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The Effects of Function-Based Thinking on Teacher Selection of Interventions for Disruptive Student Behavior

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THE EFFECTS OF FUNCTION-BASED THINKING ON TEACHER SELECTION OF
INTERVENTIONS FOR DISRUPTIVE STUDENT BEHAVIOR

by

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ABSTRACT

The Effects of Function-Based Thinking on Teacher Selection of Interventions for

Disruptive Student Behavior

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Traditional approaches to addressing student misbehavior often involve the imposition of reactive and punitive consequences. Certain groups of students who engage in disruptive behavior experience a disproportionate amount of these punitive disciplinary responses. African American males are one such group. A growing body of research suggests that a need exists for more proactive and positive approaches to addressing student classroom misbehavior. One promising option is function-based thinking—a critical component of functional behavioral assessment. The present study examined both the accuracy of and change in teacher selected antecedent and/or consequence interventions aligned with the function of student behavior. Additionally, changes in teacher-selected interventions were examined in relationship to student race.

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CHAPTER 1

INTRODUCTION

The Effects of Function-Based Thinking on Teacher Selection of Interventions for Disruptive Student Behavior

Across the country, the majority of students respond positively to the classroom management strategies employed by their teachers. However, there are some students who are unresponsive to these approaches and engage in different types of disruptive behavior. Today, school personnel struggle to address the misbehavior of students who engage in various forms of challenging behavior (Cohen, Kincaid, & Childs, 2007; Menzies & Lane, 2011). Unfortunately, traditional school discipline policies have largely focused on “what to do when...”, a reactive approach that relies on aversive consequences such as suspension, expulsion, and even alternate educational placement in response to repeated bouts of student misbehavior (Duran et al., 2011; Skiba, 2002; Washburn, Stowe, Cole, & Robinson, 2007).

Many school personnel operate from the misguided assumption that students will somehow “learn to behave better” and continue to rely on reactive, aversive consequences (Sugai et al., 2010). However, when aversive responses are used exclusively, there is evidence that problem behavior may actually escalate (Shore et al., 1993; Sugai & Horner, 1999). Indeed, Sulzer-Azaroff and Mayer (1994) found that increases in antisocial behavior, weakened student-teacher relations and increased deterioration of school/social climate, which together can contribute to a decline in student academic achievement. More recently, Spaulding et al. (2010) conducted a

review of school-wide discipline data in over 1,500 schools and concluded that the majority of behavioral incidents occur in the classroom. Unfortunately, research suggests that poorly managed classrooms can lead to long-term negative academic, behavioral, and/or social student outcomes (Ialongo, Poduska, Werthamer, & Kellam, 2001). Finally, Klassen and Chiu (2010) found that an inverse relationship exists between high levels of teacher stress over issues surrounding classroom management and low levels of teacher self-efficacy.

Disruptive classroom behavior decreases the amount of available instructional time for all students (Weinstein, 2007), increases student disengagement (Milner, 2013), and increases the likelihood of negative teacher-student relationships all of which have lasting negative effects on academic and social outcomes for students (Sutherland, Lewis-Palmer, Stichter, & Morgan, 2008). Additionally, the cycle of avoidance and escape-motivated teacher behaviors in response to student misbehavior often leads to the escalation of negative student behavior, which further compounds an already difficult situation (Wehby, Lane, & Falk, 2003).

Although research does not support the use of negative or exclusionary practices (Skiba, 2002), school personnel continue to rely on suspension and expulsion to address relatively minor student infractions such as: classroom disruption, disobedience, and disrespect (Ciolfi, Shin, & Harris, 2011; Skiba, 2002). Macallair (2004) found that disruptive classroom behavior leads to roughly 2 million suspensions every year. High rates of suspension have been correlated with negative student outcomes such as low attendance rates (Christie, Nelson, & Jolivette, 2004; Milner, 2013; Washburn et al., 2007), decreased academic instructional time (Scott & Barrett, 2004), increased academic

failure (Christie et al., 2004; Milner, 2013), and low graduation rates (Skiba, 2002; Washburn et al., 2007). The unfortunate reality is that once suspended, the probability increases that the student will be suspended again (Bowman-Perrott, 2011; Christie et al., 2004).

Exclusionary Practices for Students from Groups with Disproportionality.

There is compelling evidence that exclusionary discipline practices such as suspension and expulsion are used disproportionately with several groups of students including: males, African American students, students from low socioeconomic backgrounds, older students, and students with disabilities, especially an emotional disability (Achilles, McLaughlin, & Croninger, 2007; Bowman-Perrott et al., 2011; Skiba et al., 2011; Skiba, 2000; Vincent, Sprague, & Tobin, 2012). Many of these students from groups with disproportionality could be considered “vulnerable populations”. Skiba (2002) reviewed 25 years of research and found that African American students typically were suspended at a rate two to three times higher than Caucasian students. Others have reported rates almost four times more for African American students (Ciolfi et al., 2011). Even so, the disproportionate use of suspension for African American male students is not attributable to more disruptive behavior. Rather, it appears to stem from disproportionate rates of office referrals with harsher administrative decisions in response to behavior such as disrespect, disruption, or disobedience (Skiba et al., 2011; Skiba, Michael, Nardo, & Peterson, 2002). African American males typically are referred to the office for more subjective reasons and often receive more severe consequences than do their Caucasian peers for very similar or less severe types of behavior (Skiba et al., 2011).

Often times, the occurrence of minor incidents of student misbehavior that is not addressed effectively and proactively tends to escalate into behavior that is more difficult to change (Gable, 2014). Unfortunately, many teachers do not know how to respond to student misbehavior and often believe that a referral for suspension or for special education services is the only option for addressing challenging behavior (Skiba et al., 2006). There appears to be a strong link between disproportionality and subjectivity as reflected in the over-identification of African American males referred for special education, especially for disability categories that involve “judgment” such as an emotional disability (ED; Skiba et al., 2006). While this phenomenon is not completely understood, teacher misinterpretation of culturally based behaviors, stereotyping associated with African American males, or fear of loss of classroom control may explain the basis for an over-reliance on reactive and exclusionary practices or alternate placements for this population (Skiba et al., 2002).

In recognition of the occurrence of challenging behavior, Sugai et al. (2010) reported that “successfully addressing problem behavior requires an increased emphasis on proactive approaches in which expected and more socially acceptable behaviors are directly taught, regularly practiced in the natural environment, and followed by frequent positive reinforcement” (p. 9). The evidence is clear that there continues to be an over-reliance on exclusionary discipline practices, especially for certain groups of students (Skiba et al., 2002). Clearly, a paradigm shift is required for educators to move from a traditional reactive and aversive approach to a more proactive and preventative response to student misbehavior (Bradshaw, Reinke, Brown, Bevans, & Leaf, 2008). Experts agree that such a shift includes designing behavior interventions and supports aligned with the

function (or purpose) of the disruptive behavior in which students engage (Campbell & Anderson, 2008; McIntosh, Brown, & Borgmeier, 2008; Sugai & Lewis-Palmer, 2004).

Functional behavior assessment. Functional behavior assessment (FBA) is an effective strategy for collecting data, identifying the function of student behavior, and using that knowledge to design proactive and preventative student behavior support plans (BSP; Scott et al., 2005). The effectiveness of function-based support, identified through the FBA process, over non-function based support for improving student behavior for students at risk for and with ED has been well documented in the research (Carr & Durand, 1985; Ingram, Lewis-Palmer, & Sugai, 2005; Lane, Weisenbach, Little, Phillips, & Wehby, 2006; McIntosh & Av-Gay, 2007; Mustian, 2010; Payne, Scott, & Conroy, 2007). Recently, Gage, Lewis, and Sticher (2012) conducted a meta-analysis of studies addressing FBA. The results of this meta-analysis indicate that FBA-based interventions were effective on average 70.5% of the time across all student characteristics. However, in this meta-analysis, student race was not identified as a variable. Indeed, few studies have focused on African American students as recipients of function-based supports developed through the FBA process (Mustian, 2010). However, results of one study that involved two general education teachers and two African American male students suggested that the use of FBA and function-based interventions can result in favorable outcomes that include decreases in student misbehavior. Another notable finding was that teachers reconsidered the need for referral for special education services for an emotional disability as a response to behaviors initially perceived as challenging and warranting a referral (Mustian, 2010).

Until recently, much of the research regarding FBA has been conducted in clinical settings or in schools with researchers and/or external experts facilitating the process (Chitiyo, 2005; Hershfeldt, Rosenberg, & Bradshaw, 2010; Mustian, 2010; Scott et al., 2005). There is only a modest body of research supporting the ability of school-based personnel to conduct a FBA and use the information collected to design effective behavior support plans (McIntosh & Av-Gay, 2007; Payne et al., 2007; Strickland-Cohen & Horner, 2015). That research does not support the ability of educators to conduct a complete FBA without some support from external experts/researchers (e.g., conduct functional analysis to confirm hypothesized function). To complicate matters further, there is no single agreed upon methodology for conducting a FBA and developing function-based interventions (Fox & Gable, 2004; Gable, 2014; Payen et al., 2007). Indeed, efforts to move evidence-based practices embedded within FBA from clinical to classroom settings has not been without challenges (Gable, Park, & Scott, 2004; Umbreit & Ferro, 2011; Van Acker, Boreson, Gable, & Potterton, 2005). Scott et al. (2005) suggested that even when school-based personnel trained in FBA and subsequently conduct a FBA, they often disregard the identified function when selecting an intervention and revert to negative consequences and/or exclusionary practices. Even with professional learning, educators often continue to rely on negative disciplinary practices in response to student problem behavior.

Engaging school personnel in professional learning in function-based thinking, a less resource intensive way to identify the function of misbehavior, may be one way to provide a practical structure within which to address disruptive student behavior (Hershfeldt et al., 2010; Scott et al., 2005). There is reason to believe that function-based

thinking affords teachers the ability to think about and respond to student behavior in a proactive way, thus decreasing the likely exacerbation of a minor problem behavior (Hershfeldt et al., 2010). Furthermore, function-based thinking, derived from FBA research, may be a means to translate research into practice, allowing teachers to think differently and to adjust the learning environment as a first response to student behavior, thus reducing the use of punitive or exclusionary discipline practices.

Use of function based thinking to address disruptive classroom behavior.

Function-based thinking (FBT) is a key component of FBA. It is defined as a “quick and systematic way of thinking that informs the selection of effective function-based supports” (Hershfeldt et al., 2010, p.14). Function-based thinking (FBT) is linked to the notion that behavior is learned, predictable, and changeable and is strongly influenced by environmental factors (Sugai & Lewis-Palmer, 2004). Accordingly, there is growing recognition that school personnel should attend to the context or environment in which behavior occurs. The process of thinking about behavior in terms of environmental conditions under which behavior is most versus least likely to occur provides a way for teachers to reflect on factors that contribute to a student’s behavior. Use of FBT allows teachers to address academic deficits and behavioral needs simultaneously (Sugai & Lewis-Palmer, 2004; Umbreit & Ferro, 2011). Based on knowledge gained from FBT, function-based supports can be developed that consists of a summary statement of the problem behavior including the environment in which the behavior is occurring, antecedents, and consequences (Scott et al., 2010).

FBT is not meant to replace FBA. Rather, it is intended to offer a way to provide early intervention for mild to moderate misbehavior, thereby decreasing more serious

behavior problems (Loman & Horner, 2014). FBT is a proactive practice that, when used effectively, can provide a way to prevent the need for office referrals and referral to special education and other supports external to the classroom (Hershfeldt et al., 2010). The use of FBT represents a way to use the research-based practices embedded within FBA to promote more proactive and preventative approaches with a larger number of students at-risk for developing more serious behavioral challenges (Hershfeldt et al., 2010; Loman & Horner, 2014; Sugai & Lewis-Palmer, 2004). In sum, FBT allows teachers to address challenging student behavior more immediately and effectively and thereby reduce the reliance on punitive and exclusionary disciplinary practices.

Professional learning regarding function-based thinking. A substantial number of educators report that they feel unprepared and unsupported to address challenging behavior of students at-risk for or with ED (Eber, Sugai, Smith, & Scott, 2002; Gable, Tonelson, Sheth, Wilson, & Park, 2012; Gage et al., 2010; Kern, Hilt-Panahon, & Sokol, 2009; Reed, Gable, & Yanek, 2014). Wagner et al. (2006) found that among general education teachers, only 29% of elementary teachers, 30% of middle school teachers, and 13% of high school teachers report feeling confident in their ability to support students with challenging behavior.

Not surprisingly, Westling (2010) asserted that providing adequate support for teachers to implement behavioral strategies and supports for struggling students poses a real problem. One way to address that problem is to engage staff in professional learning in engaging instruction, effective behavior management, and skills to address diversity and cultural issues (Christie et al., 2004). By designing professional learning that is teacher-friendly and simple to implement (Gable, 2014), teachers may learn to think

differently about student behavior and select practices that do not rely solely on reactionary approaches.

The preceding discussion highlighted the fact that the use of reactive responses to student problem behavior remains a common practice with teachers relying on negative or punitive disciplinary practices in response to even minor classroom incidents. There is a growing body of research that supports the fact that negative management practices are used disproportionately with some students and prove ultimately to be ineffective (Skiba et al., 2002). Professional learning for function-based thinking may provide a framework for teachers to focus on student behavior more objectively, thus decreasing the likelihood of subjectivity with respect to student behavior and disproportionate use of exclusionary practices.

While FBA represents an evidence-based approach to addressing student behavior, the resources required and the challenges associated with using FBA often make it difficult to use in educational settings (Gable, 2014). In contrast, function-based thinking represents a way for teachers to look at behavior and its environmental context to facilitate selection of function-based interventions that support a positive change in student behavior. Payne et al. (2007) suggested that there is a need to explore the procedures that are simple enough to implement within the daily educational setting. For these reasons, the present study focuses on the effects of professional learning as a way to facilitate a change in adult behavior that will decrease the overreliance on punitive and exclusionary practices. Specifically, the following questions will be addressed:

- Are teachers able to select function-based interventions accurately after completing professional learning on function-based thinking?

- What are the effects of providing professional learning on function-based thinking and teacher selection of interventions in response to escape-motivated and attention-seeking behavior?
- How do the effects of providing professional learning on function-based thinking differ based on student characteristics of race?

Additionally, this study will answer three social validity research questions.

- What are teachers' opinions regarding the practicality of using FBT within the context of the classroom?
- What is the likelihood that teachers will apply the professional learning on FBT in their respective classrooms?
- What are teachers' opinions regarding the effectiveness of using FBT within the context of the classroom?

CHAPTER 2

LITERATURE REVIEW

Over-reliance on exclusionary discipline practices is a result of traditional, reactive responses to student misbehavior, including relatively minor incidents (Skiba, 2002). Certain groups of students, including students with disabilities and African American males, receive a disproportionate amount of exclusionary discipline (Skiba et al., 2011). Functional behavioral assessment is an evidence-based practice for supporting a change in student behavior, but challenges exist that often prevent its use by educators in school settings (Gable, 2014). Function-based thinking is a foundational component of FBA, which may be a less resource intensive application of applying function-based support to a larger number of students in a proactive manner (Scott et al., 2010). This literature review will include four components: (a) disproportionate use of exclusionary practices, (b) functional behavior assessment, (c) function-based supports, and professional learning on function-based supports.

Disproportionate use of Exclusionary Practices. There is mounting evidence that exclusionary discipline practices (e.g., suspension, expulsion) are disproportionately used with several groups of students including: males, African American students, students from low socioeconomic backgrounds, older students, and students with disabilities, especially an emotional disability (Achilles et al., 2007; Bowman-Perrott et al., 2011; Skiba et al., 2011, Vincent et al., 2012). Exclusionary disciplinary practices often are used inconsistently among students in response to relatively minor classroom misbehavior (Skiba, 2002; Vincent et al., 2012). Additionally, students with disabilities

typically are suspended for non-violent behaviors that do not differ substantially from the behavior of their peers without disabilities (Skiba (2000). African American males are often referred to the office for more subjective behaviors such as disrespect or noncompliance and often receive harsher consequences than do their Caucasian peers for very similar or less severe types of behaviors (Skiba et al., 2011).

Studies using school district, state, and national datasets have demonstrated the inequities that exist regarding exclusionary discipline practices. Achilles and her colleagues (2007) used logistic regression analyses to examine sociocultural variables associated with high levels of exclusionary discipline practices (suspension and exclusion) for three groups: students with an emotional disability (ED), students with other health impairment (OHI) with a diagnosis of attention-deficit/hyperactivity disorder (ADHD), and students with a learning disability (LD). Selected participant data for 1,824 participants were used from the Special Education Elementary Longitudinal Study (SEELS) database, a national study of student characteristics, outcomes, and experiences of elementary and middle school students with disabilities funded by the Office of Special Education Programs of the U.S. Department of Education. Results of this study conducted by Achilles and her colleagues (2007) indicated that the use of exclusionary practices were more predictable for students with ED and ADHD than students with LD. Other student sociocultural variables associated with higher rates of exclusionary disciplinary practices included: African American race, older age groups, male gender, and low socio-economic status (SES).

Bowman-Perrott et al. (2011) extended the work of Achilles and her colleagues (2007) by using a stratified (by primary disability) randomized sample of 11,512 students

from the SEELS database to study patterns and predictors of exclusionary discipline practices over time using odds ratio to analyze the data. Results of this study showed that students suspended or expelled at an early age were more likely to continue to experience exclusionary discipline. Additional sociocultural variables predictive of exclusionary discipline over time were being male (two to four times more likely than females) and being African American (almost twice as likely than students from other races).

Vincent et al. (2012) examined exclusionary discipline practices using discipline data from one Pacific Northwest state with 559,221 enrolled students. The database consisted of 147,850 exclusionary discipline incidents made up of 64,088 unique (individual) students across 1,195 schools. Using exploratory data analysis (EDA), the researchers examined patterns and relationships of student characteristics and exclusionary practices. Results of their study also indicated disproportionate use of exclusionary disciplinary practices for students from African American, Hispanic, and American Indian/Alaska Native (AI/AN) backgrounds.

Skiba et al. (2011) conducted a disaggregated analysis of a nationally representative data set from schools using the School-wide Information Systems (SWIS; May et al., 2006) to examine racial disparities in office discipline referrals and resulting administrative responses. The sample included 436 schools with 120,148 elementary students and 60,522 middle school students. Results of this study indicated significant disparities with exclusionary discipline for African American (almost four times the odds) and Latino students (two times the odds). At the elementary school level, African American students were more likely to experience exclusionary discipline for any behavior incident (not more serious or more disruptive behavior) and Latino students

were more likely to be suspended for all behavior incidents except disruption. Disparities were also found at the middle school level with African American students who were more likely to be expelled or suspended than Caucasian students for disruption, minor infractions, and tardy/absenteeism. Latino students were more likely to be suspended or expelled for all behavior incidents except drug or alcohol use or possession. Of equal importance was the finding of harsher consequences for African American students in response to behavior incidents. In sum, discipline disparities appeared to have originated from disproportionate rates of office referrals from classroom teachers and harsher administrative decisions in response to subjective and interactive types of behaviors such as disruption and noncompliance. Additionally, African American males typically received office referrals for more subjective behavior categories such as disruption and noncompliance and received more severe consequences than their Caucasian counterparts for similar or less severe types of behavior. The researchers noted the importance of future investigations of student and teacher interactions to better understand racial disparities in school discipline.

Teachers often rely on referral for special education services as the only way to deal with student behavior. Consequently, one might think that the most vulnerable student populations are perceived as having additional challenges that add to teacher uncertainty about their ability to effectively respond to student behavior. Skiba and his colleagues (2006) interviewed 64 individuals from fourteen elementary schools in seven Midwestern city school districts with disproportionate numbers of minority students receiving special education services. The participants included 7 directors of special education, 9 school psychologists, 20 school administrators, and 29 classroom teachers.

Interviews were conducted to explore perceptions of factors contributing to disproportionality in special education. The researchers reported findings consistent with previous studies. Among all of the participant responses, were variations about the types of student behaviors evident in classrooms and the ability and resources available to teachers to deal with student behavior. However, the classroom teachers in this study reported that special education was indeed the most viable and sometimes the sole source of support for some student learning and behavior challenges. The researchers noted three important conclusions to this study including: the factors contributing to disproportionality are complex and cannot be addressed with simplistic solutions, the ability to reduce disproportionality will require considerable resources and support to general education teachers to address the needs of vulnerable populations, and the inability of educators to accept that there are inequities in education will perpetuate the issues with disproportionality. Finally, the researchers proposed that if the “cultural mismatch” regarding social behavior is contributing to disproportionality in referrals to special education, then it is imperative that classroom teachers be supported with professional learning in many components including classroom management.

Beliefs, experiences, and expectations all influence the ways teachers approach student behavior. Drawing on the extant research on the disproportionate use of exclusionary discipline practices especially for African American males, it would seem that teacher stereotypical perceptions may unconsciously influence the use of harsh responses to simple classroom disruptions (Butler, Joubert, & Lewis, 2009; McGrady & Reynolds, 2013). Beliefs, experiences, and expectations all influence the ways teachers approach student behavior. As part of a series of studies focusing on African American

K-12 students in a Midwestern urban school district, Butler et al. (2009) explored issues surrounding African American males and questions about disproportionality using a sample from the larger school district database. The sample consisted of data from 27,883 students and focused on disciplinary roles, behavior infractions, and administrative decisions. A cross-racial analysis was developed to explore these variables in the dataset. The researchers concluded that African American males received harsher punishments for disobedience, a subjective behavior based largely on teacher perceptions. Specifically, as a result of an office referral for disobedience, African American males received two days of suspension (exclusionary discipline) and Caucasian males received restricted recess. The researchers suggested that students not fitting into the social and behavioral norm of the teacher population (e.g., disobedience) may have been perceived as a threat to control, which is typically at the core of a classroom teacher's approach to behavior management.

McGrady and Reynolds (2013) used data from 2002 Education Longitudinal Study (ELS) conducted by the National Center for Education Statistics, a nationally representative study of 15,362 high school sophomores, to examine teacher perceptions of student behavior. The researchers used multivariate analysis to examine teacher interviews (one math teacher and one English teacher per student respondent), student and parent surveys about the student's behavior, and other variables from a sample of approximately 9,000 students. Looking at mismatch of race between teachers and students, the researchers found that Caucasian teacher perceptions of ability and classroom behaviors were more negative for African American students than Caucasian students. The researchers noted the significance of this finding to suggest that teacher

perceptions were susceptible to racial stereotypes associated with lower potential for African American students.

Drawing from the accumulated literature, it would appear that defining “appropriate” classroom student behavior is a subjective process based on teacher expectations that are infused with cultural norms that may differ from those of their students (McGrady & Reynolds, 2013). Additionally, students from groups with disproportionality (e.g., African American males, students with disabilities, students from low socio-economic status) may present behaviors that are very different from the social and behavioral norms of classroom teachers, exacerbating the perceived threat or loss of control. It would appear that educators need a process to engage with student behavior, regardless of sociocultural variables, that increases their ability and confidence to respond effectively to student behavior perceived as challenging.

Functional behavior assessment. Functional behavior assessment (FBA) is a proven effective way to examine what triggers and reinforces student behavior in relation to its context and, in turn, identify necessary modifications to the environment to support a change in student behavior (Scott & Nelson, 1999). A variety of direct and indirect data sources can be used with a FBA. Direct data collection include: conducting observations on antecedents, behaviors, and consequences (A-B-C), partial interval recordings, and scatterplots (Gable et al., 2014). Indirect methods include: teacher, student, and family interviews and review of academic, discipline, attendance records and medical history (Payne et al., 2007). A descriptive analysis or a functional analysis may be used to determine the relationship between the behavior and the environmental context under which it occurs and is maintained (Gable et al., 2014; Payne et al., 2007). Information

obtained from a FBA allows school-based personnel (teams) to identify and modify the antecedents and/or consequences of “inappropriate” behavior and to provide instruction on functionally equivalent replacement behaviors that allow students access to the same outcome as the problem behavior but is more socially acceptable.

Research supports the effectiveness of function-based support, identified through the FBA process, over non-function based support for improving student behavior for students at risk for and with EBD (Carr & Durand, 1985; Ingram et al., 2005; Mustian, 2010; Payne et al., 2007; Strickland-Cohen & Horner, 2014) across a broad range of educational settings (Lane et al., 2006). In a recent review of the literature, Gable et al. (2014) examined research on FBA in school settings specific to outcomes for students with ED and concluded with considerations and implications. In their review of several literature reviews on FBA for students at risk for or with ED, they found that there have been over 400 articles published on FBA. One literature review reported a 98% success rate for using FBA to change student behavior for students at risk for or with ED within the classroom context. Information reported from the literature reviews suggested that function-based supports based on FBA were a critical component for successful behavior change in students across disability categories, but it is not clear if race was identified as a student characteristic in these studies.

Until recently, much of the research on FBA has been conducted in clinical settings or in schools with researchers and/or external experts facilitating the process (Chitiyo, 2005; Hershfeldt et al., 2010; Mustian, 2010; Scott et al., 2005; Strickland-Cohen & Horner, 2015). There has only been a modest amount of research supporting the ability of school-based personnel to conduct a FBA and use the information collected to

design an effective behavior support plan (McIntosh & Av-Gay, 2007; Payne et al., 2007; Scott et al., 2005). There is some evidence that supports the ability of educators to implement various components of FBA, but not necessarily a complete FBA process (conducting a functional analysis). To further complicate an already difficult situation, there is no single agreed upon methodology for conducting a FBA and developing function-based supports (Fox & Gable, 2004; Payne et al., 2007). In a review of the literature, Gable et al. (2014) asserted that school personnel continue to struggle to conduct FBAs and neglect or misidentify the function, and consequently fail to develop and implement effective BIPs.

Using FBA at the onset of student misbehavior is an effective way to intervene proactively with student misbehavior (Scott, Nelson, & Zabala, 2003). However, challenges to implementation often prevent the use of this evidence-based practice to produce a positive change in student behavior. Quinn et al. (2001) and her colleagues, a team of experts on FBA and students at risk for and with ED, examined publications that focused on issues implementing FBA in typical school settings in response to the struggles schools encounter in attempting to comply with federal mandates for use of effective function-based behavior supports, based on FBA, for students with disabilities and challenging behaviors. Based on their review of the literature and collective expertise, they identified some over-arching challenges to implementation that included: (a) the need for a team-based approach to implementation that includes general educators implementing components of a student BIP within the general education classroom, (b) a cumbersome multi-faceted process for assessment and analysis to conduct a FBA and develop a BIP, (c) a resource intensive process to develop an individualized plan of

support for each student, and (d) an imperative need for schools to move beyond a deficit model to a preventative model of intervening with student behavior. Scott et al. (2003) argued that the difficulties of applying FBA in practical settings and the lack of agreement and consistency around the approach to FBA and the resulting professional learning present major roadblocks to moving it into common practice.

Research is emerging to examine the challenges of implementing FBA and the impact of FBA-based interventions for students at risk for or with ED. In a recent meta-analysis of the research on FBA, Gage et al. (2012) examined 69 studies (primarily single subject design) conducted to extend previous research that examined the impact of FBA interventions on behaviors for students at risk for or with ED in schools. The review included 146 students (ages 3-16 years) with the majority conducted with male elementary-age students. The results of this study indicated that there was a statistically significant change in student behavior using FBA-based interventions, with a reduction on average of 70.5% of the time across all student characteristics. However, student race was not identified in their analysis. An important implication was noted in this study. General education teachers were able to conduct assessments and implement interventions, but with a great deal of training and support from the researchers (external support). The researchers concluded that teachers should engage in professional learning to obtain the knowledge and skills to conduct an FBA and implement FBA-based interventions independently.

Heckaman, Conroy, Fox, and Andrea (2000) conducted a review of 22 studies that examined the use of FBA to develop function-based behavior support plans for students with or at risk for ED. Through the literature review, the researchers explored

the implementation of FBA procedures and interventions and the impact of FBA on students identified at risk for or with ED, students with behavior problems identified with a related disorder such as ADHD, and students without a label who exhibited problem behaviors. Studies included both direct and indirect measures with most using a combination of both, including teacher interviews, direct classroom observations of antecedents, behaviors, and consequences (A-B-C). Procedures also included development and confirmation of hypotheses through manipulation of environmental variables and observation of the impact on the targeted behaviors. The researchers did not find consistency in terms of instrumentation and procedures used across studies, only across research teams conducting the studies.

In their review, Heckaman et al. (2000) were unable to find trends with function-based supports as a result of the literature review. However, antecedent interventions (e.g., adjustment of academic task difficulty) were found in 6 studies (27%), combined antecedent and consequence interventions (e.g., adjustment of academic task difficulty and differential reinforcement techniques) were used in 4 studies (18%), skill-based interventions (e.g., self-monitoring) or a combination of skill-based, antecedent-based, and/or consequence-based interventions were used in 6 studies (27%), and consequence interventions were found in the remaining 6 studies (27%). Heckaman and colleagues (2000) also noted that a lack of consistency with implementation of the interventions, implemented by classroom teachers with the support of the researchers, was reported in all 22 studies.

While Heckaman et al., (2000) found variation in the instrumentation, procedures, and the types of interventions used across the 22 studies, the majority of the studies

reflected positive changes in student behavior. Decreases in problem behavior and/or increases in appropriate behavior resulting from function-based supports identified through a FBA were documented for 82% of the studies reviewed. Student ages ranged from 4 to 14 and problem behavior targeted for support included: aggression, self-injury, talking out, tantrums, teasing, negative verbal statements, crying, off-task, task avoidance, noncompliance, and disruptive behavior in general. Information on generalizability of student behavior was only reported in two studies and maintenance of student behavior change was only reported for seven studies. Clearly, the effectiveness of FBA-based interventions has been demonstrated for students at risk for and with ED, but inconsistencies with FBA components present implementation challenges.

Results of the preceding reviews revealed that very few studies focused on African American students as recipients of function-based supports designed through the FBA process (Gage et al., 2012; Heckaman et al., 2000). A few studies focusing on FBA-based interventions for African American students were found and will be discussed further in the next section. Generally speaking, outcomes of those studies indicated that FBA-based interventions yielded positive outcomes for African American students. For example, results of one study that involved two general education teachers trained to use FBA and develop function-based supports for two African American male students suggested that the use of FBA and function-based interventions can yield favorable outcomes (Mustian, 2010).

Many obstacles to implement FBA and FBA-based interventions in school settings have been discussed (Gable et al., 2014; Gage et al., 2012; Heckaman et al., 2000). These obstacles have included (a) lack of consensus regarding what constitutes

best practices, (b) realistic applications in school-based settings, (c) the professional learning needs of practitioners to conduct a FBA, and (d) the fact that FBA may be a time consuming process. Some authorities have proposed prioritizing professional learning and coaching to support educators with the skill sets to identify and implement FBA-based interventions. Even with professional learning around FBA, educators may not use the results of the FBA, including identification of the behavior function, to inform development of a Behavior Intervention Plan (BIP; Scott et al., 2005). In fact, Scott and his colleagues (2005) found that even after receiving professional learning in FBA, school-based personnel were able to initiate an FBA, but disregarded the function of the behavior when identifying interventions and developing an intervention plan and instead reverted to negative consequences and/or exclusionary practices. After school-based teams were provided professional learning in FBA as part of this study and presented with student referral case studies for escape-motivated behavior, they disregarded the identified function and selected exclusionary practices for 70% of the cases (Scott et al., 2005).

Van Acker et al. (2004) found similar results when FBAs and Behavior Intervention Plans (BIPS) were reviewed after a one-day training on the FBA process. Among their findings were that practitioners did not use the results of the FBA to complete the BIP. It appeared that even with professional learning, educators often continued to rely on exclusionary discipline practices to address student problem behavior. Based on their review, Heckaman and colleagues (2000) recommended that researchers explore the ability of teachers to generalize skills gained through professional

learning and support to select and implement function-based supports across students, behaviors, and instructional tasks.

Some research examining the continuum of function-based supports, from function-based thinking to function-based analysis, suggests that a comprehensive FBA may not always be necessary for milder problematic behaviors (Gable et al., 2014). Stichter and Conroy (2005) suggested that for some students, perhaps those engaging in relatively minor patterns of misbehavior and at-risk for more intense misbehavior, identifying the function may be a very straightforward matter. Others support this idea and suggest that the methodologies utilized to collect and analyze data to identify function may be identified with accuracy using less resource intensive methodologies. For example, while most current research includes recommendations for using both indirect and direct methods of assessment, some research is evolving that suggests that under certain conditions indirect (e.g., teacher interview) methods may be sufficient (Gable et al., 2014; Newcomer & Lewis, 2004). Loman and Horner (2014) evaluated the impact of a training on basic FBA and discovered that after training, 8 out of 10 participants were able to identify the function of the behavior through an indirect assessment method (teacher interview) using the Functional Assessment Checklist for Teachers and Staff (FACTS; March, Horner, Lewis-Palmer, Brown, & Carr, 2000). The function was confirmed through direct observation. However, when indirect assessment methods (teacher interviews) were combined with direct assessment methods (direct observation), all 10 hypothesized functions were accurate as confirmed by a formal functional analysis. This suggests that educators may be able to engage in function-based

thinking as a means of responding to student behavior proactively and effectively with very little support.

Gage et al. (2012) suggest that because FBA-based interventions are more effective than non-function-based interventions, teachers should possess the ability to conduct an assessment and to develop a BIP to support a positive change in student behavior. While this is ideal, it may not always be realistic to apply this evidence-based practice within natural settings. In fact, even though the federal government identified function as a critical component of developing student behavior interventions in special education (Individuals With Disabilities Act, 1977; Reauthorization of the Individuals with Disabilities Education Act, 2004), schools continue to struggle with using FBA to develop efficient and effective student behavior support plans (Loman & Horner, 2014).

Function-based thinking provides a platform for teachers to respond to student behavior immediately and to possibly decrease the likelihood of the escalation of problem behavior and the establishment of negative interaction pathways between teachers and students. Furthermore, function-based thinking may represent a way by which teachers can address and target behavior and alter the instructional environment as a first response to minor student behavior incidents (Hershfeldt et al., 2010). Even so, FBT as a more manageable option to FBA to supporting student behavior is not well understood by educators (Sugai & Lewis-Palmer, 2004). Therefore, providing school personnel professional learning in function-based thinking may be one way to facilitate changes in responses to disruptive behavior (Hershfeldt et al., 2010; Scott et al., 2005).

Use of function-based supports to address behavior in the classroom.

Authorities assert that function-based thinking (FBT) is a foundational component of

FBA. FBT is defined as a “quick and systematic way of thinking that informs the selection of effective function-based supports” (Hershfeldt et al., 2010, p.14). Scott and Caron (2005) suggested that changes in student behavior can best be accomplished through the consideration of function when developing an intervention plan. If we apply the principle of Occam’s razor to the process of analyzing reasons for disruptive student behavior, then we first must consider the simplest explanation for addressing the problem and move to more complex solutions only after the simplest solutions have not produced the desired outcome. FBT is not meant to replace FBA; rather, it is a less resource intensive way to provide early intervention for mild to moderate misbehavior, thereby decreasing the likelihood of escalation and/or the development of more serious problem behaviors (Loman & Horner, 2014).

While there have been no experimental studies conducted on FBT, research is emerging on both function-based supports derived from the FBA across various types of students and behaviors and comparisons of function-based versus non-function-based support for changing behavior for students at risk for and with ED (Carr & Durand, 1985; Germer et al., 2011; Ingram et al., 2005; Lane et al., 2006; Mustian, 2010) across a range of educational settings (Lane et al., 2006, Turton, Umbreit, & Mathur, 2011). Carr and Durand (1985) first examined the comparative effects of function-based intervention versus non-function-based interventions. Carr and Durand (1985) concluded that the key to intervening with behavior problems serving as nonverbal communication rests on identifying the function of the behavior and selecting interventions that teach students appropriate forms of communication to address the identified function of the behavior (e.g., attention-seeking, escape from task difficulty). These researchers demonstrated a

reduction in behaviors to include aggression, tantrums, and self-injurious behavior for four developmentally disabled children by teaching functionally equivalent forms of communication as replacements to the misbehavior serving as nonverbal communication.

Building on the research by Carr and Durand, others have reached similar conclusions regarding the effectiveness of function-based supports over non-function-based support. Repp, Felce, and Barton (1998) conducted a seminal study that demonstrated function-based treatments for stereotypic and self-injurious behaviors, delivered in the natural classroom setting, were more effective than other treatments delivered without regard to function. In a review of the literature, Ingram et al. (2005) found that the use of function-based interventions led to more positive outcomes than interventions not based on function. Improved results were found for students with (a) stereotypical and self-injurious behaviors, (b) escape-maintained behaviors, and (c) off-task behaviors of student with learning and emotional disabilities.

Filter and Horner (2009) examined the effects of function-based supports verses non-function-based supports on problem behavior and task engagement of two fourth grade Caucasian males (one with an identified disability and one without) using a single-case reversal design. Function-based antecedent and consequence interventions produced greater decreases in problem behavior and increases in task engagement for both students in this study. However, it is important to note, that similar to many other studies, both the function-based and non-function based antecedent and consequence interventions were delivered by the researchers, not practitioners in the general education classroom.

Payne et al. (2007) demonstrated the effectiveness of function-based supports over non-function based supports for four elementary students, two males and two

females, using an alternating treatment design. The researchers reported that function was identified correctly through semi-structured interviews with teachers as confirmed by a brief functional analysis for each of the four students. This has important implications for the practical application of identification of function by educators without a great deal of external support. Of equal importance is that the researchers (trained in FBA and functional analysis) and not the practitioners conducted the brief functional analysis.

Ingram et al. (2005) conducted similar research, using a single subject withdrawal design, with counterbalancing to control for function and non-function based interventions, and found positive results including reducing off-task and non-engaged behaviors of two 6th grade males in general education classrooms. Descriptive FBA procedures (teacher interviews, student interviews, and direct observations) were used in this study to identify function-based consequence interventions. A functional analysis was not conducted to confirm the hypothesis through experimental manipulation. Instead, an expert rating system was used to verify function. The researchers posed that this is important because function was identified through less resource intensive procedures, mainly interviews and direct observations. The researchers also asserted that the need exists for further research to identify more efficient processes for identifying function-based interventions thus increasing the likelihood that educators will put the research into practical.

Newcomer and Lewis (2004) used a multiple-baseline-across-participants design with an alternating treatment design, to compare function verses non-function based interventions for three elementary students at-risk for school failure. Using descriptive functional assessments (e.g., teacher interviews and ratings, students interviews,

scatterplots, and direct observation), the researchers identified hypothesized functions that were confirmed using naturalistic functional analysis. Function-based supports were found to be more effective than non-function based supports for decreasing problematic behaviors including physical aggression, off-task behaviors, withdrawn, and confrontation. The researchers played a prominent role throughout the process. Additionally, the functional assessment and analysis were both conducted within the natural classroom context, demonstrating the ability to identify and confirm function using less time-consuming methodologies, albeit with the support of outside researchers. Teachers in the study indicated acceptability of the process and expressed confidence with the teacher and student interview data. Teachers reported feeling most concerned with the time necessary for data collection and the least competent with the ability to conduct experimental manipulation independently.

Ellingson, Miltenberger, Stricker, Galensky, and Garlinghouse (2000) used descriptive functional assessment consisting of teacher questionnaires and interviews and observation data to identify the hypothesized function of student behaviors for three students with developmental disabilities and behavior challenges. The researchers used a brief reversal design to compare the effects of function-based supports and non-function based supports and found greater reductions in problem behavior with the function-based interventions. An important finding was that teacher questionnaires completed independently yielded the same hypothesized function as structured interviews facilitated by behaviorally trained personnel (e.g., school psychologist). This finding suggested that teachers are able to think about and identify a hypothesized function of student behavior.

There is emerging research to demonstrate the enhanced effectiveness of evidence-based practices that address the function of student behavior. One such practice is the use of self-monitoring interventions. Traditionally, research regarding the use of self-monitoring to support a positive change in academic and social student behavior has focused on students monitoring the problem behavior or the incompatible behavior with no regard to function (Briere & Simonsen, 2011). Hansen, Wills, Kamps, and Greenwood (2014) found that the use of function-based self-management interventions with students in general education classrooms by general education teachers resulted in increases in on-task behavior. Briere and Simonsen (2011) examined the impact of function-based self-monitoring on two middle school students, a Caucasian male and a Hispanic female. Functions for off-task or disruptive behaviors included escape-maintained and attention-seeking behavior from peers that were identified through FBAs conducted by the researchers. Using an experimental single-subject multiple treatment reversal design, the researchers concluded that functionally relevant self-monitoring interventions were more effective than functionally non-relevant interventions in reducing disruptive behavior for students in general education classrooms at risk for more chronic behaviors (Briere & Simonsen, 2011).

Another evidence-based intervention designed for students at-risk for developing more chronic problem behaviors, the Class-Wide Function-Related Intervention Team (CW-FIT), encompasses a bundle of four practices. While it includes addressing common functions of student behavior (e.g., attention) through a group contingency, it does not include a functional analysis to identify a function of student behavior (Wills et al., 2010). Kamps et al. (2011) conducted a study across six general education elementary

classrooms. The CW-FIT was implemented as a targeted intervention as part of a three-tiered framework within classrooms with behavior management issues that included students at risk for ED. Results of this study revealed increases in on-task behavior overall and decreases in disruptive behaviors for most students at-risk for ED through the use of group contingencies and behavior supports based on the common function of attention from both teachers and peers. Function-based supports were identified without the use of a FBA, which suggests that function-based thinking offers a less resource intensive approach to applying this evidence-based component of a FBA.

Function-based supports, including manipulation of antecedents and consequences, also have been examined as a way to assess and intervene with academic and social behavioral issues simultaneously. Function-based supports have been used to effectively address problem behavior by manipulating instructional antecedents. For example, when task difficulty for math and reading academic assignments was increased for a typically developing Caucasian fourth grade male, off-task problem behavior that included talking with others, kicking desks, and wandering around the classroom decreased (Umbreit, Lane, & Dejud, 2004). The researchers conducted a FBA and selected the function-based interventions. Both the student and the teacher reported acceptability of the intervention, which suggests that both adults and students may be receptive to function-based interventions (Umbreit et al., 2004). In this study, changing problem behavior involved a simple function-based academic instructional adjustment implemented within the context of the classroom. This supports the notion that function-based interventions can be delivered within the instructional context of the classroom.

Liaupsin, Umbreit, Ferro, Urso, and Upreti (2006) had success using function-based interventions derived from a descriptive FBA to increase on-task behavior using function-based antecedent and consequence interventions across three classrooms for a 14-year old typically developing Caucasian female. Sanford and Horner (2012) were successful in changing problematic student behavior for 3 out of 4 Caucasian elementary students by manipulating reading academic instructional tasks after identifying escape as the function maintaining the behavior. The researchers were instrumental in conducting the FBA, including a functional analysis to confirm the function. This research supported the findings of other researchers where antecedent-only interventions (e.g., manipulation of instructional tasks) were utilized to change student behavior. Other authorities assert that antecedent-only interventions tend to be implemented with greater ease within the natural context of the classroom than other types of interventions, which may increase teacher use of these preventative function-based approaches (Kern et al., 2009).

Strickland-Cohen and Horner (2014) demonstrated the effectiveness of function-based supports to decrease problem behaviors and increase student academic engagement. Led by individuals who participated in four 1-hour training sessions on *Basic BSP*, teams were able to identify function-based interventions to change social and academic behavior for five elementary students. Targeted behaviors included: off-task, talk-outs, out-of-seat, making faces at peers, and inappropriate use of academic materials. Identified functions included: escape from non-preferred academic tasks, obtain adult attention, and obtain peer attention. Function-based interventions included typical teacher behaviors including: adult attention for appropriate behaviors, instruction on appropriate classroom behaviors such as hand-raising, class jobs, and scheduled breaks.

The effectiveness of function-based supports also has been demonstrated with students with ED in various settings including alternative educational settings (Turton et al., 2011; Umbreit & Ferro, 2011). According to Turton et al. (2011), function-based supports derived through a FBA were effective with three Caucasian high school age students who were not responding to a school-wide point system in an alternative setting. Furthermore, with the function-based supports, the students were able to generalize their on-task behaviors to other classrooms during the day. Both teachers and students continued to implement the function-based supports during maintenance probes, which supports the social validity of the intervention (Turton et al., 2011).

There are few studies that have included African American students as recipients of interventions that stem from FBA and function-based supports that have produced favorable outcomes have been favorable. Kamps, Wendland, and Culpepper (2006) examined the impact of function-based interventions derived from FBA and delivered in a general education classroom for two second grade African American students, one female and one male, with academic and behavioral challenges. Student social behavioral challenges, identified through functional assessment interviews conducted by the researchers, included noncompliance to instructional requests, talking out and off task during independent seatwork, disruptive behaviors (e.g., fidgeting, making noises, and playing with items), all relatively minor behavioral events. Student academic challenges, identified by the classroom teachers, included deficits in reading for both students and math for one student. Function-based supports stemming from a complete FBA, including a functional analysis conducted by the general education teacher during instructional delivery and supported by the researcher, resulted in a decline in identified

student behavior. Researches noted that through the FBA professional learning, teachers learned the importance of their interactions with students regarding student behavior. Additionally, function-based supports included use of teacher attention, use of student help cards to request a brief escape from academic tasks, self-management linked to function, and multiple antecedent interventions.

Mustian (2010) conducted a study that involved two general education teachers and data collection for two fifth-grade African American male students suggested that the use of FBA and function-based interventions produced positive outcomes. These outcomes included changes in student disruptive behavior and the teachers' perception regarding the need for referral for special education services. Teacher participants volunteered to participate and teacher recommendations were used to select students perceived and observed to have intensive behavioral needs and possibly a need for referral for special education services. Observed student behaviors included: lack of focus, off-task behavior, aggressiveness, talking out of turn, walking around the classroom without permission, and argumentative behavior (e.g., rolling eyes, smacking lips, mumbling under breath). Notable outcomes included decreases in student disruptive behavior and teachers rethinking the need for referral for special education services for an emotional disability (Mustian, 2010).

Several studies indicated positive outcomes for African American males with function-based interventions developed and delivered by teachers working collaboratively with external experts/researchers. Germer et al. (2011) found that a general education teacher, working collaboratively with researchers, was able to select and to implement function-based supports for a second grade African American male

struggling with both academic and non-academic behaviors and who had been referred to the pre-referral intervention team. Upon completion of this study, results indicated a decrease in off-task (not disruptive) behavior and perhaps more importantly, a change to positive teacher beliefs about the student behavior.

Additionally, Aitken et al. (2011) reported success with both story writing ability and on-task behavior as a result of a function-based intervention package that addressed both the academic and non-academic behaviors of an 8-year old African American male educated in a third-grade inclusion classroom. Campbell and Anderson (2008) reported positive changes in the behavior of a 10-year old African American male in a general education classroom stemming from an intervention aligned with the function of the behavior. Each of these studies included function-based support identified through the FBA process and were conducted in collaboration with external liaisons or researchers. So, while the outcomes were positive, the implementation remained time intensive and largely dependent upon outside experts. Researchers did note changes occurred in teacher beliefs about behavior exhibited by African American males, a population with disproportionality. This outcome is consistent with those described by Germer et al. (2011) and Mustian (2010).

Lo and Cartridge (2006) examined the impact of FBAs and BIPs on disproportionality in discipline and special education for African American males. Student participants included four elementary African American students with identified problem behaviors that included disruption, noncompliance with social and academic requests, conflict with peers, and off-task behaviors, all relatively minor behavior examples. One of the students had been diagnosed with ADHD and ED, one had been

diagnosed with ADHD and had received special education services delivered in a resource room for students with mild developmental disabilities and learning disabilities, and one had been retained in second grade. Researchers reported decreases in off-task behavior for all students and increases in identified replacement behaviors as a result of function-based supports developed through a FBA and included in a BIP. Supports included explicit instruction on social skills, differential reinforcement techniques (teacher attention), consequence-based interventions, and function-based self-monitoring that included the use of students visually prompting teacher attention through “check my work cards”. Of significance is that, as a result of the changes in student behavior, all four students maintained their current placements, which meant no referral to special education for two students and no change in placement to more restrictive settings for the other two students. Equally important is that the teachers were involved in the FBA process and delivery of interventions, but with a great deal of support from the researchers.

The research is compelling regarding the effectiveness of function-based interventions to effectively intervene with a variety of problematic student academic and social behaviors. There is a growing body of research to support better outcomes when function-based supports are employed verses non-function based supports for a range of problem behaviors and individuals and across a variety of settings (Ingram et al., 2005; Lane et al., 2006; Payne et al., 2007). Research is emerging documenting the effectiveness of function-based interventions on African American male students and consequently, changes in teacher perceptions of African American males (Aitkin et al., 2011; Germer et al., 2011; Mustian 2010)

Effective professional learning on function-based supports. Educators report that they feel unprepared and unsupported to address social behavioral issues presented by students at risk for and with ED (Eber et al., 2002; Gable et al., 2012; Gage et al., 2010; Kern et al., 2009; Reed et al., 2014). Westling (2010) examined teacher perceptions about themselves and their interactions with students with challenging behavior. The sample size consisted of seventy teachers with 38 special education teachers and 32 general education teachers representing three elementary schools, one high school, and one alternative school. Westling (2010) developed and used a Likert scale questionnaire that included items pertaining to seven areas including: 1) perceptions about why behavior occurs and possibilities for improvement, 2) perceived preparation from pre-service, 3) perceived preparation from in-service focused on working with students with challenging behavior, 4) confidence in ability to work with students with challenging behavior, 5) strategies utilized, 6) support from others to work with students with challenging behavior, and 7) perceived impact of challenging behavior on teachers and students.

Descriptive analysis and multiple regression analysis were used to analyze the data. Results indicated that special education teachers found students with ED, LD, and ADHD among the most challenging students and general education teachers found students without disabilities and students with LD and ADHD among the most challenging students. Less than half of the special education teachers reported that they had adequate preparation to conduct FBAs and develop individual behavior supports through either pre- or in-service instruction. General education teachers reported having adequate preparation through pre- and in-service in classroom management. Both special

education and general education teachers believed that challenging behavior consumed a great deal of time, increased stress levels, and impacted the learning of the students with the challenging behavior and the other students in the classroom.

The most common behaviors identified by both groups were the same and included defiance, noncompliance, disruption, and socially inappropriate behaviors. Special education teachers reported that almost half of their students presented challenging behavior and the general education teachers reported that almost one fourth of their students presented challenging behaviors. Multiple regression analysis was used to look at the predictive relationship between variables. Results indicated that the level of preparation and the use of effective strategies were more predictive of teacher confidence to deal effectively with challenging behavior than was support or the type of teacher (special or general). Clearly, both special and general education teachers struggle with a continuum of student behavior, even what might be considered to be minor behavioral incidents (e.g., disruption, defiance, inappropriate social behaviors) as indicated in this study.

The pragmatic issues associated with supporting practitioners to implement FBA, a highly effective evidence-based practice for supporting the behavioral needs of struggling students, is further complicated by the multitude of gaps in the over-arching “research-to-practice” literature (Quinn et al., 2001). One possible way to close this gap is to provide professional learning that addresses engaging instruction, effective ways for managing classroom behavior management, and incorporating diversity and cultural issues (Christie et al., 2004). Loman and Horner (2014) suggested that effective

classroom behavior management would include the application of FBT to all day-to-day student behavior.

Cook, Cook, and Landrum (2013) identified ineffective dissemination of research in special education as exacerbating the research-to-practice gap. This holds true for the research supporting FBA as an evidence-based practice. While there is a substantial body of research supporting the use of FBA to address student behavior, a significant obstacle to using FBA is the professional learning necessary for school-based personnel to understand and implement this process (Quinn et al., 2001). In a review of literature reviews, Gable et al. (2014) asserted that there is no consensus in the field regarding the kind and amount of professional learning required to support educators in conducting an effective FBA. Furthermore, Scott et al. (2010) reasoned that training efforts have been largely unsuccessful due to the complexity of the FBA process and suggested preparing school personnel to implement a simplified FBA.

Emerging research on FBA, including that examining the training of educators to identify function, supports the notion that identifying the function of behavior may not need to be as involved as previously documented with resource intensive professional learning. Traditional professional learning has included resource intensive support on collecting data from multiple sources to conduct a FBA, which includes identifying function through a functional analysis (Gable et al., 2014). While a functional analysis leads to function identification, it is not easy to apply under the classroom conditions in which student misbehavior occurs. After attending a day of professional learning on FBA and Behavior Intervention Plans (BIP), Van Acker et al. (2005) reviewed FBA/BIPs completed by participants and discovered that only 61% of those reviewed included any

indication of teams verifying the hypothesized function through a functional analysis or a process of data triangulation (common methods). These findings suggest that teams may use data collected through the FBA to develop a BIP, but often omit steps that are essential to confirm the hypothesized function of student behavior.

Addressing the issues of complexity with the FBA process (Scott et al., 2010), alternative approaches to identifying the function of student behavior are being used with less resource intensive methodologies under the natural occurring conditions of a classroom (Camp, Iwata, Hammond, & Bloom, 2009). Morin and Battalio (2004) concluded that providing professional learning on the evidence-based perspective that underlies FBA (what motivates student behavior or its function) will equip teachers to have a high personal teaching efficacy (PTE) and thus, improve teacher responses to student misbehavior. Drawing on the work of Heath and Heath (2008), Cook et al. (2013) indicated that dissemination strategies used to get evidence-based practices into the hands of practitioners should include “simplicity, unexpectedness, concreteness, credibility, emotion, and stories (p.176).” By designing professional learning that incorporates some of these elements and is relevant, teacher-friendly, and simple to implement (Gable, 2014; Losinski, Maag, Katsiyannis, & Ennis, 2014), teachers may learn to think differently about their approaches to student behavior and select preventative practices that do not rely solely on reactive practices.

Several researchers have examined the impact of training on a simplified FBA process that includes the components of effective professional learning discussed. Strickland-Cohen and Horner (2015) conducted research using a two-phase process to examine the ability of elementary school personnel to develop and implement function-

based supports for students with mild to moderate behaviors after completing four 1-hour professional learning sessions on basic behavioral principles over a course of four weeks. Participants consisted of 13 educators that included special education teachers, school psychologists, counselors, and various types of specialists, but no general education teachers. The training including teaching participants to: interact with FBA summary statements and identify function-based replacement behaviors, develop function-based preventative, instructional, and consequence interventions, identify contextual fit and implementation fidelity procedures, and learn how to facilitate a team through the process to complete a behavior support plan. Time also was spent practicing application of skills taught, including team facilitation. Participants increased their knowledge, measured by *pre Basic BSP* training and *post Basic BSP* training, by 26 percentage points. Overall, results suggest that typical school personnel were able to gain knowledge in basic behavior principles necessary to build function-based student Behavior Support Plans (BSP) and to successfully apply those skills to facilitate a team development of an effective BSP. A subset of 5 of the 13 participants led elementary school teams to develop a BSP for 5 individual students. Data analysis using a non-concurrent multiple baseline analysis across this subset of participants indicated the development of highly effective function-based plans implemented with fidelity and decreases in problem behavior and increases in academic engagement. Based on the outcomes of this study, the researchers recommended that pre- and post learning assessments and the identification of specific learning objectives be included in the design of professional learning.

Loman and Horner (2014) conducted research on training in basic FBA for typical school personnel and their ability to conduct a FBA. Participants included

elementary school counselors, administrators, and specialists, but no general education teachers. The study consisted of three phases with training that included pre- and post-learning assessments in the first phase, application of the skills with a student in the second phase, and functional analysis conducted by the researchers to confirm adequacy of the FBA and effectiveness of the training in the final phase. The training consisted of four 1-hour sessions. Each session was developed using “recognized instructional design principles” that included defining: training objectives, reviewing previously covered content, presenting new content with opportunities to practice throughout, and checking for understanding. Only 46% of the participants accurately identified the function of behavior as assessed by a pre-learning assessment before the training. After training in Basic FBA, 80% of participants were able to accurately identify the function of the student behavior through an interview using the *Functional Assessment Checklist for Teachers and Staff* (FACTS; March et al., 2000). Upon completion of the training, which did not include any follow-up in the form of coaching, feedback, or assistance, 80% of the participants accurately identified the function using teacher interviews and 100% of the participants accurately identified the function using teacher interviews and direct observation. Function was confirmed through functional analyses conducted by the researchers.

Filter and Horner (2009) conducted a study comparing the impact of function-based and non-function based supports on two fourth-grade Caucasian males. While this study did not involve training educators, results of the study confirmed the ability of a general education teacher to correctly identify the function of student problem behavior using the FACTS, a teacher interview. This has important implications for developing a

simplified process for identifying behavior function in that typical practitioners were able to do so with accuracy through the use of interviews about student behaviors, a less time intensive method.

Mustian (2010) conducted a study examining the impact of a professional learning package on FBA that included a multiple day in-service, embedded opportunities to practice, and intensive coaching and performance feedback provided to the teachers. Two general education teachers were able to implement content learned, with the support of coaching and performance feedback provided by the external expert (researcher) and student behaviors decreased significantly as a result of the function-based supports. The researcher noted positive feedback from the teachers about using FBA and function-based interventions in the general education classroom and attributed this to many reasons including teacher feedback on the importance of understanding basic behavioral principles and teacher ability to contextualize the function-based supports implemented in their respective classrooms.

Equally important is understanding and developing professional learning that impacts teacher beliefs and attitudes toward students with challenging behaviors. Mustian (2010) and others demonstrated changes in teacher perceptions of African American males as a result of training on function-based supports. Others have examined teacher beliefs and perceptions about student behavior to develop a better understanding. Bambara, Goh, Kern, and Caskie (2012) studied perceptions of educators regarding implementing individualized positive behavior interventions and supports. A four part questionnaire that included identification of barriers and enablers to implementing positive behavior supports to individual students was completed by 293 participants, of

which about one-third were teachers. The researchers identified the 10 most common barriers to implementation and found that 5 of those were related to school culture and teacher practices and beliefs. In particular, identified barriers included: a resistance to change traditional classroom management practices, a mindset that punishment should serve as the primary means of responding to student behavior, a belief that students with problematic behavior should be educated separately from their peers, and a belief that interventions should produce quick changes in behavior. The researchers shared several possible implications that included developing effective and efficient positive behavioral interventions and supports for individual students and ongoing professional learning to support a change in educator practice.

Lohrmann et al. (2008) also examined barriers to adopting positive behavior interventions and supports at the school-wide level, including classroom, and found that philosophical differences among staff contributed to a lack of implementation. Specifically, technical assistance providers participating in the study, reported that school staff often believe that their job is to teach academics and not to teach behavior and that students should not be positively reinforced for engaging in appropriate behavior. Even so, along the continuum of FBA (from FBT to a comprehensive FBA), providing instruction and reinforcement on the identified replacement behaviors are a critical component of intervention.

Finally, there is very little research regarding various “media” to deliver professional learning including face-to-face, online, or a hybrid approach that incorporates some of both. Fishman et al. (2014) used an experimental design to compare the impact of professional learning delivered face-to-face and professional learning

delivered online. Results of their study indicate increases in teacher self-efficacy, classroom practices with the academic content (math curriculum) of the professional learning, and student learning in both treatment conditions with no differences between conditions. They emphasized that their findings suggest that it is less important to place too much emphasis on media and that greater emphasis should be placed on the features of professional learning that lead to changes in teacher practices and beliefs and student learning.

In sum, traditional disciplinary responses are reactive and rely heavily on punitive consequences, including exclusionary practices (e.g., suspension). Exclusionary discipline can lead to a host of negative outcomes for students (Milner, 2013). Exclusionary disciplinary practices are used disproportionately with some groups of students, including students with disabilities and African American males. African American males are often over-identified for “value judgment” disability categories such as ED, thus increasing the risk of disproportionality.

Research supports the effectiveness of function-based support, identified through a FBA, to change behavior for students at-risk for and with ED (Carr & Durand, 1985; Ingram et al., 2005). Research is emerging to demonstrate the effectiveness of function-based supports for African American students (Lo & Cartridge, 2006; Mustian, 2010). Inconsistencies with FBA procedures and professional learning, as well as, overly complicated processes prevent use of this effective practice.

Morgan and Sideridis (2013) argued that teachers need to understand the cause or function of behavior as it occurs within the school context to increase their capacity to effectively support a positive change in student behavior. Function-based thinking may

provide a framework for teachers to independently identify preventative and effective interventions to minor classroom student behavior. Specifically, professional learning on FBT designed to include best practices including those mentioned above, may provide an opportunity for teachers to think differently about student behavior and increase the likelihood of using preventative and proactive practices based on the function of behavior. FBT also places the focus on student behavior with an objective lens, thus decreasing the subjectivity in response to student behavior and the disproportionate use of exclusionary practices for some students including African American males.

Function-based thinking is a promising approach that may lead to increased teacher use for a larger number of students, including African American males, and application to a larger number of students. Research on professional learning for FBT targeting general education teachers will promote the use of FBT as a preventative approach to supporting positive changes in student behavior that may lead to exclusionary discipline or alternative education environments. Finally, Payne et al. (2007) argued that educators need interventions that require low effort and efficient use of time without the support of external researchers to implement.

CHAPTER 3

METHODOLOGY

Participants and Setting. The participants in this study consisted of twenty-six teachers from two urban school divisions (primarily middle schools) in a southeastern state. Participation was voluntary and solicited through the division PBIS coordinators. Seventy-seven percent of the participants were female and 23% were male. Sixty-five percent were Caucasian and 35% were African American. Ninety-two percent of teachers participated in the research, primarily for the professional learning, because it was linked to their jobs and/or interest at their workplace (62.5% school interest and 37.5% school division interest). The other 8% (2 teachers) chose to participate for their own personal interest and development. Ninety-two percent of participants were general education classroom teachers and 8% were special education teachers. Participants included: 23 traditional middle school teachers and 1 middle school teacher in a K-8 school, 1 elementary school teacher, and 1 high school teacher. None of the participants reported being a Board Certified Behavior Analyst.

Participants were brought together in small groups (one group in one school division and two groups in the other school division) in centralized locations for 2 one-hour sessions and completed an online professional learning module, which the module developers suggest allowing approximately 80 minutes for completion. The participants were awarded 5 hours of approved continuing education through their respective division. Additionally, participants completing all components of the study (pre- and post case

studies, online professional learning module, and social validity questionnaire) entered their participant numbers into a drawing for \$50.00, one per school division.

Dependent Variables. The dependent variables included accuracy in selection of function-based interventions (antecedents and/or consequences) and changes in interventions in response to student case studies. Each participant participated in a pre- and post professional learning assessment (see Appendix A) of their ability to select function-based interventions accurately. In order to identify effects of the online professional learning, each participant completed a pre- and post professional learning assessment of intervention selection in response to pre-selected case studies (see Appendix B).

Independent Variables. The independent variable consisted of an online professional learning module developed by Borgmeier and Loman (2013) at Portland State University (<https://sites.google.com/a/pdx.edu/functionbasedthinking>; see Appendix C). The online module was designed to increase participants' understanding of and ability to apply function-based thinking. The module was organized to teach content and to engage the participants in practice and the application. The module addressed selection of antecedent and consequence interventions and selection of replacement behaviors aligned with functions of behavior. The two behavior functions taught in this module were escape-motivated behavior (negative reinforcement) and attention-seeking behavior (positive reinforcement). The online professional learning module was designed specifically to include best practices regarding professional learning to include: teacher-friendly format easily accessible content (Cook, Griffin, Hall, Oakes, & Lane, 2013; Heath & Heath, 2008), clearly stated learning objectives (Strickland-Cohen & Horner,

2015), pre- and post assessments and opportunities to practice and apply the content, and a simplified process to engage with function-based thinking (Gable et al., 2014).

Social Validity. Social validity was determined by using a five question 5-point Likert scale survey to collect data on participant perceptions about the intervention (see Appendix D). The survey also included three open-ended questions about using function-based thinking as a tool for addressing disruptive student classroom behavior. Survey items were drawn from the accumulated literature.

Design and Procedure. This study was conducted in three phases. During phase one, participants met in a central location outside of the typical school hours. Each participant was provided with a consent letter (Appendix E) and an outline of the study procedures (see Appendix F). In advance of the first meeting, the researcher randomly assigned participants to 1 of 4 groups. Specifically, four cards with the numbers 1,2,3,4 were placed into a bag. One card was drawn from the bag at a time until all four numbers were selected. The order of the numbers drawn was recorded and the process was continued until a list of 50 numbers was generated and used to assign participants to one of the four groups. Upon entering the centralized location during the first one-hour meeting, participants were assigned a number from one through four based on the list generated during the randomization process.

Each participant was assigned a random participant number. Participant names were not collected. Participants received two yellow cards (see Appendix G), which included the pre-determined group assignment and a place for participants to record their participant numbers. Participants were instructed to return one yellow card to the researcher and hold on to the other until the end of the study. The researcher used the

yellow cards submitted to assemble the post-case studies (pre-determined by group number) and social validity surveys in advance of the second one-hour meeting (phase three). Participants were instructed to use the outline of study procedures resource provided for instructions on accessing the online professional learning module and copies of the pre- and post-assessments to be used with the online module). The researcher also demonstrated accessing the online professional learning module to provide a model and a visual of what to look for once online.

During phases one and three, groups of participants responded to identified pre- and post- video case studies. Group assignments determined which pre- and post case study participants completed (see Table 1). The case studies were based on identified functions of escape-motivated behavior and attention-seeking behavior. There were two function-based case studies with all variables held constant except for race (see Table 2). For each function-based case study, there was an African American male middle school student and a Caucasian male middle school student, both of whom engaged in the same disruptive classroom behavior. Case studies included an introduction to the student and data from naturally occurring data sources (e.g., academic, discipline, attendance, etc.).

Each case study included 12 possible interventions for participants to select as responses to scenarios presented. The twelve interventions were drawn from the accumulated research (Scott et al., 2005) and consisted of six antecedents, three “positive” consequences (those not identified as punitive or exclusionary practices), and three punitive/exclusionary consequences. The six antecedents were: give the student more time to complete the assignment, move student’s seat to the back of the room to reduce disruption, teach student to ask for a break, modify academic requirements,

provide additional math instruction after school, and use pre-correction before independent work time. The three “positive” consequences included: use differential reinforcement (e.g., praise student for beginning work), speak one on one with the student, and ignore student misbehavior to avoid escalation. The 3 punitive/exclusionary consequences included: use detention, implement loss of privileges, and use in-school suspension. Pre- and post case study responses were assessed to identify changes in interventions selected.

Table 1.
Video Case Studies for Disruptive Classroom Behavior

Case 1: Escape-motivated behavior	African American Middle School Male Student
	Caucasian Middle School Male Student
Case 2: Attention-seeking behavior	African American Middle School Male Student
	Caucasian Middle School Male Student

Table 2.

Assignment of Participants to Video Case Studies

Group 1		Group 2		Group 3		Group 4	
Pre-	Post-	Pre-	Post-	Pre-	Post-	Pre-	Post-
Attention-seeking behavior	Escape-motivated behavior	Escape-motivated behavior	Attention-seeking behavior	Escape-motivated behavior	Attention-seeking behavior	Attention-seeking behavior	Escape-motivated behavior
Caucasian Male	Caucasian Male	Caucasian Male	African American Male	African American Male	Caucasian Male	African American Male	African American Male

During phase two, participants completed online professional learning for function-based thinking (<https://sites.google.com/a/pdx.edu/functionbasedthinking>). The professional learning consisted of an online module developed by Borgmeier and Loman

(2013; see Appendix A). The researcher worked with the authors of the professional learning online module to add data collection in order to collect additional demographic information including: participant number, gender, race, position, and experience with conducting functional behavioral assessments (FBA). Each participant completed the module independently using the instructions for accessing the module provided during phase one. Participant responses were collected for pre- and post learning assessments, practice item responses, and application responses. Participants were given two weeks to complete the module.

Professional learning for function-based thinking included: (a) an overview of basic behavioral principles, problem summary statements, and function identification; (b) guided practice with examples of intervention selection based on function-based thinking; and (c) a pre- and post assessment with application to identify function-based antecedents and consequences (including extinction procedures) that are likely to increase the use of replacement behaviors and decrease the problematic behaviors (Scott et al., 2005; Umbreit & Ferro, 2011); and (d) practice applying the concepts. Based on recommendations of the authors, participants were asked to allow 80 minutes to complete the online module. Participants were informed that they needed a strong Internet connection and the instruction resource to access the module. Scores of the pre- and post professional learning assessments were provided to participants upon completion of the module, allowing for immediate feedback.

During phase three, participants were given their post-case study, which was pre-determined through the initial group assignment (see Table 2). Participants also completed the social validity survey using paper and pencil during this phase.

Participants turned in the yellow card with their participant number included with the post-case study and social validity survey. Once completion of all portions of the study was confirmed for each participant (e.g., pre- and post case studies, online module, and social validity survey), the corresponding yellow card was entered into the drawings (one \$50 drawing for each school division). Division coordinators were emailed the participant numbers drawn and they communicated with participants, independently of the researcher, to ensure those participant codes drawn were identified and awarded the incentive.

Assessment, Data Collection and Analysis

Function-Based Knowledge and Skills Assessment. The first research question addressed whether teachers were able to select function-based interventions accurately after completing professional learning on function-based thinking. As a component of the online professional learning module, participants were provided a printed hard copy of both the pre- and post professional learning assessments during the first one-hour meeting in phase one (see Appendix B). There were two versions for each of the pre- and post- professional learning assessments. Each included an assessment for selecting interventions for escape-motivated behavior and interventions for attention-seeking behavior. Once participants began the online professional learning module, they were prompted and only permitted to complete the pre-professional learning assessments online. Upon completion of the online module, participants were instructed and prompted to complete the online post professional learning assessment. It should be noted that the pre- and post professional learning assessments were designed to allow application of the concepts presented with immediate feedback provided to the participants.

Data for the pre- and post professional learning assessments were collected via the online professional learning module (Borgmeier & Loman, 2013). The module developers provided access to the data, organized by participant research number, to the researcher. Data provided included: (a) pre- and post professional learning item responses and cumulative scores for accurate selection of function-based antecedents and consequences, (b) years of experience, (c) number of functional behavior assessments conducted, (d) gender, (e) race, (f) and position. A change in the pre- and post professional learning scores was calculated and available through the online professional learning module for each participant. Data analysis used for this question was a replication of that used by Loman and Horner (2013) with online professional learning for FBA. A one-tail paired t-test was used to determine if there was a significant difference between scores on the pre- and post professional learning assessments.

Effects of Professional Learning for Function-Based Thinking . The second research question addressed the effects of professional learning on function-based thinking and teacher selection of interventions. Pre- and post case study responses with pre-populated antecedents and consequences (see Appendix C) were provided via paper copies to participants during phases one and three. For all participants, the researcher calculated pre- and post-video sums for each of the individual antecedent and consequence intervention selections provided for each of the video case study responses. Separate counts were made for antecedents that addressed academic instructional variables (e.g., modifying academic tasks, moving student desk to back of room) and consequences that involved removal or exclusion of the student from the classroom or school (e.g., detention, in-school suspension), as well as, other types of consequences

(e.g., ignoring). To address issues of reliability, two individuals reviewed original counts of data. Each case study was anchored to either escape-motivated behavior or attention-seeking behavior. Antecedent and consequence interventions selected were analyzed by case study function to assess any relationship between function and intervention choices. All counts for these analyses were subjected to reliability counts by comparing counts with what was entered. Odds ratios were used to compare one variable to another (e.g., escape-motivated and attention seeking). Fisher exact tests were used to determine if the difference in odds between African American and Caucasian students was significant.

Case studies included pre-populated antecedent and consequence strategies for participant selection (see Appendix C). Psychometric properties for the pre- and post case study response items have not been assessed. However, the items were selected from peer-reviewed journal articles addressing best practices (Kern et al., 2007) and an instrument used in previous research that included a review by a panel of experts (Scott et al., 2005).

The third research question addressed how effects of professional learning for function-based thinking differed based on the student characteristic of race. Each participant group was assigned a pre- and post- case study (see Table 2). Counter balancing with case studies between pre- and post tests was used to counteract any effects on participant responses due to function, perceived difficulty of case study scenario based on function, and/or race. Odds ratios were used to compare one variable to another (e.g., pre- and post antecedents, pre- and post consequences, pre- and post selection for African American students, pre- and post for Caucasian students, etc.). Fisher exact tests were used to determine if the difference in odds between African American and Caucasian students was significant.

Social Validity of Function-Based Thinking. The final research questions asked whether function-based thinking was perceived as a practical and effective approach that teachers would use in the context of the classroom. A five question 5-point Likert scale survey (1 = *strongly* disagree, 2 = disagree, 3 = *neither* agree nor disagree, 4= *slightly* agree, 5 = agree, 6 = *strongly* agree) was used to collect data on teacher participant perceptions about the function-based thinking (see Appendix D). The survey also included three open-ended questions about using function-based thinking as a tool for addressing disruptive classroom behavior. All questions were drawn from previous research and have been cited regularly (Bambera et al., 2012; Westling, 2010). The use of open-ended survey questions were included to capture teacher voice and access a greater level of detail with teacher perceptions about function-based thinking (Bambera et al., 2012). Overall averages for each item were calculated for the five questions and themes were identified and samples reported for the two open-ended questions. Development of this instrument was drawn on the accumulated literature

CHAPTER 4

ANALYSIS OF DATA

Data Analysis

The statistical software IBM SPSS Statistics 21 was used for data analysis. Descriptive statistics were used to assess the characteristics of the study participants. Paired *t* tests were used to compare pre-FBT and post-FBT scores. Effect size using the Cohen's *d* statistic was used to assess the overall change in FBT scores from pre- to post-test. Descriptive statistics were also used to assess change in intervention selection after the professional learning. Odds ratios were used to assess differences in intervention selection for behavior motivation (escape seeking vs. attention seeking) and race (Caucasian vs. African American). Finally, descriptive statistics were used to investigate the professional development's social validity.

Results

Demographics. Of the twenty-six participants, none of the participants had participated in this training before, either online or face-to-face. Sixty-nine percent of participating teachers had not had any previous training on the topics of Functional Behavioral Assessment and Behavior Support Planning (FBA/BSP). One teacher (4%) had attended sessions at conferences on FBA/BSP. Five teachers (19%) had attended in-service professional development on FBA/BSP, and 2 teachers (8%) had taken a university course focused on FBA/BSP. The majority of participants (85%) had never had any experience participating in FBA/BSP. Two teachers (8%) had participated as a team member only on a FBA/BSP case. One teacher (4%) had conducted a FBA and one

teacher (4%) had developed and served as a case manager leading the implementation of a BSP based on an FBA.

Participants were assigned randomly to a group during phase one of the study, prior to the professional learning opportunity. Group inclusion determined the pre- and post case study, which varied by behavior type (escape-motivated and attention-seeking) and race (Caucasian and African American). Group membership consisted of the following: Group 1 had 5 teachers (19.2%); Group 2 had 7 teachers (26.9%), Group 3 had 8 teachers (30.8%); and Group 4 had 6 teachers (23.1%).

Function-Based Knowledge and Skills Assessment. To assess whether teachers were able to select function-based interventions accurately, a fourteen question pre- and post assessment was completed by participants at the beginning and end of the online professional learning module. A participant could score between 0 (none correct) to 14 (all correct) for each assessment. The following analysis presents a summary of the pre-test scores, post-test scores, and change in scores. The results show a significant increase in teacher ability to select function-based interventions after the professional learning.

Table 3 contains the pre- and post learning assessment results for the number of correctly identified function-based interventions. Results of the pre-learning assessment, indicated teachers averaged 47.5% accurate selection of function-based interventions with a mean of 6.65 correct ($SD = 2.48$). Results of the post-learning assessment indicated that teachers averaged 69.2% accurate selection of function-based interventions with a mean of 9.69 correct ($SD = 3.71$). A paired t test was used to compare each participant's pre-learning assessments and post-learning assessments. The positive increase in learning assessment scores was significant as teachers accurately identified an

average of 3.04 ($SD = 4.04$) additional function-based interventions after the professional learning module ($p = 0.001$). The positive change in identification after the online professional learning module was substantiated by an extremely large effect size of $d = 0.753$.

Table 3.

Pre- and post learning assessments for function-based thinking

	Minimum Value	Maximum Value	Median	Mean (Average Percent)	Standard Deviation (SD)
Pre-learning assessment	2	12	6	6.65 (47.5%)	2.481
Post-learning assessment	0	14	11	9.69 (69.2%)	3.707
Change	-10	8	3.5	3.04 (21.7%)	4.035

Eighty-eight percent (23 of 26) of the teachers increased the number of function-based interventions that they were able to identify correctly after the module. Of the three teachers whose pre-to post learning assessment scores did not increase, scores decreased by 1, 4, and 10 questions. The teacher whose score decreased by 10 questions scored a 0 on the post-test. This average increase was significant and demonstrates that the professional learning increased the correct selection of function-based interventions.

Effects of Professional Learning for Function-Based Thinking and Teacher Selection of Interventions in Response to Escape-Motivated and Attention-Seeking Behavior and by Student Race. Teachers participated in a pre-case study and a post-case study. The participant's group determined the motivating behavior (escape-motivated or

attention-seeking) and race (Caucasian or African American) for the student in each case study. After each case study, teachers selected which interventions they would choose as a reaction to the student's misbehavior and academic and behavioral data provided. The following analysis compares the percentage of teachers who chose each intervention for both case studies. Next, odds ratios were used to investigate if the motivating behavior (escape-motivated or attention-seeking) affected intervention selection and if the behavior affect changed after the online professional learning. Finally, odds ratios were used to investigate if race was a factor in the selection of interventions prior to and after the online professional learning module.

For each participant the number of interventions selected in response to the pre- and post case studies were calculated and the results are shown in Table 4. Participants selected an average of 4.62 ($SD = 1.68$) interventions for the pre-case study and an average of 3.50 ($SD = 1.48$) interventions for the post-case study. The number of interventions selected decreased significantly after the online professional learning by an average of 1.12 ($SD = 1.73$) with $p = 0.003$.

Table 4.

Number of Interventions Selected for each Case Study

	Minimum	Maximum	Median	Mean	Standard Deviation
Pre-Case Study	2	8	4	4.62	1.675
Post-Case Study	1	7	3.5	3.5	1.476

Table 5 compares the 3 punitive consequences to the other 9 interventions (antecedents and positive consequences), the average number of punitive consequences selected with the post-case study decreased from 0.73 to 0.12. The pre-case study had an average of 3.88 ($SD = 1.31$) interventions selected that were non-punitive and the post-case study had an average of 3.38 ($SD = 1.47$) interventions selected that were non-punitive. Collectively, teachers selected a total of 19 punitive consequences (0 to 3 per teacher with an average of 0.73) for the pre-case study. However, after the online professional learning, only 3 teachers chose one punitive intervention as a consequence for the post-case study. One teacher chose detention, another teacher chose loss of privileges, and a different teacher chose in-school suspension.

Table 5.

Number of Punitive Consequences Compared to Non-Punitive Interventions Selected

		Minimum	Maximum	Median	Mean	Standard Deviation
Pre-Case Study	Non-Punitive Interventions	2	7	4	3.88	1.306
	Punitive Consequence	0	3	1	0.73	0.827
Post-Case Study	Non-Punitive Interventions	1	7	3	3.38	1.472
	Punitive Consequence	0	1	0	0.12	0.326

Table 6 compares the two types of consequences selected, positive (e.g., differential reinforcement) and punitive (e.g., in-school suspension). Teachers selected an average of 2.08

($SD = 0.63$) positive consequence interventions and 0.73 ($SD = 0.83$) punitive consequence interventions in response to the pre-case study. After the online professional learning, teachers selected an average of 1.27 ($SD = 0.72$) positive consequence interventions and 0.12 ($SD = 0.33$) punitive consequence interventions in response to the post-case study. From pre- to post case study, teachers reduced their selection of both types of consequence interventions (positive and punitive).

Table 6.

Number of Types of Consequence Interventions Selected in Response to Case Study

		Minimum	Maximum	Median	Mean	Standard Deviation
Pre-Case Study	Positive Consequence	1	3	2	2.08	0.628
	Punitive Consequence	0	3	1	0.73	0.827
Post-Case Study	Positive Consequence	0	3	1	1.27	0.724
	Punitive Consequence	0	1	0	0.12	0.326

In general, the number of interventions selected for the post-case study decreased from the number of interventions selected for the pre-case study. This decrease was seen for all interventions combined, antecedents, positive consequences, and most importantly punitive consequences.

To assess the effects of the professional learning on teacher selection of interventions in response to different types of behavior function, pre- and post case study responses were

analyzed. Table 7 shows the percentage of teachers who chose each intervention in the pre- and post case studies. The percentage of teachers who selected the consequence interventions decreased from pre- to post- case study for all 6 consequences interventions.

Table 7.

Selection of Intervention

Intervention	Intervention Type	Pre-Case Study Selection	Post-Case Study Selection
Academic Modification	Antecedent	15.4%	26.9%
Give student more time	Antecedent	3.8%	15.4%
Move the student's seat	Antecedent	42.3%	11.5%
Provide additional math instruction after school	Antecedent	26.9%	34.6%
Teach the student to ask for a break	Antecedent	46.2%	76.9%
Use pre-correction before independent time	Antecedent	46.2%	46.2%
Ignore student misbehavior to avoid escalation	Consequence (positive)	30.8%	19.2%
Speak one-on-one with the student	Consequence (positive)	96.2%	42.3%
Use differential reinforcement	Consequence (positive)	80.8%	65.4%
Detention	Consequence (punitive)	23.1%	3.8%
In-school suspension	Consequence (punitive)	11.5%	3.8%
Implement loss of privileges	Consequence (punitive)	38.5%	3.8%

Odds ratios were calculated to assess if the odds of selecting a particular intervention differed with respect to motivating behavior (escape-motivated or attention-seeking) or race (Caucasian or African American). The following analysis compares teacher responses to escape-motivated behavior and attention-seeking behavior. For the pre-case study, 11 (42%) of the participants reviewed a case study where the student displayed escape-motivated behavior and 15 (58%) of the participants reviewed a case study where the student displayed attention-seeking behavior. In the post-case study, 15 (58%) of the participants reviewed a case study where the student displayed escape-motivated behavior and 11 (42%) of the participants reviewed a case study where the student displayed attention-seeking behavior.

Table 8 shows the odds ratios for all 12 interventions with escape-motivated behavior as the reference category compared to attention-seeking behavior. The odds ratios were calculated for both pre- and post case study selections. In the pre-case study intervention selections, the odds of a teacher moving the student's seat was 6.750 times higher than the odds of a teacher moving the student's seat for escape-motivated behavior. Similarly, the odds for teaching the student to ask for a break was 1.050 times higher, ignoring the student misbehavior to avoid escalation was 3 times higher, using differential reinforcement was 8 times higher, using detention was 1.636 times higher, using in-school suspension was 1.538 times higher, and implementing loss of privileges was 5.143 times higher for attention-seeking behavior than escape-motivated behavior. The odds of a teacher using academic modification, providing additional math instruction after school, and using pre-correction before independent time was less likely to be selected for attention-seeking behavior compared to escape-motivated behavior.

Specifically, the odds of a teacher using academic modification was 1.445 times higher for escape-motivated behavior than attention-seeking behavior in the pre-case study. The odds of a teacher providing additional math instruction after school was 16.667 times higher for escape-motivated behavior compared to attention-seeking behavior. Finally, the odds of a teacher using pre-correction before independent time was 1.799 times higher for escape-motivated behavior than attention-seeking behavior.

One-tailed Fisher exact tests were used to determine if the difference in odds between escape-motivated and attention-seeking behaviors was significant for each intervention. After the pre-case study, the difference in odds was significant for moving a student's seat ($p = 0.040$) and providing additional math instruction after school ($p = 0.011$). The odds of a teacher moving a student's seat for attention-seeking behavior was significantly higher than the odds for escape-motivated behavior. The odds of a teacher providing additional math instruction after school was significantly higher for escape-motivated behavior than the odds for attention-seeking behavior.

In the pre-case study selection, only one teacher chose to give the student more time in response to an escape-motivated behavior and none of the teachers chose to give a student more time for an attention-seeking behavior. Also, all fifteen teachers responding to attention-seeking behavior chose to speak one-on-one with the student displaying attention-seeking behavior and only one of the eleven teachers responding to escape-motivated behavior chose to speak one-on-one with the student.

In the post-case study intervention selections, the odds of a teacher moving the student's seat was 3.111 times higher than the odds of a teacher moving the student's seat for escape-motivated behavior. Similarly, the odds for teaching the student to ask for a

break was 1.636 times higher, using pre-correction before independent time was 1.8 times higher, ignoring the student misbehavior to avoid escalation was 8 times higher, and speaking with the student one-on-one was 1.25 times higher for attention-seeking behavior than escape-motivated behavior. The odds of a teacher using academic modification, providing additional math instruction after school, and using differential reinforcement was less likely to be selected for attention-seeking behavior compared to escape-motivated behavior. Specifically, the odds of a teacher using academic modification was 6.667 times higher for escape-motivated behavior than attention-seeking behavior. The odds of a teacher providing additional math instruction after school was 11.364 times higher for escape-motivated compared to attention-seeking behavior. Finally, the odds of a teacher using differential reinforcement was 2.294 times higher for escape-motivated behavior than attention-seeking behavior in the pre-case study.

Similar to the pre-case study, one-tailed Fisher exact tests were used to determine if the difference in odds between escape-motivated and attention-seeking behaviors was significant for each intervention. With the post-case study, the difference in odds was significant for providing additional math instruction after school ($p = 0.024$). The odds of a teacher providing additional math instruction after school was significantly higher for escape-motivated behavior than the odds for attention-seeking behavior. This is the same significant result observed with the pre-case study.

In response to the post-case study, none of the teachers reacting to an attention-seeking behavior chose to give the student more time while four teachers reacting to an escape-motivated behavior chose to give the student more time. Also, none of the

teachers chose to give an escape-motivated student detention or in-school suspension while only 1 teacher chose to give an attention-seeking student detention or in-school suspension after the post-case study. None of the teachers chose to implement loss of privileges for an attention-seeking behavior and only 1 teacher chose to implement loss of privileges for an escape-motivated behavior.

The odds of moving the student's seat, teaching the student to ask for a break and ignoring student misbehavior to avoid escalation are higher for attention-seeking behavior at both the pre- and post case studies. The odds of academic modification, and providing additional instructional support was higher for escape-motivated behavior at both pre- and post-case studies. Teachers only chose to give a student more time for escape-motivated behavior after both pre- and post-case studies. For these six interventions, the motivating behavior influenced the odds of choosing an intervention.

The odds of using pre-correction before independent time were higher for escape-motivated behavior before training and higher for attention-seeking behavior after training. The odds of using differential reinforcement were higher for attention-seeking behavior before training, then higher for escape-motivated behavior after training. Almost all of the teachers chose to speak one-on-one with the student pre-training. Specifically, one teacher responding to escape-motivated behavior chose to speak one-on-one with the student. This was the only teacher to choose this intervention for the pre-case study. After training, more than half of the teachers did not choose to speak one-on-one with the student post-training. Specifically, 9 of the 15 teachers responding to escape motivated behavior and 6 of the 11 teachers responding to attention-seeking behavior chose to not speak one-on-one with the student. As previously noted, detention, in-school

suspension, and implementing loss of privileges were each selected by only one teacher after the professional development. For these six interventions, the odds of selection changed after completion of the online module.

Table 8.

Intervention Selection Odds Ratios for Escape-Motivated Behavior vs. Attention-Seeking Behavior

Intervention	Intervention Type	Pre-Case Study Selection	Post- Case Study Selection
Academic Modification	Antecedent	0.692	0.150
Give student more time	Antecedent	*	*
Move the student's seat	Antecedent	6.750**	3.111
Provide additional math instruction after school	Antecedent	0.060**	0.088**
Teach the student to ask for a break	Antecedent	1.050	1.636
Use pre-correction before independent time	Antecedent	0.556	1.800
Ignore student misbehavior to avoid escalation	Consequence (positive)	3.000	8.000
Speak one-on-one with the student	Consequence (positive)	*	1.250
Use differential reinforcement	Consequence (positive)	8.000	0.436
Detention	Consequence (punitive)	1.636	*
In-school suspension	Consequence (punitive)	1.538	*
Implement loss of privileges	Consequence (punitive)	5.143	*

*The odds ratio could not be calculated because a crosstab category contained zero teachers.

** Fisher exact test *p-value* is less than 0.05

The next analysis compares teacher responses to a Caucasian student and an African American student. In the pre-case study, 13 (50%) of the participants reviewed a case study of a Caucasian male student and 13 (50%) of the participants reviewed a case study of an African American male student. In the post-case study, 12 (46%) of the

participants reviewed a case study of a Caucasian male student and 14 (54%) of the participants reviewed a case study of an African American male student.

Table 9 shows the odds ratios for all 12 interventions with Caucasian as the reference category compared to an African American student. The odds ratios were calculated for both pre- and post-case study selections. In the pre-case study intervention selections, the odds of a teacher using detention for an African American student was 2.44 times higher than the odds of a teacher giving detention for a Caucasian student. This was the only intervention that had higher odds for African American students. The odds of teaching the student to ask for a break and using pre-correction before independent time were the same for Caucasian and African American students in the pre-case study. Seven other interventions had higher odds for Caucasian students than African American students. Specifically, the odds for giving academic modifications was 3.597 times higher, moving the student's seat was 1.37 times higher, providing additional math instruction after school was 3.436 times higher, ignoring the student misbehavior to avoid escalation was 2.083 times higher, using differential reinforcement was 5.319 times higher, using in-school suspension was 2.183 times higher, and implementing loss of privileges was 1.927 times higher for a Caucasian student than an African American student.

Again, one-tailed Fisher exact tests were used to determine if the difference in odds between Caucasian and African American students was significant for each intervention. After the pre-case study, none of the higher odds were statistically significant at the 0.05 significance level.

In the pre-case study selection, only one teacher chose to give the student more time to a Caucasian student and none of the teachers chose to give a student more time for an African American student. Only one teacher chose to not speak one-on-one with the Caucasian student and all teachers chose to speak one-on-one with the African American student.

In the post-case study intervention selections, the odds of a teacher using academic modifications for an African American student was 1.2 times higher than the odds of a teacher using academic modifications for a Caucasian student. Similarly, the odds for giving the student more time was 3 times higher, providing additional math instruction after school was 2.25 times higher, and ignoring the student misbehavior to avoid escalation was 1.364 times higher for an African American student compared to the odds for a Caucasian student. The odds of a teacher teaching the student to ask for a break, using pre-correction before independent time, speaking one-on-one with the student, and using differential reinforcement were less likely to be selected for an African American student than a Caucasian student. Specifically, the odds of a teacher teaching the student to ask for a break was 6.098 times higher for a Caucasian student than for an African American student in the post-case study. The odds of a teacher using pre-correction before independent time was 1.333 times higher for a Caucasian student than for an African American student. The odds of a teacher using speaking one-on-one with the student was 1.799 times higher for a Caucasian student than for an African American student. Finally, the odds of a teacher using differential reinforcement with the student was 1.111 times higher for a Caucasian student than for an African American student.

One-tailed Fisher exact tests were used to determine if the difference in odds between Caucasian and African American students was significant for each intervention. Similar to the pre-case study results, after the post-case study, none of the higher odds were statistically significant at the 0.05 significance level.

Additional results of the post-case study intervention selection indicate that none of the teachers chose detention or loss of privileges for a Caucasian student and only one teacher chose detention or loss of privileges for an African American student. None of the teachers chose to move the student's seat or an in-school suspension for an African American student and only one teacher chose to move the student's seat or giving an in-school suspension for a Caucasian student.

The odds of using differential reinforcement was higher for Caucasian students after both pre- and post-case studies. This is the only intervention that appears to be influenced by the student's race. All other odds changed from pre- to post-case studies. The odds for academic modification, providing additional math instruction after school, ignoring student misbehavior to avoid escalation were higher for Caucasians during the pre-case study and higher for African Americans during the post-case study. The odds for teaching the student to ask for a break and using pre-correction before independent time were higher for African American students during the pre-case study and equal during the post-case study. The odds for the other six interventions could not be calculated for either the pre- or post-case study because so few teachers chose that interventions after one of the videos. For these ten interventions, the odds of selection changed after completion of the online module.

Table 9.

Intervention Selection Odds Ratios for Caucasian vs. African American

Intervention	Intervention Type	Pre-Case Study Selection	Post- Case Study Selection
Academic Modification	Antecedent	0.278	1.200
Give student more time	Antecedent	*	3
Move the student's seat	Antecedent	0.730	*
Provide additional math instruction after school	Antecedent	0.291	2.250
Teach the student to ask for a break	Antecedent	1.000	0.164
Use pre-correction before independent time	Antecedent	1.000	0.75
Ignore student misbehavior to avoid escalation	Consequence (positive)	0.480	1.364
Speak one-on-one with the student	Consequence (positive)	*	0.556
Use differential reinforcement	Consequence (positive)	0.188	0.900
Detention	Consequence (punitive)	2.440	*
In-school suspension	Consequence (punitive)	0.458	*
Implement loss of privileges	Consequence (punitive)	0.519	*

*The odds ratio could not be calculated because a crosstab category contained zero teachers.

**Fisher exact test *p-value* is less than 0.05.

Notably the odds comparing motivating behavior varied more than the racial odds indicating that behavior type played a larger role in intervention selection than student demographic characteristics.

Social Validity. The final research questions asked whether function-based thinking was perceived as a practical and effective approach that teachers would use in the context of the classroom. A five question 5-point Likert scale survey (1 = *strongly* disagree, 2 = disagree, 3 = *neither* agree nor disagree, 4= *slightly* agree, 5 = agree, 6 = *strongly* agree) was used to collect data on teacher participant perceptions about the function-based thinking (See Appendix D). The survey also included three open-ended questions about using function-based thinking as a tool for addressing disruptive classroom behavior. Averages for the five questions were calculated by adding item scores for all participants and dividing each total item score by the number of participants (n=26; see Table 10). On average, most participants responded favorably indicating an overall rating of “slightly” or “strongly” agree with averages ranging from 4.12 to 4.26. Specifically, participants responded most favorably to the importance of selecting function-based interventions with an average response of 4.46. When asked how important it would be to apply function-based interventions to their own students and the likelihood that they would utilize this practice, participants responded slightly lower with average responses at 4.35 for both. Overall, practicality had the lowest average response at 4.12, though this still indicates a favorable response. Open-ended responses to the question regarding practicality included responses reflecting beliefs such as “we are giving into the student”, “it doesn’t teach accountability for students”, “feels like giving into negative behaviors”, and “I worry about this conflicting with high expectations

[which means] going against administrations' guidance". Several participants responded differently and reported that they would use this practice and a few had already begun applying it by the time they returned for phase three of the study. Responses supporting a likelihood to implement included: "I think the FBT is VERY effective since I have started with some students", " I felt it has merit and anything I can do to reduce negative consequences based on behavior is helpful", and "very likely if take time to identify the antecedents and the triggers". Many participants responded that they would need support, more training, and possibly "training for the entire staff to all be on board". Others indicated that "too many students with behavior problems are in one class" and "too many other initiatives are in place". One participant responded that this would be "one more thing". All of these were reported as possible barriers to implementation.

Table 10.

Results of Social Validity Measure Collected During Phase Three

Question	Average Response
How important do you believe it is to select interventions based on function to support student behavior?	4.46
How important do you believe it is to select interventions based on the physical form of the behavior?	4.23
How relevant do you think it is to select interventions based on function for the students you teach?	4.35
What is the likelihood that you will use what you have learned through this professional learning with students you teach?	4.35
Overall, how practical do you think it is to use the function of behavior to guide intervention selection for student behavior?	4.12

CHAPTER 5

DISCUSSION AND CONCLUSIONS

Discussion

Harsh disciplinary practices for relatively minor classroom behaviors, the high rate of recidivism, and the far reaching negative effects associated with exclusionary discipline practices underscore the importance of providing professional learning on practices teachers can use to reduce the likelihood of exclusionary discipline. The disproportionate use of exclusionary discipline with African American males for subjective types of behavior further emphasizes the importance of providing proactive and practical approaches for teachers to positively address student behavior.

The purpose of the present study was to examine the effects of professional learning on function-based thinking on teacher ability to select function-based interventions for disruptive student behavior. Additionally, the study examined the effect of professional learning on FBT on teacher selection of interventions specific to African American males, a student population often subjected to a disproportionate use of negative exclusionary practices.

The study included 26 teacher participants who completed an online professional learning module on FBT. Paired t test were used to compare the participants' pre- and post learning on FBT and Cohen's d statistic was used to calculate the effect size with results that indicated a statistically significant increase in participant learning. Additionally, descriptive statistics were used to assess change in interventions selection after the online professional learning module and results indicated a decrease in the

selection of punitive consequence interventions. Odds ratios were used to assess differences in interventions selected by behavior function (escape-motivated or attention-seeking) and race (African American or Caucasian). Results from this analysis yielded various outcomes. Finally, descriptive statistics were used to examine the social validity of FBT as a way to interact with student behavior. Overall, FBT was perceived as an effective way for engaging with student behavior. Discussion points and conclusions are presented in this chapter organized by the research questions. Finally, limitations of this study and implications are discussed.

Research Question: Are teachers able to select function-based interventions accurately after completing professional learning on function-based thinking? Findings from this study indicated that teachers were able to increase their knowledge of FBT as a result of participating in an online professional learning module completed in approximately 80 minutes. A statistically significant increase was found in the learning associated with the online professional learning module as measured by pre- and post learning assessments. Of the 26 participants, 88% were able to increase their selection of function-based interventions upon completion of the module.

These findings also suggest that general education teachers (92% of the participants in this study) were able to increase learning around FBT. This adds to previous research on professional learning that was effective in increasing teacher knowledge on identifying function-based supports as previous study participants included counselors, administrators, and specialist, but no general education teachers (Stirckland-Cohen & Horner, 2015; Loman & Horner, 2014). Additionally, much of the research demonstrating the effectiveness of function-based supports has involved the support of external experts to identify and/or

implement the interventions (e.g., Filter & Horner, 2009; Newcomer & Lewis, 2004; Payne et al., 2007). In this study, general educators demonstrated the ability to apply function-based thinking as a result of an efficient means (time) of professional learning.

These findings support previous research that suggested teachers are able to identify function-based supports as a result of a simplified process and effectively designed professional learning (Loman & Horner, 2014; Strickland-Cohen & Horner, 2015). This research also supports the findings of other research that demonstrates educators can think functionally about behavior as measured through means such as teacher interviews and confirmed through additional analysis (Ingram et al., 2005). Furthermore, these results support important components of professional learning recommended by previous researchers including specific learning objectives and pre- and post learning assessments (Loman & Horner, 2014; Strickland-Cohen & Horner, 2015).

Research Questions: What are the effects of providing professional learning on function-based thinking and teacher selection of interventions in response to escape-motivated and attention-seeking behavior? How do the effects of providing professional learning on function-based thinking differ based on student characteristics of race? This study examined teacher selection of antecedent and consequence interventions in response to pre- and post case studies that differed by function (escape-motivated or attention-seeking) and race (African American or Caucasian). Results indicated that collectively, teachers decreased their selection of punitive consequences in response to case studies on student behavior. Participants were assigned randomly to groups with pre-determined pre- and post case studies. Counter balancing was used to counteract for any effects on participant responses due to function, perceived difficulty of case study scenario

based on function, and/or race. Descriptive analysis was used to examine intervention selection before and after the professional learning. Findings indicated that collectively, there was a decrease in the selection of punitive consequences from an average of 0.73 to an average of 0.12. Specifically, decreases were shown with the selection of detention (from 23.1% to 3.8%), in-school suspension (from 11.5% to 3.8%), and for loss of privileges (from 38.5% to 3.8%). This addresses the issues identified in the literature with the over-reliance on exclusionary or punitive practices to respond to relatively minor incidents (Ciolfi et al., 2011; Skiba, 2002). The behaviors in the case studies included disruption (e.g., making noises, talking out, sighing loudly, throwing materials on the floor), negative comments, and noncompliance with teacher academic requests, all relatively minor behaviors.

Additionally, odds ratios were used to assess differences in intervention selection based on behavior function, race, and impact of professional learning. One-tailed Fisher exact tests were used to determine if the difference in odds was statistically significant for each odds ratio. While there were no statistically significant odds in intervention selection based on race for pre- and post professional learning, there are a few noteworthy differences between pre- and post case results. When looking at the interventions chosen by race, many of those with a higher pre-case odds of selection for a Caucasian student including academic modifications, additional instruction, and ignoring, changed to higher odds for an African American student as a response to the post case. The only intervention with odds that seemed to be influenced by race was differential reinforcement. This intervention's odds were higher for Caucasian students in response to both pre- and post case studies. Equally noteworthy is that the odds of selecting a punitive consequence (detention, in-school suspension, and loss of privileges) was influenced by professional learning. In fact, only one teacher chose each of these as responses

after the professional learning. Finally, the odds comparing motivating behavior varied more than the racial odds indicating that behavior function played a larger role in intervention selection than student race.

Research Questions: What are teachers' opinions regarding the practicality of using FBT within the context of the classroom? What is the likelihood that teachers will apply the professional learning on FBT in their respective classrooms? What are teachers' opinions regarding the effectiveness of using FBT within the context of the classroom? This study examined the social validity of FBT professional learning, teacher perceptions about the importance of using FBT in the classroom to support student behavior, and teachers' perceptions regarding practicality of applying this within the classroom. Overall, general education teachers participating in this study indicated that the professional learning training was a valuable experience. The importance of using function to address student behavior received the highest rating from teachers. Teachers indicated the importance of using FBT to select interventions based on student behavior function. Practicality received the lowest rating of any other items, although the average response indicated that teachers were either "slightly" or "strongly" in favor of this approach. Although teachers responded favorably to the importance of using FBT to support student behavior in general, ratings for applicability to their own students was slightly lower. Participants in this study were mostly middle school (92%) general education teachers teaching in urban school divisions. Perhaps including more examples of urban school settings within the online professional learning module would promote connection to applying FBT in urban school divisions.

It was important to include open-ended responses to capture participant voice and beliefs regarding FBT. Responses to the three open-ended questions were mixed. Open-ended responses indicated that some teachers had already begun to implement this approach within the two to three weeks between the initial meeting and the final meeting (the professional learning module was completed in between as well). Those who had already begun to practice with implementation, responded favorable to the results they were experiencing. Conversely, perceived barriers to implementation based on teacher responses to the open-ended questions included issues with too many other competing “initiatives” and “lack of administrator support”.

Still, some responses to the open-ended questions reflected beliefs that may be barriers to implementation. Statements such as “we are giving into the student”, “it doesn’t teach accountability for students”, and it “feels like giving into negative behaviors” indicate that teacher beliefs may conflict with FBT. Beliefs not aligned with FBT may prevent teachers from moving forward with this approach.

Finally, many participants responded that they would need more support and training. Others indicated that “too many students with behavior problems are in one class” leading to uncertainties with practicality. So while the professional learning experience to increased learning on FBT, teachers may need support on applying it effectively at the class-wide level such as with the Class-Wide Function-related Intervention Team (Kamps et al., 2011; Willis et al., 2010).

Conclusions

There are several limitations and implications with the present study. A discussion of limitations of the present study will be discussed followed by implications.

There are several limitations of the present study. First, participation in this study was voluntary so it is likely that the participants were highly motivated and willing to put energy into learning about new ways to support students. Additionally, the sample size was small and a larger sample size might provide more robust results. Participants from this study are from urban school divisions and may not be representative of educators across other types of school divisions (e.g., rural, suburban).

There are also several implications for this study. First, the professional learning module used in this study was delivered online, a much less resource intensive method for providing professional learning opportunities to educators. The online delivery also allowed the learner to complete the module independently at their convenience. The online module included best practices for professional learning and was formatted in a teacher-friendly way, increasing the likelihood of learning and acceptability (Gable, 2014). Participants, who were mostly general education teachers (92%) increased their knowledge about FBT through the completion of this online module which adds to the literature that educators can increase learning and ability to accurately identify function-based supports (Loman & Horner, 2014; Strickland-Cohen & Horner, 2015).

Additionally, the module focused on a simplified process to learn about function-based thinking, which is a foundational component of FBA, a practice with a substantial research base supporting its effectiveness with changing student behavior based. Morin and Battalio (2004) concluded that providing professional learning on the evidence-based perspective that underlies FBA (what motivates student behavior or its function) will equip teachers with the tools to support more effective responses to student misbehavior.

Finally, general education teachers decreased their selection of punitive and exclusionary discipline practices after completing the online professional learning. Although research does not support the use of negative or exclusionary practices (Skiba, 2002), school personnel continue to rely on suspension and expulsion to address relatively minor student infractions such as: classroom disruption, disobedience, and disrespect (Ciolfi et al., 2011; Skiba, 2002). Research supports the need for a shift in practices from traditional reactive and aversive approaches to more proactive and preventive responses aligned with function to effectively support changes in disruptive classroom behavior (Bradshaw et al., 2008; Campbell & Anderson, 2008; McIntosh et al., 2008). FBT can be a framework applied by general education teachers as a means of effectively responding to minor behavioral incidents for a larger number of students, potentially including vulnerable populations subjected to disproportionate disciplinary practices.

The case studies focused on minor behavioral incidents occurring in the classroom. They also included data that occur naturally within the context of a school setting (e.g., grades, previous end-of-year assessments, office discipline referrals, tardies, and attendance). This addresses the opinions put forth in the literature that suggest the need to explore procedures that are simple enough to implement within the daily educational setting (Payne et al., 2007). Future research should investigate FBT with naturally occurring data sets to ensure data-informed FBT.

While there were no statistically significant differences in the odds of intervention selection by race or behavior, there were a few noteworthy considerations. Mainly, differential reinforcement was not selected in response to the case studies with African

American students. Future research should examine teacher selection of more specific interventions, mainly those with large effect sizes such as feedback (Hattie & Timperley, 2007). This could contribute to the equitable use of evidence-based practices. Teacher attention has been identified as a common function (Kamps et al., 2011); therefore, this may be a specific practice with important implications for equitable usage.

Authorities assert that function-based thinking is a key component of the use of functional behavior assessment (FBA) to design effective behavioral supports for student behavior (Carr & Duran 1985; Mustian, 2010; Strickland-Cohen & Horner, 2015). Despite the research supporting the use of FBA to address a diverse student population with behavioral challenges, barriers such as a lack of resources and skills (Scott et al., 2005), continue to impede the ability of school personnel to use the practices associated with FBA and behavioral support plans as a proactive measure to prevent student misbehavior. Professional learning for function-based thinking as a way to produce a preventative approach to minor classroom behavior may be one way to support teachers in implementing effective practices for struggling students. Using FBT to address student behavior effectively may reduce the overreliance on exclusionary discipline practices for students, including those from groups with disproportionality. Finally, FBT may provide a way for teachers to incorporate effective academic and behavioral supports to reduce office disciplinary referrals and/or referrals to more restrictive environments and educational services.

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APPENDIX A

PRE- AND POST PROFESSIONAL LEARNING ASSESSMENTS

Identifying Behavioral Interventions based on a Functional Behavioral Assessment

Student Jordan Grade 4th Date Today

#1 Read the ABC Summary of Behavior below and Complete the tasks below the dashed line.

<p>Routine <u>Science</u></p> <p>Antecedent/Trigger <i>Independent work - Asked to work independently for 10 min. or longer on science worksheet or</i> (NOTE: student reads at 5th grade level & can accurately answer questions on worksheet)</p>	<p>Problem Behavior <i>Off-task questions & remark that turn into power struggles, frequently says "you don't like me", blurts out responses, engages in disruptive behavior (e.g. pencil tapping, asking for new book, worksheet, pencil)</i></p>	<p>Consequence/Function <i>Gets adult attention</i> Teacher response, power struggle; teacher pulls student aside to talk for a few minutes, ensuring student she "likes him, but not his behavior"</p>
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#2 Identify the Most Appropriate Alternative Behavior based on the Function of Behavior above

A Alternative Behavior

CHECK 1

- Respectfully ask peers for help
- Wait to ask teacher questions after instruction or during breaks
- Student earns computer for completing work
- Raise hand and ask teacher for help
- Take a work break

#3 Select the Interventions that Best Match the Function of Behavior in the Summary Statement above:

Manipulate Antecedent to prevent problem & prompt alternate/desired behavior	Teach Behavior Explicitly Teach Alternate & Desired Behaviors	Alter Consequences to reinforce alternate & desired behavior & extinguish negative behavior	
B CHECK 1	C CHECK 1	D Positive CHECK 2	E Negative CHECK 2
<p>Move student's seat closer to the teacher</p> <p>Teacher checks in with student on arrival and during independent work</p> <p>Have peers remind student to pay attention & raise hand</p> <p>Warn student she will be sent to the office if she makes negative comments</p> <p>Have all materials ready for student upon arrival to class</p>	<p>Teach student to finish worksheet, then ask teacher if she can talk with a peer</p> <p>Teach student to take a break</p> <p>Teach student to ask for an alternate assignment</p> <p>Teach student to wait to ask teacher questions during breaks</p> <p>Teach student to respectfully ask teacher for help</p>	<p>Teacher gives student frequent positive attention for on-task respectful behavior</p> <p>Student earns 5 min. free time with peer for being on task in class</p> <p>Peers praise Jordan for on-task behavior</p> <p>Let student work with teacher if respectfully asks</p> <p>Let student work with peer tutor if respectfully asks</p>	<p>Peers earn "Wow Cards" for ignoring Jordan's negative behavior</p> <p>Teacher talks with student about "being respectful" after she makes negative comments</p> <p>When student begins off-task behavior give brief visual prompt to ask teacher for help</p> <p>Ignore student's negative comments to avoid power struggle</p> <p>When student makes negative comments send to talk to the counselor</p>
<div style="border: 1px solid black; display: inline-block; padding: 5px;">Remember to Check 2 in each column</div>			

Identifying Behavioral Interventions based on a Functional Behavioral Assessment

Student Morgan Grade 6th Date Today

#1 Read the ABC Summary of Behavior below and Complete the tasks below the dashed line.

Routine <u>Social Studies</u>		
<p>Antecedent/Trigger <i>Task too difficult: When asked to write paragraphs, essays, answer questions in writing; student struggles with spelling and sentence</i></p> <p>(NOTE: student verbally answers most questions successfully in large</p>	<p>Problem Behavior <i>Student immediately refuses to work, doodles, throws book paper & pencil on floor, says "soc'l studies is lame", makes negative comments to the teacher</i></p>	<p>Consequence/Function Escape Difficult Task <i>-Escape Writing sentences & spelling; after initial prompts teacher quits asking student to write, if behavior escalates student is sent to hall or office</i></p>

#2 Identify the Most Appropriate Alternative Behavior based on the Function of Behavior above

Alternative Behavior

CHECK 1 **A**

- Student earns desired computer time for each sentence written
- Ask to write on large lined paper
- Do writing & have a peer check spelling
- Ask to take a break from writing
- Complete the task then take a 2 min. break

#3 Select the Interventions that Best Match the Function of Behavior in the Summary Statement above:

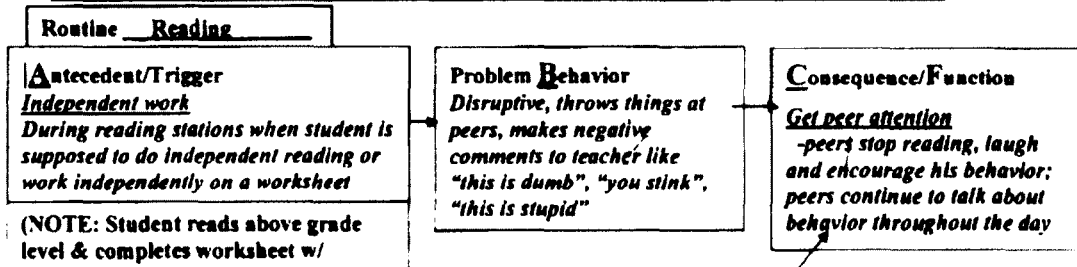
<p>Manipulate Antecedent to prevent problem & prompt alternate/desired behavior</p> <p>B CHECK 1</p> <ul style="list-style-type: none"> <input type="checkbox"/> Give student more time to complete the writing task <input type="checkbox"/> Move student's seat to the back of the room to reduce disruption <input type="checkbox"/> Give student high-interest topics to write about (e.g. student really likes football) <input type="checkbox"/> Have student dictate answers instead of writing <input type="checkbox"/> Have student do writing task on large lined paper 	<p>Teach Behavior Explicitly Teach Alternate & Desired Behaviors</p> <p>C CHECK 1</p> <ul style="list-style-type: none"> <input type="checkbox"/> Teach student to ask peer to check spelling <input type="checkbox"/> Teach student to ask for large lined paper to write on <input type="checkbox"/> Teach student to ask teacher for a break <input type="checkbox"/> Have student write what he did wrong & what he should do next time <input type="checkbox"/> Teach student to ask for a different topic to write about 	<p>Alter Consequences to reinforce alternate & desired behavior & extinguish negative behavior</p> <p>D Positive CHECK 2 ←</p> <ul style="list-style-type: none"> <input type="checkbox"/> Let student choose topic to write about after writing 5 sentences <input type="checkbox"/> Student earns 1 minute computer time for each sentence completed or when on task for 5 min. <input type="checkbox"/> Student gets a break when asking appropriately <input type="checkbox"/> Student gets extra recess time for finishing writing tasks all week <input type="checkbox"/> After writing 5 sentences, student gets to complete writing assignment in special seat 	<p>E Negative CHECK 2 ←</p> <ul style="list-style-type: none"> <input type="checkbox"/> Ignore student misbehavior to prevent escalation <input type="checkbox"/> Give student a warning that he will be sent to office if he doesn't get writing <input type="checkbox"/> Have student stay in during recess to finish work w/ teacher help <input type="checkbox"/> After student gets disrespectful have him tell you the answers instead of writing <input type="checkbox"/> When student begins refusing tell student to ask for a break
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Remember to Check 2 Responses in each column

Identifying Behavioral Interventions based on a Functional Behavioral Assessment

Student Quinn Grade 3rd Date Today

#1 Read the ABC Summary of Behavior below and Complete the tasks below the dashed line.



#2 Identify the Most Appropriate Alternative Behavior based on the Function of Behavior above

A

CHECK 1

Alternative Behavior

- Ask to read or work with a peer
- Ask for a work break
- Earn extra recess w/ peer for finishing work quietly
- Read quietly and finish worksheet independently
- Ask to talk to the teacher

#3 Select the Interventions that Best Match the Function of Behavior in the Summary Statement above:

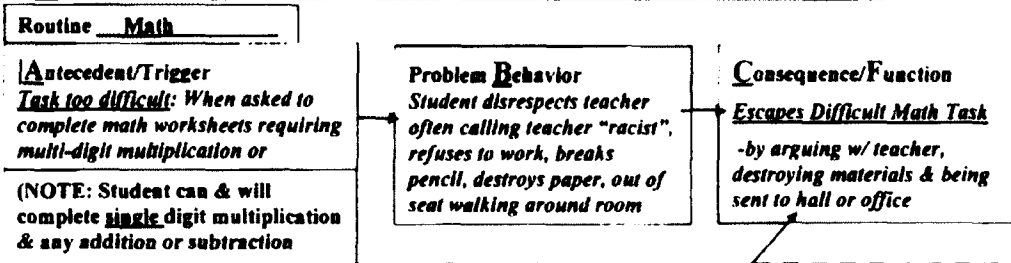
<p>B</p> <p>Manipulate Antecedent to prevent problem & prompt alternate/desired behavior</p> <p>CHECK 1</p> <ul style="list-style-type: none"> <input type="checkbox"/> Give student worksheet with fewer problems & easier (2nd grade) reading passages <input type="checkbox"/> Move student's seat closer to the teacher <input type="checkbox"/> Modify reading assignments & independent work to work with a peer <input type="checkbox"/> Remind the student of school rules and not to say disrespectful comments <input type="checkbox"/> Have the student wear headphones to reduce distractions 	<p>C</p> <p>Teach Behavior Explicitly Teach Alternate & Desired Behaviors</p> <p>CHECK 1</p> <ul style="list-style-type: none"> <input type="checkbox"/> Teach student to finish worksheet, then read independently <input type="checkbox"/> Teach student to ask teacher for a break <input type="checkbox"/> Teach student to ask for an alternate assignment <input type="checkbox"/> Teach student to ask to work with a peer <input type="checkbox"/> Teach student to respectfully ask teacher for help 	<p>D</p> <p>Alter Consequences to reinforce alternate & desired behavior & extinguish negative behavior</p> <p>Positive CHECK 2</p> <ul style="list-style-type: none"> <input type="checkbox"/> Student gets to play game with teacher for completing work w/ no negative comments in reading <input type="checkbox"/> Student earns 5 min. of free time with peer for being on task with no negative comments in reading <input type="checkbox"/> Send a note home to the student's parents when Quinn works hard in class <input type="checkbox"/> Let student work with peer if respectfully asks <input type="checkbox"/> Let student work with teacher if respectfully asks 	<p>E</p> <p>Negative CHECK 2</p> <ul style="list-style-type: none"> <input type="checkbox"/> Peers earn "Wow Cards" for ignoring Quinn's negative comments <input type="checkbox"/> Have peers tell Quinn to "be respectful" when he makes negative comments <input type="checkbox"/> When student gets upset provide an alternate assignment or reading passage <input type="checkbox"/> When student starts w/ problem behavior direct the student to ask to work w/ peer <input type="checkbox"/> Have student write what he did wrong & what he should do next time
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Remember to Check 2 Responses in each column

Identifying Behavioral Interventions based on a Functional Behavioral Assessment

Student Dexter Grade 5th Date Today

#1 Read the ABC Summary of Behavior below and Complete the tasks below the dashed line.



#2 Identify the Most Appropriate Alternative Behavior based on the Function of Behavior above

A Alternative Behavior

CHECK 1

- Complete the worksheet without problem behavior
- Finish the multi-digit worksheet then take a break
- Ask teacher for a break from work
- Ask a peer to check his work after each problem.
- Student earns extra recess for completing

#3 Select the Interventions that Best Match the Function of Behavior in the Summary Statement above:

B CHECK 1	C CHECK 1	D CHECK 1	E CHECK 1
<p>Manipulate Antecedent to prevent problem & prompt alternate/desired behavior</p> <p>Move student's seat closer to the teacher's desk</p> <p>Have student join a counseling group</p> <p>Have student complete 3 multi-digit multiplication problems then check with peer</p> <p>Give student worksheets with more single digit & few multi-digit mul/div problems</p> <p>Use a computer game to have student practice multi-digit multiplication</p>	<p>Teach Behavior Explicitly Teach Alternate & Desired Behaviors</p> <p>Teach student to ask a peer to check his work after completing 3 problems</p> <p>Teach student to ask teacher for a break from work</p> <p>Have student write what they did wrong & what they should do next time</p> <p>Teach student to complete the multi-digit multiplication worksheet & then ask for a break</p> <p>Teach empathy; have student write how it feels when he's called racist or called names</p>	<p>Alter Consequences to reinforce alternate & desired behavior & extinguish negative behavior</p> <p>Alt./Expected Behavior</p> <p>Student earns a "Skip 5 problems" card if on-task for 10 min. or completing 5 problems</p> <p>Student earns 5 min in skatepark after finishing multi-digit multiplication worksheet</p> <p>Student gets to do multiplication on computer if on task for 5 min.</p> <p>Student gets to take a break when asking appropriately</p> <p>Student gets extra recess time for finishing worksheets all week</p>	<p>Problem Behavior</p> <p>Have student write an apology immediately for calling teacher "racist"</p> <p>Have student stay in during recess to finish worksheet w/ teacher help</p> <p>When student is disrespectful give him an easier assignment</p> <p>Prompt student to ask for a break when problem behavior begins</p> <p>Warn the student to get to work or he will be sent to Time-out</p>

Remember to Check 2 Responses in each column

APPENDIX B**PRE- AND POST CASE STUDIES**

Escape-Motivated Behavior Case Study for African American Male

Case Study for Justin
November of the Current School Year

This is Justin. Justin is 14 years old and attends Burbank Middle School as an 8th grader.



When Justin is asked to work independently for 15 minutes or longer on a math worksheet, he immediately refuses to begin his assignment. He draws on his paper, throws his book to the floor, and makes negative comments aloud such as “this is stupid”.

The math teacher tells him to get busy, but he does not begin his work and increases the number of negative comments. Once this behavior escalates to this point, the teacher tells Justin to go to the office.

Existing data for Justin

- Academic Achievement
 - Current grades
 - Language Arts: C
 - Math: D-
 - Previous end of year assessment for language arts: Passed Proficient
 - Previous end of year assessment for math: Failed
- Discipline and Attendance
 - 3 Office Discipline Referrals for disruptive behavior during math class
 - 5 unexcused tardies to math
 - 1 unexcused absence (day of math test)

If you were Justin's teacher, what would you do to address his disruptive behavior? Select all that apply.

- | | |
|--|---|
| <input type="checkbox"/> Give the student more time to complete the assignment | <input type="checkbox"/> Modify academic requirements |
| <input type="checkbox"/> Use detention | <input type="checkbox"/> Implement loss of privileges |
| <input type="checkbox"/> Move student's seat to the back of the room to reduce disruption | <input type="checkbox"/> Ignore student misbehavior to avoid escalation |
| <input type="checkbox"/> Teach student to ask for a break | <input type="checkbox"/> In-school suspension |
| <input type="checkbox"/> Speak one on one with the student | <input type="checkbox"/> Provide additional math instruction after school |
| <input type="checkbox"/> Use differential reinforcement (e.g., praise Justin for beginning work) | <input type="checkbox"/> Use pre-correction before independent work time |

Escape-Motivated Behavior Case Study for Caucasian Male

Case Study for Bobby November of the Current School Year

This is Bobby. Bobby is 14 years old and attends Burbank Middle School as an 8th grader.



When Bobby is asked to work independently for 15 minutes or longer on a math worksheet, he immediately refuses to begin his assignment. He draws on his paper, throws his book to the floor, and makes negative comments aloud such as “this is stupid”.

The math teacher tells him to get busy, but he does not begin his work and increases the number of negative comments. Once this behavior escalates to this point, the teacher tells Bobby to go to the office.

Existing data for Bobby

- Academic Achievement
 - Current grades
 - Language Arts: C
 - Math: D-
 - Previous end of year assessment for language arts: Passed Proficient
 - Previous end of year assessment for math: Failed
- Discipline and Attendance
 - 3 Office Discipline Referrals for disruptive behavior during math class
 - 5 unexcused tardies to math
 - 1 unexcused absence (day of math test)

If you were Bobby's teacher, what would you do to address his disruptive behavior? Select all that apply.

- | | |
|---|---|
| <input type="checkbox"/> Give the student more time to complete the assignment | <input type="checkbox"/> Modify academic requirements |
| <input type="checkbox"/> Use detention | <input type="checkbox"/> Implement loss of privileges |
| <input type="checkbox"/> Move student's seat to the back of the room to reduce disruption | <input type="checkbox"/> Ignore student misbehavior to avoid escalation |
| <input type="checkbox"/> Teach student to ask for a break | <input type="checkbox"/> In-school suspension |
| <input type="checkbox"/> Speak one on one with the student | <input type="checkbox"/> Provide additional math instruction after school |
| <input type="checkbox"/> Use differential reinforcement (e.g., praise Bobby for beginning work) | <input type="checkbox"/> Use pre-correction before independent work time |

Attention-Seeking Behavior Case Study for African American Male

Case Study for Jamal
November of the Current School Year

This is Jamal. Jamal is 14 years old and attends Burbank Middle School as an 8th grader.



When Jamal is asked to complete independent seatwork during English, he engages in disruptive behavior such as making noises, blurting out questions to the teacher, and sighing loudly. The English teacher walks over to him and tells him to get to work each time, but he does not begin his work and his behavior escalates. This typically results in a power struggle between Jamal and his English teacher.

Existing data for Jamal

- Academic Achievement
 - Current grades
 - Language Arts: B
 - Math: B
 - Previous end of year assessment for language arts: Passed Proficient
 - Previous end of year assessment for math: Passed Proficient
- Discipline and Attendance
 - 3 Office Discipline Referrals for disruptive behavior during English class
 - 0 unexcused tardies
 - 0 unexcused absences

If you were Jamal's teacher, what would you do to address his disruptive behavior? Select all that apply.

- Give the student more time to complete the assignment
- Use detention
- Move student's seat to the back of the room to reduce disruption
- Teach student to ask for a break
- Speak one on one with the student
- Use differential reinforcement (e.g., praise Jamal for beginning work)
- Modify academic requirements
- Implement loss of privileges
- Ignore student misbehavior to avoid escalation
- Assign to in-school suspension
- Provide additional math instruction after school
- Use pre-correction before independent work time

Attention-Seeking Behavior Case Study for Caucasian Male

Case Study for George
November of the Current School Year

This is George. George is 14 years old and attends Burbank Middle School as an 8th grader.



When George is asked to complete independent seatwork during English, he engages in disruptive behavior such as making noises, blurting out questions to the teacher, and sighing loudly. The English teacher walks over to him and tells him to get to work each time, but he does not begin his work and his behavior escalates. This typically results in a power struggle between George and his English teacher.

Existing data for George

- Academic Achievement
 - Current grades
 - Language Arts: B
 - Math: B
 - Previous end of year assessment for language arts: Passed Proficient
 - Previous end of year assessment for math: Passed Proficient
- Discipline and Attendance
 - 3 Office Discipline Referrals for disruptive behavior during English class
 - 0 unexcused tardies
 - 0 unexcused absences

If you were George's teacher, what would you do to address his disruptive behavior (check all that apply)?

- | | |
|--|---|
| <input type="checkbox"/> Give the student more time to complete the assignment | <input type="checkbox"/> Modify academic requirements |
| <input type="checkbox"/> Use detention | <input type="checkbox"/> Implement loss of privileges |
| <input type="checkbox"/> Move student's seat to the back of the room to reduce disruption | <input type="checkbox"/> Ignore student misbehavior to avoid escalation |
| <input type="checkbox"/> Teach student to ask for a break | <input type="checkbox"/> In-school suspension |
| <input type="checkbox"/> Speak one on one with the student | <input type="checkbox"/> Provide additional math instruction after school |
| <input type="checkbox"/> Use differential reinforcement (e.g., praise George for beginning work) | <input type="checkbox"/> Use pre-correction before independent work time |

APPENDIX C

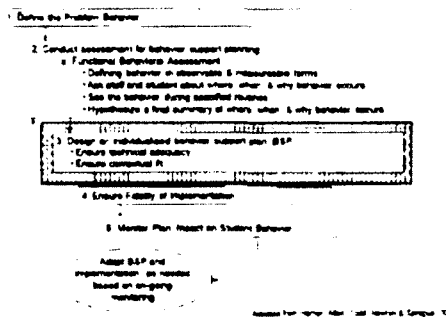
ONLINE PROFESSIONAL LEARNING MODULE OUTLINE

Basic FBA to BSP

Using FBA to Develop Function-Based Support for Students with Mild to Moderate Problem Behavior

Module 4: Critical Features of BSP

The Basic FBA to BSP Process



Basic FBA to BSP Training Series

- Module 1- Teaching Basic Principles
- Module 2- FBA: Practice Interviewing
- Module 3- FBA: Practice Observing
- Module 4- Critical Features of BSP
- Module 5- Building BSP from FBA
- Module 6- Implementation & Evaluation
- Module 7- Leading a BSP Team

Basic vs. Complex FBA/BSP

Focus of the training series

	Basic FBA/BSP	Complex FBA/BSP
For	Students with mild to moderate problem behaviors (behaviors that are NOT dangerous or occurring in many settings)	Students with problems to solve behavioral problems, may be dangerous or occurring in many settings
What	Relatively simple and efficient process for behavior support planning based on "practical" FBA data	Time-intensive process that involves emergency planning, family-centered planning, and collaboration with outside agencies
Developed by whom	Team of school-based professionals (e.g., PBIS team members whose job responsibilities include FBA and behavior support planning)	School-based team including professionals trained to develop and implement intensive interventions for students with severe problem behaviors (e.g., behavior specialist)



Objectives

- Use a Competing Behavior Pathway to Identify Function-based behavior supports that:
 - Teach positive behaviors to replace problem behavior
 - Use strategies to prevent problem behavior & prompt positive behaviors
 - Reinforce replacement & desired behaviors
 - Effectively respond to problem behaviors by redirecting & minimizing their pay-off

Review Morgan



Morgan is a 6th grade student who was referred by her teacher for being "disruptive" (refusing to do work, throws books/papers on floor, and says "this is lame"). This problem occurs most frequently when Morgan is asked to write paragraphs to answer writing prompts in social studies. Morgan can verbally answer most questions successfully in large group discussions, however she struggles with spelling and sentence construction. After she engages in "disruptive" behavior the teacher ignores Morgan and lets her get out of the writing task, as she has sent her to the office in the past. Her behaviors are most likely to occur when she has recently received negative or corrective feedback about writing tasks.

Summarize Morgan's Behavior

Routine: During _____

Setting event More likely when...	Antecedent When...	Behavior The student...	Consequence And/or a result...
			Function: To...

Review

For Morgan, what routine would you focus on for the FACTS and ABC observation?

What antecedents will you be observing for?

What outcomes will you be observing for?

What is the setting event?

Summary of Morgan's Behavior

Routine: During Social Studies

Setting event More likely when...	Antecedent When...	Behavior The student...	Consequence And/or a result...
Parent, teacher, negative feedback	Asked to write paragraphs	Refuses to do work, draws, looks at floor, inappropriate comments	Teacher does not ask for work or send her to office

Function:
To... avoid writing tests

What is wrong with / missing from this summary statement?

Sarah often leaves her seat without permission, walks around the room and talks with peers. Sarah's peers laugh and talk with her. This behavior is more likely if she has forgotten to take her medication before school. The function of Sarah's behavior is to gain access to teacher attention and to escape tasks.

Setting Event	Antecedent	Behavior	Consequence
Sarah forgets to take medication		Walking around room, talking with peers	Attention from Peers Teacher Adult Attention Escape from Task

An FBA is completed when...

You have completed a(n):

1. FACTS interview with the teacher (or other staff)
2. ABC observation to verify the information from the FACTS.
3. Summary of Behavior Table with a Final Hypothesis/Summary of Behavior that you are convinced is accurate.

If not convinced, do more observations and/or interview the student or other staff.

If still not convinced, get help (behavior specialist).

Critical Components of Behavior Support Plans

- #1: Competing Behavior Pathway
- #2: Function-Based Behavior Support Strategies
- #3: Implementation Plan
- #4: Evaluation Plan

From FBA to BSP

- The most important purpose of conducting FBA is to inform the development of comprehensive Behavior Support Plans that directly address the **FUNCTION** of student behavior
- **Start with** FBA results, specifically the **Summary Statement**

Function-Based Interventions

- Start with FBA results = Summary of Behavior
- Summary of Behavior should include a detailed and specific description of:
 - Targeted Routine
 - **Antecedents** triggering behavior
 - Setting events
 - **Problem Behavior**
 - **Consequence/Outcome** of Problem Behavior
 - **Function of Behavior**

Function-Based Strategies must also match fit the context. CONTEXTUAL FIT?

- Do the function-based strategies "fit" with:
 - The skills and values of the implementers
 - The available resources
 - Administrative structure/support
- Strategies with good "fit" are more likely to be implemented accurately and consistently

Team Development

- A behavior support plan is developed based on a completed FBA summary (which you have learned to do!!)
- A team of people closely involved with the student come together to complete the competing behavior pathway
 - Teacher, parent, other staff, and behavior specialist
 - To ensure plan is: **FUNCTION-BASED & CONTEXTUALLY-FIT (NEEDS TO BE BOTH!)**
- This Module will cover **Function-Based Interventions**
 - Ensuring Contextual-Fit will be addressed in a later module.

Analyzing the Summary of Behavior

- Read over the Summary of Behavior, but pay special attention to the Function identified for the problem behavior
 - The Function of Behavior will be central to identifying effective interventions to address:
 - Antecedent
 - Behaviors to Teach &
 - Consequences

Start w/ Summary of Behavior from FBA

Targeted Routine

Setting Events (will be covered in next module)

Antecedent → **Problem Behavior** → **Maintaining Consequence & Function**

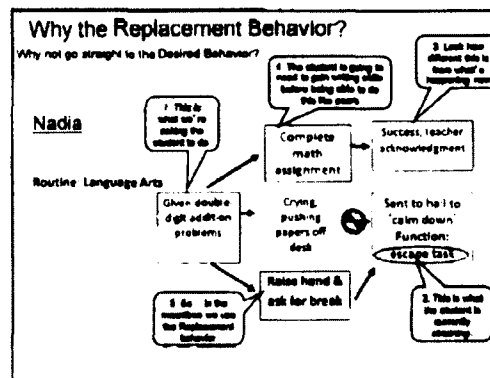
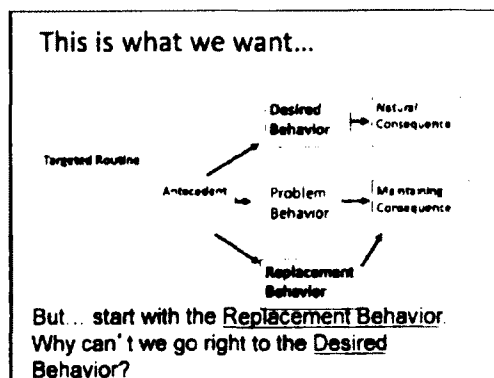
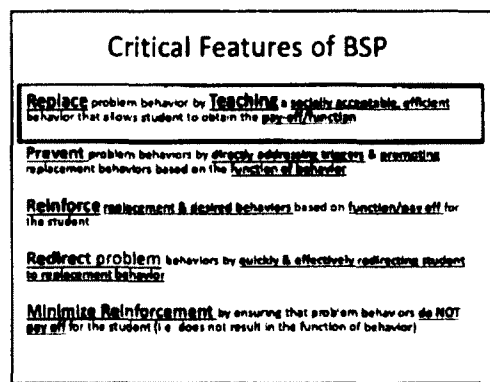
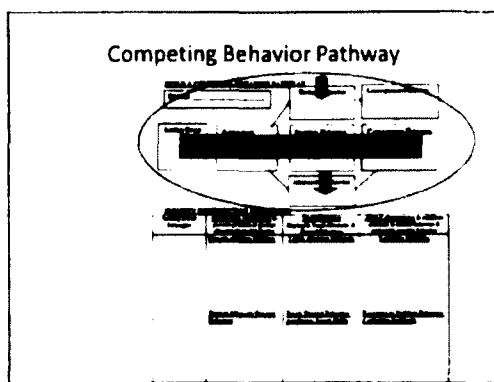
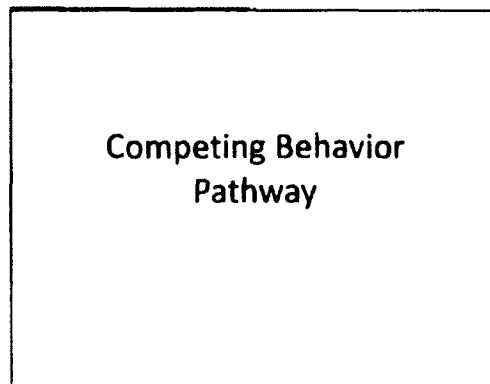
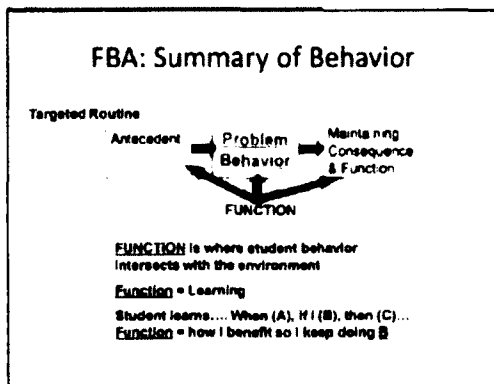
Setting Events
 Includes: **Setting Events Wheel**
 NOTE: student usually receives some positive reinforcement help prompt

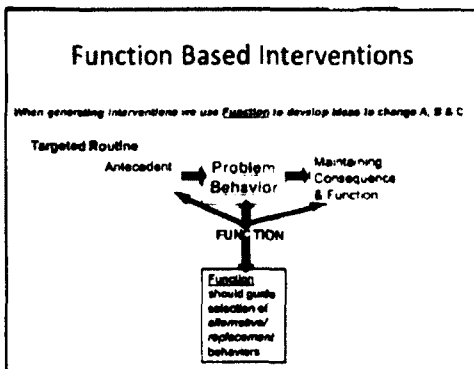
Antecedent/Trigger
 Includes: **Setting Events**
 Includes: **Setting Events**
 Includes: **Setting Events**

Problem Behavior
 Includes: **Problem Behavior**
 Includes: **Problem Behavior**
 Includes: **Problem Behavior**

Consequence/Outcome
 Includes: **Consequence/Outcome**
 Includes: **Consequence/Outcome**
 Includes: **Consequence/Outcome**

NOTE: student usually receives some positive reinforcement help prompt





Understanding Replacement Behaviors

- **Replacement Behaviors are:**
 - an immediate attempt to reduce **disruption & potentially dangerous behavior** in the classroom
 - Take some of the pressure off the teacher
 - designed to actively begin breaking the student's habit of using problem behavior to meet their needs, by replacing it with a more acceptable Replacement behavior

Essential Characteristics of a Replacement Behavior

- An appropriate Replacement Behavior:
 - Serves the same function as the problem behavior
 - Is easier to do and more efficient than the problem behavior
 - Replacement Behaviors require less physical effort & provide quicker, more reliable access to desired outcome/response than problem behavior
 - Is socially acceptable

Which of the Following are Appropriate Replacement Behaviors?

- Leslie is 12, has severe intellectual disabilities, does not use words, and screams during independent work times in the Life Skills classroom. Screaming is maintained by adult attention.
- Which is the best Replacement Behavior?
 - Put head down on her desk and sit quietly
 - Sign "more" to another student
 - Take completed work up to show the teacher
 - Move to sit by another student
 - Use picture communication system to request teacher help

1. Does same function? Does it provide adult attention?

2. Is behavior easier to do than problem behavior?

3. Is behavior socially acceptable?

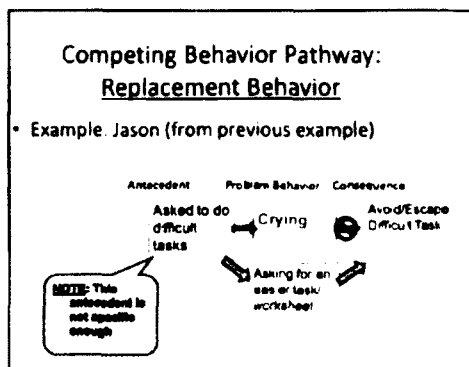
Which of the Following are Appropriate Replacement Behaviors?

- Jason is nine and cries when asked to do difficult tasks. The crying is maintained by avoiding or escaping difficult tasks.
- Possible Replacement Behaviors:
 - More rewards for doing tasks
 - Ask for an easier task/ worksheet
 - Ask to play w/ his Gameboy
 - Appropriately request adult attention
 - Ask to have soda after tasks are done

1. Does same function? Does it provide escape from difficult task?

2. Is behavior easier to do than problem behavior?

3. Is behavior socially acceptable?



Activity 1: Identify the Replacement Behavior

Name: _____ Date: _____

Step 1: Read the ABC Summary of Behavior Below and Consider the rules below the Behavior Box.

Antecedent (A) Trigger Catherine's friend. This child is very popular. Often, when questions are asked, Catherine will quickly volunteer an answer.	Problem Behavior Catherine consistently refuses to work. She often draws lines or paper or pencil on floor. She says "I refuse to take" when negative comments are made.	Consequence (C) Results Catherine's friend. Catherine's friend says "I refuse to take" when negative comments are made. Catherine's friend says "I refuse to take" when negative comments are made.
---	--	---

Step 2: Read the ABC Summary of Replacement Behavior Below and Consider the rules below the Behavior Box.

Replacement Behavior Catherine will draw lines on paper or pencil on floor. She will say "I refuse to take" when negative comments are made.	Yes or No? Why?
--	---------------------------

1. Draw your Definition

2. Is it Better?

3. Is it Feasible/Compatible?

Check your Replacement Behavior for Morgan

Name: _____ Date: _____

Step 1: Read the ABC Summary of Behavior Below and Consider the rules below the Behavior Box.

Antecedent (A) Trigger Catherine's friend. This child is very popular. Often, when questions are asked, Catherine will quickly volunteer an answer.	Problem Behavior Catherine consistently refuses to work. She often draws lines or paper or pencil on floor. She says "I refuse to take" when negative comments are made.	Consequence (C) Results Catherine's friend. Catherine's friend says "I refuse to take" when negative comments are made. Catherine's friend says "I refuse to take" when negative comments are made.
---	--	---

Replacement Behavior
Ask to take a lunch item every day.

Activity 2: Jordan

With a partner go through each of the Competing Behavior Pathway Replacement Behavior options in Example #2 → Yes or No & Why

Name: _____ Date: _____

Step 1: Read the ABC Summary of Behavior Below and Consider the rules below the Behavior Box.

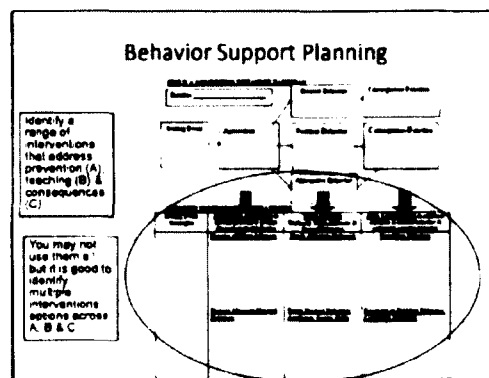
Antecedent (A) Trigger Catherine's friend. This child is very popular. Often, when questions are asked, Catherine will quickly volunteer an answer.	Problem Behavior Catherine consistently refuses to work. She often draws lines or paper or pencil on floor. She says "I refuse to take" when negative comments are made.	Consequence (C) Results Catherine's friend. Catherine's friend says "I refuse to take" when negative comments are made. Catherine's friend says "I refuse to take" when negative comments are made.
---	--	---

Replacement Behavior
Responsibility will pass the day. She will ask to take a lunch item every day.

CHECK

Developing Function-Based Interventions

- ### Critical Components of Behavior Support Plans
- #1: Competing Behavior Pathway
 - #2: Function-Based Behavior Support Strategies
 - #3: Implementation Plan
 - #4: Evaluation Plan



Teaching Replacement Behavior

Teaching Behavior

Teaching

1) Identify skill(s) to teach

- Quit focus when teaching behavior
- Replacement Behavior
- Desired Behavior

ALWAYS START with the Replacement Behavior

- **FIRST** - Teach the Replacement behavior you identified in Competing Behavior Pathway
- Teaching = Review & practice regularly

THEN - teach the Desired Behavior

- this may be something to focus on immediately or only after the student is fluent with the Replacement behavior

Teaching Behavior

Don't assume student already has Replacement Behavior in their skill set

- 1) Develop an observable definition of behavior
 - identify examples & non examples
- 2) Model/ Lead/ Test
- 3) Schedule Review & Practice of Skill/ Behavior Regularly

Check Your "Teaching Behavior" for Morgan

What are the critical features of Teaching Interventions?

First teach the Replacement Behavior

Does Replacement Behavior:

- have more positive consequences?
- is it easier?
- require less effort?

Question	Yes	No	Why?
1. Do you have a clear, observable definition of the behavior you are teaching?			
2. Do you have a clear, observable definition of the replacement behavior?			
3. Do you have a clear, observable definition of the desired behavior?			
4. Do you have a clear, observable definition of the competing behavior pathway?			
5. Do you have a clear, observable definition of the consequences of the behavior?			
6. Do you have a clear, observable definition of the consequences of the replacement behavior?			
7. Do you have a clear, observable definition of the consequences of the desired behavior?			
8. Do you have a clear, observable definition of the consequences of the competing behavior pathway?			
9. Do you have a clear, observable definition of the consequences of the replacement behavior?			
10. Do you have a clear, observable definition of the consequences of the desired behavior?			
11. Do you have a clear, observable definition of the consequences of the competing behavior pathway?			
12. Do you have a clear, observable definition of the consequences of the replacement behavior?			
13. Do you have a clear, observable definition of the consequences of the desired behavior?			
14. Do you have a clear, observable definition of the consequences of the competing behavior pathway?			
15. Do you have a clear, observable definition of the consequences of the replacement behavior?			
16. Do you have a clear, observable definition of the consequences of the desired behavior?			
17. Do you have a clear, observable definition of the consequences of the competing behavior pathway?			
18. Do you have a clear, observable definition of the consequences of the replacement behavior?			
19. Do you have a clear, observable definition of the consequences of the desired behavior?			
20. Do you have a clear, observable definition of the consequences of the competing behavior pathway?			

Example: Teaching Behavior



Teach Morgan to raise her hand & ask for a break. Instead of engaging in negative behavior

*By teaching Morgan an easier replacement behavior to get what he wants, we're making the problem behavior inefficient.

Morgan will need frequent practice, pre-corrections, and prompts to help him get in the habit of using the Replacement behavior

Activity 3 - Jordan

With a partner go through each of the Teaching Behavior options in Example #2 → Yes or No & Why

Question	Yes	No	Why?
1. Do you have a clear, observable definition of the behavior you are teaching?			
2. Do you have a clear, observable definition of the replacement behavior?			
3. Do you have a clear, observable definition of the desired behavior?			
4. Do you have a clear, observable definition of the competing behavior pathway?			
5. Do you have a clear, observable definition of the consequences of the behavior?			
6. Do you have a clear, observable definition of the consequences of the replacement behavior?			
7. Do you have a clear, observable definition of the consequences of the desired behavior?			
8. Do you have a clear, observable definition of the consequences of the competing behavior pathway?			
9. Do you have a clear, observable definition of the consequences of the replacement behavior?			
10. Do you have a clear, observable definition of the consequences of the desired behavior?			
11. Do you have a clear, observable definition of the consequences of the competing behavior pathway?			
12. Do you have a clear, observable definition of the consequences of the replacement behavior?			
13. Do you have a clear, observable definition of the consequences of the desired behavior?			
14. Do you have a clear, observable definition of the consequences of the competing behavior pathway?			
15. Do you have a clear, observable definition of the consequences of the replacement behavior?			
16. Do you have a clear, observable definition of the consequences of the desired behavior?			
17. Do you have a clear, observable definition of the consequences of the competing behavior pathway?			
18. Do you have a clear, observable definition of the consequences of the replacement behavior?			
19. Do you have a clear, observable definition of the consequences of the desired behavior?			
20. Do you have a clear, observable definition of the consequences of the competing behavior pathway?			

Critical Features of BSP

Replace problem behavior by **Teaching** a socially acceptable, efficient behavior that allows student to obtain the pay-off/function

Prevent problem behaviors by **directly addressing triggers & promoting** replacement behaviors based on the function of behavior

Reinforce replacement & desired behaviors based on function/pay off for the student

Redirect problem behavior by quickly & effectively redirecting student to replacement behavior

Minimize Reinforcement by ensuring that problem behaviors do NOT pay off for the student (i.e. does not result in the function of behavior)

Function Based Interventions

When generating interventions we use Functions to develop ideas to change A, B & C

Selecting Prevention Strategies: Modifying Triggers

When identifying preventive antecedent strategies

- Eliminate or alter the trigger so student will no longer need to use problem behavior

The **BEST** antecedent MODIFICATIONS directly address:

- #1 The identified ANTECEDENT
- #2. The FUNCTION of the problem behavior

Prevention Interventions Directly address the identified antecedent

- When asked to read aloud in class, Kyle makes inappropriate comments and pushes his book off his desk
 - Antecedent = Asked to read aloud in class
 - Potential options that more directly address the antecedent
 - Give student passage in advance to practice pre-reading
 - Do not ask student to read aloud in class
 - Let student read 1 sentence directions that he = follow with instead of entire paragraphs from the text
 - Non examples (do not directly address antecedent)
 - Move student closer to the teacher
 - Attend a counseling group about anger management
 - Check in with teacher before reading group
- Now, why is Function important?

Antecedent interventions must address the function the problem behavior serves

- When asked to read aloud in class, Kyle makes inappropriate comments and pushes his book off his desk to avoid public speaking (not related to reading difficulty; related to extreme social anxiety)
 - Does the Intervention address the Function of Behavior
 - Give student passage in advance to practice pre-reading
 - Do not ask student to read aloud in class or respond publicly
 - Let student read 1 sentence directions they are familiar with instead of entire paragraphs from the text

Prevention Interventions

Does the intervention directly address the Antecedent? by function?

Yes or No? Why?

- Give student passage in advance to practice pre-reading
- Move the student's seat to the back of the room to reduce disruption
- Give student high-stakes topics to write about so student really has to be
- Have student give class answers instead of writing
- Have student do writing task on large-lined paper

Prevention Strategies: Prompting the Replacement/Desired Behavior

After the Replacement behavior has been taught Prompts and Pre-corrections are used to support and help remind the student to use Replacement/desired behavior

Example

- Pam's problem behavior is maintained by escape from difficult math assignments.
 - When handing out assignments, Pam's teacher will remind her that she can raise her hand and request an easier task (Replacement behavior)
 - Pam's math assignments will include specific visual prompts to help her successfully complete the tasks (desired behavior)

Prevention Interventions

$A \rightarrow B \rightarrow C$

Instead of giving Morgan the class writing assignment involving paragraph and essays, let's give her an assignment she can be more successful with (e.g., have student dictate answers instead of writing)

By changing A, we can PREVENT Morgan's need to engage in negative behavior, making it irrelevant

Activity 4 - Jordan

With a partner go through each of the Prevention Interventions options in Pre-Test #2 → Yes or No & Why

Student: _____ Date: _____

At least one of the following interventions must be completed before the student can receive a reward.

<p>Checklist 1</p> <p>More rules, not more consequences</p> <p>Teacher should be able to monitor and control the situation</p> <p>Have your reward ready to give attention & reinforcement</p> <p>If you cannot do this, the student requires attention</p> <p>More of consequence than the student requires</p>	<p>Checklist 2</p> <p>Identify the problem behavior and its function</p> <p>Identify the function of the problem behavior</p> <p>Identify the function of the replacement behavior</p> <p>Identify the function of the consequence</p> <p>Identify the function of the antecedent</p>	<p>Checklist 3</p> <p>Identify the function of the problem behavior</p> <p>Identify the function of the replacement behavior</p> <p>Identify the function of the consequence</p> <p>Identify the function of the antecedent</p>
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Critical Features of BSP

Replace problem behavior by Teaching a socially acceptable, efficient behavior that allows student to obtain the same effect/function

Prevent problem behaviors by directly addressing triggers & promoting replacement behaviors based on the function of behavior

Reinforce replacement & desired behaviors based on function/effect for the student

Redirect problem behaviors by quickly & effectively redirecting student to replacement behavior

Minimize Reinforcement by ensuring that problem behaviors do NOT pay off for the student (i.e. does not result in the function of behavior)

Function Based Interventions

When generating interventions we use functions to develop ideas to change A, B & C

Targeted Routine

Antecedent → Problem Behavior → Maintaining Consequence & Function

FUNCTION

- Function should guide selection of prevention strategies
- Function should guide selection of alternative/replacement behaviors
- Function should guide selection of consequences (+) and (-)

Reinforce Positive Behavior

- Reinforcement should focus on 2 different sets of behaviors →

Replacement Behaviors & Desired Behaviors

1. Reinforce the Replacement Behavior

- When the student engages in the replacement behavior, quickly provide the student with an outcome that matches the outcome/ function of the problem behavior
- E.g. if student raises hand to request an easier, substitute assignment, in order to escape difficult tasks → then quickly provide the student with the easier assignment

2. Reinforce Desired Behaviors

Reinforce the Desired Behavior(s), or approximations of the desired behavior

- The ultimate plan is to have the student move beyond the replacement behavior to using the desired behavior
- Reinforcing this progression should start from the beginning of the intervention

Considerations for Reinforcing Desired Behavior

A. The goals & expectations for desired behavior must be reasonable

- Reasonable expectations of student behavior
 - EXAMPLE: on a daily basis the student is out of seat & off task the entire period & has not turned in any work the entire term
 - Probably NOT a Reasonable Expectation = student to be in seat the whole class period and turn in completed worksheets
 - More Reasonable approximations (Start Small & Build on Success):
 - » Turns in assignments 50% completed
 - » On task and trying to complete work for 15 minutes each period

Reinforcing Desired Behavior

B. The timeframe for goals for desired behavior must be reasonable

In the Beginning try to Reinforce Every occurrence or approximation

Reasonable timeframes for Reinforcement

- Probably NOT Reasonable Timeframes for reinforcement
 - If student turns in all worksheets for week 1, he will earn 15 min. in skate park on Friday
 - If student is in seat and on-task for the entire period, he will earn a candy bar
- More Reasonable Timeframes for reinforcement
 - If student completes 5 problems, he can choose 3 problems to cross off the worksheet
 - If student is on task for 10 min., he will earn 4 min. of computer time

Considerations for Reinforcing Desired Behavior

C. The reinforcer must be valued by the student

- The function of behavior is a good place to start when identifying valued reinforcers
- e.g. If the function of behavior is to Gain Peer Attention, the reinforcer should give access to Peer Attention
- e.g. If the function of behavior is to Avoid Difficult Task, the reinforcer could be a "Free Homework Pass"

Reinforcing Positive Behavior

1. Identify an intervention to Substitute the Target Behavior with an Alternative Behavior

2. Is reinforcer valued (based on function of behavior)

Are expectations & outcomes reasonable?

Does it identify Reinforcers? (Critical? unique?)

Empowerment: Student has a real choice

Yes or No? Why?

... but student chooses topic for write about when writing 3 sentences

... Student earns 1 min of computer time for each sentence completed or when on task for 5 min

... Students get a break when asking appropriate

... Student gave extra recess time for finishing writing tasks at work

... After writing 5 sentences student gets to complete writing assignments in special seat

Activity 5

With a partner go through each of the Reinforcement Intervention options in Example #2 → Yes or No & Why

Intervention	Yes or No?	Why?
1. Identify the replacement behavior at another time or location	Yes	Replacement behavior is clearly defined and measurable. It is a socially acceptable, efficient behavior that allows student to obtain the pay-off/function.
2. Identify a response to problem behavior that does not maintain the problem behavior	Yes	Response is a socially acceptable, efficient behavior that allows student to obtain the pay-off/function.
3. Identify a response to problem behavior that does not maintain the problem behavior	Yes	Response is a socially acceptable, efficient behavior that allows student to obtain the pay-off/function.
4. Identify a response to problem behavior that does not maintain the problem behavior	Yes	Response is a socially acceptable, efficient behavior that allows student to obtain the pay-off/function.
5. Identify a response to problem behavior that does not maintain the problem behavior	Yes	Response is a socially acceptable, efficient behavior that allows student to obtain the pay-off/function.
6. Identify a response to problem behavior that does not maintain the problem behavior	Yes	Response is a socially acceptable, efficient behavior that allows student to obtain the pay-off/function.
7. Identify a response to problem behavior that does not maintain the problem behavior	Yes	Response is a socially acceptable, efficient behavior that allows student to obtain the pay-off/function.
8. Identify a response to problem behavior that does not maintain the problem behavior	Yes	Response is a socially acceptable, efficient behavior that allows student to obtain the pay-off/function.
9. Identify a response to problem behavior that does not maintain the problem behavior	Yes	Response is a socially acceptable, efficient behavior that allows student to obtain the pay-off/function.
10. Identify a response to problem behavior that does not maintain the problem behavior	Yes	Response is a socially acceptable, efficient behavior that allows student to obtain the pay-off/function.

Critical Features of BSP

Replace problem behavior by **Teaching a socially acceptable, efficient** behavior that allows student to obtain the **pay-off/function**

Prevent problem behaviors by **directly addressing triggers & promoting** replacement behaviors based on the **function of behavior**

Reinforce replacement & desired behaviors based on **function/pay off** for the student

Redirect problem behaviors by **quickly & effectively** redirecting student to replacement behavior

Minimize Reinforcement by ensuring that problem behaviors do **NOT** **pay off** for the student (i.e. does not result in the function of behavior)

Redirect Problem Behavior

When Student engages in the problem behavior

Redirect or Prompt the student to use the replacement behavior

A subtle gestural or verbal prompt to remind student to use the replacement behavior can effectively get the student on track. e.g., Raising your hand to prompt hand-raising behavior (replacement-behavior); OR saying "if you raise your hand you can take a break"

- When the student engages in the replacement behavior, quickly provide the student with an outcome that matches the function of the problem behavior
 - This should also help to prevent escalation
- E.g. if student makes hand to request an easer or substitute assignment, in order to escape difficult tasks → then quickly provide the student with the easier assignment

Minimize Pay Off of Problem Behavior

Minimize the Pay off of Problem Behavior by:

- Making sure the problem behavior no longer works for the student
- Identifying a response that **does not result in the desired pay/off or the function** of the problem behavior
- E.g., if the function of problem behavior is to **escape the task**, make sure when the student engages in problem behavior they do not escape the task (e.g., must stay in for recess to complete the task)
 - Time out may not be effective if the function of student behavior is to escape the task

Responding to Problem Behavior: Redirect & Minimize

Intervention	Yes or No?	Why?
1. Identify the replacement behavior at another time or location	Yes	Replacement behavior is clearly defined and measurable. It is a socially acceptable, efficient behavior that allows student to obtain the pay-off/function.
2. Identify a response to problem behavior that does not maintain the problem behavior	Yes	Response is a socially acceptable, efficient behavior that allows student to obtain the pay-off/function.
3. Identify a response to problem behavior that does not maintain the problem behavior	Yes	Response is a socially acceptable, efficient behavior that allows student to obtain the pay-off/function.
4. Identify a response to problem behavior that does not maintain the problem behavior	Yes	Response is a socially acceptable, efficient behavior that allows student to obtain the pay-off/function.
5. Identify a response to problem behavior that does not maintain the problem behavior	Yes	Response is a socially acceptable, efficient behavior that allows student to obtain the pay-off/function.
6. Identify a response to problem behavior that does not maintain the problem behavior	Yes	Response is a socially acceptable, efficient behavior that allows student to obtain the pay-off/function.
7. Identify a response to problem behavior that does not maintain the problem behavior	Yes	Response is a socially acceptable, efficient behavior that allows student to obtain the pay-off/function.
8. Identify a response to problem behavior that does not maintain the problem behavior	Yes	Response is a socially acceptable, efficient behavior that allows student to obtain the pay-off/function.
9. Identify a response to problem behavior that does not maintain the problem behavior	Yes	Response is a socially acceptable, efficient behavior that allows student to obtain the pay-off/function.
10. Identify a response to problem behavior that does not maintain the problem behavior	Yes	Response is a socially acceptable, efficient behavior that allows student to obtain the pay-off/function.

Example: Redirect & Minimize

A → B → C

We must **ignore** to (C) let Morgan avoid long writing tasks by (B) engaging in disrespectful behavior & **instead** prompt her to raise her hand and (C) reward her for (B) raising her hand & asking for a break (Replacement Behavior)

*By not providing Morgan w/ what she wants when she engages in disrespectful behavior we are making the problem behavior **ineffective**.

It is important that we work hard to **Reinforce** Morgan for engaging in the replacement behavior, or she is likely to go back to & escalate the problem behavior

Activity 6

With a partner go through each of the **Redirect & Minimize** intervention options in Example #2 → **Yes or No & Why**

Name: _____ Date: _____

Read the **YES** responses, address them and create an entry into the Appendix

<p>Replace Problem Behavior Identify a socially acceptable, efficient behavior that allows student to obtain the pay-off/function</p>	<p>Prevent Problem Behaviors Address the triggers of the problem behavior and provide replacement behaviors based on the function of behavior</p>	<p>Reinforce Replacement & Desired Behaviors Reinforce the replacement behaviors based on function/pay off for the student</p>
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Minimize Reinforcement by ensuring that problem behaviors do NOT pay off for the student (i.e. does not result in the function of behavior)

Key Points from Module 4: Critical Features of BSP

Replace problem behavior by **teaching** a socially acceptable, efficient behavior that allows student to obtain the pay-off/function

Prevent problem behaviors by **directly addressing triggers** & providing replacement behaviors based on the function of behavior

Reinforce replacement & desired behaviors based on function/pay off for the student

Redirect problem behavior by quickly & effectively redirecting a student to replacement behavior

Minimize Reinforcement by ensuring that problem behaviors do NOT pay off for the student (i.e. does not result in the function of behavior)

Critical Components of Behavior Support Plans

- #1: Competing Behavior Pathway
- #2: Function-Based Behavior Support Strategies
- #3: Implementation Plan
- #4: Evaluation Plan

Morgan's Function-Based Intervention

Name: _____ Date: _____

Read the **YES** responses, address them and create an entry into the Appendix

<p>Identify Problem Behavior Define the behavior in terms of observable and measurable actions</p>	<p>Identify Function Determine the purpose or goal of the behavior</p>	<p>Identify Replacement Behavior Identify a socially acceptable, efficient behavior that allows student to obtain the pay-off/function</p>	<p>Identify Triggers Identify the environmental conditions that precede the behavior</p>
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Checks for Understanding

Complete both Post-test Vignettes #1 & #2 (Dexter & Quinn)

Comments/Questions about Module #4

- At the bottom of page 4.13 please write any comments/questions you may have pertaining to this module.
- Thank you for your time & attention!

APPENDIX D

SOCIAL VALIDITY: PARTICIPANT SATISFACTION SURVEY

Participant #:

Date:

Directions: You participated in a study in which you received professional learning for function-based thinking (FBT) and apply this practice to selection of interventions to support student disruptive classroom behavior. To determine the practicality and effectiveness and the likelihood that you will use this approach in your classroom to support student disruptive behavior, we would like to know your opinion on the following items. We sincerely appreciate your feedback.

Question	Response				
	<i>Strongly Disagree</i> 1	<i>Slightly Disagree</i> 2	<i>Neither Agree nor Disagree</i> 3	<i>Slightly Agree</i> 4	<i>Strongly Agree</i> 5
How important do you believe it is to select interventions based on function to support student behavior?					
How important do you believe it is to select interventions based on the physical form of the behavior?					
How relevant do you think it is to select interventions based on function for the students you teach?					
What is the likelihood that you will use what you have learned through this professional learning with students you teach?					
Overall, how practical do you think it is to use the function of behavior to guide intervention selection for student behavior?					
Open-ended questions					
What are your opinions regarding the practicality of using FBT within the context of the classroom?					
What is the likelihood that teachers will apply the professional learning on FBT in their respective classrooms?					
What are teachers' opinions regarding the effectiveness of using FBT within the context of the classroom?					

APPENDIX E

PARTICIPANT CONSENT LETTER

Dear Study Participant,

I wish to look at the effects of professional learning about function-based thinking as a potentially efficient and effective way to prevent minor disruptive classroom behaviors from escalating into more problematic concerns for use with all students. Participants will learn about an effective evidence-based approach to address student behavior. If you decide to participate in this study, you will be agreeing to participate in 2 half-hour sessions and complete an online professional learning module on your own (about 80 minutes). This study will examine the impact of online in-service training on selection of behavior interventions.

I want your decision about participating in this study to be absolutely voluntary. Your division has agreed to approve this in-service for teacher recertification points through their internal professional development system. If, at any time during the study, you wish to opt out, you are free to do so and any respective data collected will be destroyed.

I assure you that your identity will be protected. Each participant will be assigned a participant number and individual names will not be collected. Initial participant identifying information will be destroyed upon completion of data collection and the data analysis will be conducted with the remaining de-identified data set. The data collected may be used only in the aggregate for future publications. After the research has been accepted for publication, the data will be destroyed.

The researchers conducting this study include Dr. Robert A. Gable, Professor at Old Dominion University, and Ms. Kimberly Yanek, doctoral candidate at Old Dominion University. Please contact these researchers with any questions (rgable@odu.edu, kyanek@odu.edu).

Sincerely,

Kimberly Yanek

APPENDIX F

OUTLINE OF STUDY PROCEDURES

Function-Based Thinking Research Project

Welcome and thank you for your willingness to participate with this professional learning and research project. Below is an overview of the timeline and requirements for participation.

Check-In Session:

- Δ Identify your participant code using your first and last initials and birthday. For example, TY112365 (two digit month, two digit day, and last two digits of year).
- Δ Record your participant code on the yellow cardstock provided. Keep one for yourself and submit the other before you leave today.
- Δ Your participant code will be used to complete each component of the study and will be entered into a drawing upon completion of all components of the study.
- Δ Read the consent form for participation. All participation in this study is voluntary.
- Δ Complete the case study and submit to the researcher.
- Δ Take copies of the pre- and post- test handouts for the online module. Record your participant number on the pre- and post- test handouts.

On-line Professional Learning Module

- Δ Participants will complete an online module for *Function-Based Thinking*, created by Dr. Chris Borgmeier and Dr. Sheldon Loman with Portland State University. Be sure to enter your 8-digit participant code. Use the following link to access the online module:
https://portlandstate.qualtrics.com/SE/?SID=SV_6n97jpQ2NrPzj01
- Δ Upon completion of the module, participants will receive the results of the pre- and post- tests. Please print two of these- one for your records and one to submit to the researcher during the check-out session.

Check-out Session

- Δ Submit your pre- and post- test results from the online module to the researcher. Be sure to record your participant number on the results.
- Δ Complete the case study and submit to the researcher.
- Δ Complete the participant survey. Please be sure to record your participant number on the survey and submit this to the researcher.
- Δ Each participant completing the check-in case study, check-out case study, pre-and post- tests from the online module, and the participant survey (5 components) will have their participant code entered into a drawing for a \$50 gift card.

Please submit any questions to the researcher, Kimberly Yanek, at kyanek@odu.edu.

With sincerest appreciation,
Kim

APPENDIX G**PARTICIPANT CODE CARDS WITH GROUP ASSIGNMENTS****My Participant Code is:**

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Group 1**My Participant Code is:**

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Group 2**My Participant Code is:**

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Group 3**My Participant Code is:**

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Group 4

VITA

Kimberly Guthrie Yanek, M.S.Ed

EDUCATION:

2015 Expected Ph.D. with Completion date		Old Dominion University; Norfolk, VA; Education an emphasis in Special Education
1997	M.S.Ed	Old Dominion University; Norfolk, VA; Education with an emphasis in Special Education
1991	B.A.	Old Dominion University; Norfolk, VA; Business Administration with an emphasis in Accounting

EXPERIENCE:

Academic Experience: Assistant to Major Professor; Old Dominion University, Norfolk, VA. (Assisted with development of an online course ESSE 720/820 Curriculum and Instruction: Research into Practice; 621 Effective Interventions for Children and Youth with Challenging Behavior).

Non-Academic Experience:

2015 to present: Positive Behavior Interventions and Supports (PBIS) Assistant Director, Training and Technical Assistance; Sheppard Pratt Health System, Baltimore, MD (Lead the development and delivery of training, technical assistance, and evaluation support of a multi-tiered system of supports (MTSS) for behavior in partner districts within assigned region. Ensures the quality, efficacy, and efficiency of technical assistance activities to advance educational agencies to be self-sustaining in their PBIS implementation. Participates in the development of the program's policy, funding, curriculum, research, and dissemination activities. Supervises assigned staff.

2004 to 2015: Positive Behavioral Interventions and Supports and Behavior Specialist; Virginia Tiered System of Support Consultant; Virginia Department of Education Training and Technical Assistance Center, Old Dominion University, Norfolk, VA. (Facilitate development and delivery of professional learning and coaching capacity for VDOE State Directed Project for Virginia Tiered System of

- Support and Positive Behavioral Interventions and Supports. Work in partnership with school divisions (urban, suburban, and rural) to install sustainable systems to support three-tiered frameworks for Pre-K-12 and alternative settings. Build capacity of local school divisions to implement three-tiered frameworks through professional learning in-services, coaching, and technical assistance around systems change, school-wide positive behavior interventions and supports, multi-tiered system of supports, and challenging student behavior. Work collaboratively with Mid-Atlantic Equity Center to embed culturally responsive practices within the three-tiered framework. Provide coaching throughout education systems to include central office personnel, school administration, and classroom teachers. Provide professional learning and coaching to service providers (internal and external to school divisions) to include community health providers, school psychologists, school social workers, juvenile justice, and other community agencies.
- 1997 - 2004: Special Education Teacher, Virginia Beach City Public Schools, Virginia Beach, VA (Working with students with DD, ED, MR, LD, OHI, and ASD across self-contained, resource, and collaborative teaching models, Teacher of the Year 2001).
- 1993-1996: Manager for Financial Planning Firm, West Financial, Virginia Beach, VA. (Managed accounting department of financial planning firm. Provided support to small businesses, in collaboration with financial planning department, to develop efficient and effective financial systems for professional and personal finances. Provided corporate, personal, and other tax services and business accounting as part of a comprehensive business management and financial planning support system to small businesses.

PUBLICATIONS:

- Commonwealth of Virginia Department of Education. (2009). An Introduction to Effective Schoolwide Discipline in Virginia: A statewide initiative to support positive academic and behavioral outcomes for all students. Richmond, VA: Author.
- Commonwealth of Virginia Department of Education. (2009). Functional behavioral assessment, behavioral intervention plans, and positive intervention and supports: An essential part of effective schoolwide discipline in Virginia. Richmond, VA: Author.
- Gable, R.A., Reed, L., & Yanek, K. (2014). Hard Times and an Uncertain Future: Issues that Confront the Field of Emotional Disabilities. Garner, J. Kauffman, & J.

Elliott (Eds.) *The handbook of emotional & behavioural difficulties* (2nd Ed.)
London: Sage.

- Commonwealth of Virginia Department of Education. (2010). Summit on serving students with emotional disabilities. Richmond, VA: Author.
- Participation in State Implementation of Scaling-Up Evidence-Based Practices (SISEP) Coaching Competency Task Force, February, 2010 to present. (Member, steering committee and committee at large working with national task force to develop guidance documents for innovation neutral coaching competencies for scaling up of evidence-based practices).
- Commonwealth of Virginia Department of Education. (2009). *An Introduction to Effective Schoolwide Discipline in Virginia: A statewide initiative to support positive academic and behavioral outcomes for all students*. Richmond, VA: Author.
- Gable, R.A., Quinn, M.M., Howell, K.W., & Yanek, K. (2008). *Functional behavioral assessment, behavioral intervention plans, and positive intervention and supports: An essential part of effective schoolwide discipline in Virginia*. Richmond, VA: Commonwealth of Virginia Department of Education.

MEMBERSHIP IN PROFESSIONAL SOCIETIES/ORGANIZATIONS:

- 2009-present Member, Association for Positive Behavioral Supports
- 2008-present Member, Council for Exceptional Children; Divisions CASE, CCBD, DLD, TED

PROFESSIONAL ACTIVITIES

Professional Workshops and Presentations:

- Goodman-Scott, E., & Yanek, K. *School Counseling Programs and PBIS: Can they be Implemented Together?* Presented at the Virginia School Counselors Association, Richmond, VA, October 2014.
- Kincaid, D., & Yanek, K. *How Do We Implement MTSS at a State or District Level?* Presented at the 2013 National PBIS Leadership Forum, PBIS: Equity in Education Making Education Work for All, Chicago, IL, October 10-11, 2013.
- Barrett, S., & Yanek, K. *Using the WIKI to Support Training and Technical Assistance*. Presented at the 2011 National PBIS Leadership Forum, Chicago, IL, October 26-28, 2011.
- Gable, R., & Yanek, K. *A Multi-Tiered Model for Planning, Implementing, and Evaluating the Academic and Non-Academic Instruction of Children and Youth with E/BD*. Presented at the 7th Biennial International Conference on Children/Youth with Behavioral Disorders, Council for Children with Behavioral Disorders, October 4-6, 2007.

COMMUNITY SERVICE:

- Yanek, K. & Smith, R. *Positive Behavioral Interventions and Supports in the Home: Putting a Positive Spin on Discipline*. Parent University, Norfolk Public Schools, October, 2013. (Invitational Workshop)

- Yanek, K. Check-in, Check-out (CICO): Supporting students at-risk for behavior problems. Presented at the 2008 Symposium on Professional Collaboration and Inclusive Education, College of William & Mary, November 10-11, 2008. (Invitational Workshop)
- Yanek, K. Positive Behavior Management . Presented at the 2007 Symposium on Professional Collaboration and Inclusive Education, College of William & Mary, November 10-11, 2008. (Invitational Workshop)
- Yanek, K. Supporting positive academic and behavioral outcomes for all students. Presented at the 2007 Virginia Middle School Conference, March 17, 2007.
- Yanek, K. The Young and the restless: Classroom management strategies. Presented at the 2005 Symposium on Professional Collaboration and Inclusive Education, College of William & Mary, November 1, 2005. (Invitational Workshop)