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An Evaluation of Behavior Intervention Plans: Consideration  
of the Interventionist and Contextual Fit

Carly Parkinson Atchley

A thesis submitted to the faculty of  
Brigham Young University  
in partial fulfillment of the requirements for the degree of  
Educational Specialist

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## ABSTRACT

### An Evaluation of Behavior Intervention Plans: Consideration of the Interventionist and Contextual Fit

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Educational Specialist

Behavior Intervention Plans (BIPs) are used in public schools for students with disabilities, replacing target behaviors with socially appropriate behaviors using positive behavior support strategies. However, research suggests that BIPs are often poorly written or fail to be implemented as intended. One reason for the ineffectiveness of BIPs may be that the interventionist (e.g., classroom teacher or other staff member responsible for implementing the plan) and the context of his/her classroom is not considered when plans are written by specialists (e.g., school psychologist, special education teacher). The purpose of this study was to evaluate BIPs written and used for students in public schools in the intermountain west for their contextual fit, using a researcher-developed measure of contextual fit based on key concepts previously established in research and modeled after the Behavior Support Plan-Quality Evaluation, Second Edition (BSP-QE II). With the coding guide created by our research team, we coded previously collected BIPs for practicality, the skill level and competency required for the interventionist to implement, and the consideration of cultural values for both the interventionist and the student who would receive the intervention. In addition, a previous research study by a graduate student at the same university had previously coded BIPs from four school districts in Utah for technical adequacy using the BSP-QE II and, using the results from that study, we ran a Pearson correlation to determine whether there was a statistically significant relationship between BIP quality and contextual fit. Ultimately, our study found that BIPs often failed to include all elements for contextual fit to reasonably be considered established, particularly in the cultural values of those who would implement or receive the plan. In addition, we found a moderate, positive relationship between BIP technical adequacy and contextual fit. Implications for practitioners and ideas for future research are also discussed, including ensuring that BIPs are developed in teams that include the interventionist, creating BIP templates that are culturally and contextually appropriate, and discussing the possibility of research that documents actual interventionist participation in BIP team meetings as a comparison to the results of our scoring guide of BIP contextual fit.

Keywords: behavior intervention plan, interventionist, contextual fit, technical adequacy

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## CHAPTER 1

### Introduction

In 1997, there were an estimated 5.8 million children living with disabilities in the United States, with the majority attending federally funded public-school systems to receive an education (S. Rep. No. 105-17, 1997). In order to accommodate for the needs of students with learning and behavioral disabilities, the Individuals with Disabilities Education Act (IDEA), initially the Education for All Handicapped Children Act, was reauthorized in 1997, requiring that public schools introduce certain policies and procedures designed specifically to enhance the overall learning experience of students with disabilities (H.R. Rep. No. 105-95, 1997).

Preceding the reintroduction of federal law providing accommodations for children with disabilities, research had consistently found that the needs of these particular students were not being met in public schools (H.R. Rep. No. 105-95, 1997). Students with academic, emotional, or behavioral disabilities were continually being disciplined more often and more severely than their peers, with disabled students constituting a significant percentage of both within-school and out-of-school suspensions (Maag & Katsiyannis, 2006; Yell et al., 2000). Additionally, these students were frequently found to exhibit disruptive and destructive behaviors within the classroom, negatively impacting the general learning environment both for themselves and their peers (Bechtel et al., 2012; Walker et al., 2003/2004). Thus, the IDEA required that when behavior that is a result of a particular student's disability impedes the learning of the student in question or of his/her classmates, schools are required to conduct a Functional Behavioral Assessment and, from the results, develop a Behavior Intervention Plan specific to the student's needs (S. Rep. No. 105-17, 1997).

The purpose of a Functional Behavioral Assessment (FBA) is to determine both the contextual factors surrounding target behaviors, such as the events preceding and following a particular challenging behavior, as well as to identify the function or the reasoning behind the student's need to act out (Nelson et al., 1999). Thus, a treatment plan can be created that matches the behavior's function and allows the student to find a more appropriate and socially acceptable behavior that serves the same purpose (Larson & Maag, 1998). With those data, FBAs are then ultimately used in the creation of Behavioral Intervention Plans (BIPs), an additional requirement specified by the IDEA to assist students with disabilities in the classroom (S. Rep. No. 105-17, 1997). A BIP is a formal intervention plan typically authored by school psychologists and special education teachers, often in collaboration with teams of individuals such as the teacher of the student, the parent(s), or occasionally even the student in question (Dragow et al., 1999). Positive behavioral strategies are chosen, and a proactive plan created that relies on individual student strengths to address problematic behavior with better and more socially appropriate responses within the classroom (Walker & Barry, 2017).

The process goes beyond simple positive consequences for appropriate behavior and adverse consequences or ignoring disruptive behaviors in a classroom; rather, FBAs and BIPs seek to determine the appropriate setting and needs for each student with disabilities, such that all students are taught in the most effective learning environment and using the most appropriate strategies for their academic and behavioral success (Horner & Carr, 1997; Naraian, 2017). For example, a consultant may find, through observations and teacher interviews while conducting an FBA, that a particular student starts exhibiting rowdy and inappropriate behaviors at the introduction of math lessons each day. Using contextual factors and antecedent events as a guide, it is determined that the function of the behavior is to avoid math assignments and lessons

because of the student's strong dislike for the subject. Using those data, school teams are thus able to create a BIP that addresses the function of the behavior itself in a more appropriate manner, such as reducing assignment requirements or providing built-in breaks or homework passes as a reward for completion of math assignments.

### **Statement of the Problem**

While the process behind conducting FBAs and developing BIPs may seem straightforward, years of research have consistently found that behavior plans may not be as effective as school personnel would hope (Van Acker et al., 2005). Numerous studies since the introduction of BIPs into federal law have found that many school teams fail to follow mandated regulations for personnel included in the writing process, and that the writing included in BIPs may vary significantly between states and districts due to lack of guidance as to what is required (Etscheidt, 2006). In addition, contextual factors for the individual classroom in which a BIP is introduced may not be considered as plans are written by specialists (Spencer et al., 2012). This often leads to lack of teacher acceptance of the BIP, ultimately resulting in low implementation levels and limited behavior change for the student in question (Walker & Barry, 2017).

According to the National Center for Education Statistics (NCES), the number of students with disabilities attending public schools has now risen to 6.7 million, constituting 13% of total public-school enrollment as of 2016 (NCES, 2018). The need for effective strategies in education and accommodations for students with disabilities has only increased, and school policies and procedures need to rise to match that need through effective BIPs that are implemented with fidelity in the classroom (Fallon et al., 2011). This lasting change can only occur when the interventionist, or the person who is tasked with implementing BIPs, is considered in the creation of the plan.

### **Statement of the Purpose**

The purpose of this study is to understand the consideration being given to the interventionist when BIPs are written through identifying the inclusion of the teacher or other staff member expected to implement the intervention plan in the writing of the BIP, as well as the contextual factors that may affect BIP implementation.

### **Research Questions or Research Hypotheses**

This study will address the following research questions or research hypotheses:

1. Are the interventionist(s) expected to carry out a BIP specifically named and assigned to tasks within the plan?
2. Are BIPs considered practical and efficient by the interventionist(s) expected to implement them?
3. Do BIPs account for the skill level and competency of the interventionist(s) who will implement them?
4. Do BIPs account for the personal values and preferences of the interventionist(s) who are expected to implement them?
5. Is there a statistically significant relationship between BIP quality and contextual fit?

## CHAPTER 2

### Review of Literature

Studies on the effectiveness of BIPs continually find that they are often poorly written, inadequately implemented, and rejected by the teacher or other staff member that is expected to carry out their implementation (Van Acker et al., 2005). One possible reason for this failure to create successful BIPs is that the interventionist and the context of his/her classroom is not being considered when the plans are developed. Research suggests that the first challenge in ensuring more successful interventionist consideration in BIPs may be a better understanding of the legislation introducing the requirement itself, as the IDEA offers limited guidance as to what is expected to be included in behavior plans (Katsiyannis & Maag, 1998).

### Challenges With the IDEA

The need to adjust the reauthorized IDEA arose as educators, administrators, and policymakers began to notice that schools held low expectations for the achievement of students with special education needs, effectively impeding their progress through minimal effort and programs (H.R. Rep. No. 105-95, 1997). In addition, a number of public schools failed to follow research recommended best-practice methods for working with students with emotional, behavioral, or learning disabilities (S. Rep. No. 105-17, 1997). Thus, in order to encourage teachers and administrators to provide the most effective educational support for students in special education, the IDEA introduced policy specifically requiring individualized BIPs for students with disabilities (S. Rep. No. 105-17, 1997). However, the legal requirements for BIPs as written in the IDEA are vague, creating confusion and major discrepancies among states as to when to develop BIPs and what should be included (H.R. Rep. No. 105-95, 1997; Katsiyannis & Maag, 1998).

### *Federal and State Shortcomings*

The programs enacted by the IDEA are to help school systems take the next step in providing appropriate educational opportunities for students with disabilities (S. Rep. No. 105-17, 1997). In order to do so, the law requires that educators identify students that may need additional help beyond that offered by traditional classroom instruction (Nelson et al., 1999). However, while it necessitates supports for disruptive students, the IDEA offers little guidance as to which problematic behaviors a student may exhibit that would require an FBA and BIP (Drasgow et al., 1999). Instead, it simply states that positive behavior supports and strategies must be considered “when appropriate,” without detailing specific situations and behaviors that are covered under this requirement (Cook et al., 2007; IDEA, 1997)

In addition, FBAs and BIPs are only required by the IDEA when problematic behaviors are a manifestation of a particular student’s disability; however, it may be difficult for educators to know whether a student is misbehaving because of a disability or some other extenuating circumstance (Drasgow et al., 1999). While it may seem prudent to simply conduct FBAs and develop BIPs for these students regardless of the reason for their behavior to ensure compliance with the law, the large majority of school districts lack the resources, training, and personnel to assess and write plans for any student that presents problematic behavior (Conroy et al., 2002; Maag & Katsiyannis, 2006). Thus, the failure of IDEA to identify specific guidelines as to when FBAs and BIPs are required creates a strain on the time and resources of school employees (Yell et al., 2000).

The IDEA offers similarly limited guidance on the specific components that must be included in both FBAs and BIPs to comply with federal regulations (Etscheidt, 2006). Although the IDEA does require that individualized plans be based on positive behavioral strategies, it

does not specify what is expected to be included in a typical BIP (Maag & Katsiyannis, 2006; Yell et al., 2000). This forces schools to rely on best-practice standards suggested by researchers in the field, due process hearings, and state regulations to determine how each BIP should be written and which aspects of positive behavior support should be included in the plan itself (Etscheidt, 2006). Additionally, the limited information provided by IDEA leaves much of the interpretation of the legal requirements involved in BIP development to both state and local education systems, who often fail to extend these federal regulations in order to clarify the legal expectations for both FBA and BIPs (Collins & Zirkel, 2017; Yell et al., 2000).

In fact, Conroy et al. (2002) investigated how special education programs in each state had responded to the lack of information included in the IDEA with their own legal requirements. The results saw little improvement: only 30% of the 37 survey respondents reported that their state had additional requirements extending beyond the IDEA for the specific elements to be included in BIPs (Conroy et al., 2002). The vague and open-ended nature of the IDEA leaves its interpretation to state and local education agencies, yet the results of this survey suggest that the majority of states do not offer additional guidelines beyond what is written in the IDEA itself (Collins & Zirkel, 2017; Conroy et al., 2002). In addition, for the small percentage of states that have created additional guidelines beyond those set by the federal government, standards vary considerably between the states themselves. Without specific federal procedures for developing BIPs, significant discrepancies among states as to best-practice regulations may potentially lead to practices that are not recommended (Collins & Zirkel, 2017; Van Acker et al., 2005). This creates inconsistencies in providing the most appropriate education for students with academic, behavioral, or emotional disabilities, rather than the intended result of the IDEA: a



cohesive, national standard for education of all children regardless of disability (H.R. Rep. No. 105-95, 1997).

Finally, the IDEA mandates in-service training for all educators in relation to writing BIPs but fails to determine the content to be included in these trainings (Conroy et al., 2000; Gable et al., 2014). The entire burden of creating such trainings is thus placed on local and state personnel, again creating significant discrepancies among states and districts as to best-practice policies for developing interventions (Collins & Zirkel, 2017; Conroy et al., 2000). Regulations for trainings are similarly inconsistent, with only 25% of the aforementioned 2002 survey respondents reporting statewide training for BIPs as mandatory for educators (Conroy et al., 2002). And while many consider in-service training to be the most important factor in successful implementation of IDEA requirements, state educational systems may be unable to allocate the time, resources, and personnel necessary for mandating and implementing statewide training (Conroy et al., 2002; Gable et al., 2014). As a result, statewide trainings become as ineffective as the state regulations for guidelines in writing BIPs, each a consequence of the inadequate federal requirements set forth by the IDEA (Collins & Zirkel, 2017). These challenges inevitably create difficulties for educators developing behavior plans, more often than not leading to unsuccessful classroom BIPs (Van Acker et al., 2005).

### **Problems With Behavior Intervention Plans**

Potentially due to the lack of guidance provided by the IDEA for the guidelines expected in individualized behavior plans, years of research has shown that the majority of BIPs are often poorly written and ineffective (Van Acker et al., 2005). Issues found by researchers to limit the effectiveness of such plans arise in the creation of the plan, the writing and included information, and a lack of training for those included in plan development.

### ***Creation of the Plan***

While the IDEA states that BIPs should be considered if a student's behavior that is a result of his/her disability interferes with the learning environment of a given classroom, there is very limited guidance as to how these plans are expected to be written (Etscheidt, 2006). As a result, the creation of the behavior plan varies among states, school districts, and even specific schools, many of whom may not be following best-practice recommendations as suggested by the literature (Van Acker et al., 2005).

Research recommends, for example, that teams of multiple diverse individuals be included in the writing of a BIP (Blood & Neel, 2007). Some states even require that BIPs be written in IEP teams, and yet often a lack of time and resources within the public-school system forces schools to cut corners, creating plans with only one or two school personnel (Van Acker et al., 2005). This is particularly problematic considering BIPs should be created by individuals who have a thorough knowledge and understanding of each student in order to develop plans that are appropriate to unique student behavioral challenges (Drasgow et al., 1999; Maag & Katsiyannis, 2006). In instances where only one or two persons are developing a BIP independently, the person in question may be only slightly familiar with the student and circumstance for which a BIP is required, resulting in a plan that is not as individualistic or context-specific as it possible (Solnick & Ardoin, 2010). This also isolates parents from the development of the BIP, who could be an important resource in understanding which interventions are most likely to benefit the student (Thomas, 2010).

Student participation and involvement in developing BIPs is often similarly neglected in schools (Solnick & Ardoin, 2010). For example, Blood and Neel (2007) found student input in BIPs to be almost non-existent, a finding that is especially concerning within their study as more

than 90% of the behavior plans reviewed were for students in either middle or high school.

Where appropriate, seeking student participation in the development of their own BIPs helps increase student self-determination, creating a plan and environment in which a student is more likely to actively participate in the intervention (Blood & Neel, 2007; Korinek, 2015). Despite this best-practice recommendation, however, educators often lack the time and resources necessary to collaborate with students for which they write BIPs, typically resulting in plans that are less likely to be accepted by the students in question (Korinek, 2015). This failure to produce an adequate team for developing BIPs creates additional challenges in that it often results in poorly written plans.

### ***Writing and Information***

A study by Van Acker et al. (2005) conducted a review of 71 FBAs and BIPs, as submitted by public elementary and secondary schools across the state of Wisconsin. The researchers found that over half of these behavior plans contained multiple significant errors, many of which would result in ineffective implementation, including: failure to identify the function of the target behavior, resulting inevitably in a plan that neglects to determine an alternative behavior that accomplishes the same function; aversive consequences to undesired behaviors despite the IDEA requirement that all BIPs use exclusively positive support methods; and continuing previously unsuccessful BIPs, among other oversights.

Of the many alarming discrepancies found by Van Acker et al. (2005) between best-practice and reality in public school BIPs, perhaps the most concerning was that nearly every intervention plan failed to even identify the target behavior educators were seeking to correct. For BIPs in which the target behavior was identified, a discouragingly small percentage of BIPs went on to actually test the behavior hypothesis prior to introduction into the classroom, resulting

in interventions that may still be addressing the wrong function of behavior. Even when the function of a student's behavior is properly identified and tested, research suggests that there is often a lack of connection between the function and the intervention strategies that are chosen for the BIP (O'Neill & Stephenson, 2009). Without adequately specifying problem behaviors and connecting their function to appropriate interventions, a BIP ultimately lacks any purpose and cannot be used to effect change in the classroom (Cook et al., 2007). Poorly written plans may also fail to identify a specific interventionist that is assigned to each aspect of the plan, which can create confusion as to who is responsible for implementing certain BIP elements and decrease the likelihood that they are implemented as intended (Killu, 2008).

In addition, when interventions are created primarily by specialists, such as school psychologists or special education teachers, they may fail to write BIPs in such a way that they can be understood by the interventionist. A review of behavior support plans across mental health fields by Wardale et al. (2018) found that the majority could be classified as “weak” according to research scales, particularly in relation to the readability of the plan. On average, the plans reviewed in the study required, at minimum, a university-level education to understand. This type of formal language can be challenging even for university-graduate educators to comprehend, particularly considering such educators typically have little exposure to the behavior-related formal language included in these types of plans. Understanding may be even more difficult for paraprofessional educators (i.e., classroom aides, typically responsible for more concentrated student assistance) who may be tasked with implementing certain aspects of BIPs alongside teachers and may have a limited university education (Wardale et al., 2018).

One example of this idea is shown through a recent study conducted Charlton et al. (in press), which evaluated BIPs for technical adequacy and compared the quality of plans to

surveys related to teacher perceptions of treatment integrity, or fidelity in implementing the plan successfully in the classroom. Researchers found that there was a significant inverse relationship between treatment integrity and BIP quality; in other words, as BIP technical adequacy increased, teachers reported less success in implementing the plan as it was designed (Charlton et al., in press). Researchers hypothesized that this inverse relationship may stem from the writing of more technically adequate BIPs, which may become more difficult for teachers to implement successfully when they are more technical and complex (Charlton et al., in press).

Overall, research has continually shown that BIPs are often documents of compliance rather than legitimate tools used by educators to help change undesired behaviors in classrooms (Blood & Neel, 2007; O'Neill & Stephenson, 2009). When the target behavior and its function is missing from intervention plans, BIPs serve little purpose but to follow necessary federal regulations, often becoming simply a list of positive and negative consequences to student behavior rather than a comprehensive plan that seeks to replace problem behaviors with more socially appropriate responses (Blood & Neel, 2007).

### ***Lack of Training***

While the majority of states offer training to those who will be involved in creating BIPs, such as school psychologists, general and special education teachers, and administrators, statewide training is often not mandatory, as sending educators to training meetings can be expensive and inconvenient during school hours (Conroy et al., 2002; Fallon et al., 2011). The majority of state education agencies do not require persons writing BIPs to hold a degree, have specific certification, or even complete minimum trainings relating to FBA/BIP procedures (Conroy et al., 2002). Even when BIPs are developed by those whom the school considers to be highly skilled in the process, a significant percentage are still considered inadequate, raising the

question of whether specialists have the training and skill set necessary to complete IDEA requirements (Cook et al., 2007). Minimal guidance or assistance is typically provided to school districts to complete specific BIP procedures, often consisting of short phone calls and school visits from trained professionals rather than comprehensive trainings (Conroy et al., 2002).

The general lack of availability and resources for needed trainings in FBA and BIPs is especially concerning considering that research has found that staff members with better training are more likely to develop significantly more effective intervention plans (Cook et al., 2007). Teams that include at least one member with some amount of training in the FBA/BIP process are less likely to include critical flaws such as those mentioned previously as found by Van Acker et al. (2005). Yet despite the positive impact of trainings on the success of behavior plans, the majority of BIP trainings are still not mandatory in many school districts, resulting in poorly written interventions for students in need of help.

### **Teacher as Interventionist**

In addition to creating poorly written and ineffective behaviors plans, many BIP authors also fail to consider who the interventionist of the plan will be. As those who spend the greatest amount of time with students each day, it is typically teachers that are tasked with the implementation of BIPs written for students in their classrooms (DiGennaro et al., 2007). In spite of this responsibility, educators are often excluded from the writing process, untrained in behavioral management and other skills necessary to comply with the steps included in each BIP, or uncomfortable with the resulting plan and the evaluations that follow (Walker & Barry, 2017).

### ***Lack of Teacher Involvement***

While it is generally recommended that BIPs are created in IEP teams or in teams with multiple collaborators, due to time and resource restrictions many districts report that single

consultants or two-person teams create intervention plans (Van Acker et al., 2005). As a result, the majority of general and even special education teachers are excluded from the BIP creation process, despite the fact that these same teachers will then be expected to implement such plans as written (Albin et al., 1996; Solnick & Ardoin, 2010). Consequently, many teachers are unaware of student BIPs within their own classrooms, even when they were interviewed as part of the assessment process that helped to develop the plan (Blood & Neel, 2007).

It can be additionally problematic when consultants fail to include teachers in the writing process, as the resulting BIP is often complex and difficult for teachers to navigate (Walker & Barry, 2017). The teacher is then expected to successfully implement a BIP they do not understand, leading many teachers to report feeling overwhelmed and frustrated by the responsibility (Walker & Barry, 2017). Similarly, when a BIP is given to a teacher without a detailed explanation of what steps should be taken to ensure that specific behavior management procedures are followed, teachers are often left feeling solely responsible for the entire implementation of the plan, or that the BIP is unnecessary or does not adequately address the presenting problem (Allday et al., 2011; Stephenson et al., 2000). These findings are especially concerning in light of research suggesting that collaborative intervention teams are not only more likely to create an effective BIP, but that, as a result, teachers are more likely to implement the plan as written, ultimately leading to improved student outcomes (Cook et al., 2012).

### ***Untrained Teachers***

In an attempt to create an inclusive learning environment for all students in public education, more students with disabilities are being included in general education classes (Ashman & Elkins, 2004; Fallon et al., 2011). This can create an extra burden for teachers, who are tasked with adjusting their curriculum in an attempt to benefit all students in the classroom

equally (Larson & Maag, 1998). The majority of teachers report student misbehavior to be one of the most difficult aspects of the profession, and inclusive classrooms can create environments in which teachers are more likely to face daily behavior challenges (Clunies-Ross et al., 2008). Teachers typically feel underprepared since they receive limited training in behavior management, even when significant behavioral challenges present themselves in their classrooms (Allday et al., 2011; Ringeisen et al., 2003). Training opportunities themselves are often scarce, despite the fact that most educators believe that special education training should be required for all teachers (Tucker, 2017). When BIPs are established in the classroom, teachers may be expected to implement certain interventions for which they have not been adequately trained, such as precision requests, social skills trainings, and other positive behavioral strategies (Yell et al., 2000). Many educators then feel frustrated or inadequate, and are resistant to BIPs as a result, which are often seen as simply an additional demand on teachers already feeling the strain of inclusive classrooms (Ringeisen et al., 2003; Scott et al., 2003).

This is also true of paraprofessional educators (paras), who may spend more time with students with BIPs in special and general education classes than any other staff member in the school (Hendrix et al., 2018). Due to the amount of time spent with students in the classroom, paras may be asked to play a role in the implementation of certain aspects of student BIPs; in spite of this responsibility, however, paraprofessionals often have even less education and training in behavior management than teachers (Hendrix et al., 2018; Pindiprolu et al., 2007). Just as with teachers, this can lead to frustration and, ultimately, a BIP that is not adequately carried out (Hendrix et al., 2018).



### ***Teacher Discomfort With Interventions***

A number of teachers may object to BIPs they feel are unrelated to their classroom, particularly when they feel as though they are alone in implementing them (O'Neill & Stephenson, 2013; Stephenson et al., 2000). However, research suggests that teachers are also reluctant to participate in BIP procedures when such processes involve formal progress meetings where teachers feel they are being negatively evaluated (Walker & Barry, 2017). Many educators are uncomfortable with observation in their classroom, and consistently report direct feedback to be the least acceptable form of criticism when implementing BIPs, leading many to object even to the initial steps of BIP development to avoid increased evaluations (Scott et al., 2003; Stephenson et al., 2000). Due to time constraints, school psychologists are similarly avoidant of direct observation, and may opt to use rating scales and teacher interviews when developing BIPs even though these processes are less effective at identifying the function of the challenging behavior a student presents (O'Neill et al., 2015).

This idea ultimately creates a discrepancy between the research, which suggests that theoretical teaching alone is insufficient to support educators in carrying out programs, and the wishes of teachers, who tend to reject observation and feedback in the process of teaching and evaluating intervention implementation (Stephenson et al., 2000). Some of the challenge may be in the persons who conduct observations and give feedback; teachers typically prefer seeking assistance from other teachers and school-based resources rather than outside supports, such as unfamiliar district employees (Stephenson et al., 2000). So, while educators report needing additional support from school personnel on behavior management and interventions, in reality research suggests that even if such supports were available many teachers would be unlikely to use them (Stephenson et al., 2000). In fact, a number of the resources requested by teachers are

already accessible within any given school, but educators are either unaware of these options or uncomfortable with the process of seeking support from these aides (O'Neill & Stephenson, 2013). Many teachers miss out on valuable assistance in implementing interventions because they appear undesirable or unavailable, ultimately resulting in low implementation fidelity of classroom BIPs.

### **Implementation Fidelity**

Once a BIP has been written and introduced in a classroom, it must then be effectively implemented by teachers, paraprofessionals, or other interventionists. Implementation fidelity (also known as treatment fidelity, or treatment integrity) is the level to which a given intervention is consistently and continually carried out by those responsible as intended (Brown & Rahn-Blakeslee, 2009). According to some research, the failure of a BIP to initiate and sustain lasting change in the problematic behavior of a student may often have more to do with a lack of correct implementation than inadequacies in the intervention itself (Gresham, 1989). These challenges typically occur due to low implementation levels in classrooms, failure to record implementation levels by the interventionist, and contextual barriers to implementation.

### ***Low Implementation Levels***

Identifying an appropriate intervention to be used with a particular student is a necessary step in creating behavior change, but it is insufficient if not paired with fidelity in the implementation of the plan (Wickstrom et al., 1998). Some researchers suggest that implementation is equally, if not more important than the development of the intervention itself, and integrity in implementation of a given intervention has consistently proven to positively correlate with reducing problematic behavior in students (Browning-Wright et al., 2003; Cook et al., 2012; Walker & Barry, 2017). Despite this, numerous studies have suggested that behavior

plans may not be implemented in classrooms as originally designed (Branch et al., 2018). Some studies have found that even well-written behavior plans may be implemented with full fidelity less than half of the time (Cook et al., 2012). Studies that have shown successful implementation of BIPs have done so with heavy researcher influence, and the majority of other findings suggest that when educators are left to implement behavior plans on their own, treatment integrity decreases significantly (Branch et al., 2018; Cook et al., 2012). This is especially true over time, as teachers may implement BIPs with fidelity when they are first introduced to the classroom but struggle to consistently follow through on interventions in the absence of needed support (Cook et al., 2012). Many educators report difficulty remembering to implement interventions for specific students on top of other daily responsibilities, particularly in classrooms with large numbers of students or multiple students with BIPs (Collier-Meek et al., 2018).

Such consistently negative findings are especially concerning considering low implementation leads to low levels of necessary behavior change (Cook et al., 2012). Variability in treatment integrity can lead to poorer outcomes relating to the intervention that is being applied to a particular student (Branch et al., 2018; Noell et al., 2002). Additionally, low treatment fidelity prevents an educator's ability to determine the actual effect of the intervention itself on behavior change; when a behavior plan is not implemented as intended, it becomes impossible to determine whether any resulting behavior changes, or lack thereof, can be attributed to the plan itself, or rather other extenuating classroom circumstances (Brown & Rahn-Blakeslee, 2009; Gresham et al., 1993).

### ***Failure to Monitor Implementation***

Of additional concern is the fact that oftentimes, implementation levels are not even measured, either by teachers conducting the intervention or consultants overseeing the process

(Walker & Barry, 2017). A study by Cochrane and Laux (2008) found that while the majority of school psychologists considered measuring treatment integrity to be critical to understanding the effect of an intervention on the intended student, only a small percentage reported that they always measure implementation fidelity, with most responding that they only measure occasionally or not at all. Even when treatment integrity data is collected, there is often limited documentation that can then be referenced in determining the effectiveness of BIPs (Cochrane & Laux, 2008; Walker & Barry, 2017).

One frequently cited reason for failure to monitor a classroom BIP is time constraints, both on behalf of teachers who may feel overwhelmed with the responsibility of the plan, as well as for school psychologists, who typically have a large caseload across multiple schools (Branch et al., 2018; Cochrane & Laux, 2008). The acceptability of measuring treatment integrity presents an additional challenge, as teachers often experience discomfort with being monitored, reporting that they feel they are being critiqued for their teaching (Cochrane & Laux, 2008). As a result, a number of school psychologists may opt instead to provide less intrusive opportunities for monitoring implementation, such as self-reports given to teachers (Gresham et al., 2000). While this may help teachers feel more comfortable, it also introduces a level of subjectivity to implementation report levels, as self-reports may not be as reliable as direct observation (Gresham et al., 2000; Wickstrom et al., 1998).

### ***Barriers and Appropriate Context***

Educators involved in developing BIPs may also fail to place needed emphasis on creating a plan that can be implemented easily by special and general education teachers (Ringeisen et al., 2003). In fact, researchers are discovering that the primary focus of consultants writing intervention plans is on the problematic behavior itself, and not the education or skill level of

providers in the classroom (Ringeisen et al., 2003). As a result, there are often a number of barriers that educators face in the appropriate implementation of a BIP as it is given to them (Long et al., 2016). Collier-Meek et al. (2018) explored these barriers, finding that within any given classroom there were challenges to implementation at the intervention level, the provider level, and the organizational level.

At the intervention level, teachers primarily cited the complexity of interventions and the time and persons required for consistent implementation to be the greatest barriers to successfully carrying out BIPs (Collier-Meek et al., 2018). In other words, complex interventions or those that appear to take considerable time to implement outside of a teacher's regular classroom duties are less likely to be perceived as manageable and thus, less likely to be implemented with fidelity (Charlton et al., in press). This is consistent with other research, which has found that as intervention complexity increases, the resulting implementation fidelity decreases (Charlton et al., in press; Wickstrom et al., 1998). In addition, certain interventions may be difficult to carry out without added help in the classroom, and when this help is unavailable it may be especially challenging for teachers to focus on individual student BIPs while also managing general classroom behaviors (Clunies-Ross et al., 2008; Collier-Meek et al., 2018; Hendrix et al., 2018).

Provider levels refer to teachers themselves, who often lack training opportunities specific to BIPs and their implementation, such that the most frequently reported implementation barrier was management of challenging behaviors (Collier-Meek et al., 2018; Domitrovich et al., 2008). Finally, organizational barriers consist of the overall context of the school and classroom in which a BIP is introduced (Collier-Meek et al., 2018; Domitrovich et al., 2008). Behavior plans that are at least partially decided upon by teachers and closely follow the mission and

culture of the school are more likely to be implemented with fidelity, whereas when interventions are chosen without consideration of school-wide and classroom-specific contexts, they become a barrier to treatment integrity (Collier-Meek et al., 2018; Kallestad & Olweus, 2003; Ringeisen et al., 2003).

Each of these teacher-reported barriers as cited by Collier-Meek et al. (2018) suggest that educators responsible for challenging BIPs may need assistance not solely with the intervention itself, but integrating the new ideas included in the plan into the context of their individual classrooms. In fact, while most of the implementation barriers were related to the interventionist (e.g., the teacher), the majority of the suggested strategies involved changes to the intervention or its introduction to the class (Collier-Meek et al., 2018). This is particularly important for consultants and IEP teams that develop BIPs and oversee their implementation, as it places responsibility on the creation of the BIP itself to be more contextually appropriate for individualized classroom settings and lessens the expectation that teachers carry out such plans with fidelity on their own.

### **Purpose**

BIPs are a necessary component to improving conduct and learning in students with disabilities, not only because they are a legal requirement, but because best-practice research has consistently found that, when effectively written and implemented, they are successful in helping struggling students find greater success in the classroom (Nahgahgwon et al., 2010; Scott et al., 2008). Despite legal and research recommendations, however, there is a consistent gap between best-practice as suggested in the literature and what is actually being practiced in schools (Ringeisen et al., 2003). School personnel often mistakenly assume that teachers will implement a BIP with exactness simply because it is introduced and explained to them; in reality, many of

the interventions presented to teachers can be complex and difficult to implement with the limited training and support which teachers typically receive (Walker & Barry, 2017).

Perhaps even more important than the challenging nature of BIPs to implement, however, is that providers consistently fail to consider the context in which a behavior plan will be implemented (Collier-Meek et al., 2018). Change within a classroom resulting from an intervention has to consider the teacher, the organization, and fit into the day-to-day function of an established classroom in order to be effective (Gersten & Brengelman, 1996). Even individual students cannot be considered on their own by teams developing BIPs on their behalf; each student exists within the influence of classroom, family, culture, peers, and other important contextual factors (DuPaul, 2003). Research to determine the best methods for BIPs in classrooms is seldom conducted in an environment in which classroom contexts are taken into account (DuPaul, 2003). Thus, even when interventions are empirically-based and backed by the research, they may not be effective for all teachers or students (Ringeisen et al., 2003).

The idea behind creating behavior plans that are contextually appropriate was first introduced by Albin et al. (1996), who argued that a model of “goodness-of-fit” that considered the context under which an intervention would be implemented was necessary for its success (Albin et al., 1996). Since then, researchers have added to the definition to create what is now referred to as “contextual fit,” or the alignment of an intervention’s procedures to the values, needs, skills, and resources available in the setting in which it will be carried out (Horner et al., 2014). In other words, contextual fit is intended to determine how well a BIP in a particular classroom is designed to match the training levels and personal values of the interventionist tasked with carrying out the plan. Additionally, contextual fit requires that the intervention actually meet the identified need of the target population, as well as have the ability to be

accomplished with the resources available in the classroom (Horner et al., 2014). Thus, contextual fit should be considered throughout the process of selecting evidence-based interventions, initial implementation, and then adjustment and adaptation throughout continued implementation (Horner et al., 2014).

While BIPs are generally developed by consultants and tend to be defined by their quality, contextual fit is defined by the interventionist, or the person who will be responsible for implementing and supporting the plan (Damschroder et al., 2009). It is not enough for a school psychologist or an IEP team to create a BIP that they deem appropriate and likely to produce success; the actual interventionist has to approve of the plan in the context of their personal classroom, values, skills, and resources in order to ensure fidelity in implementation and lasting behavior change as a result (Spencer et al., 2012).

Despite over 20 years of research reiterating the necessity of contextual fit in successful implementation of BIPs since it was first recommended by Albin et al. (1996), studies continually suggest that contextual fit is not being considered when BIPs are developed by individuals other than the interventionist. An analysis of BIPs in schools across the Pacific Northwest by Benazzi et al. (2006, for example, found that plans developed by behavior specialists often included intervention procedures with which interventionists were unfamiliar, were inconsistent with their personal values, appeared to be less focused on the best interest of the student, and were perceived as less efficient to implement in the classroom. Similar studies have produced near-identical results: despite best-practice knowledge that contextual fit is an important consideration when creating BIPs, interventionists are not typically considered when behavior plans are created (Fixsen et al., 2010; McLaughlin et al., 2012).



Since the introduction of BIPs as a legal requirement and subsequent research suggesting that they are often ineffective, a number of studies have been conducted to determine the reason behind these failures in carrying out best-practice standard for BIPs in schools (Blood & Neel, 2007; Collier-Meek et al., 2018; Walker & Barry, 2017). While intervention research studies have independently examined poorly written BIPs and their resulting lack of acceptability by the professional tasked with its implementation, there is little research connecting the two: how the interventionist may not be considered when a BIP is developed. Our research seeks to bridge this research gap by examining intervention plans themselves and discovering whether or not interventionist variables are considered by those that are typically authoring BIPs.

It is possible that consultants and IEP teams developing BIPs focus entirely on the problem behavior of a student without considering the numerous other variables that may affect implementation fidelity. While best-practice research has shown that it is vital that BIPs be personalized to each student, it may be just as valuable for teams developing BIPs to identify the specific person, teacher or paraprofessional, who will actually be expected to carry out the complex parts of each individual behavior plan (Blood & Neel, 2007). By understanding the interventionist's training level, values and teaching style, and the context of their classroom, each BIP is likely to be written in a way that is more closely aligned with the culture and value of the classroom, which research has proven to be an important step in resulting acceptability and thus high implementation fidelity (Collier-Meek et al., 2018). The purpose of this study is to understand the consideration being given to the interventionist and the context for which a BIP is being written through identifying the inclusion of the teacher or other staff member expected to implement the intervention plan in the writing of the BIP itself.

## CHAPTER 3

### Method

The following section describes in detail each of the participants included in our study, the two measures used to evaluate BIPs for technical adequacy and contextual fit, the procedures of our study and the research design and analyses that we employed. Our research follows a study previously conducted by the third author of this study, where BIPs were collected from local school districts and evaluated for technical adequacy using the Behavior Support Plan Quality Evaluation Guide, Second Edition (BSP-QE II; Charlton et al., in press). Instructional Review Board (IRB) approval was previously obtained through the above research, and as a result our research team submitted an amendment to this approval to code BIPs for additional information relating to contextual fit (Charlton et al., in press). We followed similar procedures as those required by the IRB; namely, coding BIPs that had been previously de-identified by local school districts before they were received. A more detailed explanation of the de-identification requirement and obtaining consent is included in the Procedures section below.

### Participants

A previous research team, consisting of graduate and undergraduate students in school psychology and special education, collected copies of BIPs written and used for students in elementary and secondary schools from four intermountain west public-school districts (Charlton et al., in press). Select student demographics and data describing the type and frequency of problem behavior in the districts from which BIPs were collected are presented in Table 1.

BIPs in these participating districts are typically developed by specialists (e.g., special education teachers or school psychologists) and then presented to an IEP team for approval. BIP

interventionists (i.e., the person responsible for the execution of the plan) include special education teachers, general education teachers, and/or paraprofessionals who work with students with problem behaviors in their classroom. For this study, BIPs were collected for students in either elementary or secondary settings, with special education teachers, general education teachers, and paraprofessionals all functioning as interventionists. This allowed us to evaluate a variety of behavior plans across school settings in order to have a better understanding of how the majority of BIPs in participating districts were written, regardless of circumstance. A total of 51 previously collected BIPs were analyzed, which allowed the team to address the typical technical adequacy and contextual fit of the BIPs as well as to conduct specific analyses and comparisons between and within the plans.

Due to the confidential nature of BIPs, the plans were de-identified of the names of any students, plan developers, or interventionists before being received by the research team for analysis. However, student demographics were available for the majority of BIPs received, including student gender, grade, and special education classification or disability. The available demographics are included in Table 2.

**Table 1***Student Demographics From Participating Districts*

Demographic Variable	District A	District B	District C	District D
Total students	36,475	34,945	12,192	6,182
Race (%)				
White	75.9	86.0	42.1	83.0
Hispanic	8.8	10.0	51.4	16.0
Asian/Pacific Islander	3.0	2.0	1.2	1.0
Black	<1.0	1.0	1.76	<1.0
Special Populations				
ELL	5.9	3.0	16.9	10.0
SpEd	9.3	11.5	11.9	8.6
Problem Behavior Incidents				
Bullying	144	24	5	0
Assault	392	85	6	3

*Note.* ELL = English language learners. SpEd = Students served in special education. Data was taken from the study from which previously collected BIPs were analyzed (Charlton et al., in press). Data were reported as the number of incidents that occurred during the 2015-2016 school year, the time frame during which BIPs for the study were collected.

**Table 2***Comparisons of BIP Student Demographics*

Student Demographic Variable	Frequency	Percentage
<b>Gender</b>		
Male	41	80.4
Female	8	15.7
Missing	2	3.9
<b>Grade</b>		
Elementary	35	68.6
Secondary	5	9.8
Missing	11	21.6
<b>Special Education Classification/Disability</b>		
Autism (AU)	6	11.8
Emotional Disturbance (ED)	5	9.8
Specific Learning Disability (SLD)	4	7.8
Other	3	5.9
Missing	33	64.7

*Note.* All BIPs that were evaluated were de-identified by the school district and may not include all of the above information. Missing refers to a BIP in which any of the above demographics were not specified or may have been de-identified before they were received by the research team.

## Measures

We used two different measures to analyze and code each of the BIPs that were collected: a rubric designed to analyze technical adequacy, and a separate measure created by the research team to evaluate the contextual fit of BIPs as they relate to the interventionist.

### *Technical Adequacy: Behavior Support Plan-Quality Evaluator II (BSP-QE II)*

The BSP-QE II was developed as an updated version of the initial evaluation guide (Behavior Support Plan-Quality Evaluator) by Browning-Wright et al. (2003) and is a measure of BIP quality based on key operational concepts of positive behavior support planning. These key concepts include: (a) behavior function, (b) situational specificity, (c) behavior change, (d) reinforcement tactics, (e) reactive strategies, and (f) team coordination and communication (Browning-Wright et al., 2007). The BSP-QE II expands on these six features to assess for 12 different components that should be included in all BIPs, creating a rubric by which BIPs can be measured for adequacy (Webber et al., 2011).

The reliability and validity of the first version of the BSP-QE was tested by Browning-Wright et al. (2003), evaluating 200 behavior plans using graduate students trained by the authors of the measure. Using the same procedures, the initial BIPs were then rated by a second group of advanced graduate students having received the same training one year later and data then submitted for evaluation. The item-total correlations for the rating items of the BSP-QE were found to have a range of .45 to .67, with an average of .59. In tests of internal consistency, the BSP-QE obtained an alpha of .80, which suggested sufficient consistency across items. Finally, the authors also assessed for inter-rater reliability (IRR) with 58% of the total score behavior plans using a Pearson Product Moment Correlation for each item and the total plan score. Overall IRR estimates for the total plan score exceeded .80 and was thus

considered consistent across raters. The overall data collected Browning-Wright et al. (2003) indicated that the BSP-QE had adequate internal consistency and inter-rater reliability estimates.

The BSP-QE II was later developed by Browning-Wright et al. (2007) as an updated version of the original evaluation guide. One hundred graduate students were trained on and coded hundreds of plans for three years after the original edition was created, and the second edition was modeled on their responses to said coding. Significant changes between the first and second version of the BSP-QE include more thorough explanations on how to effectively score and thereafter write BIPs on areas such as: describing the target behavior, analyzing the environment, summarizing interventions, understanding the purpose of the behavior, improving reinforcement provisions, effectively monitoring progress, etc. (Browning-Wright et al., 2007).

Since the development of the BSP-QE II, it has been effectively used in a number of research studies and has consistently been found to be a reliable and valid tool in measuring the technical adequacy of BIPs (MacDonald & McGill, 2013; Medley et al., 2008; Webber et al., 2011). Studies using the BSP-QE II to evaluate behavior plans in school settings for children with disabilities have reported strong IRR among variables, ranging from 0.78 (Kraemer et al., 2008) to 0.84 (Cook et al., 2012). Content validity has also been highly rated: a study by Webber et al. (2011) rated all components of the measure as very important to extremely important. In addition, educational teams trained on BIP quality using the BSP-QE II were later found to develop BIPs that were more technically sound according to best-practice research (Kraemer et al., 2008).

Analysis of BIP technical adequacy was previously completed by the research team from which the collected BIPs were drawn (Charlton et al., in press). For that study, the BSP-QE II

was modified to include seven key features of BIP quality, including: (a) defining the behavior, (b) behavior function, (c) behavior change: environmental alteration and teaching strategies, (d) reinforcement, (e) reactive strategies, (f) team coordination and communication, and (g) goals and objectives. According to researchers from the above-described study, each of the seven selected areas were carefully selected to answer research questions about technical adequacy of BIPs, with each item chosen as those that the BIP-QE creators stated were essential to a well-developed plan (Browning-Wright et al., 2003; Charlton et al., in press). As a result, the seven selected items were: 1) problem behavior, 2) function, 3) teaching strategies, 4) reinforcement, 5) reactive strategies, 6) team coordination, and 7) goals and objectives. Each item was rated on the 3-point Likert-type scale developed by Browning-Wright et al. (2003), with scores ranging from 0 to 2 to produce a maximum score of 14.

### ***Contextual Fit***

Contextual fit refers to how successfully a BIP considers the training levels, values, and resources of a given classroom when creating behavioral strategies that interventionists will be expected to implement (Spencer et al., 2012). Horner et al. (2014) defined contextual fit using eight essential components that establish the fit between an intervention and the environment in which it takes place. Each of these components were evaluated by the lead researcher for relevance relating specifically to the interventionist, from which three were selected: efficiency, skills/competency, and cultural relevance.

Horner et al. (2014) elaborated on these three components, referring to *efficiency* as the practicality of the chosen intervention in terms of the time required for the interventionist to spend on the BIP each day, as well as the personnel, money, and materials needed to implement with fidelity. *Skills and competency* refers to clarifying language within the BIP itself that



identifies how the training, coaching, orientation, and support the interventionist needs will be delivered and who will assist in the process. *Cultural relevance* is a reference to how well the BIP matches the values and preferences of those who will implement, manage, and support the intervention. In other words, the type of intervention and how it is expected to be carried out has to be acceptable and relevant to those who are expected to implement it in a given setting. Each of these three key components of contextual fit determine how a particular interventionist will respond to and be willing to implement BIPs with fidelity and are thus crucial to the overall effectiveness of the behavior plan and resulting behavior change (Damschroder et al., 2009).

As there are currently no measures of contextual fit for BIPs in the literature, this study used the research mentioned above by Horner et al. (2014) in their introduction of the key components of contextual fit. After explaining the importance of efficiency, skills and competency, cultural relevance, and each of the other essential components in establishing contextual fit within an intervention, Horner et al. (2014) provided examples of questions to ask when reviewing a BIP to determine whether or not the plan has adequate contextual fit. We used these sample questions to create a quantitative measure of contextual fit for each BIP that was coded.

In addition to questions relating specifically to components of contextual fit, a preliminary question created by the research team simply asks whether or not the BIP specifies the interventionist (i.e., who is expected to implement the plan or specific components of the plan). In order for a BIP to be measured on appropriate contextual fit of the plan as it relates to the interventionist, the interventionist must first be named and included in the plan itself. Each of the questions used, categorized by their respective key component of contextual fit, can be found in Table 3.

**Table 3***BIP Contextual Fit Questions by Key Component*

	<b>Preliminary</b>	<b>Efficiency</b>	<b>Skills/Competencies</b>	<b>Cultural Relevance</b>
<b>Coding Questions for BIPs</b>	Does the BIP identify specifically who will implement the plan or specific components of the plan?	Are the time and effort for initial adoption reasonable?  Are the time and effort for sustained adoption as efficient or more efficient than current interventions (given the outcomes generated?)	Are the skills needed to implement the intervention defined?  Are materials and procedures available to establish needed skills?  Does the level of skill development fit professional standards and/or the organizational staffing structure?	Are the outcomes of the intervention valued by those who receive them?  Are the strategies and procedures consistent with the personal values of those who will perform them?  Are the strategies and procedures consistent with the personal values of those who will receive them?

*Note.* Responses were scored on a 3-point Likert scale that categorizes the variables as not present, somewhat present, or fully present, with corresponding scores of 0, 1, or 2, respectively.

In order to compare BIP technical adequacy to contextual fit for the same BIP, a scoring guide was created by the research team to model the guide developed by Browning-Wright et al. (2003) for the BSP-QE II. As such, each item relating to components of contextual fit were similarly rated on a 3-point Likert-type scale, with variables categorized as not present, somewhat present, or fully present. These categories corresponded with a score of 0, 1, or 2, respectively. Using several practice BIPs, our measure was pilot tested prior to data collection,

ensuring that each of our questions adequately evaluated the contextual factors in all the of the scored BIPs. The full scoring guide is included in Appendix A of this document.

## **Procedures**

The previously described research team worked with special education directors at participating school districts in the intermountain west to identify recently developed BIPs, both currently in-use or recently used for students with disabilities (Charlton et al., in press). Each district was requested to de-identify the plan before it was sent to the team, requiring that each district remove the name, ID number, or any other means of identification of the student, BIP author, or interventionist(s) that may have been included in the plan. Each district was also required to consent to the study before BIPs could be collected (Charlton et al., in press).

In preparation for BIP coding, a graduate student volunteer was trained on the evaluation and coding procedures for the researcher-designed measure of contextual fit. After completing training described below, BIPs were coded using the contextual fit scoring guide, then evaluated for inter-rater reliability. If they met the acceptable threshold of agreement, they were submitted for analysis. Conclusions were then drawn based from the data that was collected from coding, as well as statistical analyses that were conducted.

### ***Training Procedures for BIP Coding***

A team of researchers, including the lead researcher and a volunteer, both graduate students in school psychology at Brigham Young University, were responsible for analyzing and coding the behavior plans using the measure of contextual fit established by the researcher. The graduate student assistant was trained on all coding procedures by the lead researcher. Training consisted of two hours across two weeks, during which the research team was required to read the government report from which the contextual fit questions were drawn (Horner et al., 2014).

The research team then coded four example BIPs together using the guidelines provided by that government document.

Having been provided these examples of successful coding, the graduate student volunteer was given additional practice BIPs to code individually, with feedback provided as needed based on performance. The lead researcher had previously coded these same practice BIPs to be used for inter-rater agreement. The research assistant then compared results to the lead researcher with an expectation to obtain at-least an 80% or better level of agreement (Stemler, 2004). Whenever that threshold was not met, additional training was provided until an 80% minimum was achieved. Training was considered completed once the research assistant had coded four BIPs individually with a 92% level of agreement with the lead researcher.

Having completed training, both coders were then randomly assigned eight BIPs to code individually over the course of a week. The research team then met once each week for four weeks to resolve questions and test for inter-rater reliability, as well as assign eight additional BIPs to be coded individually before the following research meeting.

### ***Inter-Rater Reliability***

Using a random number generator, BIPs were randomly divided between the two coders and then coded individually using the researcher-developed measure of contextual fit. Best-practice guidelines suggest that values greater than 80% are acceptable for establishing credible inter-rater reliability (Stemler, 2004); as such, at least 25% of the coded behavior plans were expected to reach an agreement level of 80% or higher before they could be used in the study. In the end, 29% of the BIPs were randomly selected, again by random number generator, and re-coded independently in order to determine levels of inter-rater reliability, with an overall IRR agreement level of 96%.

## Research Design and Analysis

This study employed a systematic records review design. The School Archival Records Search (SARS) is one example of a records review used to systematically code existing school records. Developed by Walker et al. (1990), the SARS is designed to code basic school records for individual students on certain variables (e.g., attendance, achievement, school failure, disciplinary contacts) to screen for at-risk students and determine appropriate interventions on a personal basis. Our study followed a similar design: in this case, the records we systematically reviewed were existing BIPs from state and local school districts. While records reviews as a whole have not been used often in educational research, studies in which this research design has been employed have successfully used existing school-based records to systematically code for predetermined variables pertaining to their individual research questions (see e.g., Howland et al., 2006; Wehmeyer & Schwartz, 2001).

Initial descriptive statistics (e.g., total scores) were used to summarize results from both scoring guides. Additionally, the following descriptive analyses were used to understand the basic characteristics of BIPs from participating districts as they related to contextual fit: average scores and standard deviations, the percentages of the BIPs that achieved certain scores on a variety of contextual fit items, and raw scores for specific contextual fit items. Our hypothesis was that the majority of BIPs collected, used as a representative sample of BIPs of districts in the intermountain west, would fail to include important elements of contextual fit in the writing of the plans. This may help to explain the failure to implement BIPs with fidelity that has generally been found in research on their effectiveness, thus resulting in a lack of behavioral change over time (Solnick & Ardoin, 2010; Van Acker et al., 2005).

In addition to descriptive statistics, the research team ran a Pearson correlation to determine the relationship between BIP technical adequacy and contextual fit. We hypothesized a statistically significant relationship between BIP quality and contextual fit; in other words, that BIPs with higher levels of technical adequacy would be more likely to include key elements of contextual fit within the plan.

## CHAPTER 4

### Results

We analyzed each of the coded BIPs using primarily descriptive statistics, including the frequency of key elements related to contextual fit, averages, and standard deviations. In addition to descriptive statistics, we ran a Pearson correlation to determine whether or not there was a relationship between the technical adequacy and contextual fit of BIPs coded in our study. The following presentation of the results is organized by research question.

#### **Research Question 1: Interventionist(s) Specified**

To determine whether or not the specific interventionist of a BIP was named and all their responsibilities listed in the BIP itself, we asked a preliminary question for each BIP that was coded: does the BIP identify specifically who will implement the plan or specific components of the plan? Our purpose was to determine whether each element of a behavior plan was well-defined and assigned to a specific person to carry out.

As a preliminary condition, we also stipulated that if no interventionist was mentioned, coding of the BIP in question would be discontinued. This decision was made with the understanding that it would be impossible to code for contextual fit as it relates to the interventionist if no interventionist was specified. After coding for this preliminary question, we found that all of the BIPs in the study included at least some information as to who would be responsible for carrying out elements of the plan. As a result, each of the 51 BIPs in the study were coded for all contextual fit questions.

Of the 51 BIPs coded, only one (2%) received a score of 2, indicating that all aspects of the plan that require an interventionist were tied to a specific person(s) with frequent access to the target student. The other 50 (98%) each received a 1 on the preliminary question of the

contextual fit scoring guide, signifying that they had either failed to assign an interventionist to each element of the behavior plan, or that tasks were assigned to an individual who may not have frequent and consistent student access (e.g., school principal, school literacy specialist). For all coded responses on this preliminary question, there was a mean of 1.02 and a standard deviation (*SD*) of 0.14. These data indicate that while all coded BIPs included at least some reference the interventionist, the majority of BIP developers did not adequately consider who would implement each component of the plan.

### **Research Question 2: BIP Practicality and Efficiency**

To determine whether or not the BIPs in our study could be considered practical and time efficient for the interventionists tasked with their implementation, we coded BIPs and ran descriptive statistics on two questions related to the time and effort of plan adoption. For all 51 BIPs on both questions related to efficiency, there was an average mean of 1.12 and a *SD* of 0.6. The total score for overall BIP practicality and efficiency, indicating how both questions were coded with a total possible score of 4, was 2.24, or 56% of a perfect score. Of the scores coded for each BIP on the two questions, 24% were a 2 ( $n=25$ ), 63% were a 1 ( $n=64$ ), and 13% were a score of 0 ( $n=13$ ). This suggests that the majority of behavior plans in our study were moderately efficient to adopt and sustain, but relatively few could be considered completely practical and time efficient. Table 4 includes describe statistics for all efficiency items.



**Table 4***BIP Practicality/Efficiency Items*

	Mean	Std. Deviation	<i>n</i>
Initial Adoption	1.14	0.53	51
Sustained Adoption	1.1	0.67	51
Total	2.24	1.2	51
Average	1.12	0.6	51

*Note.* Average refers to the average score for both coded questions relating to the practicality and efficiency of the BIP and is out of 2, while Total refers to the total possible score for both questions and is measured out of a possible score of 4.

**Research Question 3: Interventionist Skill Level and Competency**

Our third research question, designed to measure whether or not BIP elements were appropriate to the skill level and job requirements of the interventionist, was measured through coding and descriptive statistics for three questions. The questions on the contextual fit scoring guide measured: if each skill required for the BIP to be carried out was clearly defined, if materials for the behavior plan were easily accessible, and if the skills necessary for BIP success were those that matched the interventionist's skill level and normal functions. For the 51 BIPs coded, there was a mean of 1.17 and a *SD* of 0.56. This led to an average skill and competency mean of 1.17, with a total mean of 3.12 which was 52% of a possible total score of 6. Additionally, an analysis of all recorded scores for the three questions found that 25% were a score of 2 (*n*=39), 66% were a 1 (*n*=101), and 9% were a 0 (*n*=13).

The average mean for this third research question was the highest overall, suggesting that BIP developers were best at ensuring their behavior plan fit the skill level and competency of those expected to carry it out. Despite this, only 25% of BIPs achieved the highest score on

questions relating to skill level/competency, indicating that BIP developers still lacked key elements in ensuring an appropriate skill level match to the interventionist. In addition, there was significant variance between the three questions that were coded, suggesting that while BIPs generally chose interventions that were appropriate to skill level of the interventionist who would be expected to carry them out (mean=1.45), they more often failed to specifically define all materials needed for the BIP or to choose materials for which interventionists had easy access (mean=0.63). Table 5, included below, contains descriptive statistics for each question related to the skill level of the interventionist.

**Table 5**

*BIP Skill Level/Competency*

	Mean	Std. Deviation	<i>n</i>
Skills Defined	1.04	0.63	51
Materials/Procedures	0.63	0.32	51
Appropriate Skill Level	1.45	0.58	51
Total	3.12	1.53	51
Average	1.17	0.56	51

*Note.* Average refers to the average score for the three coded questions relating to the skill level and competency of the BIP interventionist and is out of 2, while Total refers to the total possible score for all three questions and is measured out of a possible score of 6.

**Research Question 4: Personal Values/Preferences**

To understand how well BIPs collected by the research team were able to account for the personal preferences and values of interventionists and students, we again coded and ran descriptive statistics on three additional questions relating to both valued outcomes and intervention strategies. The third question relating to preferences asked if the strategies and

procedures of the BIP were consistent with the personal values of those who would receive them (i.e., the student for whom the behavior plan was created). To ensure that our evaluation of student input was age-appropriate, the research team stipulated that any BIP developed for a student in kindergarten through third grade should not be coded on the final question. As a result, 19 BIPs written for grades K-3 were excluded from scoring, leaving 32 total BIPs that were coded for the third and final question.

For all BIPs on questions relating to personal values, there was a mean of 0.21 and a *SD* of .44. In addition, the average mean across all three coded questions was a 0.20, with a total mean of 0.75, or 12.5% of a possible total score of 6. Scored item percentages were as follows: 2 questions were scored as a 2 (1%), 24 were scored as a 1 (18%), and 108 were scored as a 0 (81%). Both the average mean and total mean for this domain was significantly lower than each of the other areas evaluated, suggesting that the majority of BIP developers lacked important language relating to personal values in the writing of the BIP. See Table 6 for further item descriptive statistics.

**Table 6***BIP Personal Values/Preferences*

	Mean	Std. Deviation	<i>n</i>
Valued Outcomes	0.14	0.45	51
Strategies (Interventionist)	0.08	0.27	51
Strategies (Student)	0.53	0.52	32*
Total	0.75	1.24	51
Average	0.20	0.44	51

*Note.* Average refers to the average score for the three coded questions relating to the cultural values and personal preferences of the BIP interventionist and is out of 2, while Total refers to the total possible score for all three questions and is measured out of a possible score of 6.

\*Student input should be age-appropriate; as a result, 19 BIPs were excluded from coding for preferences and values due to students being in grades K-3.

After coding for each of our nine questions relating to consideration of the interventionist and contextual fit, we determined that the average mean for all coded questions was 0.88 out of a possible score of 2. In addition, out of a possible total score of 18, the total mean for the included BIPs across all domains was 7.13, or 40% of a perfect score. This indicates that, as a whole, the BIPs in our study did fail to include key elements relating to contextual fit.

### **Research Question 5: Relationship Between BIP Quality and Contextual Fit**

In order to determine whether there is a statistically significant relationship between the technical adequacy of BIPs and their contextual fit, a Pearson product-moment correlation coefficient was computed using total scores from both the BSP-QE II and the researcher-developed measure of contextual fit for all 51 BIPs included in the study. There was a positive correlation between the two variables,  $r = .401$ ,  $n = 51$ ,  $p = .004$ . All Pearson correlation

coefficient data are summarized in Table 7. Overall, there was a moderate, positive relationship between BIP quality and BIP contextual fit; higher scores on BIP technical adequacy were correlated with higher scores on overall contextual fit.

**Table 7**

*Correlations Between BIP Total and Contextual Fit Total*

		BIP Total	Contextual Fit Total
BIP Total	Pearson Correlation	1	.401**
	Sig. (2-tailed)		.004
	N	51	51
Contextual Fit Total	Pearson Correlation	.401**	1
	Sig. (2-tailed)	.004	
	N	51	51

\*\* Correlation is significant at the .01 level (2-tailed).

## CHAPTER 5

### Discussion

The purpose of this study was to determine whether BIP developers considered the interventionist responsible for implementation, as well as the context in which the BIP would be carried out, during the writing process. Research has consistently found that limited guidelines relating to how BIPs should be developed have led to BIPs that are poorly written and fail to include teacher input and contextual factors (Benazzi et al., 2006). We hypothesized that, in examining BIPs themselves, we would find little evidence of key elements required for behavior plans to be considered contextually appropriate (Horner et al., 2014). In addition, we sought to understand whether there was a connection between BIP quality and BIP contextual fit.

#### Consideration of the Interventionist

We first examined the extent to which BIPs in our study identified an appropriate interventionist for every aspect of the behavior plan. In coding for this preliminary question, we found that while each BIP named at least one interventionist specific to an aspect of the plan's implementation, the majority still failed to explicitly name a person responsible for every aspect of the plan. Research into effective BIPs suggests that if plans are generic and nonspecific, with confusion as to who is responsible for each step of the plan, they are less likely to be implemented with fidelity (Killu, 2008). Our findings therefore indicate that the majority of the BIPs in our study included elements that were unlikely to be implemented with fidelity due to generic writing by BIP developers. For many of the BIPs, these nonspecific components were part of highly general sections relating to antecedent or pre-correction strategies. In these, BIPs developers wrote suggestions as to preventative approaches to use with students, such as creating a visual schedule, without naming a specified person responsible for actually creating the visual

schedule (or other preventative strategy). Research suggests that without an identified interventionist, a visual schedule or similar generic strategy is unlikely to actually be carried out (Killu, 2008).

Only one of the BIPs in our study received a perfect score of 2 on our preliminary question, indicating that every action included as part of the intervention was assigned to a specific person who would be expected to implement the task. This particular BIP separated all intervention tasks, including pre-correction strategies, intervention strategies, and appropriate consequences to problem behavior, into easily readable tables that described the responsibility of the interventionist in implementing each task in detail. A second column in the table, titled “who will implement”, ensured that each of these intervention tasks were assigned to a specific individual who was listed by name in each area. Previous research suggests that, by creating an intervention plan that is more individualistic and specific to all interventionists who are expected to participate in implementation, BIP developers for this particular plan are helping to ensure that all aspects of the intervention are implemented with fidelity and as intended (Killu, 2008).

### **Contextual Fit**

We also explored three of the essential elements identified by Horner et al. (2014) as those necessary for establishing contextual fit for behavior plans: practicality/efficiency of the plan, skill level/competency of the interventionist, and aligning the BIP to the personal values and preferences of both the interventionist and the student for which it was developed. When examining the practicality and efficiency of BIPs, we found that while most attempted to create plans that were at least moderately effective, the majority still lacked elements relating to the time and effort required for their adoption and sustained implementation. Teachers as a whole, and particularly general education teachers, report receiving limited training in behavior

management and the implementation of positive behavior support strategies, and a complex, multi-faceted behavior plan may lead to teacher frustration and resultantly low implementation levels (Allday et al., 2011; Tucker, 2017). BIP developers also need to be cognizant that some behavior plans may be in place for several months or even across school years, and the interventions suggested need to be sustainable, particularly for teachers who have classrooms with 20-35 other students (Ringeisen et al., 2003). One example of a BIP that failed to consider the long-term practicality of an intervention asked the teacher of a kindergarten student with significant behavior challenges to de-escalate problem behavior through a routine that involved placing the student in a “safe place” in the classroom and, following a 10-minute interval, de-briefing with the student through a lengthy conversation. While placing the student in a “safe space” in the classroom is a manageable and appropriate response to challenging behaviors, baseline data included in the intervention indicated that the student’s behavior escalated several times daily. For a general education kindergarten teacher with no aides or other outside support, it may be an unreasonable expectation for the teacher to be able to create opportunities for lengthy, individual de-briefing conversations with one student several times per day.

In addition, many of the coded BIPs failed to include data from the student’s current classroom functioning in order to ensure that proposed interventions and desired outcomes would ultimately be more time efficient. Teachers who perceive an intervention plan as less time effective than current classroom practices are less likely to implement the BIP with fidelity (Benazzi et al., 2006); it may therefore be important to interventionist buy-in for BIPs to include data comparing current student functioning to desired outcomes.

On our researcher-developed measure of contextual fit, the coded BIPs received the highest average mean overall on questions relating to the skills and competency level of the



interventionist. In other words, the majority of BIPs included procedures and elements that appropriately fit the professional standards and skill level of those who were expected to implement the plan. Some, however, did include requirements that failed to match the skill and training of the interventionist: a few BIPs, for example, had written in general education teachers as those who would provide social skills instruction to the student for whom the plan was developed. In one of the BIPs we coded, for example, it was written that a student would “benefit from instruction that teaches frustration tolerance, problem-solving skills, and flexibility with his mindset,” with no written intention for the student to meet with a counselor or school psychologist for this instruction. In the intermountain west districts from which BIPs were collected and evaluated, educators with advanced degrees and specialized training (e.g., school psychologist, school counselor, school social worker) are those who are typically tasked with providing social skills instruction. A similar BIP suggested to the interventionist, of which only a general education teacher was listed, that a student may require “nuanced social skill instruction in step-by-step-manner (e.g., how to make friends, how to understand how our behaviors impact others (metacognition), problem-solving strategies, etc.)”. Requiring teachers to provide support beyond their traditional role and in areas for which they have not been trained, such as instructing students in social skills, can lead to teacher frustration, burn out, and lower intervention implementation fidelity (Ringeisen et al., 2003).

While the average mean for skill level and competency was the highest of each domain relating to contextual fit, there was considerable variability between the coded questions in this category, with ready access to materials scoring significantly lower than the other two questions relating to interventionist skills. This was clearly seen in one of the BIPs we coded, which suggested that the interventionist allow the student to “use sensory or fidget toys/tools in the

classroom, such as a wiggle chair, resistance band for chair legs, stress balls, etc.,” but did not include any language suggesting that those items were already available in the general education teacher’s classroom or another location within the school. A behavior plan that is unable to implemented easily, without clearly defined access to all needed materials, is one that fails to consider both the interventionist of the plan and the context to which it will be put in place (Horner et al., 2014; Long et al., 2016).

A number of BIPs also failed to fully define the skills that were needed for implementation of the plan. For example, several BIPs included “precision requests” as an antecedent intervention, or for use when a student started to escalate and engage in problem behaviors. However, “precision requests” were rarely defined in the BIPs themselves, and often there were no instruction opportunities provided for interventionists unfamiliar with the concept of a precision request. Interventionists that are asked to use strategies with which they do not have experience or training are more likely to experience frustration with BIPs and resist their implementation (Yell et al., 2000).

That said, during the process of coding we also saw BIPs that did explicitly define all skills that were required for the interventionist to implement all aspects of the intervention with fidelity. One of the BIPs, for example, provided specific instructions as to the language and actions the interventionist, a general education teacher, would need to follow both for implementing the intervention itself and for responding appropriately to the student’s escalated behaviors. One section of the BIP instructed the teacher to complete the following steps whenever the student became agitated: “Prompt, ‘tell me what you need.’ When the student tells you, respond with, ‘thanks for telling me what you need.’ Grant reasonable requests or timeframe for when it can be granted, or rationale for why it can’t.” This process was

accompanied by a plan for the student to meet with the school psychologist in order to improve his ability to communicate his needs to his teachers when he starts to become upset or frustrated. By explicitly describing the exact process the interventionist should follow to meet the needs of this particular student, the BIP developer ensures increased teacher buy-in and comfort with the intervention, as well as a plan that is more likely to be implemented as intended (Allday et al., 2011; Walker & Barry, 2017).

The final area of contextual fit that we examined related to the cultural relevance of elements included in behavior plans. The average score for BIPs in this area was the lowest overall, indicating that above all areas of contextual fit that were coded in our study, BIP developers most often failed to include important language relating to the values of those who would implement and receive the intervention. This was particularly true for the first two questions on cultural relevance for which we coded: the first required the BIP to indicate if intended outcomes were valued by those who would receive them, or the student for which the intervention was developed. While many of the coded BIPs included examples of student preferences in their development (e.g., using reinforcements that were explicitly described as those that the student was known to enjoy and were motivating), only three of 51 total BIPs had clear indications that the student would value the intended outcome of the behavior plan. This aligns with previous research, which suggests that student input is rarely considered when behavior plans are developed (Blood & Neel, 2007).

The BIPs that did include evidence of student values can provide some guidance for BIP developers as to how to articulate valued student outcomes in the writing of a behavior plan. One BIP, for example, described in detail the preferences of the student to assist interventionists who may be working with him (the student's name, deidentified in the BIP for which we coded, has

been replaced with “the student”): “the student responds best with adults he has a relationship with, who show an interest in him personally, and who he feels are a support for him and his success at school. The student also responds well when reasonable requests are met with fairness, rationale for procedure is clear, and consequences are pre-determined”. This BIP is more likely to be met with support from both the student, whose personal values have been intentionally considered and included in the writing of the plan, and the interventionist, who will benefit from increased understanding of how to effectively work with the student in question. A second BIP that received scores signifying included language on student preferences indicated that the student for which the BIP was created had “self-identified three behavioral goals that she would like to improve this year,” with her ability to earn rewards based the steps she took towards achievement of those goals. Where appropriate, allowing a student to select his or her own goals to work towards could help increase student self-determination and motivation as well as encourage students to be active participants in their own behavior plans (Blood & Neel, 2007; Korinek, 2015).

In addition, our second question relating to cultural relevance required the BIP to include strategies and procedures that were consistent with the personal values of the interventionist. Of 51 BIPs overall, only one included articulated evidence of the interventionist’s personal philosophies and preferences in the written language of the plan, and relatively few BIPs had at least some indication of interventionist preferences. A number of BIPs recorded the teacher or other interventionists as participants in accompanying behavior meetings, but otherwise provided no evidence of consideration given to the interventionist’s values when the plan was developed. Teachers have been found to object to interventions they feel are not consistent with their personal learning philosophy, and BIPs that fail to include interventionist preferences may

therefore be less likely to be implemented and enact important behavior change (Spencer et al., 2012).

The singular BIP we coded that did include some articulated evidence of the interventionist's cultural values did so by clearly stating what the teacher had expressed she would need in order to successfully implement the plan, then articulating how the behavior plan would meet those needs (the teacher's name, which was de-identified prior to coding, has been replaced with "the teacher"): "The teacher indicated that she would benefit from increased communication between home and school; as such, parents or mental health providers should provide the school with advanced notice if the student is having a hard day or working through difficult experiences in therapy". BIP teams can consider requesting teacher input relating to their personal preferences and values and then ensure those preferences are explicitly evidenced within the behavior plan to ensure that developed BIPs are contextually appropriate.

Each of the BIPs in our study had been coded by a previous research team from Brigham Young University for technical adequacy, or quality and inclusion of essential elements needed for BIP success. Our researcher-developed scoring guide for contextual fit was designed to model that used by the previous research team for coding BIP technical adequacy in order to then explore the possibility of a statistically significant relationship between BIP quality and contextual fit. In data analysis, we found a moderate, positive relationship between both variables, where higher scores on BIP technical adequacy correlated with higher scores on the corresponding BIP's contextual fit. This suggests that when BIPs follow best-practice guidelines for inclusion of important elements, they are also more likely to include key features that create BIPs that are contextually appropriate to the classroom for which they are written. This further emphasizes what has been highlighted by research into BIPs for years: it is essential that high

quality BIPs are being developed and introduced into classrooms for many reasons, including to ensure that they are accepted by the interventionist expected to implement them (Van Acker et al., 2005).

### **Limitations**

The findings of this research study should be interpreted with caution due to a limited sample size. Only 51 total BIPs were coded, each of which were collected solely from four different public-school districts in the intermountain west region of the United States. BIPs from the same district often utilized templates that either did or did not include essential elements of contextual fit, so many BIP scores from within the same district were similar. In addition, it is difficult to know how state policies and procedures many have influenced BIP development. Although the statistically significant results that we found are relevant, a larger and more varied sample, with BIPs from more districts in diverse areas, could provide greater insight into contextual fit as a whole as well as its relationship with BIP technical adequacy. This would also help ensure that the results we found could generalize to more areas beyond the intermountain west region where our study took place.

BIPs in our study had been previously evaluated using an evidence-based guide for coding behavior plans for technical adequacy, the BSP-QE II (Browning-Wright et al., 2007). Our research team was unable to find a similar coding guide for the contextual fit of behavior plans, and we developed our own guide as a result. Although the questions we used for coding were research-based and our guide was based heavily on the BSP-QE II, this is the first study for which our researcher-developed coding guide has been used (Horner et al., 2014). We piloted our scoring guide using sample BIPs and inter-rater reliability information was taken to ensure

consistency between coders, but it is possible that our guide is not the most accurate representation of true contextual fit in a behavior plan.

Finally, it should be noted that while the majority of BIPs did not include evidence of the interventionist's personal preferences and values, many of the coded BIPs included signature lines that suggested that teachers of students for whom BIPs were written were involved in collaboration meetings during which BIPs were developed. While the findings of our research study suggest that interventionists are not being considered when BIPs are created, particularly in terms of the cultural relevance of the behavior plan, it is possible that some of the BIPs in our study were decided upon collaboratively. As we only had access to the BIP itself, it was impossible for our research team to know whether or not the interventionist was a contributor to the BIP development process and approved of the procedures decided upon and written into the plan.

### **Implications for Future Research**

Although the concept of contextual fit was first introduced by Albin et al. in 1996, as of yet, a method for determining the contextual fit of a plan by evaluating a BIP itself has not been developed or confirmed through research. Our measure of contextual fit was modeled after the BSP-QE II, which has been studied rigorously for reliability and validity and used in numerous research studies since its inception (Browning-Wright et al., 2007). A similar process could be utilized for either our measure of contextual fit, or another researcher-developed coding guide in order to ensure that behavior plans are reliable and valid in determining contextual fit by reviewing BIPs themselves. Scoring guides and the information they provide can be valuable tools in helping school districts, as they develop behavior plans, ensure that the BIPs they create are legally adequate, follow best-practice guidelines, and ultimately lead to desired student

outcomes. Since measures of this nature exist for the quality of BIPs, a similar guide for creating BIPs that are also contextually appropriate for interventionists and specific classrooms may be beneficial to practitioners as they develop behavior plans.

One possible future area of research that may ensure that our measure or another scoring guide is a valid representation of contextual fit could be to connect the measure with a teacher survey specific to contextual fit. Our study focused entirely on BIPs themselves, with no connection to the teacher or other interventionist who actually implemented it within the classroom. Based on what was included in the writing of the BIPs, it appears as though the interventionist and their preferences and values are not being considered adequately; however, it may be helpful to actually survey or interview the interventionist in question for their opinion on the behavior plan and evaluate how those responses correlate with the contextual fit score that the BIP received.

Another potential area of research could be to request that teams document participation in BIP meetings and teacher involvement in the discussion before then coding BIPs for contextual fit and determining whether or not any teacher involvement is emphasized in the writing of the BIP. As mentioned above in the limitations section, it is possible that interventionists in certain districts are part of collaborative teams and contribute in significant ways in the development process of BIPs, ensuring in those meetings that the proposed interventions align with the context of their classroom and with their preferences and values without it being explicitly stated in the plan itself. It may be interesting to compare interventionist input in the collaborative development of behavior plans to the coded contextual fit score of the BIP that is created as a result, in order to determine whether teachers and other interventionists are actual participants in BIP development and their input is simply not included



in the actual writing of the plan. This concept also prompts another interesting idea for future research studies to explore: do BIPs really need to explicitly include evidence of contextual fit when they are written, or is it enough for the interventionist to contribute and orally approve of the plan? Can behavior plans be contextually appropriate without written evidence that they include key concepts of contextual fit?

Finally, it may be interesting for future research to explore contextual fit concepts specific to a secondary school setting. While our study did include BIPs designed for students in both elementary and secondary settings, coding was completed under the assumption that a single interventionist's personal preferences either were or were not considered when the plan was developed. The reality in a secondary setting is often that multiple teachers, each of whom have different contextual factors in their individual classrooms, are expected to carry out facets of student behavior plans. For a study that focuses specifically on students in secondary settings, our contextual fit scoring guide may need to be adjusted to acknowledge numerous interventionists, and coding may differ to accommodate the consideration of multiple classroom contexts when evaluating contextual fit.

### **Implications for Practitioners**

As mentioned above, four districts contributed to the BIP samples that were utilized for coding and analysis. The majority of BIPs from each of the four districts had standard templates that were used by BIP developers, with many of these templates appearing to contribute to a lack of contextual fit in BIP writing. Many of the BIPs from a certain district, for instance, included a section titled "antecedent intervention strategies," which included several suggestions for pre-correction of problematic student behavior. However, these antecedent strategies were the same across each of the BIPs from the district, indicating that they were general suggestions that were

copied from BIP to BIP rather than individualized ideas for teachers to use to promote positive behaviors for a specific student. This led to a poor contextual fit score regarding identifying the interventionist as well as for failing to select interventions that were culturally relevant.

FBA's and BIP's are required by federal law, and previous research has suggested that BIP's often appear to be documents of compliance rather than legitimate attempts to create lasting behavior change through replacing functions of behavior with more socially appropriate responses (Blood & Neel, 2007; O'Neill & Stephenson, 2009). District-wide behavioral templates appear to be an example of merely complying with the law without creating technically adequate or contextually appropriate BIP's: by using templates, practitioners ensure that all legally required elements are present in behavior plan but may then fail to include key elements that will make implementation and resulting behavior change likely. School districts, as well as others that develop BIP's based primarily on templates, may benefit from reviewing essential elements of contextual fit and adjusting their templates to reflect contextually appropriate practices, or getting rid of templates entirely.

The findings of this study are most relevant for BIP developers, particularly when the task of BIP development is assigned to a specialist (e.g., school psychologist, special education teacher) rather than a collaborative system in which the interventionist is involved. Those tasked with writing BIP's should be careful to ensure that both the interventionist and the context to which the BIP will be introduced are considered when behavior plans are developed. According to the research, teams that include multiple members, rather than just the specialist, when developing BIP's are more likely to create high-quality plans that will actually address student needs (Van Acker et al., 2005). Using best-practice and research-based guidelines to create high quality BIP's can assist in also creating plans that are contextually appropriate, and thus more

likely to be accepted by the classroom teacher and implemented with fidelity. Studies evaluating contexts to which BIPs will be implemented have found that adjusting the behavior document itself is a simple and effective way to create plans that are more closely aligned with teacher preferences and school climates; BIP developers should therefore prioritize technically adequate BIPs that are, as a result, more likely to match interventionist values (Collier-Meek et al., 2018).

### **Conclusion**

Since the introduction of BIPs to special education law, numerous studies have been conducted that have found that often, these behavior plans are not implemented properly and have resultantly little impact on changing challenging student behaviors. Accompanying research has found that poorly written plans and teachers that feel inadequate or incapable as an interventionist may contribute to BIP failure in school settings. Our research study expanded these previous findings to include contextual fit, with the understanding that many BIPs are not as contextually appropriate as best-practice guidelines suggest they should be. This is valuable information in that it both creates opportunities for additional important research surrounding contextual fit, as well as provides BIP developers with some guidelines as to how to increase interventionist buy-in when writing behavior plans: by creating plans collaboratively with teachers and other interventionists and ensuring that BIPs match the setting in which they will be implemented.

## REFERENCES

- Albin, R. W. , Lucyshyn, J. M. , Horner, R. H. , & Flannery, K. B. (1996). Contextual fit for behavior support plans. In L. K. Koegel, R. L. Koegel, & G. Dunlap (Eds.), *Positive behavioral support* (pp. 81-98). Brookes.
- Allday, R., Nelson, J., & Russel, C. S. (2011). Classroom-based functional behavioral assessment: Does the literature support high fidelity implementation? *Journal of Disability Policy Studies*, 22(3), 140–149.
- Ashman, A., & Elkins, J. (2004). *Educating children with diverse abilities*. Pearson Education.
- Bechtel, P. A., Stevens, L. A., & Brett, C. E. W. (2012). Tips for dealing with behavior management issues. *Strategies*, 25(4), 30-33.  
<https://doi.org/10.1080/08924562.2012.10592160>
- Benazzi, L., Horner, R. H., & Good, R. H. (2006). Effects of behavior support team composition on the technical adequacy and contextual fit of behavior support plans. *Journal of Special Education*, 40(3), 160-170.
- Blood, E., & Neel, R. S. (2007). From FBA to implementation: A look at what is actually being delivered. *Education and Treatment of Children*, 30(4), 67-80.
- Branch, A., Hastings, R. P., Beverley, M., Hughes, C. (2018). Increasing support staff fluency with the content of behavior support plans: An application of precision teaching. *Journal of Intellectual & Developmental Disability*, 43(2), 213-222.  
<https://doi.org/10.3109/13668250.2016.1267334>
- Brown, S., & Rahn-Blakeslee, A. (2009). Training school-based practitioners to collect intervention integrity data. *School Mental Health*, 1(3), 143–153. <https://doi.org/10.1007/s12310-009-9014-9>

Browning-Wright, D., Mayer, G. R., Cook, C. R., Crews, S. D., Kraemer, B. R., Gale, B. (2007).

A preliminary study on the effects of training using Behavior Support Plan Quality Evaluation Guide (BSP-QE) to improve positive behavioral support plans. *Education & Treatment of Children, 30*(3), 89–106.

Browning-Wright, D., Saren, D., & Mayer, G. R. (2003). *The Behavior Support Plan-Quality*

*Evaluation Scoring Guide*. Positive Environments, Network of Trainers.

<http://www.pent.ca.gov/>

Charlton, C. T., Rigby, D. M., Moulton, S. E., Sabey, C. V., & Richardson, M. J. (In Press).

Implementing behavior intervention plans in schools: A pilot of the complex relationship between technical adequacy, treatment integrity, and student outcomes. *Journal of Behavioral Education*.

Clunies-Ross, P., Little, E., & Kienhuis, M. (2008). Self-reported and actual use of proactive and

reactive classroom management strategies and their relationship with teacher stress and student behaviour. *Educational Psychology, 28*, 693-710.

Cochrane, W. S., & Laux, J. M. (2008). A survey investigating school psychologists'

measurement of treatment integrity in school-based interventions and their beliefs about its importance. *Psychology in the Schools, 46*, 499-507. <https://doi.org/10.1002/pits.20319>

Collier-Meek, M., Sanetti, L. M. H., & Boyle, A. M. (2018). Barriers to implementing classroom

management and behavior support plans: An exploratory investigation. *Psychology in the Schools, 56*(1), 5-17. <https://doi.org/10.1002/pits.22127>

Collins, L. W., & Zirkel, P. A. (2017). Functional behavior assessments and behavior

intervention plans: Legal requirements and professional recommendations. *Journal of Positive Behavior Interventions, 19*(3), 180–190.

- Conroy, M. A. , Clark, D. , Fox, J. J. , & Gable, R. A. (2000). Building competence in FBA: Are we headed in the right directions? *Preventing School Failure, 44*(4), 169–174.
- Conroy, M. A., Katsiyannis, A., Clark, D., Gable, R. A., & Fox, J. J. (2002). State office of education practices implementing the IDEA disciplinary provisions. *Behavioral Disorders, 27*(2), 98–108.
- Cook, C. R., Crews, S. D., Browning-Wright, D., Mayer, G. R., Gale, B., Kraemer, B., & Gresham, F. M. (2007). Establishing and evaluating the substantive adequacy of positive behavioral support plans. *Journal of Behavioral Education, 16*(3), 191–206.
- Cook, C.R., Mayer, G.R., Wright, D. B., Kraemer, B., Wallace, M. D., Dart, E., Collins, T., & Restori, A. (2012). Exploring the link among behavior intervention plans, treatment integrity, and student outcomes under natural educational conditions. *Journal of Special Education, 46*, 3-16.
- Damschroder, L. J., Aron, D. C., Keith, R. E., Kirsh, S. R., Alexander, J. A., & Lowery, J. C. (2009). Fostering implementation of health services research findings into practice: A consolidated framework for advancing implementation science. *Implementation Science, 4*(1), 50-65.
- DiGennaro, F. D., Martens, B. K., & Kleinmann, A. E. (2007). A comparison of performance feedback procedures on teachers' treatment implementation integrity and students' inappropriate behavior in special education classrooms. *Journal of Applied Behavior Analysis, 40*(3), 447–461.
- Domitrovich, C. E., Bradshaw, C. P., Poduska, J. M., Hoagwood, K., Buckley, J. A., Olin, S., Romanelli, L. H., Leaf, P. J., Greenberg, M. T., & Ialongo, N. S. (2008). Maximizing the

- implementation quality of evidence-based preventive interventions in schools: A conceptual framework. *Advances in School Mental Health Promotion*, 1(3), 6–28.
- Drasgow, E., Yell, M. L., Bradley, R., & J. G. Shriner (1999). The IDEA amendments of 1997: A school-wide model for conducting functional behavioral assessments and developing behavior intervention plans. *Education and Treatment of Children*, 22(3), 244-266.
- Etscheidt, S. (2006). Behavioral intervention plans: Pedagogical and legal analysis of issues. *Behavioral Disorders*, 31(2), 223-243.
- Fallon, M. A., Zhang, J., & Kim, E-J. (2011). Using course assessments to train teachers in functional behavior assessment and behavioral intervention plan techniques. *The Journal of International Association of Special Education*, 12(1), 50-58.
- Fixsen, D. L., Blase, K. A., Duda, M. A., Naoom, S. F., Van Dyke, M., Weisz, J. R., et al. (2010). Implementation of evidence-based treatments for children and adolescents: Research findings and their implications for the future. In J. Weisz & A. Kazdin (Eds.), *Implementation and dissemination: Extending treatments to new populations and new settings* (2nd ed.; pp. 435–450). Guilford.
- Gable, R. A., Park, K. L., Scott, T. M. (2014). Functional behavioral assessment and students at risk for or with emotional disabilities: Current issues and considerations. *Education & Treatment of Children*, 37(1), 111–135. <https://doi.org/10.1353/etc.2014.0011>
- Gresham, F. M. (1989). Assessment of treatment integrity in school consultation and prereferral intervention. *School Psychology Review*, 18(1), 37-50.
- Gresham, F. M., Gansle, K. A., Noell, G. H., Cohen, S. & Rosenblum, S. (1993). Treatment integrity of school-based behavioral intervention studies: 1980–1990. *School Psychology Review*, 22(2), 254–272.

- Gresham, F. M., MacMillan, D. L., Beebe-Frankenberger, M. E., & Bocian, K. M. (2000). Treatment integrity in learning disabilities intervention research: Do we really know how treatments are implemented? *Learning Disabilities Research & Practice*, 15:4, 198-205, [https://doi.org/10.1207/SLDRP1504\\_4](https://doi.org/10.1207/SLDRP1504_4).
- Hendrix, N. M., Vancel, S. M., Bruhn, A. L., Wise, S., & Kang, S. (2018). Paraprofessional support and perceptions of a function-based classroom intervention. *Preventing School Failure: Alternative Education for Children and Youth*, 62(3), 214-228.
- Horner, R., Blitz, C., & Ross, S. (2014). *The importance of contextual fit when implementing evidence-based interventions* (ASPE Research Brief). U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. [https://aspe.hhs.gov/system/files/pdf/77066/ib\\_Contextual.pdf](https://aspe.hhs.gov/system/files/pdf/77066/ib_Contextual.pdf)
- Horner, R. H., & Carr, E. G. (1997). Behavioral support for students with severe disabilities: Functional assessment and comprehensive intervention. *The Journal of Special Education*, 31(1), 84-104.
- Howland, A., Anderson, J., Smiley, A., & Abbott, D. (2006). School liaisons: Bridging the gap between home and school. *School Community Journal*, 16(2), 47-68.
- H.R. Rep. No. 105-95 (1997). <https://www.govinfo.gov/content/pkg/PLAW-105pub117/pdf/PLAW-105pub117.pdf>
- Individuals with Disabilities Education Act, 20 U.S.C.S. §1401-1485(1997).
- Kallestad, J. H., & Olweus, D. (2003). Predicting teachers' and schools' implementation of the Olweus bullying prevention program: A multilevel study. *Prevention & Treatment*, 6(1), Article 21. <https://doi.org/10.1037/1522-3736.6.1.621a>



- Katsiyannis, A., & Maag, J. W. (1998). Disciplining students with disabilities: issues and considerations for implementing IDEA '97. *Behavioral Disorders, 23*(4), 276–289.
- Killu, K. (2008). Developing effective behaviour intervention plans: Suggestions for school personnel. *Intervention in School and Clinic, 43*(3), 140-149.
- Korinek, L. (2015). Promoting self-determination throughout the FBA/BIP Process. *Preventing School Failure, 59*(2), 98–108.
- Kraemer, B. R., Cook, C. R., Browning-Wright, D., Mayer, G. R., Wallace, M. D. (2008). Effects of training on the use of the Behavior Support Plan Quality Evaluation Guide with autism educators: A preliminary investigation examining positive behavior support plans. *Journal of Positive Behavior Interventions, 10*(3), 179–189.
- Larson, P. J., & Maag, J. W. (1998). Applying functional assessment in general education classrooms: Issues and recommendations. *Remedial and Special Education, 19*(6), 338–349.
- Maag, J. W., & Katsiyannis, A. (2006). Behavioral intervention plans: Legal and practical considerations for students with emotional and behavioral disorders. *Behavioral Disorders, 31*(4), 348–362.
- MacDonald, A., & McGill, P. (2013) Outcomes of staff training in positive behaviour support: A systematic review. *Journal of Developmental and Physical Disabilities, 25*(1), 17–23.
- McLaughlin, T. W., Denney, M. K., Snyder, P. A., Welsh, J. L. (2012). Behavior support interventions implemented by families of young children: Examination of contextual fit. *Journal of Positive Behavior Interventions, 14*(2), 87–97.
- Medley, N. S., Little, S. G., & Akin-Little, A. (2008). Comparing individual behavior plans from schools with and without school-wide positive behavior support: A preliminary study.

- Journal of Behavioral Education*, 17, 93–110. <https://doi.org/10.1007/s10864-007-9053-y>
- Nahgahgwon, K. N., Umbreit, J., Liaupsin, C. J., Turton, A. M. (2010). Function-based planning for young children at risk for emotional and behavioral disorders. *Education & Treatment of Children*, 33(4), 537–559.
- Naraian, S. (2017). *Teaching for inclusion: Eight principles for effective and equitable practice*. Teachers College Press.
- National Center for Education Statistics, (2018). *The condition of education: Students with disabilities*. Institute of Education Sciences, National Center for Education Statistics. [https://nces.ed.gov/programs/coe/indicator\\_cgg.asp](https://nces.ed.gov/programs/coe/indicator_cgg.asp)
- Nelson, R., Roberts, M., Mathur, S., Rutherford, R. (1999). Has public policy exceeded our knowledge base? A review of the functional behavioral assessment literature. *Behavior Disorders*, 24(2), 169–179.
- Noell, G. H., Gresham, F. M., & Gansle, K. A. (2002). Does treatment integrity matter? A preliminary investigation of instructional implementation and mathematics performance. *Journal of Behavioral Education*, 11(1), 51–67. <https://doi.org/10.1023/A1014385321849>
- O’Neill, R. E., Bundock, K., Kladis, K., & Hawken, L.S. (2015). Acceptability of functional behavioral assessment procedures to special educators and school psychologists. *Behavioral Disorders*, 41(1), 51-66.
- O’Neill, S., & Stephenson, J. (2009). Teacher involvement in the development of function-based behavior intervention plans for students with challenging behavior. *Australasian Journal of Special Education*, 33(1), 6-25

- O'Neill, S., & Stephenson, J. (2013). One year on: First-year primary teachers' perceptions of preparedness to manage misbehaviour and their confidence in the strategies they use. *Australasian Journal of Special Education*, 37(2), 125-146.
- Pindiprolu, S. S., Peterson, S. M., & Berglof, H. (2007). School personnel's professional development needs and skill level with functional behavior assessments in ten midwestern states in the United States: Analysis and issues. *Journal of the International Association of Special Education*, 8(1), 31–42.
- Ringeisen, H., Henderson, K., & Hoagwood, K. (2003). Context matters: Schools and the “research to practice gap” in children’s mental health. *School Psychology Review*, 32(2), 153-168.
- Scott, T. M., Anderson, C. M., Spaulding, S. A. (2008). Strategies for developing and carrying out functional assessment and behavior intervention planning. *Preventing School Failure*, 52(3), 39–49. <https://doi.org/10.3200/PSFL.52.3.39-50>
- Scott, T. M. , Liaupsin, C. J. , Nelson, L. M. , & Jolivette, K. (2003). Ensuring student success through team-based functional behavioral assessment. *Teaching Exceptional Children*, 35(5), 16–21.
- Solnick, M. D., & Ardoin, S. P. (2010). A quantitative review of functional analysis procedures in public school settings. *Education and Treatment of Children*, 33(1), 153-175.
- Spencer, T. D., Detrich, R., & Slocum, T. A. (2012). Evidence-based practice: A framework for making effective decisions. *Education and Treatment of Children*, 35(2), 127–152.
- S. Rep. No. 105-17 (1997). <https://www.govinfo.gov/content/pkg/CRPT-105srpt17/pdf/CRPT-105srpt17.pdf>

- Stemler, S. (2004). A comparison of consensus, consistency, and measurement approaches to estimating interrater reliability. *Practical Assessment, Research, and Evaluation, 9*(4).
- Stephenson, J., Linfoot, K., & Martin, A. (2000). Behaviours of concern to teachers in the early years of school. *International Journal of Disability, Development and Education, 47*(3), 225–235. <https://doi.org/10.1080/713671118>
- Thomas, C. A. (2010). *Parent experiences in using positive behavior support to reduce challenging behavior in children with severe disabilities: A qualitative case study* [Doctoral dissertation, University of Hawai'i at Manoa]. ERIC.
- Tucker, T. D. (2017, January 1). *Teacher attitudes on including students with behavior intervention plans in high-school inclusive classroom*. [Doctoral dissertation, Trevecca Nazarene University]. ProQuest.
- Van Acker, R., Boreson, L., Gable, R. A., & Potterton, T. (2005). Are we on the right course? Lessons learned about current FBA/BIP practices in schools. *Journal of Behavioral Education, 14*(1), 35-56.
- Walker, H. M., Block-Pedego, A., Todis, B., & Severson, H. (1991) *School archival records search (SARS): User's guide and technical manual*. Sopris West.
- Walker, H. M., Ramsey, E. and Gresham, F. M. (2003–2004). How disruptive students escalate hostility and disorder- and how teachers can avoid it. *American Educator, 27*(4), 22–27.
- Walker, J. D., & Barry, C. (2017). Improving outcomes of behavioral intervention plans. *Intervention in School and Clinic, 53*(1), 12–18.
- Wardale, S., Davis, F., Vassos, M., & Nankervis, K. (2018). The outcome of a statewide audit of the quality of positive behaviour support plans. *Journal of Intellectual & Developmental Disability, 43*(2), 202-212.

- Webber, L. S., McVilly, K. R., Fester, T., & Zazelis, T. (2011). A preliminary investigation of the utility of the “Behavior Support Plan Quality Evaluation Guide II” for use in Australia. *Journal of Intellectual & Developmental Disability, 36*(4), 273–277.  
<https://doi.org/10.3109/13668250.2011.587401>
- Wehmeyer, M. L., & Schwartz, M. (2001). Disproportionate representation of males in special education services: Biology, behavior or bias? *Education and Treatment of Children, 24*(1), 28–45.
- Wickstrom, K. F., Jones, K. M., LaFleur, L. H., & Witt, J. C. (1998). An analysis of treatment integrity in school-based behavioral consultation. *School Psychology Quarterly, 13*(2), 141-154.
- Yell, M. L., Katsiyannis, A., Bradley, R., & Rozalski, M. (2000). Ensuring compliance with the disciplinary provisions of IDEA '97: Challenges and opportunities. *Journal of Special Education Leadership, 13*(1), 3-18.

## APPENDIX

**Instruments****Contextual Fit Scoring Guide for Behavior Intervention Plans**

Adapted for use in coding behavior intervention plans from application questions suggested by Horner et al. (2014).

(continued on the following pages)

<i>Components to Evaluate</i>	<i>Scoring</i>	<i>Examples</i> <i>All examples below relate to the same student and same behavior/intervention.</i>	<i>Key Concepts</i>
<p>PRELIMINARY QUESTION:</p> <p>Is the interventionist (e.g., the person or persons expected to carry out the behavior plan) specifically named in the BIP?</p>	<p>2 = All aspects of the behavior plan that require an interventionist to carry out are tied to a specific person or persons who have frequent and consistent access to the student in question (e.g., teacher, paraprofessional, school counselor/psychologist, etc.).</p> <p>1 = Some of the actions of the behavior plan do not have a specific interventionist assigned to them or are vague in terms of person responsible.</p> <p>OR</p> <p>All aspects of the behavior plan are tied to a specific person or persons, but the person in question does not have frequent and consistent student access (e.g., school principal)</p> <p>0 = No interventionist is specifically mentioned*</p>	<p>2 = “Tommy will be provided with a Check-in Check-out (CICO) sheet at the beginning of each day by Ms. Jones, his teacher. Tommy will “check-in” with both Ms. Jones and his specials teachers (Mr. Smith, Ms. Richardson) at the end of each class period. Tommy will receive 60 minutes of social skills instruction each month through the school psychologist, Mr. Wade.”</p> <ul style="list-style-type: none"> <li>All aspects of the BIP are accounted for using specific persons for each interventionist required.</li> </ul> <p>1 = “Ms. Jones will provide Tommy’s daily CICO sheet and “check in” with him. Tommy will also receive social skills instruction.”</p> <ul style="list-style-type: none"> <li>No specific person is addressed as providing the social skills instruction the BIP requires.</li> </ul> <p>0 = “Tommy will complete CICO. He will receive social skills instruction.”</p>	<p>The success of a BIP may be, in part, associated with identifying the specific person (teacher, paraprofessional, etc.) who will actually be expected to carry out the plan (Blood &amp; Neel, 2007). Identifying specific interventionists allows BIPs to be tailored to the values and acceptability of those who will actually implement the plan (Thomas &amp; Lafasakis, 2019).</p> <p>By understanding the values, skills, and needs of each individual interventionist, the BIP is more likely to be written in a way that is accepted and implemented with higher fidelity by the interventionist (Collier-Meek, Sanetti, &amp; Boyle 2018).</p>

\* Note: if the BIP receives a score of 0 on this preliminary question, discontinue coding.

<i>Components to Evaluate</i>	<i>Scoring</i>	<i>Examples</i> <i>All examples below relate to the same student and same behavior/ intervention.</i>	<i>Key Concepts</i>
<p>EFFICIENCY: 1a. Are the time and effort for initial adoption reasonable?</p>	<p>2 = The behavior plan itself specifies all necessary planning procedures in order for the implementation of the BIP to commence. All tasks are tied to a specific person or persons to carry out. The time frame within which the BIP can commence is no longer than 1 week.</p> <p>1 = The behavior plan specifies all plans for initiation and person(s) required for initial adoption, but takes longer than 1 week to commence.</p> <p>OR</p> <p>The behavior plan takes less than 1 week for initial adoption but does not specify all procedures necessary for initiation or person(s) responsible for carrying out those procedures.</p> <p>0 = The behavior plan does not include any information as to what steps are necessary for initial</p>	<p>2 = “Tommy’s specific CICO sheet will be created by himself, his mother, his teacher, and the principal during an upcoming IEP meeting. Ms. Jones will have access to this CICO sheet in order to print copies each day. Office staff will order prizes as daily reinforcement for Tommy following completion of his CICO sheet.”</p> <ul style="list-style-type: none"> <li>All necessary components to implement the BIP are addressed and take no longer than 1 week to implement.</li> </ul> <p>1 = “Ms. Jones will create unique copies of Tommy’s CICO sheet for each day of the week. Ms. Jones will also make specific reinforcing toys based on Tommy’s favorite television series”.</p> <ul style="list-style-type: none"> <li>All plans for adoption are specified, but may be unreasonable and take longer than 1 week to implement.</li> </ul> <p>“Ms. Jones will print Tommy’s daily CICO sheet. Tommy will be rewarded at the end of each day with prizes for completion.”</p> <ul style="list-style-type: none"> <li>Plans for adoption are reasonable, but are not specific as to who will purchase the reinforcers.</li> </ul>	<p>When BIPs are complex or time-consuming, educators cite difficulty remembering to implement interventions for specific students on top of their other responsibilities, particularly in classrooms with large numbers of students or multiple students requiring behavior plans (Collier-Meek et al., 2018).</p> <p>Without needed supports, teachers often report feeling overwhelmed or solely responsible for complicated BIPs in their classroom, leading to frustration with BIPs, which are seen as an additional demand for those already feeling the strain of inclusive classrooms (Scott,</p>



	adoption, does not specify who is responsible for preparing the intervention, and/or takes longer than 1 week to commence.	0 = "Tommy will complete the CICO program."	Liaupsin, Nelson, & Jolivette, 2003).
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<i>Components to Evaluate</i>	<i>Scoring</i>	<i>Examples</i> <i>All examples below relate to the same student and same behavior/intervention.</i>	<i>Key Concepts</i>
<p>EFFICIENCY: 1b. Are the time and effort for sustained adoption as efficient or more efficient than current interventions (given the outcomes generated)?</p>	<p>2 = The intervention currently in-use or current classroom functioning is specified, and the proposed intervention plan is similarly time efficient for the interventionist or is designed to produce desired results that are as efficient or more efficient in the classroom.</p> <p>1 = The proposed intervention is somewhat more efficient or as efficient as previous interventions or current functioning; time and effort for sustained adoption may be significant even if ultimate outcomes are more efficient than current practices.</p> <p>OR</p> <p>The student's current level of functioning may be unclear, but the intervention is presumed more efficient.</p> <p>0 = The proposed intervention plan is less efficient than currently in-use interventions or assumed less</p>	<p>2 = "Currently, Tommy disrupts the class an average of two times per hour, with disruptions often lasting three to five minutes during instructional periods. Regular classroom behavior management practices have not reduced these disruptions. The CICO intervention will take approximately one week to implement, after its creation during a previously scheduled IEP meeting and 10-minute training from the school psychologist, and will require two minutes from Ms. Jones every hour, significantly reducing the time spent attempting to manage Tommy's classroom disruptions."</p> <ul style="list-style-type: none"> <li>The CICO intervention requires minimal time and effort for adoption, and the outcomes are proven to be more time efficient than the student's current disruptions.</li> </ul> <p>1 = "The CICO intervention will require two minutes from Ms. Jones every hour as compared to Tommy's current disruption level, which requires three to five minutes of attention an average of twice every hour. The intervention will require Ms. Jones to attend several district-level trainings over the course of multiple weeks before it can be implemented."</p> <ul style="list-style-type: none"> <li>While BIP outcomes are proven to be more efficient than previous practices, time and effort for sustained adoption is significant.</li> </ul>	<p>Studies of BIPs have found that a large percentage may include intervention procedures that are perceived as less efficient than previously used interventions or regular classroom practices (Benazzi, Horner, &amp; Good, 2006). Teachers who perceive an intervention to be inefficient as compared to previously attempted practices are less likely to implement the</p>

	efficient than current functioning, or no current classroom functioning is present.	0 = The chosen intervention requires significant classroom effort and the time and effort for adoption is significant.	plan with fidelity (Benazzi et al., 2006).
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<i>Components to Evaluate</i>	<i>Scoring</i>	<i>Examples</i> <i>All examples below relate to the same student and same behavior/intervention.</i>	<i>Key Concepts</i>
<p>SKILLS/COMPETENCIES: 2a. Are the skills needed to implement the intervention defined?</p>	<p>2 = All specific actions required for the interventionist to obtain the skills necessary for implementation of the behavior plan are listed and clearly defined, with instruction opportunities explained in order to ensure the interventionist possesses the skills necessary for implementation.</p> <p>1 = All specific actions required for the interventionist to obtain the skills necessary for implementation of the behavior plan are listed and clearly defined, but no instructional periods are detailed to ensure interventionist capacity for implementation.</p> <p>OR</p> <p>Some actions, but not all, required by the interventionist for implementation are listed and defined with teaching instructions present.</p> <p>0 = The actions required for the interventionist to successfully implement the plan are not listed or described in</p>	<p>2 = “Each interventionist involved in the CICO program will monitor Tommy’s behavior during their respective class period. After each, they will ‘check in’ with Tommy to award a score of 0-3 (with 3 being the best) based on his classroom performance. Ms. Jones, Mr. Smith, and Ms. Richardson, as interventionists, will be asked to attend a short training conducted by Mr. Wade to ensure understanding of the program prior to implementation.”</p> <ul style="list-style-type: none"> <li>• All actions necessary for the interventionist to gain needed skills are listed, and training opportunities for the interventionists to learn the skills required are clearly defined.</li> </ul> <p>1 = “Ms. Jones and each of Tommy’s specials teachers will help to complete the CICO program by “checking in” with Tommy after each instructional period”.</p> <ul style="list-style-type: none"> <li>• While all skills necessary are listed, no instructional periods are given to ensure sufficient training.</li> </ul>	<p>Teachers often feel unprepared to educate students who require specialized instruction through BIPs and receive limited training in behavior management (Allday et al., 2011). Training opportunities for behavioral management for teachers are scarce (Tucker, 2017).</p> <p>Without training, teachers and other interventionists (e.g., paraprofessionals) may be asked to implement interventions for which they have not been adequately trained, leading to frustration and</p>

	<p>detail, and no instructional opportunities are present.</p>	<p>0 = “Ms. Jones will assist Tommy in completing the CICO program”.</p> <ul style="list-style-type: none"> <li>• No skills/training are included.</li> </ul>	<p>resistance to classroom BIPs (Ringeisen et al., 2003; Yell et al., 2000).</p>
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<i>Components to Evaluate</i>	<i>Scoring</i>	<i>Examples</i> <i>All examples below relate to the same student and same behavior/intervention.</i>	<i>Key Concepts</i>
<p>SKILLS/COMPETENCIES: 2b. Are materials and procedures available to establish needed skills?</p>	<p>2 = All materials required for implementation of the behavior plan are defined and the process for receiving/purchasing/creating the materials is clearly defined.</p> <p>1 = Some materials, but not all, required for the implementation of the behavior plan are defined.</p> <p>OR</p> <p>All materials required for implementation of the behavior plan are specific and defined, but the process for receiving/purchasing/creating the materials is vague or missing from the plan.</p> <p>0 = The materials required for implementation of the behavior plan are not defined, and the process for</p>	<p>2 = “The CICO worksheet for Tommy to follow will be created by the IEP team during an upcoming IEP meeting. The daily worksheet will be printed and presented to Tommy by Ms. Jones along with Tommy’s clipboard, purchased by the front office, during morning exercises. All reward prizes earned by Tommy will be purchased by office staff and stored in the front office for the end of each day.”</p> <ul style="list-style-type: none"> <li>All materials needed for the CICO intervention (daily worksheet, clipboard, rewards) are clearly defined and clear procedures established for obtaining the materials.</li> </ul> <p>1 = “The CICO worksheet for Tommy to follow will be given to him at the beginning of every day on a clipboard. At the end of each day, Tommy will receive rewards based on his CICO performance.”</p> <ul style="list-style-type: none"> <li>All materials needed for the CICO intervention are clearly defined, but the process for who will purchase/create the necessary materials is missing.</li> </ul>	<p>Contextual fit requires that the intervention is able to be accomplished with the resources available in the classroom (Horner et al., 2014). Teachers may already feel the financial strain of having to buy materials for their classroom from their own personal pocket and may be reluctant to implement a BIP that requires additional materials that they have to purchase. There are also time constraints associated with collecting or creating the appropriate</p>

	receiving/purchasing/creating materials is missing from the plan.	<p>0 = “Tommy will participate in CICO daily and will receive rewards according to his performance”</p> <ul style="list-style-type: none"> <li>• The materials needed for the CICO intervention are not defined and there is no clear process for receiving them.</li> </ul>	materials if they are significantly outside what is available in a traditional classroom.
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<i>Components to Evaluate</i>	<i>Scoring</i>	<i>Examples</i> <i>All examples below relate to the same student and same behavior/intervention.</i>	<i>Key Concepts</i>
<p>SKILLS/COMPETENCIES: 2c. Does the level of skill development fit professional standards and/or the organizational staffing structure?</p>	<p>2 = Chosen interventions are considered appropriate to the professional skill level of the person(s) who are expected to implement the plan (e.g., teacher, school counselor, school psychologist, etc.)</p> <p>1 = Some, but not all, of the chosen interventions are considered appropriate to the professional skill level of the person(s) who are expected to implement the plan (e.g. teacher, school counselor, school psychologist, etc.)</p> <p>0 = Chosen interventions require</p>	<p>2 = “Ms. Jones will be responsible for ‘checking in’ with Tommy at the end of each instructional period following training from the school psychologist. Ms. Jones will score Tommy based on his classroom behaviors and the areas included on his CICO worksheet. Office staff will be provided with appropriate materials and training to score Tommy’s CICO sheet at the end of each day and provide a prize based on his percentage. In addition, the school psychologist will meet with Tommy weekly for lessons in social skills.”</p> <ul style="list-style-type: none"> <li>Ms. Jones’ part in the intervention is based on classroom behaviors and therefore highly related to her experience and skill level. The school psychologist is charged with social skills lessons, a task typical for the profession.</li> </ul> <p>1 = “Ms. Jones will be responsible for ‘checking in’ with Tommy at the end of each instructional period, as well as providing feedback as it relates specially to social skills.”</p>	<p>Teachers may be asked to implement certain interventions for which they are (1) not adequately trained, and (2) may be outside of the scope of their traditional responsibility as classroom educators (Yell et al., 2000). An example of this is social skills instruction: teachers may be asked to help students with BIPs in learning important social skills when traditionally, educators with advanced degrees and specialized training (e.g., school psychologist, school social worker) are responsible for social skills instruction.</p> <p>Teachers who are asked to implement interventions beyond their</p>



	<p>the person(s) who are expected to implement the plan to perform tasks outside of their professional skill level.</p>	<p>0 = “Ms. Jones will conduct social skills lessons with her class twice a week for the benefit of Tommy.”</p> <ul style="list-style-type: none"> <li>• Ms. Jones is asked to complete an intervention that is beyond her training level.</li> </ul>	<p>professional skill level may feel inadequate and experience burn out as a result (Ringeisen et al., 2003).</p>
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<i>Components to Evaluate</i>	<i>Scoring</i>	<i>Examples</i> <i>All examples below relate to the same student and same behavior/intervention.</i>	<i>Key Concepts</i>
<p>CULTURAL RELEVANCE: 3a. Are the outcomes of the intervention valued by those who receive them?</p>	<p>2 = The BIP clearly indicates that the student values the intended outcomes of the plan.</p> <p>1 = There is some indication that the student values the intended outcomes of the plan.</p> <p>OR</p> <p>There is indication that the parent/guardian of the student values the intended outcomes of the plan.</p> <p>0 = There is no indication that the student values the intended outcomes of the plan.</p>	<p>2 = “In an interview with the school psychologist, Tommy expressed a desire to become a better reader so that he can read the same books as his older brothers. The CICO intervention will help Tommy to refrain from frequent disruptions during reading time and classroom instruction in order to encourage his reading skills to increase.”</p> <ul style="list-style-type: none"> <li>The BIP explicitly states an academic goal of the student that aligns with the intended outcomes of the plan. Interventionists can remind the student of his personal goals and their relationship to the goal of the intervention throughout its implementation.</li> </ul> <p>1 = “Tommy is reading at a level significantly below that of his peers, and the CICO intervention will help Tommy to refrain from frequent disruption during reading time and classroom instruction to help increase his reading ability.”</p> <ul style="list-style-type: none"> <li>The intended outcome of the BIP is one that will directly benefit the student’s academic learning and may therefore be valuable, but the student’s specific interests in the BIP are not mentioned.</li> </ul> <p>0 = “The CICO intervention will allow Ms. Jones to teach the class without frequent interruptions.”</p> <ul style="list-style-type: none"> <li>The intended outcome is designed to align with the values of the interventionist, and there is no indication that the values of the student have been considered.</li> </ul>	<p>Student participation in the development of BIPs is often neglected, despite research findings suggesting that students who help develop their own plan show increased self-determination and active participation (Blood &amp; Neel, 2007; Korinek, 2015).</p> <p>A BIP that includes the input of those who will receive the intervention may be more contextually appropriate for the student(s) in question, and therefore more likely to see student cooperation in its implementation (Blood &amp; Neel, 2007).</p>

<i>Components to Evaluate</i>	<i>Scoring</i>	<i>Examples</i> <i>All examples below relate to the same student and same behavior/intervention.</i>	<i>Key Concepts</i>
<p>CULTURAL RELEVANCE: 3b. Are the strategies and procedures consistent with the personal values of those who will perform them?</p>	<p>2 = The BIP includes clear indication (articulation) that chosen procedures are consistent with the values of the interventionist(s) primarily responsible for its implementation.</p> <p>1 = There is some indication that the chosen procedures are consistent with the values of the interventionist(s) primarily responsible for implementation.</p> <p>0 = There is no indication that chosen procedures are consistent with the values of the interventionist(s) primarily responsible for implementation.</p>	<p>2 = “Ms. Jones was included in the team that decided on CICO as a behavioral intervention for Tommy. Ms. Jones stated that, as part of her behavioral management philosophy, she prefers individualized student goals and frequent and consistent feedback on performance. CICO was suggested as a result by the school psychologist, and Ms. Jones agreed. She indicated that it would be a manageable addition to her current daily responsibilities.”</p> <ul style="list-style-type: none"> <li>The interventionist’s role in helping to create the BIP is specifically described, and the chosen intervention aligns with the values and time constraints of the interventionist.</li> </ul> <p>1 = “In an interview with the school psychologist, Ms. Jones stated that she prefers frequent and consistent feedback with students, although it is difficult on top of classroom management. CICO was therefore chosen as an intervention that centers on consistent feedback throughout the school day.”</p> <ul style="list-style-type: none"> <li>The interventionist was interviewed for personal preferences and values, but was not specifically included in the decision to implement CICO with the student in question.</li> </ul> <p>0 = The interventionist’s personal preferences and the relationship of the BIP to the time constraints of the interventionist are not specifically addressed.</p>	<p>Teachers and other individuals who are tasked with implementing behavior plans may be left out of the development process of the BIP and thus have little to no say as to their preferred intervention or the procedures for behavioral management for which they are most comfortable (Van Acker et al., 2005).</p> <p>Research suggests that teachers may have different views about the acceptability of certain BIP components (Allen &amp; Warzak, 2000). A number of teachers may object to BIPs they feel are unrelated to their classroom, or do not match their personal values and teaching approaches (Spencer, Detrich, &amp; Slocum, 2012).</p>

<i>Components to Evaluate</i>	<i>Scoring</i>	<i>Examples</i> <i>All examples below relate to the same student and same behavior/intervention.</i>	<i>Key Concepts</i>
<p>CULTURAL RELEVANCE: 3c. Are the strategies and procedures consistent with the personal values of those who will receive them?</p>	<p>2 = The BIP clearly indicates that the student values the chosen strategies and procedures to be carried out on their behalf.</p> <p>1 = There is some indication that the student values the chosen strategies and procedures to be carried out on their behalf (e.g., inclusion of student preferences).</p> <p>0 = There is no indication that the student values the chosen strategies and procedures to be carried out on their behalf.</p> <p>N/A = If the student is in grades K-3, do not score.*</p>	<p>2 = “Tommy was included in the team that developed the BIP and agreed to participate in the CICO program. He was excited to have his own clipboard and helped select the daily goals that would contribute to his CICO scores. Tommy also selected the reinforcement he would receive for CICO completion.”</p> <ul style="list-style-type: none"> <li>• When appropriate, the student was consulted in BIP procedure development and chosen procedures were approved by the student. The student was also heavily involved in selecting the reinforcers he would be working towards.</li> </ul> <p>1 = “Tommy will receive rewards at the end of each day at the front of the office, consisting of stickers and snack foods that are highly reinforcing to him according to his mother.”</p> <ul style="list-style-type: none"> <li>• Student preference was considered in terms of reinforcement, but there is no indication that the student was consulted in developing the procedures that the BIP will follow.</li> </ul>	<p>Student participation in the development of BIPs is often neglected, despite research findings suggesting that students who help develop their own plan show increased self-determination and active participation (Blood &amp; Neel, 2007; Korinek, 2015).</p> <p>A BIP that includes the input of those who will receive the intervention may be more contextually appropriate for the student(s) in question, and therefore more likely to see student cooperation in its implementation (Blood &amp; Neel, 2007).</p>

		0 = No mention of student preferences in terms of procedures, reinforcers, or otherwise.	
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\* Note: student input in BIP development should be age-appropriate.