct observations determine the frequency, rate, latency, or duration of target behaviors, the antecedents to the target behavior, and perceived consequences to the behavior in the student’s natural school environment (Gresham et al., 2001). During the direct observations the behavior is system recorded. There are several reliable recording
methods. The most frequently advocated direct observation methods are event recording, partial interval recording, whole interval recording, or momentary time sampling (Chafouleas, Riley-Tillman, & Sugai, 2007; Gresham et al., 2001; Kennedy, 2005). Event based recording can be used to measure the frequency of the target behavior. The observer can use interval based recording methods which can be used for behaviors that are continuous and do not have a clearly defined beginning and end.

*Functional Analysis*

Another functional behavior assessment method that is used to determine the function of behavior is a functional analysis. A functional analysis is a functional behavior assessment method that occurs in an analog setting that manipulates antecedents and consequences are arranged so that their separate effects on problem behavior can be observed and measured. The conditions that are usually examined during a functional analysis are contingent attention, contingent escape, alone, and a control condition (Iwata et al, 1994). During a functional analysis, the researcher is able to better control environmental variables in contrived settings rather than natural settings (Broussard & Northup, 1995; Cooper et al., 2008; Iwata et al., 1994). However, a functional analysis is not always conducted during a FBA.

*Function-Based Interventions*

Once a functional behavior assessment has been completed, function based classroom interventions focusing on the function of the behavior can be developed from results of the functional behavior assessment (Dunlap et al., 1993). A functional behavior assessment can assist in the development of a behavior intervention plan that provides the teaching of replacement behaviors and a consistent means of assigning consequences for
inappropriate behaviors (Skiba et al., 1998; Tobin et al., 1996). Research indicates that interventions based on the assessed function of the behavior can be more effective than those not based on the behavior’s function.

Lane, Smither, Huseman, Guffey, and Fox (2007) evaluated the effectiveness of an intervention package in reducing the frequent disruptive behaviors of a six year old boy in kindergarten and increasing his task engagement. Their results showed that interventions based on the function of the behavior could be effective in reducing the challenging behavior of disruptive students. Total disruptive behaviors decreased from a mean of 22% to 6% while engagement in academic tasks increased from 46% to 84%.

Filter and Horner (2009) examined the effectiveness of function based interventions versus non-function based interventions. They studied three elementary aged students who exhibited problematic behaviors in the general education classroom. The independent variable was the percentage of intervals with problem behavior. The first student exhibited problematic behaviors 13% of intervals during baseline and that decreased to .1% during intervention. Academic engagement increased from 69% to 77% while academic engagement decreased from 69% to 42% during the non-function based intervention. The second student exhibited problematic behaviors 28% of intervals during baseline and that decreased to 3% during intervention. Academic engagement increased from 51% to 95% while academic engagement remained about the same at 51% during the non-function based intervention. Results showed that both students were engaged in problem behavior significantly less during function-based interventions than non-function-based interventions.
Aikman, Garbutt, and Furniss (2003) used brief functional analysis probe conditions to verify the results of a descriptive functional behavior assessment. The initial descriptive assessment of the disruptive behavior of an eight year old student with severe developmental disabilities showed that levels of disruptive behavior, which included screaming and throwing, were higher in some sessions than others and suggested that the disruptive behavior might be maintained by escape from task demands. They developed an intervention based on the function of the behavior where work demands were alternated with 5-minute periods of free activity. This reduced the levels of screaming to under 50%, and throwing to under 25%, of baseline levels.

Wood, Umbreit, Liaupsin, and Gresham (2007) examined the effectiveness of properly implemented function-based behavioral interventions for an eight year old boy with average academic abilities and problematic behaviors in the general education classroom. The FBA hypothesized that the function of the student’s behavior was teacher attention and escape from academic tasks. They developed an intervention addressing these functions. Results showed that the student remained on task 91% of the measured intervals when the behavioral intervention was properly implemented by the teacher compared to only 9% when the intervention was not properly implemented.

Numerous studies have reported function-based interventions have shown notable results by effectively decreasing disruptive behaviors and increasing more appropriate replacement behaviors. However, the literature concerning the FBA process and developing function-based interventions in general education classrooms with typically developing or at-risk students is limited. Scott et al. (2004) conducted a meta-analysis of over 600 studies between the years of 1995-2000 and found only 12 studies that utilized
FBA procedures in school-based settings. Seven of the twelve studies occurred in the general education classroom with students who were not labeled with a disability, at-risk for emotional or behavioral problems, severe emotional disturbance, attention deficit hyperactivity disorder (ADHD), mental retardation, or learning disabled. Since this study was conducted, several studies of function-based interventions have been conducted in general education settings.

Patterson (2009) examined the effects of function based interventions for a student in a general education setting. A 9th grade student who exhibited out of seat behaviors was studied. Patterson determined that the function of the out of seat behavior was adult attention. He implemented an intervention that created conversations with the student before the class began providing the student to access to adult attention. During baseline, the student was out of his seat an average of 5 times per class session. When the intervention was implemented the out of seat behavior dropped to 1.6 times per class. The intervention was withdrawn and the out of seat behavior increased returned to baseline levels. When the intervention was re-implemented, the out of seat behavior reduced to .5 per class session showing that the function based intervention helped reduce problematic behavior for a typically developing student in a general education classroom setting.

Newcomer and Lewis (2004) examined an elementary aged student who was exhibiting off task behaviors in the general education classroom. Results showed that function-based interventions were more effective than non function-based interventions. For the first student, the function of the problematic behavior was escape from academic tasks. The function based intervention provided the student with an opportunity to escape
from difficult tasks by pairing him with a peer tutor that would be available for assistance. The non function-based intervention was a cue and prompt intervention in which the teacher would cue and prompt the student to remain on task during assignments. The function-based intervention showed a decreasing trend in off-task behavior and a functional relation appeared when compared to baseline levels. The off task behaviors decreased from a mean of 38% during baseline to 5% during intervention.

Packenham, Shute, and Reid (2004) utilized a simplified functional behavior assessment procedure to examine its effectiveness. Results showed that the teacher was able to hypothesize the function of problematic behavior and develop a function-based intervention that decreased problematic behavior in the general education classroom. Two typically developing students were identified as having problematic behaviors in the classroom. The function-based intervention was developed after the teacher hypothesized that the function of the behavior was attention. The problematic behavior for the first student decreased from a mean of 34% during baseline to 10% during the function-based intervention. The function of the off-task behavior of the second student was escape due to difficult academic tasks. Off-task behavior decreased for this student from 53% during baseline to 24% during the function-based intervention. The results of this study also showed that a simplified FBA procedure is practical for classroom teachers while reducing problematic behaviors in the general education classroom.

*Purpose*

Although the Individuals with Disabilities Education Improvement Act (2004) makes provisions for conducting functional behavior assessments for students with disabilities, best practices would allow using the same process for students without
disabilities who are at risk for having behavioral issues in the classroom. Yet many
schools do not use functional behavior assessments and continue to utilize ISS as a
consequence for problem behaviors although research indicates this has not been
effective (Costenbader & Markson, 1998; Mendez & Sanders, 1981; Stage, 1997;
Yancey, 2001). By continuing current ISS practices, students are exposed to the risks of
missing academic instruction time, low academic achievement, and potentially becoming
a school dropout (Diem, 1988; Mendez & Sanders, 1981).

In an attempt to determine if infusing functional behavior assessment and positive
behavior intervention plans into the discipline process will impact student behavior and
learning, the current study will investigate the effects of implementing function-based
interventions developed from functional behavior assessment data for students who have
been assigned ISS. The purpose of this study is to answer the following research
questions:

(1) What are the effects of function-based classroom interventions derived from a
functional behavior assessment and an in-school suspension program on duration of ISS
placement, number of office discipline referrals, amount of academic instruction time,
and academic grades for at-risk middle school students who display problematic
behaviors in school?

(2) What are the effects of function-based classroom interventions derived from a
functional behavior assessment that was implemented by teachers on participants’
classroom disruptive behavior?

(3) What are the effects of function-based classroom interventions derived from a
functional behavior assessment and typical school discipline policies including an in-
school suspension program on participants’ pre and post test scores on the Student Risk Screening Scale (SRSS)?

**Hypotheses**

1. Function-based classroom interventions derived from functional behavior assessments will reduce office discipline referrals and days in in-school suspension as well as increase academic grades and academic instruction time for typically developing at-risk students who display problematic behaviors at school.

2. Function-based classroom interventions implemented by teachers will reduce problematic behaviors in the classroom setting.

3. The Student Risk Screening Scale scores will reduce after students have participated in function-based interventions for problematic behaviors in the classroom setting.
Chapter 3

Methods

Study 1

Participants. A total of 125 students were identified as having received an office discipline referral during the first two months of school. All students in the school were administered the Student Risk Screening Scale (SRSS) (Drummond, 1994). The participants were selected from the top 25% of students with the most office discipline referrals and identified as at risk for behavior problems by the SRSS (Drummond, 1994). Four of these students were randomly selected as participants to receive function-based classroom interventions during the current school year. Two participants were in sixth grade and two participants were in seventh grade. All participants had been enrolled in the school since the beginning of the school year.

Kevin was an 11-year-old African American male in the sixth grade. Although he has been diagnosed with Attention Deficit Hyperactivity Disorder (ADHD) and Obsessive Compulsive Disorder (OCD), he did not receive any special education services and was not identified as being eligible for 504 services. Kevin scored 17 on the Student Risk Screening Scale (SRSS) which identified him as a high-risk student who may exhibit externalizing or internalizing behaviors. Kevin had received four office disciplinary referrals for classroom disruptions during the seven months of the school year. He had served 12 days of ISS during the seven months of the study.

Lance was a 12-year-old African American male in the seventh grade. He scored 10 on the SRSS that identified him as a high-risk student who may exhibit externalizing or internalizing behaviors. Lance received 14 ODRs for classroom disruptions during the
seven months of the study. He served 22 days of ISS during the seven months of the study. He also was assigned eight days of OSS for fighting and non-compliance in ISS during the seven months of the study.

Timothy was 12-year-old African American male in the seventh grade. He was diagnosed with ADHD, but did receive special education consultation services as a gifted student, but he was not eligible for 504 services. He scored 12 on the SRSS that identified him as a high-risk student who may exhibit externalizing or internalizing behaviors. Timothy received 16 ODRs for classroom disruptions during the seven months of the study. He served 45 days of ISS during the seven months of the study. He also was assigned three days of OSS for non-compliance in ISS and violating school rules during the seven months of the study.

Jimmy was an 11-year-old African American male in the sixth grade. He did not receive any special education services. He scored 11 on the SRSS that identified him as a high-risk student who may exhibit externalizing or internalizing behaviors. Jimmy had received 11 ODRs for classroom disruptions during the seven months of the study. He had served 42 days of ISS during the seven months of the study. He was also assigned four days of OSS for noncompliance in ISS during seven months of the study. Jimmy was absent a total of 32 days during the 7-month study, including four OSS days.

**Setting**

The study was conducted in a suburban middle school that utilizes an ISS program as a form of discipline for students who receive office disciplinary referrals for minor infractions of school policy. The school serves sixth through eighth grades and does not have a school wide positive behavior support system in place. The student
membership at this school for the 2009-2010 school year was 893 students. During 2009-2010, the racial makeup of this school was 69.8% African American, 23.5% Caucasian, 3.36% Hispanic, 2.91% Asian American, and 1.33% Native American/Asian Islander. Fifty percent of the students receive free or reduced lunch and are classified as economically disadvantaged.

This school has seen significant changes in its student population over the past six years. Since 2002, the percentage of economically disadvantaged students has almost tripled from 16.6% in 2002 to 47% in 2008-2009. The racial makeup of the school has also drastically changed from 73% Caucasian and 24% African American in 2002 to 28% Caucasian and 67% African American in 2008-2009. Also, this school has experienced a large influx of students from other school systems, primarily a larger urban school system. During the 2007-2008 year, 151 students (16.27%) transferred in from other school systems. This trend has been ongoing since 2004 (17.4%). Students leaving this school also increased from 16.14% in 2004-2005 to 17.98% in 2007-2008. Attendance rates have held consistent around 94% since 2002-2003.

The school uses ISS as the most frequently utilized consequence for students who commit minor disciplinary infractions such as: disrespect, violation of school rules, out of area, dress code, and other rule violations. Other consequences issued for minor rule violations include teacher/student conferences, parent/teacher conferences, administrator/parent/teacher conferences, after school or before school detention, in-school detention, lunch detention, corporal punishment, or OSS. These consequences were included in the student code of conduct that is given to each student in the student handbook and parent handbook at the beginning of the school year.
During the 2007-2008 school year, there were 1,572 ISS assignments given to students who committed these minor disciplinary infractions. Students served a total of 4,710 days of ISS for the 2007-2008 school year. During the 2008-2009 school year, the number of ISS assignments dropped slightly to 1,256 while the number of ISS days served increased to 4,992. The school also issued 421 OSS assignments and 2,597 days of OSS in the 2007-2008 school year and issued 250 OSS assignments and 2,291 days of OSS in 2008-2009 (see Figure 1).

![Figure 1](image.png)

*Figure 1. Number of Assignments/Days for ISS and OSS for the 2007-2008 and 2008-2009 school years.*

The general education ISS classroom is set up for students in grades 6 through 8. An ISS monitor is placed in this classroom to supervise students and to assist with
classroom assignments. Students are sent to the ISS classroom where they must sit quietly, follow ISS procedures, and complete assignments sent from their classroom teachers.

The FBA and function-based interventions were developed and implemented in the participant’s general education classrooms. Parental consent and student assent was sought from the entire school student population at the beginning of school (see Appendices A, B, and C). The SRSS score of those students with consent but receive no intervention was used as a comparison for students who receive function-based classroom interventions.

Materials

Office disciplinary referrals (ODR). The ODR is a report of the frequency, setting, and time that the participant engaged in a rule infraction or problem behavior that was observed by a staff member or teacher and the consequence that was issued for the problem behavior or rule infraction (Sprague et al., 2000). The ODR used at this school includes basic information about the student (name, grade, sex, and race) as well as when and where the incident occurred, and dates of previous incidents. This ODR lists 31 incidents that violate the school code of conduct. The teacher or bus driver checks the appropriate box that identifies the incident that violated the school code of conduct. It includes a section that notes the actions taken by the teacher or bus driver prior to the referral as well as administrative action. Copies of ODR forms were made available to teachers and staff through the school office (see Appendix D). A copy of the ODR form is also located on each teacher’s school laptop to assist in expediency of turning in the ODR to the administrators.
**Student Risk Screening Scale (SRSS).** The SRSS is a free, easy to administer, and brief screening tool used to identify students at risk for anti-social behavior (see Appendix E). The SRSS is a one page instrument in which the classroom teacher rates each student, using a Likert-type scale, in their class in seven areas: steals; lies, cheats, steals; behavior problems; peer rejection; low academic achievement; negative attitudes; and aggressive behaviors (Lane, Kalberg, & Menzies, 2009). The SRSS identifies students as being low risk (0 – 3), moderate risk (4 – 8), and high risk (9 -17). The SRSS is a psychometrically sound instrument for identifying students that do and do not exhibit behaviors that indicate anti-social behavior (Drummond, Eddy, Reid, & Bank, 1994). The SRSS has strong internal validity, with an alpha coefficient of 0.83 (Lane, Little, Redding, Phillips, & Welsh, 2007). The SRSS has demonstrated convergent validity with the Strengths and Difficulties Questionnaire (SDQ) at the middle school level ($r = .66$) and at the high school level ($r = .47$) (Drummond et al, 1994; Lane, Kalberg, Parks, & Carter, 2008; Lane, Parks, Kalberg, & Carter, 2007).

**Motivation Assessment Scale (MAS).** The Motivation Assessment Scale (MAS) is an indirect assessment tool that assesses the functions of behavior problems (see Appendix F). The MAS is a research-based behavioral interview instrument that is easy and quick to administer to help determine the function of the problem behavior (attention, tangible, escape, and sensory). The MAS consists of 16 diagnostic questions that evaluate the function of the behavior that is scored on a 7-point scale (ranging from Never to Always). The MAS has been shown to have high internal consistency and inter-rater reliability of .80 and .95 (Durand & Crimmins, 1992).
**Experimenter**

The experimenter is a certified special education teacher with eleven years experience teaching special education specializing in functional behavior assessments, function-based interventions, and social skills. He has recently completed training to become a Board Certified Behavior Analyst (BCBA) and will take the board exam this spring. The school guidance counselors assisted the experimenter as data collectors for the classroom observations.

**Dependent Variables**

The dependent variables were the rate of office disciplinary referrals per instructional day of participants, duration of assignment to ISS, academic grades, and rate of disruptive behaviors.

Office disciplinary referrals (ODRs) are used by schools as a method of monitoring problem behaviors. The ODR is a report of the frequency, setting, and time that the participant engaged in a rule infraction or problem behavior that was observed by a staff member or teacher and the consequence that was issued for the problem behavior or rule infraction (Sprague et al., 2000). These rule infractions and problem behaviors include fighting, disrespect toward staff, destruction or defacing property, annoying to other students, bullying, unacceptable or written language, lack of cooperation, excessive talking, insubordination, or violation of established rules. ODRs are turned in by the classroom teacher to the administrators and consequences are issued this information is then in turn collected by the attendance office, recorded into the system wide information system, and then filed in the student’s records.
The rate of ODRs was measured by the number written per day for the participant by teachers or administrators divided by the days that the student attended school per month from the beginning of school until the end of the study. ODR data for purposes of this study were collected from the system wide information system. ODR data (days in ISS, rule infractions, and teacher comments) for the participants receiving functional behavior assessments were kept on the ODR data spreadsheet to assist the researcher in keeping track of the information (see Appendix G).

The duration of ISS refers to the number of days a student spends in ISS. Duration of ISS was measured by the number of days issued ISS that are written on the ODR per incident divided by the days that the student attends school per month from the beginning of school until the end of the study. This information was collected from the ODR filed in the system wide information system. This information was placed on the ODR data spreadsheet to document the total days of ISS each participant is issued.

Academic instruction time refers to the amount of time a student spends in the classroom receiving instruction. Academic instruction time missed due to placement in ISS was measured by the number of days issued ISS divided by the days that the student attends school per month from the beginning of school until the end of the study. This information was collected from the academic school calendar and the system wide information system.

Academic grades refer to the participants’ report card grades in reading and math and were collected from the beginning of the study to the end of the study. The academic grades represent the percentage of accuracy during two nine-week periods. Academic grades after intervention was compared to the grades before intervention began.
Academic grades were collected ex post facto from the system wide information system and any percentage changes were reported.

The disruptive behaviors were identified through office disciplinary referrals derived from teacher observation of the incident. Disruptive behavior was defined as oppositional and defiant behavior that disrupts the academic process for others and may include actions such as: destruction or defacing of property, fighting, unacceptable written or verbal language, lack of cooperation, excessive talking, defiant attitude toward staff, insubordination, violation of established rules, disrespect toward student or staff, violation of dress code, and sleeping in class. Non-examples of disruptive behaviors include the participant being on task with academic work, remaining in seat, following directions and classroom procedures, and appropriate peer interaction.

Research Design

To address the first research question, a multiple baseline design was utilized during which a functional behavior assessment was conducted with students who were at risk of severe behavioral issues in the classroom. In a multiple baseline design, “two or more baselines are concurrently established and the independent variable is sequentially introduced across the baselines” (Kennedy, 2005, p. 150). The criteria for the implementation of the FBA condition were those who score a high score on the SRSS.

To address the second research question, an ABAB design was utilized to evaluate the effectiveness of the function-based intervention. When using an ABAB design, treatment begins in the second phase is followed by its withdrawal and is followed by the treatment’s reinstatement (Kennedy, 2005).
To address the third research question, a dependent t-test was used to compare pre and post test scores from the SRSS from students who received FBAs and function based interventions and those who did not receive FBAs and were administered ISS only. The dependent t-test assesses whether the means of two groups are statistically different from each other. This analysis is appropriate whenever comparing the means of two groups (Jaeger, 1993).

Experimental Conditions

During baseline, typical school discipline procedures were in effect. When students received an ODR, they were referred to an administrator. Depending on the type of rule infraction committed by the student, participants may have received the consequence of ISS as a result of an ODR. Students may also have received a warning, detention, corporal punishment, or out-of-school suspension as a result of the ODR depending upon the type of infraction. No classroom interventions were implemented during baseline.

The intervention condition consisted of the function-based intervention. The classroom intervention was developed after conducting a functional behavior assessment. The intervention was based upon the function of the student’s behavior which may include one or more of the following: attention, escape, tangible, or sensory (Cooper et al., 2008).

Procedures

Student Risk Screening Scale (SRSS). The SRSS was administered two times during the study. Once after the fourth week of school and during the second week after winter break. The homeroom teacher completed the SRSS instrument on each student in their class. The teacher scored each participant using a Likert-type scale as follows:
never = 0, occasionally = 1, sometimes = 2, and frequently = 3. The total scores were used to classify participants into three levels: low risk (0-3), moderate risk (4-8), and high risk (9-21). Four participants were randomly selected from the students who received a high score on the first administration of the SRSS to receive a FBA and function-based classroom interventions.

*Baseline.* The procedures during baseline involved the typical school discipline actions. When students received an ODR, they were referred to an administrator. Depending on the type of rule infraction committed by the student, participants may have received the consequence of ISS as a result of an ODR. Students may also have received a warning, detention, corporal punishment, or out-of-school suspension as a result of the ODR depending upon the type of infraction. Data was collected on the number of ODRs received by the participant and the number of days of ISS assigned to each participant has received. No changes to the school discipline policy were made for any of the participants.

*Functional Behavior Assessment & Function-Based Interventions.* A functional behavior assessment consisted of a review of the student’s records (e.g., individualized education program, discipline records, cumulative academic records, etc.). The FBA was conducted after the student had received two ODRs. A combination of indirect assessment and direct assessment instruments were employed to gather data, analyze the function of the student’s disruption and to identify intervention components. A functional behavioral assessment interview, MAS (Durand & Crimmins, 1992), was conducted with teachers in direct contact with the students. The interview data was used to identify target behaviors and situations for the direct observation (see Table 2).
Table 2

Motivational Assessment Scale Results for Kevin, Timothy, Lance, and Jimmy

<table>
<thead>
<tr>
<th>Student</th>
<th>Mean MAS Score</th>
<th>Function of Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kevin</td>
<td>4.5</td>
<td>Attention</td>
</tr>
<tr>
<td>Timothy</td>
<td>4.75</td>
<td>Tangible</td>
</tr>
<tr>
<td>Lance</td>
<td>2.75</td>
<td>Attention</td>
</tr>
<tr>
<td>Jimmy</td>
<td>4.25</td>
<td>Tangible</td>
</tr>
</tbody>
</table>

The frequency of target behaviors, the antecedents to the target behavior, and perceived consequences to the behavior in the student’s natural school environment (e.g., classroom) were recorded by the experimenter using an observation form during five thirty-minute partial interval, with 10s intervals, observation in the general education classroom setting (see Appendix H). A second observer directly observed the frequency of disruptive behavior during five 30 minute randomly selected sessions in different settings using 10 second partial interval recording. The function of the problem behavior was hypothesized based on the information received from the indirect and direct assessments. Finally, at least two Board Certified Behavior Analysts and the cooperating teachers were consulted with to determine hypothesized function of the behaviors. A functional analysis was not conducted in this study.

Classroom interventions were developed from data collected during the functional behavior assessment. Interventions were matched to the function of the target behavior using the results from the MAS, direct observations, and teacher interviews. These
interventions developed to reduce the likelihood of the problem behavior occurring and attempt to increase a socially appropriate alternative behavior. The process of developing the behavior intervention plan (BIP) identified by Crone and Horner (2003) was utilized: (a) identifying antecedent, problem behavior, and consequence relationship confirmed by direct observation or and alternative behaviors and the associated contingencies, (b) identifying changes to make setting events less likely to occur or less influential, (c) identify changes in the immediate antecedents to prevent the problem behavior from occurring, (d) list teaching strategies for the alternative behavior, and (e) identify how consequences should be changed to increase the likelihood of the alternative behavior occurring and reduce the likelihood of the problem behavior occurring.

Also, during the FBA condition, participants can still receive ISS and other alternative punishments such as in-school detention, corporal punishment, or OSS. The assignments of these alternative punishments were at the discretion of the administrator who assigned the consequences for the office disciplinary referrals. Usually, in-school detention or corporal punishment was issued for participants who violated school rules (e.g., out of area, horseplaying) and often were not a result of the problem behaviors as identified in the FBA.

Teachers were trained by the researcher to implement the classroom interventions in two 1-hour training sessions on functional behavior assessments and behavior intervention plans. Treatment integrity checklists were utilized to help ensure that the intervention is implemented as planned (Gresham et al., 1993). Teachers were given a treatment integrity checklist to ensure proper treatment fidelity of the interventions.
Social validity surveys were given to teachers and students to gauge the acceptability of the functional behavior assessment and classroom interventions.

*Check-In/Check-Out (CICO)*. The Check In/Check Out (CICO) procedure is an effective intervention used for reducing problem behavior in the classroom (Crone et al., 2004). This program allows participants to check in with a designated adult in the morning to review behavioral goals, carry a point card that provides opportunities for adult feedback throughout the day, and reviews behavior and the goals at the end of the day. The card and daily results are sent home to the parent to review daily. The parent signs the card and sends it back to school.

Before school each morning, each participant checked in with an assigned teacher to review behavioral goals for the day and to choose a reward for appropriate behavior. Each participant carried around a point card to each academic class that addressed following directions, completing assignments, and respecting others (see Appendix I). At the end of each class period, teachers would provide feedback to the participants by rating their behavior. At the end of the day, the participant would meet with the assigned teacher to review the student’s behavioral performance throughout the day and discussed successes and problems that the participant may have had throughout the day. The teacher and the participant discussed problem-solving options for the next school day. If the participant met their behavioral goals, then he received a reward that each participant chose through a preference assessment (see Appendix J). The goal of a preference assessment is to assess an individual’s preference for potential reinforcers (Fisher & Mazur, 1997). One of the rewards chosen by all participants was to be able to sit with a peer of their choosing in class, sit with peers at lunch or in a seat of their choice the day
in class. Another reinforcement item that was requested by Lance was an opportunity to earn tickets to local college football and basketball games. Kevin requested running errands for teachers, being a group leader in class projects, a book from the school book fair, and spending time with his favorite teacher as his reinforcements. The participants took the point card home daily for the parent to review, sign, and brought it back to the school the next day.

*Token Economy System.* “Token economy systems provide students with immediate reinforcers (e.g., tokens or points) contingent on a desired behavior in order to increase the probability that the behavior will increase in frequency” (DuPaul, Rutherford, & Hosterman, 2008, p. 39). The function that maintained Timothy’s and Jimmy’s behavior was access to tangibles and teacher attention. One of the rewards chosen by Timothy and Jimmy were daily snacks (e.g., honey buns, fruit roll-ups) to take to lunch. They also requested time out of their academic classes (15 minutes) to go to a preferred teacher’s classroom to spend time on the computer (e.g., looking up pictures to draw, playing a game). Timothy also requested items such as sketch books and books about drawing Manga characters.

After each class period, teachers would complete a point card (see Appendix K) that monitored the classroom behavior of Timothy and Jimmy. They earned up to 2 points for following classroom instructions, remaining in their seat, completing assignments, allowing others to listen and learn, and using appropriate language. Participants could earn up to 12 points per class. If they scored below 8 points, then the student was sent to the assistant principal with an ODR. Points were cashed in daily at lunch time or the participants could save their points to purchase more reinforcing items.
Treatment Integrity and Reliability

A treatment integrity checklist (see Appendices L, M, and N) was designed to ensure the consistent implementation of the administering of the SRSS, the FBA, and the interventions. For the function-based interventions, treatment integrity was assessed weekly. Teachers completed a treatment integrity checklist every week. Once a week, the researcher or the guidance counselor observed the teacher and the student and assess whether the treatment integrity checklist was being followed.

Inter-observer agreement was conducted on the direct classroom observations using a partial interval recording form (see Appendix H). At least one out of five of each participant’s direct observation forms were assessed for inter-observer agreement by the researcher, guidance counselor, or other data collectors using the interval agreement approach in which the recording of behavior between two observers is compared on an interval by interval basis. The total number of agreements were divided by the total number of agreements plus disagreements and multiplied by 100%.

Interrater agreement was obtained on 100% of the data from the MAS assessment. The scores were calculated by the researcher and a person trained in administration and scoring assessments. Agreement was assessed for each question and was 100% for the MAS assessment for all participants who received functional behavior assessments.

Two observers simultaneously and independently observed and recorded target behaviors for 20% of the direct observations during the FBA resulting in 92% interobserver agreement. Percentage agreement was calculated by dividing the number of agreements by the number of agreements plus disagreements and dividing by 100% (see Table 3).
### Table 3

*Interobserver Agreement for Direct Observations for Kevin, Timothy, Lance, and Jimmy*

<table>
<thead>
<tr>
<th>Student</th>
<th>Mean Percentage of Frequency of Problem Behaviors</th>
<th>Interobserver Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kevin</td>
<td>18%</td>
<td>88%</td>
</tr>
<tr>
<td>Timothy</td>
<td>21%</td>
<td>94%</td>
</tr>
<tr>
<td>Lance</td>
<td>17%</td>
<td>91%</td>
</tr>
<tr>
<td>Jimmy</td>
<td>12%</td>
<td>93%</td>
</tr>
</tbody>
</table>

Treatment integrity was assessed for 33% of the sessions for CICO and was determined by the number of intervention steps divided the total number of steps. The mean for treatment integrity was 90% (range = 0% to 100%) for the CICO sessions (see Figure 2). Treatment integrity was assessed for 33% of the sessions for the function-based intervention based on the token economy system and was determined by the number of intervention steps divided the total number of steps. The mean for treatment integrity was 81% (range = 25% to 100%) for the token economy sessions (see Figure 3).
Figure 2. Percentage of Treatment Integrity for Check-In/Check-Out for Kevin and Lance.

Figure 3. Percentage of Treatment Integrity for Token Economy System for Timothy and Jimmy.
Social Validity

Social validity data were collected from teachers and students. Surveys were given to these individuals at the completion of the study (see Appendices O and P). The survey was administered to ensure that all relevant parties agreed that the procedures used for the interventions in this study were reasonable for the classroom (Lane & Beebe-Frankenberger, 2004).

Teachers were asked questions about whether or not the student’s behavior and academic grades had improved over the course of the intervention, if the FBA process and function-based interventions was significantly more work for them, the process helped them understand the behavior of their students, if the process was beneficial for the students, and if the school should continue the FBA and function-based intervention process. Teachers were also asked if they needed more training with the principles of applied behavior analysis in the classroom.

Students were asked if they felt that their behavior and academic performance had changed for the better. They were also asked whether or not the FBA and function-based intervention process was helpful to them as a student, if it would be beneficial to other students and would they recommend the process to other students. Students were also asked if they understood more about their behavior as a result of the FBA and function-based intervention process.

Study 2

Participants. Three at-risk general education students were randomly selected as participants to receive function-based classroom intervention randomly selected from the top 25% of students with the most office discipline referrals and a high score (indicating
at risk for problem behaviors) on the Student Risk Screening Scale (SRSS) (Drummond, 1994) during the current school year.

Alex was a 14-year-old African American male in the eighth grade. He scored 11 on the SRSS that identified him as a high-risk student who may exhibit externalizing or internalizing behaviors. Alex received 10 ODRs for classroom disruptions, disrupting the testing environment, and threatening violence during the seven months of the study. He served 76 days of ISS during the seven months of the study. He was assigned 6 days of OSS for threatening violence and disrupting the testing environment during the seven months of the study.

Anthony was a 14-year-old African American male in the eighth grade. He scored 10 on the SRSS that identified him as a high-risk student who may exhibit externalizing or internalizing behaviors. Anthony received 18 ODRs for classroom disruptions and lack of cooperation during the seven months of the study. He served 44 days of ISS during the seven months of the study.

Danny was a 14-year-old African American male in the eighth grade. He scored 9 on the SRSS that identified him as a high-risk student who may exhibit externalizing or internalizing behaviors. Danny received 7 ODRs for classroom disruptions, horseplay, and being out of area during the seven months of the study. He served 29 days of ISS during the seven months of the study.

Setting

The study was conducted in the same suburban middle school as in Study 1. However, a different version of ISS was implemented for students in the eighth grade.
**In-Grade intervention (IGI).** This ISS model was developed by the school principal to allow the participant to continue to receive academic instruction in all subjects. However the schedule of the participant was changed to allow less transition. Participants were not able to attend homeroom, change classes, eat lunch with peers, or participate in any extracurricular school activities. The teachers of the academic subjects rotated in and out of the IGI classroom. Participants could still attend activity classes (Music, Art, and Physical Education). However, if any participant received an ODR or had behavior issues, he would receive an In-School Detention (ISD) and miss those classes.

While in IGI, Alex received eight ODRs for classroom disruptions, disrupting the testing environment, and threatening violence. He was given 6 days of OSS for disrupting the testing environment and threatening violence. Anthony received 6 ODRs for classroom disruptions while in IGI. Danny received no ODRs for classroom disruptions while in IGI. The self-monitoring goal was added to the intervention to provide supplementary behavior support for participants in the IGI setting.

**Self monitoring.** In IGI, a self-monitoring strategy was implemented to make it possible for students to monitor their behavior in the classroom, positively obtain teacher attention as well as receive positive peer attention. When the participants met the goal of 80% for a 2-week period, they were released from the IGI program. If they did not meet the goal in both areas, then they were assigned another two week IGI session. The daily goal for the participants was to meet 80% of the behaviors on the self-monitoring checklist in order to receive a weekly reward (see Appendix Q). The behaviors included focusing on the teacher during instruction, completing assignments, not disrupting the
class by talking, staying in seat, and turning in homework. The rewards chosen for appropriate behaviors were obtained from a preference assessment that was given to the participants. The participants chose to earn tickets to a local professional basketball game if they met is their goal. In order to earn tickets to these events the participants had to earn at least 80% on their self-monitoring form for a total of 5 days in a row. By earning at least 80% on the self-monitoring form for 4 weeks, the principal evaluated the participant’s behavior and grades in the IGI program and considered them for dismissal from the IGI program. When the participants were released from the IGI program, they moved to the CICO intervention.

Self-monitoring involves the systematic observation and recording of one’s own behavior and has been used to improve academic and social behaviors in people with and without disabilities (Maag, 2004; Shapiro & Cole, 1994). Self-monitoring can be used to help students keep track of the occurrences of their behavior and reward them for improvements in their behavior (Maag, 2004; Rankin, & Reid, 1995). Self-monitoring can also improve on-task behavior, increase academic productivity, and decrease behavioral issues in the classroom (Shimabukuro, Prater, Jenkins, & Edelen-Smith, 1999). The process of self-monitoring is simple to use for teachers and students. This intervention also requires less monitoring of students by teachers (Ganz, 2008; Hutchison, Murdock, Williamson, & Cronin, 2000).

The self-monitoring form helped to keep the participant on task as well as evaluate behavior during class. The form includes five areas: focusing on teacher during instruction, completing the class assignment, not disrupting class by talking, staying in seat, and turning in homework. The form is given to the teacher at the end of the class
for verification by the teacher that the participant had completed the above areas. Giving the form to the teacher provides teacher attention to the participants.

*Experimenter, Dependent Variables, and Materials*

The experimenter, dependent variables (rate of office disciplinary referrals per instructional day of participants, duration of assignment to ISS, academic grades, and rate of disruptive behaviors), and materials were the same as in Study 1.

*Research Design*

The same research designs were used to address research questions one and three as in Study 1. To address the first research question, a multiple baseline design was used to evaluate the effects of function-based classroom interventions derived from a functional behavior assessment and an in-school suspension program on duration of ISS placement, number of office discipline referrals, amount of academic instruction time, and academic grades for at-risk middle school students who display problematic behaviors in school. To address the third research question, a t-test was used to measure the effects of function-based classroom interventions derived from a functional behavior assessment and typical school discipline policies including an in-school suspension program on participants’ pre and post-test scores on the Student Risk Screening Scale (SRSS). To address the second research question, a changing conditions design was utilized to evaluate the effectiveness of the function-based interventions on the participants’ disruptive behavior. A changing conditions design allows the researcher to monitor the effects of various procedures on student behavior (e.g., ABC). However, the changing conditions design does not show a functional relation. This design does allow
for validation of the intervention due to the social acceptability of the intervention (Kazdin, 1982).

**Experimental Conditions**

Experimental conditions, baseline, and function-based interventions were the same as Study 1 (see Table 4 for MAS results for Study 2). An additional component, IGI with self-monitoring, was added after the baseline condition and before the function-based intervention.

Table 4

*Motivational Assessment Scale Results for Anthony, Alex, and Danny*

<table>
<thead>
<tr>
<th>Student</th>
<th>Mean MAS Score</th>
<th>Function of Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthony</td>
<td>2.50</td>
<td>Attention</td>
</tr>
<tr>
<td>Alex</td>
<td>5.25</td>
<td>Attention</td>
</tr>
<tr>
<td>Danny</td>
<td>3.25</td>
<td>Attention</td>
</tr>
</tbody>
</table>

**Procedures**

The procedures for the SRSS, baseline, and functional behavior assessment and a function based intervention, CICO, were the same as Study 1. An additional component, IGI with self monitoring, was added after the baseline condition and before the function-based intervention to include procedures for progress monitoring for student behavior in the IGI classroom.

One of the rewards chosen by the CICO participants was to be able to sit with a
peer of their choosing in class, sit with peers at lunch or in a seat of their choice the day in class. Another reinforcement item that was requested by Alex, Danny, and Anthony was an opportunity to earn tickets to local college football and basketball games. The participants took the point card home daily for the parent to review, sign, and brought it back to the school the next day.

*Treatment Integrity and Reliability*

The same procedures to assess treatment integrity and reliability were used as in Study 1. Two observers simultaneously and independently observed and recorded target behaviors for 20% of the direct observations during the FBA resulting in 92% interobserver agreement. Percentage agreement was calculated by dividing the number of agreements by the number of agreements plus disagreements and dividing by 100% (see Table 5).

*Table 5*

*Interobserver Agreement for Direct Observations for Anthony, Alex, and Danny*

<table>
<thead>
<tr>
<th>Student</th>
<th>Mean Percentage of Frequency of Problem Behaviors</th>
<th>Interobserver Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthony</td>
<td>9%</td>
<td>92%</td>
</tr>
<tr>
<td>Alex</td>
<td>14%</td>
<td>90%</td>
</tr>
<tr>
<td>Danny</td>
<td>6%</td>
<td>94%</td>
</tr>
</tbody>
</table>
Treatment integrity was assessed for 30% of the sessions for CICO and was determined by the number of intervention steps divided the total number of steps. The mean treatment integrity was 92% (range = 78% to 100%) for the CICO sessions (see Figure 4).

![Figure 4. Percentage of Treatment Integrity for Check-In/Check-Out for Anthony, Alex, and Danny.](image)

**Social Validity**

The same procedures to assess social validity were used as in Study 1. Social validity data were collected from teachers and students. Surveys were given to these individuals at the completion of the study (see Appendices P and Q). The survey was administered to ensure that all relevant parties agreed that the procedures used for the interventions in this study were reasonable for the classroom (Lane & Beebe-Frankenberger, 2004).
Teachers were asked questions about whether or not the student’s behavior and academic grades had improved over the course of the intervention, if the FBA process and function-based interventions was significantly more work for them, the process helped them understand the behavior of their students, if the process was beneficial for the students, and if the school should continue the FBA and function-based intervention process. Teachers were also asked if they needed more training with the principles of applied behavior analysis in the classroom.

Students were asked if they felt that their behavior and academic performance had changed for the better. They were also asked whether or not the FBA and function-based intervention process was helpful to them as a student, if it would be beneficial to other students and would they recommend the process to other students. Students were also asked if they understood more about their behavior as a result of the FBA and function-based intervention process.
Chapter 4

Results

Study 1

Number of ODRs. The mean number of ODRs per instructional day decreased during intervention for two of the four participants (see Figure 5). During baseline, the mean number of ODRs per instructional day for Kevin was .16 (range = 0 to 2). During the interventions, the mean number of office discipline referrals (ODRs) per instructional day decreased for Kevin from .16 ODR during baseline to .02 ODRs per instructional day (range = 0 to 1) during intervention. During baseline, the mean number of ODRs per instructional day for Timothy was .22 (range = 0 to 2). The number of ODRs per instructional day for Timothy increased slightly to .24 (range = 0 to 2) during intervention. During baseline, the mean number of ODRs per instructional day for Lance was .13 (range = 0 to 2) remained stable at .13 ODRs during baseline to .43 (range = 0 to 2) and intervention. During baseline, the mean number of ODRs per instructional day for Jimmy was .15 (range = 0 to 2). The mean numbers of ODRs per instructional day decreased for Jimmy from .15 ODRs during baseline to .06 ODRs per instructional day (range = 0 to 2) during intervention.
Figure 5. The mean number of ODRs per instructional day for Kevin, Lance, Timothy, and Jimmy.

Days of ISS

The average days of ISS decreased during intervention for all four participants (see Figure 6). The mean number of days in ISS for Kevin showed a decreasing trend from a mean of 1.5 days per week during baseline to a mean of .27 days per week during intervention (range = 0 to 5). The mean number of days in ISS for Timothy decreased from 1.88 days per week during baseline to 1.12 days per week (range = 0 to 5). However, there was a high level of variability in the data. The mean number of days in ISS for Lance showed a decreasing trend from a mean of 2.38 days per week during baseline to a mean of .33 days per week (range = 0 to 5). The mean number of days in ISS decreased for Jimmy showed a decreasing trend from 1.95 days per week during baseline to .75 days per week during intervention (range = 0 to 5).
Figure 6. The number of days spent in ISS by Kevin, Timothy, Lance, and Jimmy.
**Academic Instruction Time**

The average amount of academic time spent in ISS decreased for three of the four participants (see Figure 7). The mean amount of academic instruction time spent in ISS by Kevin showed a decreasing trend from 30% during baseline to 10.23% during intervention. The mean amount of academic instruction time spent in ISS by Timothy remained stable and increasing slightly from 33.33% during baseline to 35.55% during intervention. The mean amount of academic instruction time spent in ISS by Lance showed a decreasing trend from 62.8% during baseline to 16.07% during intervention. The mean amount of academic instruction time spent in ISS by Jimmy showed a decreasing trend from 67.1% during baseline to 15.78% during intervention.

*Figure 7.* The amount of academic instruction time spent in ISS for Kevin, Lance, Timothy, and Jimmy.
**Academic Grades**

There were mixed results for the participant’s academic grades (see Figure 8). Academic grades for Kevin decreased in Reading/Language Arts from 83% in the first grading period to 79% during the second grading period. Kevin’s math grade decreased slightly from 82% during the first grading period to 80% during the second grading period. Academic grades for Jimmy slightly increased in Reading/Language Arts from 72% during the second grading period to 73% to the third grading period. Grades for Jimmy slightly decreased in Math from 74% during the second grading period to 73%. Academic grades for Lance increased slightly from 63% during the first grading period to 65% during the second grading period. Lance’s math grade decreased from 89% during the first grading period to 81% during the second grading period. The grades for Timothy increased from 68% during the first grading period to 74% during the second grading period in Reading/Language Arts and increased in Math from 62% during the first grading period to 70% during the second grading period.
Figure 8. Academic grades from progress reporting periods for Kevin, Lance, Timothy, and Jimmy.

The Effect of Function Based Interventions

The function of behavior was maintained by attention for Kevin and Lance. CICO was implemented as the function based intervention for Kevin and Lance. Results show that Kevin and Lance met their daily point goal and decreased ODRS and days in ISS when the CICO intervention was implemented (see Figures 9 and 10). However, their academic grades did not significantly increase or decrease.
**Figure 9.** Number of days Kevin spent in ISS during baseline and the CICO intervention.

**Figure 10.** Number of days Lance spent in ISS during baseline and the CICO intervention.

* = Lance was administered corporal punishment.

* = Lance was administered corporal punishment.
The function of behavior was maintained by access to tangibles for Timothy and Jimmy. A token economy system was implemented as the function-based intervention for Timothy and Jimmy. Results show that the number of ODRs and days in ISS for Timothy were at a low level and then increased with variability (see Figure 11). Results show that the number of ODRS and days in ISS for Jimmy showed a decreasing trend when the token economy system intervention was implemented (see Figure 11). However, their academic grades did not significantly increase or decrease.

Figure 11. Number of days Timothy and Jimmy spent in ISS during baseline token economy intervention.
Study 2

**Number of ODRs**

The mean number of ODRs per instructional day decreased during intervention for two of the three participants (see Figure 12). The mean number of ODRs for Anthony decreased from .23 ODRs per instructional day during baseline to .09 ODRs per instructional day during intervention (range = 0 to 3 per week). The mean number of ODRs per month decreased for Alex from .14 ODRs per instructional day during baseline to .03 ODRs per instructional day during intervention (range = 0 to 2 per week). The mean number of ODRs per instructional day for Danny increased from .03 ODRs per week during baseline to .10 ODRs per instructional day during intervention (range = 0 to 2 per week). It should be noted that two referrals were for out of area during a transition time and not for problematic behavior in the classroom.

![Figure 12. The mean number of ODRs per instructional day for Alex, Anthony, and Danny.](image-url)
**Days of ISS**

The average days of ISS decreased during intervention for all three participants (see Figure 13). The mean number of days of ISS for Anthony decreased from 2.83 days per week during baseline to .83 days per week during intervention (range = 0 to 5). The mean number of days in ISS for Danny decreased from 1.65 days per week during baseline to .14 days per week during intervention (range = 0 to 5). The mean number of days of ISS for Alex decreased from 4.75 days per week during baseline to 2.85 days per week during intervention (range = 0 to 5).
Figure 13. The number of days spent in ISS Alex, Anthony, and Danny.
**Academic Instruction Time**

The average amount of academic instruction time spent in ISS decreased for all three participants (see Figure 14). The mean amount of academic instruction time spent in ISS for Anthony during baseline was 60.71%. The mean amount of academic instruction time for Anthony decreased to 20% during intervention. Alex spent 100% of academic instruction time in ISS during baseline. During intervention, the mean amount of instruction time spent in ISS decreased to 10%. The mean amount of academic instruction time spent in ISS by Danny decreased for Danny from 42.42% in baseline to 3.22% during intervention.

![Figure 14. The amount of academic instruction time spent in ISS Alex, Anthony, and Danny.](image)

**Academic Grades**

There were mixed results for the participant’s academic grades (see Figure 15). Academic grades for Alex increased in Reading/Language Arts from 94% in the first
grading period to 95% during the second grading period. Alex’s math grade decreased slightly from 95% during the first grading period to 91% during the second grading period. Academic grades for Anthony increased in Reading/Language Arts from 61% during the first grading period to 88% to the second grading period. Grades for Anthony increased in Math from 57% during the second grading period to 78%. Academic grades for Danny increased slightly from 94% during the first grading period to 95% during the second grading period in Reading/Language Arts. Danny’s math grade decreased from 95% during the first grading period to 91% during the second grading period.

![Academic grades from progress reporting periods for Alex, Anthony, and Danny.](image)

**Figure 15.** Academic grades from progress reporting periods for Alex, Anthony, and Danny.

The Effect of Function Based Interventions

The number of days in ISS decreased during intervention for all four participants (see Figures 16, 17, 18). The number of days for Alex showed a decreasing trend from a mean of 4 days of ISS during the IGI/Self-Monitoring phase to a mean of .10 days of ISS.
per week during the CICO intervention. The number of days in ISS for Anthony showed a decreasing trend from a mean of 5 days of ISS during the IGI/Self-Monitoring phase to a mean of .17 days of ISS per week during the CICO intervention. The number of days of ISS for Danny showed a decreasing trend from a mean of 5 days of ISS during the IGI/Self-Monitoring phase to a mean of .11 days of ISS per week during the CICO intervention.

* = Alex was given OSS during these weeks.

# = Alex was administered corporal punishment.

*Figure* 16. Number of days spent in ISS by Alex during baseline, IGI with self-monitoring, and CICO.
Figure 17. Number of days spent in ISS by Anthony during baseline, IGI with self-monitoring, and CICO.
The Effects on SRSS Scores

The third research question investigated the effects of function-based classroom interventions derived from a functional behavior assessment and typical school discipline policies including an in-school suspension program on participants’ pre and post test scores on the SRSS. The hypothesis was that the SRSS scores will reduce after students have participated in function-based interventions for problematic behaviors in the classroom setting.

*Figure 18.* Number of days spent in ISS by Danny during baseline, IGI w monitoring, and CICO.
A dependent t-test was utilized to see if there was any significant difference between the SRSS scores of those students who received function-based interventions and those students who received no function-based interventions and ISS only. The pre- and post-test scores are listed in Tables 2 and 3.

The pre-test mean of the students who had received function-based interventions (N = 7) was 11 (M₁ = 11, SD = 1.63). The post-test mean of the students who had received function-based interventions was 11.14 (M₂ = 11.14, SD = 2.47). The difference between M₁ and M₂ was -.14.

The pre-test mean of the students who did not receive function-based interventions (N = 7) was 11.71 (M₁ = 11.71, SD = 1.79). The post-test mean of the students who did not receive the function-based interventions was 12.57 (M₂ = 12.57, SD = 2.88). The difference between M₁ and M₂ was .86. The results of the dependent t-test showed that there was no significant difference between the means of the FBA group, t(6) = -.141, p = .892. The results of the dependent t-test showed that there was no significant difference between the means of the group who did not receive function-based interventions, t(6), = -1.44, p = .200.
Table 6

SRSS Pre-Test and Post-Test Scores of Students Who Received Function-Based Interventions

<table>
<thead>
<tr>
<th>Participants</th>
<th>SRSS Pre-Test</th>
<th>SRSS Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kevin</td>
<td>14</td>
<td>11</td>
</tr>
<tr>
<td>Lance</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Timothy</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>Jimmy</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td>Alex</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>Anthony</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Danny</td>
<td>9</td>
<td>10</td>
</tr>
</tbody>
</table>

Table 7

SRSS Pre-Test and Post-Test Scores of Students Who Did Not Receive Function-Based Interventions

<table>
<thead>
<tr>
<th>Participants</th>
<th>SRSS Pre-Test</th>
<th>SRSS Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Johnny</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td>Dennis</td>
<td>13</td>
<td>16</td>
</tr>
<tr>
<td>Adam</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>Michael</td>
<td>11</td>
<td>16</td>
</tr>
<tr>
<td>Richard</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Bobby</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Charlie</td>
<td>12</td>
<td>13</td>
</tr>
</tbody>
</table>
Social Validity

Sixteen teachers participated in a social validity survey after the study was completed. Seventy-five percent of teachers disagreed that the FBA process was significantly more work for them. Ninety-four percent teachers agreed that the FBA process was helpful to them as a teacher. All teachers agreed that they would recommend this process for other students, that the process would be beneficial for other students, and that they understand more about their students as a result of the FBA process. Eighty-one percent of teachers agreed that they felt empowered as a teacher because of the FBA process.

Fifty-six percent of teachers agreed that the participants’ behavior had shown improvement. Only 44% agreed that the student’s academic performance changed for the better. Eighty-eight percent of teachers agreed that the school should continue this process and that they need more training in applying principles of applied behavior analysis in their classrooms.

All seven participants participated in a social validity survey after the study was completed. All seven participants agreed that their behavior had changed for the better, that they felt they had more choices during the function-based intervention process, and that they understand more about their behavior as a result of the study. Five out of seven participants agreed that the FBA and function-based intervention process was helpful to them as a student and that they would recommend this process for other students. Six of the participants agreed that this process would be beneficial for other students. Only three participants agreed that their academic performance had improved as a result of the FBA and function-based interventions.
Chapter 5

Discussion

The purpose of this study was to investigate the effects of implementing function-based interventions developed from functional behavior assessment data for students who have been assigned ISS. The study answered the following questions:

(1) What are the effects of function-based classroom interventions derived from a functional behavior assessment and an in-school suspension program on duration of ISS placement, number of office discipline referrals, amount of academic instruction time, and academic grades for at-risk middle school students who display problematic behaviors in school?

(2) What are the effects of function-based classroom interventions derived from a functional behavior assessment that was implemented by teachers on participants’ classroom disruptive behavior?

(3) What are the effects of function-based classroom interventions derived from a functional behavior assessment and typical school discipline policies including an in-school suspension program on participants’ pre and post test scores on the Student Risk Screening Scale (SRSS)?

The hypothesis for the first research question was confirmed when the results of the study showed reduced ODRs for four of the seven participants, reduced days in ISS for all but one of the participants, and increased time in the academic classroom setting for all but one of the participants. However, there was not an obvious amount of difference in the academic grades of the participants.
For the first research question, results showed the effectiveness of function-based interventions derived from a functional behavior assessment versus an ISS program. The results of this study showed that using function-based interventions developed from information from functional behavior assessments helped reduce problematic behavior in the general education classroom for at-risk students. These results agree with previous studies that show the effectiveness of function-based interventions (e.g., Aikman et al., 2003; Filter & Horner, 2009; Lane et al., 2007; Newcomer & Lewis, 2004; Patterson, 2009; Wood et al., 2007). Results indicated that the number of ODRs per instructional day decreased for two of the four participants in Study 1 and for two out of three participants in Study 2. The days per week in ISS decreased for all participants in both studies. The amount of academic instruction time spent in ISS also decreased for all participants but one. Danny’s ODRs and amount of instructional time increased due to being assigned ISS, however, Danny was assigned ISS for being out of an assigned area and not due to disruptive behaviors in the classroom that were targeted by the function-based intervention. Again, there was not a noticeable amount of change in the academic grades of the participants.

The hypothesis for the second research question was confirmed when the results showed that function-based interventions reduced problematic behaviors in the classroom as evidenced by a reduction in the days of ISS and ODRs. For the second research question for both studies, the results showed that problematic behavior in the classroom reduced as evidenced by a reduction in the number of days spent in ISS. The CICO intervention was effective in reducing the number of days in ISS for Kevin, Lance, Alex, Anthony, and Danny. These findings agree with previous research that supports the use
of CICO as an effective intervention in schools (e.g., Filter et al., 2007; Hawken & Johnston, 2007). Previous studies have shown that the token economy system is effective in reducing problematic behaviors (e.g., Bushell, Wrobel, & Michaelis, 1968; O’Leary & Becker, 1967; Walker & Buckley, 1968; Wolf, Giles, & Hall, 1968). The results of this study agree that the token economy system was effective for Timothy and Jimmy in reducing problematic behavior as evidence by the reduction of the number of days spent in ISS. However, due to the fact that Timothy’s teachers did not implement the intervention with fidelity, the results from the implementation of his intervention may have been negatively impacted which resulted in the variability of the data.

The hypothesis for the third research question was not confirmed. For the third research question, the SRSS scores did not decrease for all participants. Scores remained in the high risk category for all participants in the study. According to the dependent t-test, there was no significant difference in the SRSS pre-test and post-test scores for the participants who received function-based interventions and those who did not receive function-based interventions. The variable results on the SRSS may have been impacted by the subjectivity of the teachers who completed the SRSS forms. Another reason why the SRSS scores may not have been affected was due to the fact that the function-based interventions were not in place for a sufficient amount of time to have some bearing on the scores.

The results from this study extends the knowledge base by demonstrating that using FBAs to develop function-based interventions for problem behaviors can be effective when dealing with problem behaviors in the classroom (Blood & Neel, 2007; Carter & Horner, 2007; Horner, 1994; Ingram, Lewis-Palmer, & Sugai, 2005; Lane et al.,
2007). Using an easy to administer assessment along with direct observations and efficient data collection can provide the teacher with informative data in order to develop a hypothesis of the function of the problem behavior. Once a hypothesis is developed, a teacher can plan an intervention based on the function of the behavior. There is limited research on FBAs conducted with at-risk students without disabilities (Scott et al., 2004). The FBAs conducted for this study were implemented in the general classroom with students who did not receive special education services and gives credence to utilizing FBAs for at-risk students with high reliability.

This study extended the knowledge base in the area of ISS by showing that using function-based interventions derived from functional behavior assessment data can reduce time spent in ISS and ODRs per instructional day. Effective function-based interventions can help build prosocial behaviors instead of punishing inappropriate behaviors (Knoff, 2000; Skiba & Peterson, 2000). This study agrees with the previous findings that in order to implement effective disciplinary interventions the behavior programming must include some type of functional behavior assessment (e.g., Morris & Howard, 2003; Morrison et al., 2000).

**Limitations**

One limitation of this study was the small number of subjects limits the generalizability of findings. Using a single-subject design provides evidence that using FBAs to develop interventions for problem behavior can be effective in the classroom. However, additional replications are needed across various problem behaviors and participants to support the findings that function based interventions are effective in helping decrease problem behaviors in general education students.
Another limitation of this study was the research design used in study 2. The changing conditions design does not show a functional relation. The data for the first research question have to be viewed cautiously because sufficient evidence is needed to document the effects of function-based interventions on behavior change.

Another limitation of this study was that the participants, whether they received the FBA and function-based intervention or not, were given alternative punishments, such as in-school detention or corporal punishment, if they received an ODR. Also, during the FBA condition students could still receive ISS and other alternative punishments. Lance was given an alternative punishment, corporal punishment, three times during baseline. This may have impacted all participants who received ISS, in-school detention, or corporal punishment in place of ISS.

A third limitation of this study was the reliability and validity of the indirect assessment, MAS, in the functional behavior assessment. Even though the MAS is one of the most widely used indirect assessments where gainful information can be obtained (Durand & Crimmins, 1988), it has poor psychometric properties (Sigafoos, Kerr, & Roberts, 1994; Sturmey, 1994). In order to properly assess the function of behavior of general education students, indirect assessments should be used in conjunction with other instruments, such as direct observations, that help assess the function of problem behavior. This study only utilized one indirect assessment, the MAS, because the subjectivity or rater bias of teachers on more than one indirect assessment may have impacted the hypothesis of the function of the problem behaviors.

An additional limitation was the reasons teachers wrote referrals for students and how these teachers view disruptive behaviors. Teachers refer students to administrators
for varying reasons. These referrals are not consistent. Schools should have clear, objective operational definitions of behaviors on ODR’s to aid in consistent application of behavior consequences. The school in this study did not. Administrators should have consistent expectations and rules for writing referrals and applying consequences.

A confounding variable of the study was that Timothy, Lance and Kevin, who were prescribed medication for ADHD, did not consistently receive their medication at home. There were some weeks in which their parents gave them their medication and some weeks they did not. This may have impacted Lance and Kevin’s grades and the results of the study. Later in the study, Timothy’s medication increased which may have caused an increase in the ODRs and days in ISS.

Another confounding variable was reactivity. Reactivity can occur when participants are aware that they are being observed. Later in the study, teachers and students were aware of when they were being observed in the general education classroom by the experimenter or guidance counselor which may have impacted the results of the study as well as the validity of the study.

Treatment fidelity was another confounding variable. According to Scott and Kamps (2007), “As with any practice, implementation in the absence of fidelity provides no evidence of the merits of the intervention,” (p. 153). Treatment fidelity is defined as strategies that help monitor and enhance the consistency and accuracy of an intervention (Smith, Daunic, & Taylor, 2007). Timothy’s function-based intervention was not properly implemented during some weeks and there were two weeks where the intervention was not implemented at all. This lack of fidelity may have impacted the overall results for Timothy’s function-based intervention.
Although this study had its limitations, it is one of the first of its kind. This study sheds light on the effectiveness of ISS versus function-based interventions. Earlier studies on the effectiveness of ISS examined dependent variables such as the reduction of the number of OSS assignments and expulsions, tardies to class, and the perceptions of how administrators and teachers viewed the effectiveness of ISS programs (e.g., Chobot & Garibaldi, 1982; Mendez & Sanders, 1981; Short & Noblit, 1985). However, only two studies to date, an unpublished dissertation by Leapley (1997) and Hochman and Worner (1987) showed results that ISS had an effect on behavioral change for students who had been issued the consequence of ISS.

Implications for Practice

These results indicate that ISS is ineffective in reducing problematic behaviors in the classroom. The results showed no changes in behavior during the ISS condition. In this particular school, ISS, without the FBA, was an ineffective practice as indicated by the number of students who were repeatedly assigned to ISS. In both studies, placement in ISS resulted in decreases in the time spent in an academic classroom. One problem with ISS is that students do not receive the same quality and quantity of academic instruction as they would in the classroom. In study 2, results show that the enhanced ISS program (IGI and self-monitoring) was not effective as the function-based interventions. The function-based interventions were more effective at reducing ODRs, duration in ISS, and number of days spent in ISS when compared to the enhanced ISS. In both studies, six participants spent less time in ISS with the implementation of a function based intervention, thus increasing the amount of time spent in academic instruction. The amount of academic instruction time increased for all participants except one. Although
there was little indication that academic grades increased due to the variability of the scores, there is literature to support the evidence that the more time a student spends in academic instruction can result in an increase in academic gains (Heward, 1996; Stallings, 1980). Current practice suggests that using FBAs for tertiary interventions. The data from this study suggest that FBAs can be conducted earlier. Principals and teachers can use information derived from FBAs to help decrease the use of disciplinary actions, such as ISS, and increase the time of academic instruction for students. This in turn can lead to higher grades and improved behavior in the classroom.

The results of this study indicate that schools should develop a consistent philosophy of their discipline plan. This finding agrees with the findings of Mizell (1978) that schools should develop a philosophy of discipline that moves beyond punishment and control by helping students manage their problem behaviors. Many schools implement the punitive model of ISS which suppresses inappropriate behaviors of students by removing them from the classroom instead of building appropriate behaviors (Peterson & Rismiller, 2005). In addition, school administrators should have additional training in the theory of and the administering of school discipline. ISS would not be as widely used if school administrators were more aware of the lack of theory and research behind ISS.

The viewpoint of many teachers and administrators is that ISS can be classified as punishment. However, according to the principles of applied behavior analysis, punishment is defined as a response is followed by a stimulus change, the effect of which is a decrease in the future frequency of behavior (Cooper et al., 2008). In other words, punishment must reduce behavior. Exclusionary time out, such as ISS, is a form of
punishment that occurs when a student is removed from one environment that is more interesting and reinforcing and then placing that student in another environment that is less reinforcing (Cooper et al., 2008). Research has shown that ISS does not always reduce inappropriate behaviors in the school setting (Diem, 1988; Stage, 1997; Turpin & Hardin, 1997). Another problem is that exclusionary time out requires that the general education classroom should be more reinforcing to the student than the ISS classroom. Research shows that high recidivism rates indicate that the ISS classroom may be more reinforcing than the general education classroom (Henderson & Friendland, 1996; Tobin et al., 1996).

The results of this study point to the importance of implementing a proactive process to help identify at-risk students for problematic behavior and finding a way to help these students reduce problematic behavior in the classroom. However, administrators and teachers should understand that a “one size fits all” discipline approach does not work for all students. Teachers and administrators should not use reactionary punitive measures, such as ISS, as a way to escape dealing with a student. Teachers and administrators also should not use ISS as a “dumping ground” for at-risk students who display problematic behaviors in the general education classroom (Mizell, 1978; Opuni, 1996). However, using reactionary discipline procedures, such as ISS, can be designed to fit into this proactive process as long as there are monitoring and evaluation processes in place to judge the effectiveness of the reactionary procedures. Mizell (1978) and Garibaldi (1982) suggest using an evaluation process in the ISS program to monitor its effectiveness.
Another implication from this study is the need for teacher training in the area of functional behavior assessments and function-based interventions. One possible solution is to provide training for teachers to conduct functional behavior assessments and how to develop function-based interventions. With many schools utilizing a three-tiered positive behavior support framework to deal with problem behaviors in schools, many teachers are not properly trained to conduct FBAs or develop function-based interventions (Lane, Weisenback, Phillips, & Wehby, 2007; Payne, Scott, & Conroy, 2007; Scott et al., 2004). In this study, 81% of teachers agreed that they needed more training in principles of applied behavior analysis which is the foundation of FBAs and function-based interventions. By providing training for teachers to conduct functional behavior assessments and develop function-based interventions, schools can help teachers and administrators design interventions that produce meaningful behavior changes to improve the educational experiences of their students (Baer, Wolf, & Risley, 1968; Lane & Beebe-Frankenberger, 2004). Teachers and administrators should have the skills necessary to conduct functional behavior assessments and to develop function-based interventions.

Unfortunately, there is no systematic approach to functional behavior assessment process to train teachers. A systematic approach to implementing FBAs and function-based interventions should be considered. Umbreit, Ferro, Liaupsin, and Lane (2007) developed a systematic approach to function-based interventions by using a collaborative process that used the teacher as the primary interventionist and assessor to produce desired behavioral outcomes for students. The use of a function matrix, developed by Umbreit et al. (2007), can help teachers determine the function of a behavior, develop
specific function-based interventions, and implement these interventions that demonstrate a functional relation with high fidelity.

Schools that implement SWPBS can provide multiple levels of function-based interventions for students through a universal screening for all students and additional supports and behavior intervention plans for those students who need extra reinforcement and support. Schools would be wise to catch the at-risk students who may exhibit problem behaviors in the classroom early by implementing a universal screening process to identify those at-risk students, conducting functional behavior assessments, and developing function-based behavior intervention plans to help curtail the in-school suspension rates in their learning environments. The implementation of a SWPBS framework would address the issue of helping to identify those at-risk students and helping to provide function-based interventions to increase academic instruction time and academic achievement (Horner et al., 2005).

This study utilized positive behavior supports to improve the participants’ outcomes. Schools should provide support for all students who have problem behaviors regardless of the severity. Implementing School-Wide Positive Behavior Support (SWPBS) can teach all students expectations for behavior and reward positive behaviors, while providing instruction and support for students with problem behaviors (Horner, Sugai, Todd, & Lewis-Palmer, 2005). The SWPBS model provides a continuum of support for students on all levels. SWPBS utilizes universal screening at the primary level (for all students) which can help identify problem or at-risk students. Function-based interventions implemented at the secondary and tertiary levels are more focused and intensive than the primary level for those students, about 15% on the secondary level and
5% on the tertiary level, who are not responsive to the primary level. (Horner et al., 2005; Marchant et al., 2009; Scott & Caron, 2005).

**Future Research**

There is little current research on effectiveness of ISS, yet it is common in many schools. Future research should continue to investigate the effectiveness of ISS in terms of decreasing inappropriate behaviors, the impact on learning while in ISS, and the cost effectiveness of ISS in comparison to other behavior management systems such as School-Wide Positive Behavior Support (SWPBS).

This study should be replicated with more participants and distinct conditions, such as ISS only versus the FBA and function-based intervention only. In addition, a randomized control design with a large sample size should be conducted to investigate FBA with function-based interventions as an alternative to ISS for a complete analysis. The procedures for this study could easily be replicated using a randomized control design. In addition, only problem behaviors maintained by attention and access to tangibles were examined in this study. Research literature indicates that there are several possible functions of behavior that maintain problem behaviors such as escape, sensory, and access to tangibles (Horner, 1994; O’Neill et al., 1997). Future research examining different interventions for the various functions of behavior should be compared with ISS.

Continued research is needed to determine the efficacy of using FBAs to develop classroom interventions for at-risk students in the general education population. In addition, more research is needed in the area of training teachers and administrators in the FBA and function-based intervention development process. Unfortunately, many general
education teachers and administrators are not familiar with the FBA process because most of the literature has been focused on students with disabilities (Scott et al, 2004). Professional training opportunities should be offered to general education teachers and administrators to assist them in dealing with problem behaviors in the classroom and high numbers of students in ISS. The content and methods for continual training and supports to provide teachers with the tools needed to conduct FBAs and develop function-based interventions for their students with problem behaviors should be investigated. Further research in this area will provide useful information about functional based interventions to decrease problem behavior in students in the general school population.

Conclusion

Seven middle school participants, four in Study 1 and three in Study 2, received a FBA and an intervention based on the function of their behavior. Five participants received the function-based intervention CICO while the other two participants received the function-based intervention based on a token economy system. Results showed that six of the participants decreased the amount of time spent in ISS and the number of ODRs per instructional day decreased for four of the participants. Academic time in the classroom increased for all of the participants but one. There were mixed results for the participant’s academic grades. Results showed that function-based interventions were effective as evidenced by the reduction of time spent in ISS. However, there was no significant difference in the pre-test or post-test scores of the SRSS of the participants who received function-based interventions and those who did not receive function-based interventions.
When deciding upon consequences for inappropriate student behavior, administrators should consider function-based interventions based on information derived from functional behavior assessment data. Studies show that reactionary and punitive approaches to student discipline (e.g., ISS, OSS, or corporal punishment) have not been effective in changing student behavior. Many students could spend more time in academic instruction and improve academic gains while spending less time in ISS if more teachers and administrators utilized the FBA and function-based interventions in their schools. Although the FBA process and the development of function-based interventions have long been associated with special education, general education teachers can utilize these tools to assist their at-risk students who have problematic behaviors and therefore increase academic performance, increase time in academic instruction as well as decrease time spent in punishment based interventions such as ISS.
References


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*Journal of Emotional and Behavioral Disorders, 4*, 82–95.


Appendix A
August 7, 2009

Dear Parent/Guardian,

Your child is invited to participate in a research study investigating the effects of assessment-based treatment or in-school suspension over the school year. Your child is invited to participate in this study because they have been assigned to in-school suspension at their school. If your child participates in this study, they will be randomly selected to receive a functional behavioral assessment and a then positive behavior support plan will be developed. The functional behavioral assessment will involve (a) a review of your child’s records, (b) interviews with relevant school staff and you and your child, if appropriate, regarding perceptions of his/her performance at school, and (c) at least three observations of your child in the classroom in order to gain further insight into how to assist your child to be more successful at school. A positive behavior intervention plan will be developed based on the factors that affect your child’s behavior and will consist of research-based interventions that may be applied in the school and/or home settings to increase appropriate behavior and decrease inappropriate behavior. An assessment report and behavior intervention plan will be shared with you and relevant school staff to help your child be more successful in school. If your child is not randomly selected for the functional behavior assessment, they will be sent to in-school suspension as they normally would. We will monitor the behavioral and academic effects of the intervention plan or in-school suspension for the remainder of the current school year. Participation in this study will not prevent your student from going to in-school suspension as assigned.

The risks of participating in the study are no greater than the typical classroom procedures utilized for functional behavior assessments or in-school suspension. The close consultation with school personnel and extended monitoring of the behavior intervention plan may benefit your child by providing more effective and efficient behavior interventions that increase your child’s success in school. Data collected during this study will help provide information on how best to address problematic behavior in schools. Your child’s information will be kept confidential within the limits allowed by law. Your child’s identity will not be revealed in any publication or presentation developed from this research. Participation in the study is voluntary and you can decide to discontinue working with the study at any time. There are no consequences if you choose for your child not to participate. By giving consent, you are allowing us to actively consult with your child’s teachers and school administrators by following the above procedures to achieve positive outcomes for your child. If you have any questions, please contact Clinton Smith at 901-230-4914 or csmith15@memphis.edu or Sara Bicard at sbicard@memphis.edu or (901) 678-4872.

Sincerely,

Clinton Smith
Rev 6/01
THE UNIVERSITY OF MEMPHIS
Memphis, TN 38152-3570

Instruction and Curriculum Leadership
406 Ball Hall
901-678-2365
(FAX) 901-678-3891

We are currently looking for students to participate in a research study investigating the treatment effects of positive behavior interventions based on functional behavior assessment. Functional behavior assessments consist of interviewing the education professionals working with your child/student to define behaviors of concern, at minimum five 30-minute observations of the child in a setting in which the behavior of concern frequently occurs, and identifying the most effective intervention for the behavior based on observation data. I will conduct the functional behavior assessment develop a behavior intervention plan that will be monitored throughout the school year.

Participating in this study will provide meaningful information for implementing functional behavior assessment and designing positive behavior supports. If you choose not to participate in this study, you and your child/student will not be penalized in any way.

If you have additional questions about this study, please contact Clinton Smith at 901-230-4914 or by email csmith15@memphis.edu or Dr. Sara Bicard, by phone at 901-678-4872 or by email sbicard@memphis.edu.

Are you interested in your child/student participating in the study?
Circle one answer.

YES     NO

Before you sign the consent form, can you restate what will be involved with the study?

__________________________________________

__________________________________________

Before I sign, here are questions I have:

__________________________________________

__________________________________________

__________________________________________

__________________________________________

Parent Signature ____________________________ Date ____________________________
Appendix C
August 11, 2009

Hello,

My name is Clinton Smith and I am a student from the University of Memphis. We would like to learn more about why students are assigned in-school suspension (ISS) and the best interventions for students who are assigned ISS.

To do this, we are asking you and other students take part in a research study. The results of the study will tell us if functional behavior assessments and behavior intervention plans will help reduce the time in ISS for students who have been assigned ISS and will help students be more successful in school.

If you are selected to participate, you will be interviewed by the researcher to get your opinion about your teachers, your classes, and ISS. You do not have to answer any of the questions we ask if you do not want to or if they make you feel uncomfortable.

If you are selected to participate, a researcher, counselor, or teacher will also observe you in your classroom to find information about how students behave in classroom settings. The researcher will try to answer why students act they way they do from this information and develop a behavior intervention plan to help students stay in class and out of ISS as well as be more successful in the classroom.

The information about you during this study will be confidential, and nobody will know who you are except the people doing the research. If we write an article about what we learn from the study, we will not use your name.

Before you decide to take part in this study, we will answer any questions you have. You can also talk to your mom or dad. You do not have to be in this study, it is okay to say no. If you decide to be in this study, you can change your mind and stop being part of it at any time.

Thank you,

Clinton Smith

If you decide to be in this study, please sign your name below. You will be given a copy of this form to keep for yourself.
Appendix D
### INCIDENT TYPE

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>01. Safety Procedure Violation</td>
<td>17. Extortion</td>
</tr>
<tr>
<td>02. Destruction of Property</td>
<td>18. Defiant Attitude Toward Staff</td>
</tr>
<tr>
<td>03. Fighting/Pushing/Tripping</td>
<td>19. Insubordination</td>
</tr>
<tr>
<td>04. Defacing Property</td>
<td>20. Possession/Use of Drugs</td>
</tr>
<tr>
<td>05. Possession/Use of Tobacco</td>
<td>21. Possession/Use of Alcohol</td>
</tr>
<tr>
<td>06. Eating/Drinking/Littering</td>
<td>22. Violation of Established Rules</td>
</tr>
<tr>
<td>07. Rude Discourteous</td>
<td>23. Immoral/Disreputable Conduct</td>
</tr>
<tr>
<td>08. Unacceptable Verbal/Written Language</td>
<td>24. Disrespect Toward Student/Staff</td>
</tr>
<tr>
<td>09. Annoying to Other Students</td>
<td>25. Restless/Inattentive</td>
</tr>
<tr>
<td>14. Gambling</td>
<td>30. Sleeping in Class</td>
</tr>
<tr>
<td>15. Forgery</td>
<td>31. Health Records</td>
</tr>
</tbody>
</table>

### ACTION TAKEN BY TEACHER/BUS DRIVER PRIOR TO REFERRAL

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>01. Consulted Counselor</td>
<td>05. Changed Student’s Seat</td>
</tr>
<tr>
<td>02. Held Conference with Student</td>
<td>06. Telephoned Parent</td>
</tr>
<tr>
<td>03. Denied Privileges</td>
<td>07. Held Conference with Parent</td>
</tr>
<tr>
<td>04. Consulted other Teachers</td>
<td>08. Sent Previous Report Home</td>
</tr>
<tr>
<td></td>
<td>09.</td>
</tr>
</tbody>
</table>

### ADMINISTRATIVE ACTION

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>01. Student Regrets Incident, Cooperative</td>
<td>11. Case Referred: Guidance Department</td>
</tr>
<tr>
<td>02. Recurring Incidents will be Reported</td>
<td>12. Case Referred: Student Assistance Program</td>
</tr>
<tr>
<td>03. Student Will Make Up Time</td>
<td>13. Case Referred to Others</td>
</tr>
<tr>
<td>04. Student Placed on Probation</td>
<td>14. Assigned Detention Hall/Supervised Study</td>
</tr>
<tr>
<td>05. Student Denied Bus Privilege</td>
<td>15. Assigned In-School Suspension</td>
</tr>
<tr>
<td>06. Student Suspended From Bus</td>
<td>16. Assigned Out-of-School Suspension</td>
</tr>
<tr>
<td>07. Student/Administrator Conference</td>
<td>17. Case Referred: Board Hearing Officer</td>
</tr>
<tr>
<td>08. Student/Teacher/Administrator Conference</td>
<td>18. Recommended for Expulsion</td>
</tr>
<tr>
<td>09. Student/Parent/Administrator Conference</td>
<td>19. Corporal Punishment</td>
</tr>
<tr>
<td>10. Student/Parent/Teacher/Administrator Conference</td>
<td>99. Other</td>
</tr>
</tbody>
</table>

Administrator Comments: ________________________________

<p>| | |</p>
<table>
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<tr>
<th></th>
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<tbody>
<tr>
<td>Teacher/Driver Signature</td>
<td>Administrator Signature</td>
</tr>
</tbody>
</table>

### NOTICE TO PARENTS:

The purpose of this report is to inform you of a disciplinary incident involving the student at school or on the school bus. We trust that you appreciate the action taken by the teacher or bus driver and will cooperate with corrective action initiated today.

INCIDENT OCCURRED: _______________________________________________________________
Appendix E
Student Risk Screening Scale (SRSS)

Directions: Please rate each student on each behavior using the following scale:
0=Never, 1=Rarely, 2=Occasionally, 3=Frequently

<table>
<thead>
<tr>
<th>Student Name</th>
<th>Stealing</th>
<th>Lying, Cheating, Sneaking</th>
<th>Behavior Problems</th>
<th>Peer Rejection</th>
<th>Low Academic Achievement</th>
<th>Negative Attitude</th>
<th>Aggressive Behaviors</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>
Appendix F
Motivation Assessment Scale
1986 V. Mark Durand, Ph.D.

Name ___________________ Rater ____________________ Date _____________

Behavior Description __________________________________________________
Setting Description ___________________________________________________

Instructions: The Motivation Assessment Scale is a questionnaire designed to identify those 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.

To complete the MAS, select one behavior that is of particular interest. It is important that you identify the behavior very specifically. "Aggressive", for example, is not as good a description as "hits his sister". Once you have specified the behavior to be rated, read each question carefully and circle the one number that best describes your observations of this behavior.

0=Never, 1=Almost Never, 2=Seldom, 3=Half the Time, 4=Usually, 5=Almost Always, 6=Always

Questions

1. Would the behavior occur continuously, over and over, if this person were left alone for long periods of time? (For example, several hours) 0 1 2 3 4 5 6
2. Does the behavior occur following a request to perform a difficult task? 0 1 2 3 4 5 6
3. Does the behavior seem to occur in response to you talking to other persons in the room? 0 1 2 3 4 5 6
4. Does the behavior ever occur to get a toy, food, or activity that this person has been told that he or she can't have? 0 1 2 3 4 5 6
5. Would the behavior occur repeatedly, in the same way, for very long periods of time, if no one were around? (For example, rocking back and forth for over an hour.) 0 1 2 3 4 5 6
6. Does the behavior occur when any request is made of this person? 0 1 2 3 4 5 6
7. Does the behavior occur whenever you stop attending to this person? 0 1 2 3 4 5 6
8. Does the behavior occur when you take away a favorite toy, food, or activity? 0 1 2 3 4 5 6
9. Does it appear to you that this person enjoys performing the 0 1 2 3 4 5 6 behavior? (It feels, tastes, looks, smells, and/or sounds pleasing.)
10. Does this person seem to do the behavior to upset or annoy 0 1 2 3 4 5 6 you when you are trying to get him or her to do what you ask?
11. Does this person seem to do the behavior to upset or annoy 0 1 2 3 4 5 6 you when you are not paying attention to him or her? (For example, if you are sitting in a separate room, interacting with another person.)
12. Does the behavior stop occurring shortly after you give this 0 1 2 3 4 5 6 person the toy, food, or activity he or she has requested?
13. When the behavior is occurring, does this person seem calm 0 1 2 3 4 5 6 and unaware of anything else going on around him or her?
14. Does the behavior stop occurring shortly after (one to five 0 1 2 3 4 5 6 minutes) you stop working or making demands of this person?
15. Does this person seem to do the behavior to get you to spend 0 1 2 3 4 5 6 some time with him or her?
16. Does the behavior seem to occur when this person has been 0 1 2 3 4 5 6 told that he or she can't do something he or she had wanted to do?

Scoring:

<table>
<thead>
<tr>
<th>Sensory</th>
<th>Escape</th>
<th>Attention</th>
<th>Tangible</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. _____</td>
<td>2. _____</td>
<td>3. _____</td>
<td>4. _____</td>
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<tr>
<td>5. _____</td>
<td>6. _____</td>
<td>7. _____</td>
<td>8. _____</td>
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</tbody>
</table>

Total Score =
Mean Score =
Relative Ranking =
Appendix G
## Office Disciplinary Referral (ODR) Data

<table>
<thead>
<tr>
<th>Student</th>
<th>Days in ISS</th>
<th>Rule Infraction</th>
<th>Teacher Comments</th>
</tr>
</thead>
<tbody>
<tr>
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Appendix H
Observation Form

Student ______________________ School ______________________ Grade ______
Teacher ______________________ Subject ______________________ Date ______

Class Activity _____________________________________________

☐ Teacher directed whole class  ☐ Teacher directed small group  ☐ Independent work session

DIRECTIONS: Each box below represents a 10 sec. interval. Observe each student once, and then record the data. This is a partial interval recording. If possible, collect data for the full 15 min. until a teacher directed or independent condition. If this is not possible, put a slash when the classroom condition changes.

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>Target Student</th>
<th>Consequence</th>
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<tbody>
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<th>Consequence</th>
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<tr>
<th>Antecedent</th>
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<th>Consequence</th>
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<th>Antecedent</th>
<th>Target Student</th>
<th>Consequence</th>
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<th>Antecedent</th>
<th>Target Student</th>
<th>Consequence</th>
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</table>
ON-TASK CODE: ✓ = Eye contact with teacher or task and performing the requested task.

OPTIONAL CODES:
- L = Listening to teacher or peer,
- R = Reading,
- W = Writing,
- H = Hand up to speak,
- Y = Yawning
- R = Responding to teacher question,
- S = Sharing,
- C = On-task communicating,
- Other: __________

OFF-TASK CODES:
- T = Talking Out/Noise: Talking without permission, inappropriate verbalization or making sounds with object, mouth, or body.
- O = Out of Seat: Student fully or partially out of assigned seat without teacher permission.
- I = Inactive/Daydreaming: Student not engaged with assigned task, passively waiting, sitting, staring, etc.
- N = Non-compliance: Breaking a classroom rule or not following teacher directions within 15 seconds.
- P = Playing With Object: Manipulating distractible objects (e.g., toys, pens, elastic, erasers, string, tape).
- A = Aggression: Any threatening or harmful communication, gesture, or physical contact with others.

TEACHER INTERACTION CODES:
- (+) = Positive Interaction: One-on-one positive comment, smiling, touching, or friendly gesture.
- (-) = Negative Interaction: One-on-one reprimand, implementing punitive consequence or gesture.
- (/) = Neutral Interaction: One-on-one expressionless interaction, no approval or disapproval, directions given.

Antecedents: I - Instruction, PA - Peer Attention, TR - Transition
Consequence: TA = Teacher Attention, PA = Peer Attention, E = Escape, T = Tangible
## Check In/Check Out Form

**Student:** ______________________  **Date** ________________

<table>
<thead>
<tr>
<th></th>
<th>HR</th>
<th>Math</th>
<th>RLA</th>
<th>SS</th>
<th>Science</th>
<th>MAPS</th>
<th>HR</th>
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<tbody>
<tr>
<td>Respect Others</td>
<td></td>
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<tr>
<td>Follow Directions</td>
<td></td>
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<tr>
<td>Stay in My Seat</td>
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</tr>
<tr>
<td>Complete my Assignment</td>
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</tr>
</tbody>
</table>

### Yes! Goal Met!  ○
### Goal not met today  ○

**Points**

2 = Great
1 = Good but needed a warning
0 = Not so good; needs improvement

**Today’s Goal**

<p>| |</p>
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</table>

**Today’s Total**

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</table>

**Total Possible**

52
Appendix J
Student Functional Assessment Interview and Reinforcement Survey

Student Name: ______________________________ Grade: ________
Birthdate: ________ Person Facilitating the Interview: _____________
Date of Interview: _____________

**Section 1**

<table>
<thead>
<tr>
<th>Question</th>
<th>Always</th>
<th>Sometimes</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>In general, is your work too hard for you?</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>In general, is your work too easy for you?</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>When you ask for help appropriately, do you get it?</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Do you think work periods for each subject are too long?</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Do you think work periods for each subject are too short?</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>When you do seatwork, do you do better when someone works with you?</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Do you think people notice when you do a good job?</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Do you think you get the points or reward you deserve when you do good work?</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Do you think you would do better in school if you received more rewards?</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>In general, do you find your work interesting?</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Are there things in the classroom that distract you?</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Is your work challenging enough for you?</td>
<td>□</td>
<td>□</td>
<td>□</td>
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</tbody>
</table>
Section 2
Answer for each target behavior

Target Behavior: ____________________________

___________________________________________________________________________

___________________________________________________________________________

When do you think you have the fewest problems with this behavior?

___________________________________________________________________________

___________________________________________________________________________

When do you think you have the most problems with this behavior?

___________________________________________________________________________

___________________________________________________________________________

Why do you have problems during these times?

___________________________________________________________________________

___________________________________________________________________________

What changes could be made so that you have fewer problems with this behavior?

Section 3
Rate how much you like the following subjects:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Not at all</th>
<th>Fair</th>
<th>Very Much</th>
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</thead>
<tbody>
<tr>
<td>Reading</td>
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<tr>
<td>Math</td>
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<tr>
<td>Handwriting</td>
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<tr>
<td>Science</td>
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<tr>
<td>Social Studies</td>
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<tr>
<td>English/Language</td>
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<tr>
<td>Music</td>
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<tr>
<td>Physical Education</td>
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<td>Art</td>
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<tr>
<td>Other</td>
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</tbody>
</table>

132
Section 4
Reinforcement Survey

Part 1 Sentence Completion
Directions: Complete the following statements

1. My favorite adult at school is:
   The things I like to do with this adult are:

2. My best friend at school is:
   Some things I like to do with my best friend at school are:

3. Some other friends I have at school are:
   Some things I like to do with them are:

4. When I do well in school, a person I'd like to know about it is:

5. When I do well in school, I wish my teacher would:

6. At school, I'd like to spend more time with:
   Some things I'd like to do with this person are:

7. One thing I'd really like to do more in school is:

8. When I have free time at school I like to:

9. I feel great in school when:

10. The person who likes me best at school is:
   I think this person likes me because:
11. I will do almost anything to keep from:

12. The kind of punishment at school that I hate most is:

13. I sure get mad at school when I can't:

14. The think that upsets my teacher the most is:

15. The thing that upsets me the most is:

**Part II Reinforcers** (check all that apply)

**Favorite Edible Reinforcers**
- Candy (specify)
- Fruit (specify)
- Drinks (specify)
- Cereal (specify)
- Snacks (specify)
- Nuts (specify)
- Vegetables (specify)
- Other (specify)

**Academic Reinforcers**
- Going to library
- Having good work displayed
- Getting good grades
- Having parents praise good school work
- Giving reports
- Making projects
- Completing creative writing projects
- Earning teacher praise
- Helping grade papers
Getting a good note home
Earning stickers, points, etc.
Other (specify) ________________

Activity Reinforcers

Coloring/drawing/painting
Making things
Going on field trips
Taking care of/playing with animals
Going shopping
Eating out in restaurant
Going to movies
Spending time alone
Reading
Having free time in class
Having extra gym/recess time
Working on the computer
Other (specify) ________________

Favorite Tangible Items

Stuffed animals
Pencils, markers, crayons
Paper
Trucks, tractors
Sports equipment
Toys
Books
Puzzles
Tickets to sporting events

Social Reinforcers

Teaching things to other people
Being the teacher's helper
Spending time with my friends
Spending time with the teacher
Spending time with the principal
Spending time with ___________
Having class parties
Working with my friends in class
Helping keep the room clean
- Being a tutor
- Being a leader in class
- Other (specify) _______________

**Recreation/Leisure Reinforcers**

- Listening to music
- Singing
- Playing a musical instrument
- Watching TV
- Cooking
- Building models
- Woodworking/carpentry
- Sports (specify) __________
- Working with crafts
- Other (specify) __________
- Other (specify) __________
Appendix K
## Token Economy Point Form

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Mon</th>
<th>Tues</th>
<th>Wed</th>
<th>Thurs</th>
<th>Fri</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Completing Assignments</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Completes assignments</td>
<td>2 1 0</td>
<td>2 1 0</td>
<td>2 1 0</td>
<td>2 1 0</td>
<td>2 1 0</td>
</tr>
<tr>
<td>2. Turns in homework</td>
<td>2 1 0</td>
<td>2 1 0</td>
<td>2 1 0</td>
<td>2 1 0</td>
<td>2 1 0</td>
</tr>
<tr>
<td><strong>Respect for Others</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Speaks respectfully to teachers</td>
<td>2 1 0</td>
<td>2 1 0</td>
<td>2 1 0</td>
<td>2 1 0</td>
<td>2 1 0</td>
</tr>
<tr>
<td>2. Follow directions</td>
<td>2 1 0</td>
<td>2 1 0</td>
<td>2 1 0</td>
<td>2 1 0</td>
<td>2 1 0</td>
</tr>
<tr>
<td>3. Allows others to listen and learn</td>
<td>2 1 0</td>
<td>2 1 0</td>
<td>2 1 0</td>
<td>2 1 0</td>
<td>2 1 0</td>
</tr>
<tr>
<td>4. Accepts consequences for own behavior</td>
<td>2 1 0</td>
<td>2 1 0</td>
<td>2 1 0</td>
<td>2 1 0</td>
<td>2 1 0</td>
</tr>
<tr>
<td>5. Makes positive comments to peers</td>
<td>2 1 0</td>
<td>2 1 0</td>
<td>2 1 0</td>
<td>2 1 0</td>
<td>2 1 0</td>
</tr>
<tr>
<td>6. Speaks when given permission</td>
<td>2 1 0</td>
<td>2 1 0</td>
<td>2 1 0</td>
<td>2 1 0</td>
<td>2 1 0</td>
</tr>
</tbody>
</table>

**REQUIRES A MINIMUM OF 12 POINTS (anything below 8 notify/email assistant principal)**
Appendix L
Treatment Integrity

Student Risk Screening Scale (SRSS)

- Read directions of SRSS
- Rate each student in your first period class using the Likert-type scale in the directions.
- Total the score of each student.
- Turn SRSS into Clinton Smith

Treatment Integrity

Functional Behavior Assessment (FBA)

- Train teachers on their role in the FBA method
- Gather information from student records
  - Grades
  - Attendance
  - Special Education (if applicable)
  - TCAP Scores
  - Discipline
    - ODRs
    - Days in ISS
    - Other discipline data (OSS, Detention, etc)
- Conduct indirect assessment using MAS
- Conduct 5 direct assessments using partial interval recording
- Interview teachers/parents/student if necessary
- Develop hypothesis for function of behavior
- Develop behavior intervention plan based on function of behavior

Treatment Integrity

Function-Based Intervention

- Train teachers how to implement function-based intervention
- Develop treatment integrity checklist for teachers to use while implementing intervention
- Meet with teachers weekly about intervention
- Have guidance counselor/administrator/observer monitor classes periodically to assess treatment integrity
- Gather data weekly from teachers
Appendix M
Indirect and direct observations to be conducted to determine function of behavior for student.

Intervention is matched to the function of the behavior.

CICO procedure explained to teachers.

Mr. Smith explains CICO procedure to student.

Student completes reinforcer preference assessment.

Student picks up CICO sheet from Mr. Smith each morning.

Mr. Smith asks student to set goal for the day.

Mr. Smith reminds student to give CICO sheet to each teacher.

Student completes reinforcer preference assessment.

Student gives CICO sheet to teacher.

After class, teacher scores student on CICO sheet.

Teacher explains score for CICO sheet to student.

- Joe, I am proud of the way you listened and followed directions today in math. I am giving you a 2 for this period. Great job!

- Sally, I noticed it was really hard for you to stay on task today at the beginning of the period. But, after I reminded you of the expectations you were able to turn yourself around and that is why I am giving you a 1.

Student gives CICO sheet to Mr. Smith at dismissal.

Mr. Smith totals points for the day.

Student chooses reinforcers to “purchase” with the points earned.

______/14 Steps Completed = _________________%
Appendix N
Treatment Integrity Checklist
Token Economy

- Indirect and direct observations to be conducted to determine function of behavior for student.
- Intervention is matched to the function of the behavior.
- Token economy procedure explained to teachers.
- Mr. Smith explains token economy procedure to student.
- Student completes reinforcer preference assessment.
- Student picks up economy point sheet from Mr. Smith each morning.
- Mr. Smith reminds student to give point to each teacher.
- Student gives point sheet to teacher.
- After class, teacher scores student on point sheet.
- Teacher explains score for point sheet to student.

  a. Joe, I am proud of the way you listened and followed directions today in math. I am giving you a 2 for this period. Great job!

  b. Sally, I noticed it was really hard for you to stay on task today at the beginning of the period. But, after I reminded you of the expectations you were able to turn yourself around and that is why I am giving you a 1.

- Student gives point sheet to Mr. Smith at lunch and dismissal.
- Mr. Smith totals points for the morning and afternoon.
- Student chooses reinforcers to “purchase” with the points earned.

______/13 Steps Completed = ____________________%

Date _________________________________
Appendix O
Function Based Classroom Interventions
Teacher Social Validity Survey

1. Has the student’s behavior changed for the better?
   □ Agree        □ Disagree        □ Neither

2. Was the process significantly more work for you?
   □ Agree        □ Disagree        □ Neither

3. Was the process helpful to you as a teacher?
   □ Agree        □ Disagree        □ Neither

4. Would you recommend this process for other students?
   □ Agree        □ Disagree        □ Neither

5. Did the process make you feel more empowered as a teacher?
   □ Agree        □ Disagree        □ Neither

6. I feel like this process would be more beneficial for other students.
   □ Agree        □ Disagree        □ Neither

7. I understand more about the behavior of my students as a result of this process.
   □ Agree        □ Disagree        □ Neither

8. Has the student’s academic performance changed for the better?
   □ Agree        □ Disagree        □ Neither

9. I think the school should continue this process.
   □ Agree        □ Disagree        □ Neither

10. I feel I need more training applying the principles of applied behavior analysis in my classroom.
    □ Agree        □ Disagree        □ Neither
Appendix P
Function Based Classroom Interventions
Student Social Validity Survey

1. Has your behavior changed for the better?
   - [ ] Agree  [ ] Disagree  [ ] Neither

2. Was the process helpful to you as a student?
   - [ ] Agree  [ ] Disagree  [ ] Neither

3. I feel like this process would be more beneficial for other students.
   - [ ] Agree  [ ] Disagree  [ ] Neither

4. Would you recommend this process for other students?
   - [ ] Agree  [ ] Disagree  [ ] Neither

5. Did the process make you feel more empowered as a student?
   - [ ] Agree  [ ] Disagree  [ ] Neither

6. I understand more my behavior as a result of this process.
   - [ ] Agree  [ ] Disagree  [ ] Neither

7. Did your academic performance changed for the better?
   - [ ] Agree  [ ] Disagree  [ ] Neither
Appendix Q
Self-Monitoring Form

<table>
<thead>
<tr>
<th>How I did today in class</th>
<th>Teacher Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>I focused on the teacher during instruction.</td>
<td>❑ Yes</td>
</tr>
<tr>
<td>I completed my assignment.</td>
<td>❑ Yes</td>
</tr>
<tr>
<td>I did not disrupt class by talking.</td>
<td>❑ Yes</td>
</tr>
<tr>
<td>I stayed in my seat.</td>
<td>❑ Yes</td>
</tr>
<tr>
<td>I turned in my homework</td>
<td>❑ Yes</td>
</tr>
<tr>
<td>❑ I did not have homework.</td>
<td></td>
</tr>
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