

Developing Effective Behavior Intervention Plans:

Suggestions for School Personnel

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With federal mandates to develop and implement programs for students with disabilities who have behavior problems that impede their educational performance, school personnel are faced with increasing responsibility for developing individualized interventions. Developing interventions that appropriately, effectively, and efficiently address the relationship between learning and behavior problems is a complex task that requires a host of essential elements and procedures. For intervention team members who lead and design the functional behavior assessment and behavior intervention plans, specific issues to consider in developing and monitoring these plans are discussed.

Keywords: behavior intervention plans; assessment; intervention

Behavioral difficulties that interfere with a student's school performance have long been a challenge for educators. To address this issue, the 1997 reauthorization of the Individuals with Disabilities Education Act (IDEA) required educators to develop and implement behavior intervention plans (BIPs). When IDEA 1997 was reauthorized in 2004 as the Individuals with Disabilities Education Improvement Act (IDEIA), BIPs were included

again. These plans consider the relationship between student learning and behavior problems that impede classroom performance. Behavior intervention plans outline strategies and tactics for dealing with the problem behavior along with the role that educators must play in improving student learning and behavior. Although many students respond positively to conventional classroom behavior management strategies (e.g., establishing classroom rules, redirection) many others require specially

designed interventions to address the relationship between learning and behavior (Morgan & Jenson, 1988). Educators are increasingly placed in a position to develop specialized interventions, yet developing an intervention plan that appropriately and effectively addresses the relationship between student learning and the problem behavior is a complex task. Despite good faith efforts to develop a plan that best meets a student's behavioral needs, educators may find that their plans do not achieve desired results. This article examines specific issues that must be considered and addressed by school personnel who design and monitor the BIP process to enhance the effectiveness of BIPs.

Functional Behavior Assessment

With IDEIA 2004, a functional behavior assessment (FBA) is required prior to the development of a BIP for students with disabilities who have behavioral challenges that impede functioning in the educational environment. Practitioners have sought to analyze the factors involved in student behavior, and fortunately for educators, a behavioral technology for the assessment of challenging behavior exists. Functional behavior assessment involves using several methods to determine the causal and maintaining factors for a behavior that lead to the development of intervention strategies to meet the individualized and unique needs of the student. The FBA mandate in IDEIA continues to reflect a change in practice from one-dimensional approaches that simply seek to increase desired responses or eliminate problem behavior, to a multifaceted process that focuses on examining the contextual variables that set the occasion for problem behavior, linking assessment results to intervention planning, and seeking to develop positive instructional or behavioral strategies and supports to address more appropriate and functional skills.

Discussions and examples of FBA methodology are abundant in the literature. Several comprehensive resources on the design and execution of FBAs, and the relationship between the outcomes of an FBA and the subsequent development and execution of BIPs, are available for practitioners (Crone & Horner, 2003; Crone, Horner, & Hawken, 2004; Florida Department of Education, 1999; O'Neill et al., 1997). The underlying theme to the FBA is that all behavior has a function and occurs for a reason. Determining this function is achieved through a process that usually involves a wide variety of strategies. The primary outcome of the FBA that summarizes these findings is a hypothesis statement that describes the problem and the variables correlated with its occurrence and non-occurrence (Sugai, Lewis-Palmer, & Hagan-Burke, 1999-2000). Developing this hypothesis is achieved through the following:

1. consensus on the problem behavior,
2. a precise definition of the target behavior (Alberto & Troutman, 2006),
3. a review of the student's records and past interventions,
4. interviews with the student or all relevant parties (O'Neill et al., 1997),
5. team discussion,
6. assessment scales (e.g., Durand, 1988),
7. direct observation and measurement of the target behavior,
8. scatterplot data (Touchette, MacDonald, & Langer, 1985),
9. assessment of antecedents to and consequences of the target behavior,
10. identification of reinforcers (DeLeon & Iwata, 1996; Fisher et al., 1992; Holmes, Cautela, Simpson, Motes, & Gold, 1998; Pace, Ivancic, Edwards, Iwata, & Page, 1985),
11. examination of the ecological context to the problem behavior (Greenwood, Carta, & Atwater, 1991), and
12. analog experimentation of the proposed hypothesis (O'Neill et al., 1997).

It should be stressed that conducting an FBA is a comprehensive *process* supported by data and not simply a matter of those involved with a student achieving consensus on the problem and speculated causes. This process may involve multiple sources (teachers, parents, peers) and multiple environments and contexts (e.g., group activities vs. independent activities, different classrooms, classroom vs. playground or lunchroom). Due to the necessity of examining all of these variables, a team-based approach is essential (Todd, Horner, Sugai, & Colvin, 1999). Once the function or reason for the behavior is determined, appropriate intervention strategies can be developed and implemented. The relationship between developing interventions based on assessment information has been established, for example, in the Curriculum Based Measures (CBM) literature where student assessment is linked to instruction (Deno, 1985). Research indicates that using CBM results in more effective instructional plans (Deno, Marston, & Tindal, 1986). Similarly, an established body of research indicates that successful interventions depend on identifying the environmental correlates of problem behavior (e.g., Dunlap et al., 1993) and that identifying function serves to improve the effectiveness and efficiency of behavioral intervention (Lalli, Browder, Mace, & Brown, 1993; Umbreit, 1995).

Mandating FBAs within IDEIA improves the overall effectiveness of behavioral interventions. Failure to conduct a comprehensive FBA may result in programming that is insufficient to deal with the target behavior. Functional behavior assessments provide information on factors such as the most appropriate course of intervention, strategies and support systems, whether there are multiple functions

to the target behavior, the conditions under which the behavior occurs, and the most effective reinforcer. Lack of attention to these variables affects the integrity of the plan. The intervention developed may work to change the target behavior, but the strategy developed may not be comprehensive enough to be most efficient, effective, and relevant. For example, often an FBA is conducted and a plan is developed to be used in multiple environments. However, the same behavior may serve different functions in different environments (e.g., different classrooms). Interventions developed within a plan should ensure that the setting events and function are addressed, appropriate and effective supports are designed and made available, and the occurrence or non-occurrence of the behavior results in consequences that alter the future probability of the behavior. Similarly, the same behavior may also serve multiple functions within the *same* environment. It is context that dictates function, not type or form of the behavior. Conducting the FBA process *across* environments is the most effective means to determine this.

Assess Antecedent Variables and Setting Events

Traditionally, assessment of problem behavior involved examination of antecedents that trigger the occurrence of the target behavior and consequences that serve to maintain it. Subsequent intervention focused on manipulating the antecedent and consequent events to increase the occurrence of a desirable behavior or decrease the occurrence of an undesirable behavior. More recently, however, greater emphasis has been placed on examining behavior within its context (Horner, 1994; O'Neill et al., 1997; Sugai, Horner, & Sprague, 1999; Sugai, Lewis-Palmer, & Hagan, 1998). This emphasis has intensified with the emergence of the philosophy and practices of positive behavioral support. Within the framework of the traditional three-term contingency (i.e., Antecedent-Behavior-Consequence [A-B-C]), events and conditions that are more distant to the target behavior's direct and immediate antecedent (Smith & Iwata, 1997) are a focus of investigation. These conditions or events, referred to as *setting events*, serve to temporarily change the effectiveness of reinforcers and punishers, thus altering a student's response to environmental events and situations. For example, a student's argument with a peer earlier in the morning may serve to affect his or her on-task behavior later in the afternoon, despite modifications made to the curriculum and instructional strategies to facilitate greater on-task behavior. A poor night's sleep resulting in fatigue may serve to make a student more argumentative with peers, despite programming in place designed to promote more prosocial behavior. Setting events may occur just prior to a target behavior, or even days before. They may involve environmental factors (e.g., method and delivery of

instruction, curriculum, the physical setting, number of people in the environment), physiological factors (e.g., illness, medical conditions, side effects of meds) or social factors (e.g., family circumstances, interactions with peers on the school bus; Jolivette, Wehby, & Hirsch, 1999; Kern, Childs, Dunlap, Clarke, & Falk, 1994). Assessing for, examining, and evaluating the presence (or absence) of setting events, referred to as a *structural analysis* (see Stichter & Conroy, 2005), is similar to the FBA process with the focus shifted to antecedent and contextual factors rather than maintaining variables.

The implications of examining the setting and contextual factors on the development of an efficient, effective, and relevant BIP cannot be underestimated. Interventions may focus on manipulating setting events (e.g., preventing the occurrence of a setting event, removing a setting event, minimizing/maximizing the effects of a setting event) so as to set the occasion for the occurrence of more desired behavior. Programming may also focus on manipulating other antecedents when setting events are in effect (e.g., modifying events so they are less aversive). Although school personnel may not have access to setting events outside of the school environment (or even be aware of them), operating within the contingencies and context that one does have access to and can control can make a significant difference in the effectiveness of an intervention.

Establish the Validity of Reinforcers

Many intervention plans focus on using rewards, contingent upon the occurrence of desired behavior. By using these rewards, teachers apply the principle of positive reinforcement, where a response is followed by the presentation of a stimulus (i.e., the reward), thereby increasing the future probability of that response (Cooper, Heron, & Heward, 2007). Yet a serious flaw may result from the simple delivery of a reward. Unless the future occurrence of the behavior increases after the reward is presented, reinforcement has not occurred. A common programming strategy is using a reinforcement system or token system where a student receives a reward for desired behaviors. Rewards may not necessarily serve as reinforcers (Maag, 2001). As many intervention plans rely on this strategy for developing or increasing the occurrence of target behaviors, plans may be abandoned or may be seen as ineffective or unsuccessful when there is no resulting increase in behavior. Without a corresponding increase in a target behavior, the presentation of a reinforcer is not reinforcement. An often underutilized strategy in programming is using negative reinforcement (see Cooper et al., 2007). Like positive reinforcement, negative reinforcement results in an increase in the future probability of a response. The difference, however, is that the response is followed by the termination or reduction of a stimulus.

For example, a teacher develops a system in which students receive one homework pass for every 10 consecutive days that homework is submitted. Assuming a student's homework submission rate increases, the process of negative reinforcement has been in operation. The function of the behavior under the negative reinforcement paradigm is to escape or avoid an aversive stimulus. Improving behavior is neither a simple nor a quick fix, but educators have strategies at their disposal to determine what reinforcers (positive or negative) may be more effective under the circumstances (DeLeon & Iwata, 1996; Fisher et al., 1992; Holmes et al., 1998; Northup, George, Jones, Broussard, & Vollmer, 1996; Pace et al., 1985).

The same argument holds true for using punishment in an attempt to discipline a student. The overriding, desired effect is to decrease the future occurrence of the inappropriate behavior. If the behavior did not decrease, then punishment has not occurred. A frequent disciplinary strategy is to send a student to the principal's office when misbehavior occurs. It is assumed that the effect of this action will punish the student and result in a decrease in the future occurrence of the misbehavior. However, if the target behavior did not decrease in frequency, punishment has not occurred. In fact, the strategy may have served to negatively reinforce the target behavior instead. The important consideration for reinforcement and punishment is that they are not *things*, but rather *effects* (Maag, 2001) and these effects impact the occurrence/nonoccurrence of desirable *and* undesirable behaviors. Reinforcement and punishment are not events but a process that results in the increase or decrease of a behavior; reinforcers and punishers must function as such rather than *look like* such.

Describe and Specify Target Behaviors and Intervention Strategies

Oftentimes, several individuals will note problem behavior with a student. The different perspectives and vocabulary of these individuals can lead to a variety of terms used to describe the problem behavior. These terms may be general or specific, but the resulting consensus can have an impact on the effectiveness of a BIP. For example, a student may be described as "aggressive." Such broad descriptors can have different meanings for different people. Does the student hit others, destroy property, or verbally threaten others? Achieving consensus on the target behavior among all of those implementing the BIP ensures that the plan is implemented consistently, under appropriate conditions. A description of a target behavior should be so specific that an individual unfamiliar with the student should be able to identify the student and the target behavior when it occurs. The term *operational definition* (Alberto & Troutman, 2006) has been used to describe the precision with which target behaviors should be identified. To minimize the differing interpretations

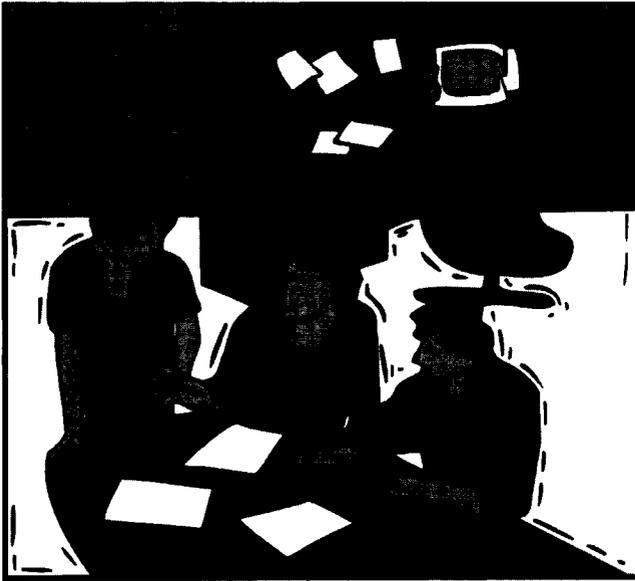
of the same target behavior, a clear description of the observable and measurable characteristics of the target response is essential. Without a clear definition of the BIP's focus, it is very likely that a plan will be inconsistently implemented, thereby minimizing its overall effectiveness and relevance.

When establishing definitions of target behaviors, the notion of response class (i.e., a set of behaviors that have a similar function but vary in their basic elements or topography) must be considered. For example, a student's attempt to avoid difficult classroom work may take many forms. She or he may verbally refuse to comply with instructions, engage in tantrum behaviors, or slam the book shut. The similarity between all of these responses is that they serve to avoid work. One must not assume, however, that the same response classes will serve the same function in a different environment, or even in the same environment with a different context. Function dictates the type of intervention, not the setting, definition or types of behavior.

Occasionally, generic, nonspecific BIPs are developed and designed to improve a student's behavior without operationally defining the behavior or focusing on specific target behaviors. For example, a student will receive reinforcement or a reward for the absence of any problem behavior in a given period of time (e.g., if the student is good for the entire class period, he or she will receive a reward). These generic approaches may not provide the specificity and results that a more direct focus provides (e.g., providing a student with a reinforcer if 80% of math problems are completed correctly within a class session). Furthermore, as the consequence is not provided for a specific response, such interventions may have minimal impact on the acquisition or development of new target responses. Along similar lines, a lack of specificity in the BIP itself is another cause for concern. Just as target behaviors must be specifically described, the intervention itself must be clearly outlined. For example, designing a BIP that states a teacher will modify the way she or he interacts with a student gives very little information as to how those interactions are modified. Should the teacher modify the delivery of instruction and if so, how? Should the teacher provide more verbal praise or corrective feedback? In addition to delineating the strategies to use, a BIP must indicate the necessary resources and support along with the expectations of those carrying out the outlined procedures. Those implementing the BIP must know what to do and what not to do when the target behavior occurs (or does not occur). Specifically outlining procedures ensures that the plan is implemented as intended with little room for interpretation.

Consistently Collect Data

Although the process of measuring student performance is not new to teachers, the practice is generally limited



to measuring academic response by recording students' grades on tests or other measures of work performance. Many teachers see little value in measuring and recording the occurrence of other student behavior in the classroom (Alberto & Troutman, 2006), and behavioral interventions are often developed with little consistency and attention to necessary details such as monitoring and evaluation (Buck, Polloway, Kirkpatrick, Patton, & Fad, 2000). If a student's behavior warrants implementing a BIP, it stands to reason that steps must be taken to evaluate the effectiveness of the plan in changing that behavior. Just as teachers use different strategies to measure students' academic performance in the classroom to evaluate the effectiveness of their instruction, a measurement of student behavior allows for evaluation of student performance and the effectiveness of the plan. Data should reflect progress toward the intervention's goal.

As previously discussed, contributing to the success of a BIP involves developing specific definitions of the target behavior. To effectively evaluate these behaviors, planned observation and measurement of their occurrence is essential. Without observation and measurement, there is no standard, objective method for determining the effectiveness of a BIP. A BIP may be prematurely modified or discontinued, or an ineffective plan may continue and prolong the student's exposure to ineffective strategies. To evaluate the effectiveness of a BIP, the student's behavior should be observed, measured, and recorded before, during, and after implementing the BIP, and the occurrence or nonoccurrence of the target behavior should be continuously assessed. Continuous measurement of student behavior reduces the likelihood of error in the intervention process (Cooper et al., 2007). Without data to represent student performance, the teacher is forced to rely on perception and opinion to assess the effectiveness of a BIP. A myriad of factors can cloud the accuracy of one's perception and opinion. The chance of error in evaluation of performance is much less when direct and objective measures are used.

Without data, no objective basis exists for judging improvement or decline in performance. Furthermore, continuous assessment of student performance and data collection improves the quality and efficiency of the decision-making process (Horner, Sugai, & Todd, 2001). That is, if an intervention is found to be unsuccessful, continuous evaluation allows for the teacher to change the intervention. Data must be used to assist with understanding, analysis, intervention, evaluation, and decision making (Sugai & Horner, 2005). Researchers have suggested that teachers who frequently and continuously collect data are better decision makers than teachers who do not (Fuchs & Fuchs, 1986; Fuchs, Fuchs, & Stecker, 1989).

Maag (2003) outlined several reasons for measuring and recording behavior. First, to accurately evaluate the effectiveness of the intervention, a precount, or baseline, is necessary. Without baseline data, no standard of comparison exists between pre- and postintervention occurrences of behavior, and there is no objective means of determining whether the intervention was effective. Second, measurement of the behavior allows the practitioner to determine whether the behavior targeted for measurement is the problem behavior (Levitt & Rutherford, 1978). Oftentimes, behaviors targeted for measurement may not be the problem. Behaviors targeted for measurement should be those that are the true problem or those targeted for intervention. For example, disruptive behavior is often the focus of intervention. Though disruptive behavior may certainly be a concern, it may also consist of several other responses such as roaming the room, talking with peers, or playing with objects. The true problem, however, is that the student does not complete work or attend to task. By collecting data on one response, other information is indirectly obtained on other related responses (Maag, 2003). As these other responses are better suited for intervention, it is more appropriate to measure their occurrence. Third, measurement of behavior assists with determining the severity of the problem. Because perceptions may be biased, data allow for an objective assessment of the degree to which the behavior occurs and its severity, relative to the occurrence of other students in the classroom. Data collection may reveal that the degree to which the behavior occurred was not as severe as perceived to be.

Implement Plan Accurately and Consistently

Central to the effectiveness of a BIP is the fidelity of the plan's implementation and several issues may contribute to the BIP's integrity. *Procedural integrity* (also referred to as treatment fidelity) refers to the accuracy and consistency of implementation (Baer, Wolf, & Risley, 1968; Gable, Quinn, Rutherford, Howell, & Hoffman, 2000; Peterson, Homer, & Wonderlich, 1982) and can result from factors such as a poorly defined target behavior or a

poorly developed plan. As previously discussed, a poorly defined target behavior may affect accurate implementation of the plan. A poorly developed plan, at best, results in inconsistent implementation, and at worst, incorrect implementation; yet both are likely to negatively impact the effectiveness of the intervention. As Gresham, MacMillan, Beebe-Frankenberger, and Bocian (2000) indicated, the degree of treatment fidelity is directly related to the effectiveness of the plan; that is, a more accurately and consistently implemented plan increases the likelihood of producing positive behavior changes. Intervention is effective only to the degree to which it is reliably implemented. Furthermore, if a plan is poorly understood, difficult to implement, or inefficient, and thus poorly implemented, it is unlikely that appropriate decisions regarding the plan and a student's progress can be made. Just as data should be taken on student performance, data on program implementation provides team members with a measure of accountability. With increased emphasis on accountable systems, it would behoove educators and researchers to develop more practical and direct methods of ensuring and monitoring treatment integrity.

A second, and often overlooked reason for poor procedural integrity, is the social validity of the plan. Social validity is defined as an intervention's acceptance by its consumers; those who implement the plan or benefit from its implementation. Gunter and Denny (1996) noted that acceptability is based upon the judgment of those implementing the plan. The complexity of the plan, the perceived effectiveness of the plan, the teacher's knowledge of the plan's implementation, the willingness and ability of school personnel to execute the plan, and the social context of the plan all impact acceptance (Gresham et al. 2000; Gunter & Denny, 1996; Quinn, 2000; Scott et al., 2004; & Sugai & Horner, 2002; Wilson, Gutkin, Hagen, & Oates, 1998). Plans viewed as demanding, ineffective, or those that go against the philosophical beliefs of those who implement them are less likely to be implemented correctly or consistently and may even be abandoned. Furthermore, with a greater focus on accountability being placed on the educational system, treatment integrity is strongly related to treatment effectiveness. It benefits educators to develop and maintain collaborative relationships with all involved in the intervention process and discuss concerns about the intervention process that may impact its utility and acceptance in the classroom. Teachers have indicated that they are better able to solve behavioral problems when collaboration among team members occurs (Giangreco, Cloninger, Dennis, & Edelman, 2000).

Address Student Skill Deficits

Maladaptive behaviors that serve as the focus of BIPs undoubtedly interfere with a student's ability to effectively interact with the environment, yet the reduction of these target behaviors does not necessarily result in

a functional improvement in the classroom (Ferritor, Buckholdt, Hamblin, & Smith, 1972). Ferritor et al. (1972) found that reducing disruptive classroom behavior does not always result in a corresponding improvement in academic performance. As important as reducing inappropriate behavior is, it is equally important for BIPs to address instruction in constructive and productive social and classroom behaviors. Knowledge of the inappropriate behavior's function is particularly important here, as knowing the function is critical for identifying relevant replacement behaviors that serve the same function as the target response. Many inappropriate behaviors are the result of a *skill* deficit rather than a *performance* deficit. Simply addressing the removal of an inappropriate behavior fails to address a possible skill deficit because the student has not learned an alternative, appropriate response. Particularly relevant to the classroom is the lack of academic skills that may impede classroom performance and the behavioral problems that often accompany these skill deficits (e.g., a student's off-task behavior during silent reading time is not due to his or her refusal to follow directions but rather to poor reading skills). Rather than developing a plan only to eliminate the undesired behavior, intervention must also focus on remediating the academic deficiencies correlated with the target behavior, the nature of which may be more appropriately addressed in an individualized education program (IEP). Generally the function of a given behavior, though the focus of intervention, is not usually a cause for concern, but rather the behavior used to achieve that function is. A plan that focuses on teaching a functional, alternative replacement behavior (e.g., teaching a student to recruit teacher reinforcement rather than calling out in class) allows the student to receive the same outcomes as the targeted undesirable behavior but by emitting a more desirable and adaptive functional response. A concurrent focus of intervention can address the acquisition of an alternative behavior that serves the same function as the target behavior.

Program for Generalization and Maintenance

The ultimate expectation of a BIP is that the intervention will result in lasting behavior change across a variety of environments that the student is expected to encounter. Unfortunately, simply implementing a BIP and successfully modifying behavior does not guarantee sustained and generalized behavior change. The desired change resulting from the implementation of a BIP may be short-lived, or the target behavior may not extend into other environments. Two types of outcomes are most often the concern with behavioral programming: stimulus generalization and response maintenance.

Stimulus generalization refers to the occurrence of a behavior in a different setting or under different conditions than in which it was trained (Alberto & Troutman,

2006; Cooper et al., 2007). For example, if the focus of a BIP is to teach a student to raise his or her hand rather than call out answers in the classroom, stimulus generalization has occurred when the student raises a hand, rather than calling out answers, in classrooms other than the classroom in which the BIP was in effect. The student also participates in a variety of questions and situations.

The second type of outcome is *response maintenance*, when a learned behavior continues long after the programmed contingencies in a BIP have been removed (Cooper et al., 2007). For example, as in the same situation just discussed, response maintenance would occur if the student continued to raise a hand, rather than call out answers, throughout her or his educational career. Generalization and maintenance rarely occur without specific programming for their occurrence. Unfortunately, a "train and hope" (Stokes & Baer, 1977) approach is often used with BIPs, where the student is taught a skill and those implementing it hope that it remains in the student's repertoire across settings and time. Although a technology for generalization and maintenance is established in the literature (Alberto & Troutman, 2006; Cooper et al., 2007; Stokes & Baer, 1977; Stokes & Osnes, 1988), these strategies are not often addressed in behavioral programming. Addressing generalization and maintenance issues in a BIP has an impact on programming design. When generalization and maintenance are addressed in programming, programming objectives change as generalization and maintenance objectives differ from typical programming objectives that focus on acquisition of behavior (Haring & Liberty, 1990). For example, the conditions under which the behavior occurs, materials used, schedule of reinforcement, or other performance criteria, differ when considering generalization and maintenance. Consequently, the BIP should be designed to reflect the conditions that the student will encounter in the real world environment.

Students may also need to be taught self-monitoring and self-management strategies to maximize generalization and maintenance (see Todd, Horner, Vanater, & Schneider, [1997] for an example of integrating self-management into the BIP process). Within generalization objectives, conditions reflecting the natural environment are addressed rather than objectives that address the successful acquisition of the skill. Thus, the criteria for successful performance differ. Because the criteria are not the same, it stands to reason that the design and execution of a BIP must also differ if these criteria are to be addressed.

Focus on Demonstrated Behavior Change, Not "Just Talk"

The intent of behavioral planning is to change specific student behavior. As such, programming must focus on the student actually emitting a desired response. Rather than focusing on a specified response, a plan may simply

focus on the student verbally reporting what the appropriate response should have been. For example, when a student responds to the teacher's request to begin working by throwing the book across the room and tipping over the desk, a BIP may indicate that she or he talks with the school social worker about more appropriate ways to handle anger. Unfortunately, simply focusing on verbalizations as a behavior change strategy is not likely sufficient enough to establish a desired behavior change.

Correspondence training involves individuals making verbal statements about future behavior. Correspondence is established through programming that reinforces the individual's stated intention (Baer, Williams, Osnes, & Stokes, 1984; Guevremont, Osnes, & Stokes, 1986a, 1986b; Stokes, Osnes, & Guevremont, 1987). However, follow-through to the actual emission of the desired response is essential, especially for the acquisition of new behaviors. Without the follow-through established with correspondence training, it is likely the programming will only serve to establish verbal reports of a desired response rather than the actual desired response.

Provide Sufficient Time, Staffing, Resources, and Supports

Despite good faith efforts to ameliorate a student's problem behavior, barriers may exist that prohibit effective implementation. First, time is an important factor to consider. Time refers not only to the time to implement the plan but also time to allow progress to be made. Second, sufficient personnel must be on board to implement the plan, especially if the plan is implemented across multiple environments (e.g., different classrooms, home and community). Some individuals may think that time and resources are insufficient to implement the program while still addressing the needs of other students, but resources are a key factor in the development and execution of BIPs. These may include materials to implement programming, ongoing consultation, or training. Support is not limited to school personnel but to the supports students require to facilitate their social and learning outcomes, to prevent problem behaviors, and to promote positive, appropriate, and functional behavior change (Carr et al., 2002; Horner, Albin, Sprague, & Todd, 1999). Rather than focusing on means to eliminate undesirable behavior, positive behavioral support strategies seek to promote student achievement through understanding of the unique factors involved in a student's behavior, individualizing interventions, and providing the necessary supports to achieve desired and sustained outcomes (see Crone & Horner, 2003; Florida Department of Education, 1999; Sugai & Horner, 2002). Effective practices require sustained support (Sugai & Horner, 2005). Resources may even include feedback on a teacher's performance of the plan's implementation. Coddling, Feinberg, Dunn, and

Pace (2005) found that providing performance feedback to teachers improved treatment integrity of the plan in the classroom. Moreover, teachers rated performance feedback as valuable to the intervention process (Coddling et al., 2005; Noell, Duhon, Gatti, & Connell, 2002). It would be inappropriate and naïve to assume that programming can be adopted and accurately implemented without adequate resources, training, or support.

Conclusion

As the practice of intervention planning grows within the educational arena and educators become more comfortable with its development and practice, the necessary and essential requirements inherent in an appropriately developed and effective plan will become more mainstream. Figure 1 provides a summary checklist for designing more

✓	Essential BIP Elements
	Functional Behavior Assessment
	• Consensus on problem
	• Review of records & past interventions
	• Interviews with all relevant parties
	• Team discussion
	• Assessment scales
	• Direct observation & measurement of the target behavior across settings & context
	• Scatterplot
	• A-B-C analysis
	• Reinforcer preference assessment
	• Ecological analysis
	• Hypothesized statement of the behavior's function
	• Analog experimentation of proposed hypothesis
	Antecedent Variables & Setting Events
	• A-B-C analysis
	• Determine the presence or absence of setting events
	• Contextual factors
	• Environmental factors
	• Physiological factors
	• Social factors
	Validity of Reinforcers
	• Reinforcer preference assessment
	• Corresponding increase in the target behavior when reinforcement is used
	• Corresponding decrease in the target behavior when punishment is used
	• Data to verify change in target behavior
	Clear Description of Target Behavior & Intervention Strategies
	• Observable, measurable, definable, & precise definition of the target behavior
	• Examination of similarities & differences between multiple target responses
	• Intervention focuses on a specific response or class of responses
	• Clear outline of BIP's procedures, specifying what one should/should not do when the behavior does/does not occur
	• Specific resources & support necessary to execute the plan
	Consistent Data Collection
	• Data collection system for continuous measurement of the target behavior is established
	• Data & student performance is continuously evaluated
	• BIP is modified, if necessary, based upon evaluation of the data
	Accurate & Consistent Implementation
	• BIP is accurately implemented
	• BIP is consistently implemented
	• Data is collected on BIP implementation
	• Social validity of the plan is established
	• Collaborative process is maintained
	Student Skill Deficits Addressed
	• Skill vs. performance deficits are determined
	• Skill deficits are remediated within a BIP or IEP
	• Establish a functional & adaptive replacement behavior
	Generalization & Maintenance Programming
	• Long-term outcomes for the target behavior are established (environmentally, contextually,

Figure 1. Checklist for designing, implementing, and evaluating effective behavior intervention plans.
Note. BIP = behavior intervention plan; IEP = individualized education program.

effective BIPs. Although this discussion has focused on the development of individual plans, practitioners should be aware that to provide effective interventions, not only must BIPs address issues specific to an individual student, but specific systems inherent to the school that also serve as contextual factors and that may contribute to the occurrence of undesirable behaviors (Todd, Horner, Sugai, & Sprague, 1999). Effective interventions are not developed in isolation, but rather are the product of individual and cumulative efforts and global and specific assessment strategies. Future resources should be directed toward training educators on more effective practices to improve the quality of intervention programming to most effectively meet the educational needs of students with behavior problems in the classroom and other school settings.

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