

Using Positive Behavioral Support to Manage Avoidance of Academic Tasks

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One of the most frequent concerns expressed by teachers and administrators is how to manage behavioral problems in the classroom (Langdon, 1999). Behavior that disrupts instruction is problematic for teachers and students, in part, because we have known for quite some time that the amount of time students engage actively in academic tasks is positively correlated to how much they learn (Black, 2004). Functional assessment and positive behavioral support (PBS) are two management approaches that are extensions of applied behavior analysis (Repp & Horner, 1999). Unlike some classroom management practices that rely heavily on aversive consequences, these approaches use more proactive techniques to manage challenging behavior and increase students' active engagement in learning. These approaches

- Use research-validated procedures to address causes or functions, of a

behavior in the environmental context in which the behavior operates.

- Teach students more efficient and desirable ways to achieve the same outcome that a problematic behavior serves.
- Emphasize simple antecedent changes to the environment that often lead to substantial improvements in behavior.

As this article shows, "simple antecedent changes" often included accommodating a student's interests, even to the extent of bringing Barbie doll accessories into the curriculum or allowing short social breaks during academic tasks. Such changes had great effects on a young girl's disruptive behavior.

Beyond addressing educators' concerns about how to manage challenging behaviors, use of these two procedures is mandated, in certain cases, by federal law (Gartin & Murdick, 2001).

Functional Assessment and Positive Behavioral Support

The reauthorization of the Individuals with Disabilities Education Act of 1997 (IDEA) introduced *functional assessment* to federal legislation and directed school personnel to use this research-validated procedure. In addition, IDEA mandated that educators use PBS strategies to address behaviors that impede a student's learning or interfere with the

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learning environment. Long before these legal mandates, research indicated that functional assessment and PBS were effective tools for managing undesirable behaviors, especially behaviors that serve functions of seeking attention, communicating one's needs, and escaping or avoiding academic tasks. For example, Carr, Newsom, and Binkoff (1976) used PBS to reduce escape-motivated behavior during instruction. Carr, Newsom et al. identified features of the instructional environment that had promoted a student's self-destructive behavior—behavior that had served the function of escaping or avoiding instruction. Carr, Newsom et al. then altered key features of the instructional environment; that is, he embedded instruction within a more positive context. This change reduced the student's escape-motivated self-destructive responses during instruction.

The Carr, Newsom et al. (1976) study is important because it is one of the first studies that applied a positive behavioral approach to ameliorate problem behavior after numerous contingency programs had failed to help the student. Carr, Newsom et al. suggested, "The failure of treatment using consequence approaches underlines our imperfect understanding of self-destructive behavior and provides us with an incentive to seek out new interventions" (p. 140).

The Carr, Newsom et al. (1976) study and many subsequent PBS studies demonstrate that simple antecedent changes to the academic environment, such as incorporating students' interests into curricular tasks (Clarke et al., 1995), permitting students' choice in the sequence of assigned tasks (Kern, Mantegna, Vorndran, Bailin, & Hilt, 2001), and modifying instructional antecedents (Wheeler & Wheeler, 1995) can lead to dramatic improvements.

Not surprisingly, students with disabilities often struggle with learning, and they often display their most disruptive behavior during academic instruction. So, how can educators use PBS to minimize students' resistance to academic instruction without disrupting

Tip 1: Seek Assistance

Identifying conditions and events in the classroom that are related to a student's disruptive behavior can be very challenging, especially when you are the student's teacher. As teachers, often we are too close to the situation, or too busy with other students and teaching tasks, to effectively identify the classroom variables that trigger and maintain disruptive behavior. Therefore, seek assistance from a capable and trusted colleague.

classroom routines? The case study of Callie may offer some answers.

Callie—A Case Study in Positive Behavioral Support

We conducted this study within and mindful of the ongoing routine of a classroom because naturalistic assessment examines the actual settings where challenging behaviors occur, not in isolated or contrived settings. We wanted our assessment to be relatively unobtrusive. In addition, interventions based on our assessment had to be practical, flexible, and suitable to the needs of the teacher, students, and classroom, while using effective, research-supported methods.

Callie was a 6-year-old female with attention deficit/hyperactivity disorder (ADHD), seizure disorder, and developmental coordination disorder. She received no medications to treat symptoms associated with ADHD. Two weeks before this study, her physician discontinued her seizure medication due to lack of seizure activity. We observed zero seizures from 1 month before the study through the end of the study. Callie did not receive any physical therapy intervention for developmental coordination disorder, although she did display some of its characteristics (e.g., clumsiness in motor movements; delays in achieving developmental motor milestones, such as crawling, walking, buttoning, zipping; and, in older children, difficulties in writing, ball-playing, biking, and skating; Fox, 1998).

Callie, one of four students in a self-contained classroom, often behaved in ways that disrupted her own and peers' work, as well as the teacher's routine, during academic tasks. She also displayed challenging behavior during lunch, snack, recess, and free time. A classwide token reinforcement system, which the teacher used before this study began, failed to improve Callie's behavior. Her challenging behavior was so frequent that we conducted a two-phase case study. Our purpose was to

How can educators use PBS to minimize students' resistance to academic instruction without disrupting classroom routines?

improve Callie's behavior through the use of PBS strategies acceptable to the teacher and Callie.

Experimental Design and Analysis—Phase 1 and Phase 2

During Phase 1, assessment, we used a multi-element design (Kazdin, 1982) to conduct a functional analysis. We examined and compared Callie's behavior in

Tip 2: Get a Different View

- Take 15 minutes to sit back and view your students and classroom environment while your educational assistant or a colleague teaches.
- When is the last time you saw yourself and your students in action in your classroom? View some videotape of yourself.
- Visit a colleague's classroom and observe.
- Visit the cafeteria or playground to practice identifying things that "predict" and precede disruptive behavior (e.g., overcrowding, elevated noise levels, inadequate equipment, age-inappropriate games, or peer-buddy mismatches).

five normally occurring school contexts: academic work, snack, recess, lunch, and free-time. For Phase 2, intervention, we used a changing conditions design (Alberto & Troutman, 1999) to accommodate teacher preferences. The classroom teacher requested no "return to baseline" due to ethical considerations about withdrawing interventions. The changing conditions design was a design that permitted implementation of multiple interventions across time, for a

Tip 3: Watch for Behavioral Red Flags

"He always acts that way. I tried everything."

"He misbehaves for NO REASON at all."

"She is just doing that to get back at me."

These "within-the-skin" statements signal frustration. Understanding that behavior occurs for a reason and is linked to antecedent and consequence events is the foundation of behavior analytic research.

Recall Tip 1, "Seek Assistance." Using a colleague's input is often helpful during times of frustration because their unbiased observations can provide objective data that are free from emotion.

single student, with no return to baseline (Alberto & Troutman).

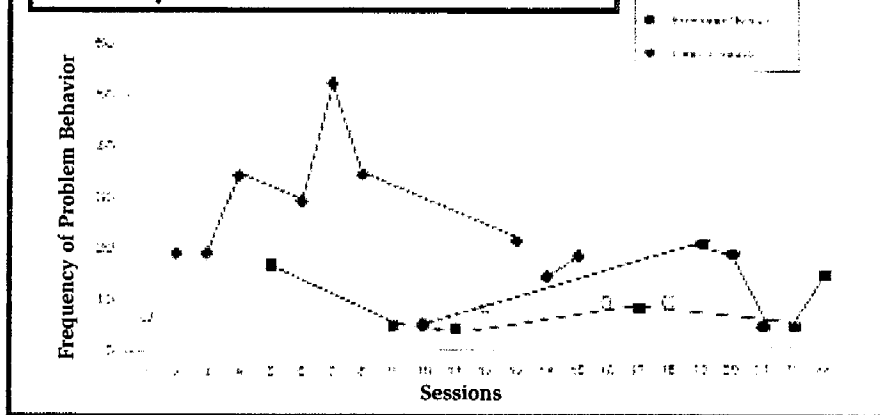
Phase 1: Assessment

Functional Assessment-Hypothesis Development

Interviews. First, the special education teacher and Callie's parents completed a single functional assessment interview form (O'Neill et al., 1997).

Direct Observations. Next, to better utilize information provided via the functional assessment interview, the first author conducted six, 10-minute observations, in several school settings, over the course of one full school day, using an A-B-C recording format, as outlined by Repp and Horner (1999). These

Figure 1. Frequency of Problem Behavior Across Sessions (Escape and Attention Combined).



observations—written objectively in narrative, anecdotal style—provided insights about the times and conditions under which Callie did and did not exhibit various types of challenging behavior.

Functional Analysis. The first author conducted a functional analysis to validate information obtained from both the interview form and direct observations. The functional analysis was conducted during a 4-hour period, on 1 day, beginning at 8 a.m. and ending at about noon.

The functional analysis occurred on a separate day from other data-collection events (i.e., after the interviews and direct observations, and prior to intervention). We conducted a total of 23, 10-minute observations of five regularly occurring routines—academic work (9 sessions), snack (1 session), recess (1 session), lunch (3 sessions), free-time (5 sessions), plus four "mixed" sessions in which routines overlapped (see Figure 1). We counted the frequency of Callie's escape-motivated and attention-seeking behaviors during each 10-minute observation session. In Figure 1, we have grouped data from similar routines (i.e., lunch and snack; recess and free time) to promote presentation clarity.

Functional Assessment Results

Interviews. Information gleaned from the teacher interview suggested tentatively two possible types (i.e., functions) of challenging behavior—escape and attention. The teacher (a) reported

that Callie's behavior was "very unpredictable," (b) was unaware of specific classroom settings that contributed to Callie's problem behavior, and (c) did not identify specific reinforcers that had maintained such behavior.

Direct Observations. Direct observations suggested further that Callie engaged in two distinctive types of problem behaviors. The first type, escape-motivated behavior, included

- Refusing to begin academic tasks.
- Hurrying to complete academic tasks.
- Asking unrelated questions and voicing unrelated comments during academic tasks (e.g., "Why do I have to do this work?" and "My chair is too short").

Tip 4: Who Changes What First?

Recall Abbott and Costello's famous skit, "Who's on First?" Well, consider our PBS sequel, "Who Changes What First?" As professionals, we must acknowledge that by changing our own actions, or by modifying how we arrange classroom settings and tasks, we can mitigate students' disruptive behavior. Habitually challenging behavior is often a sign that the current environment does not meet the needs of a particular student. Who's more likely to change what first—the student or teacher?

- Fidgeting during academic tasks (e.g., handling materials in and on her desk unrelated to task, excessive erasing, repositioning body in seat, and twirling hair).

The second type, attention-seeking behavior, included

- Tattling on peers.
- Asking personal questions (e.g., "Do you have any sisters?").
- Soliciting adults' attention (e.g., asking an adult to watch her).

Direct observations also suggested that Callie's problematic behavior, during academic tasks, was maintained and reinforced inadvertently via specific consequences. That is, the teacher often sent Callie to a timeout corner, or directed Callie to place her head on her desk, after Callie exhibited disruptive behavior during academic tasks.

These consequence-based procedures allowed Callie to escape from what was, for her, an aversive situation (i.e., academic tasks or demands) by engaging in disruptive behaviors. Direct observations, combined with interview data, also revealed minimal behavior problems from 12:00-2:30 p.m., a period that included group activities, free time, snack, recess, and dismissal—but *not academic tasks or demands*.

Functional Analysis. Functional analysis results confirmed that Callie displayed the highest frequencies of problematic behaviors during instructional periods that included academic demands, as opposed to free time-recess and snack-lunch (see Figure 1). During the nine academic demand sessions observed, total problem behaviors averaged 26.6 occurrences per session and ranged from 14 to 52.

Escape-motivated behaviors constituted 26.2 of this total, whereas attention-seeking behaviors constituted only 0.4. The "spike" in Figure 1 during session 7 ($n = 52$ problematic behaviors) occurred during Callie's least favorite subject, math. According to the teacher, high frequencies of problem behavior during math assignments were typical responses from Callie. While this data point might be a statistical outlier, it is consistent with the teacher's description and interview data about Callie's day-to-day performance.

Figure 2. Hypotheses

1. Callie's escape-motivated behavior will be reduced during academic work when
 - a. Her escape behavior is no longer followed by timeout or other escape-allowing strategies.
 - b. She is given praise for appropriate academic behavior, and inappropriate behavior is ignored.
 - c. Her tasks are modified to reduce escape behavior by incorporating her interests.
 - d. Verbal attention is provided as a reward for task completion.
 - e. Choice is provided during instructional periods.
2. Callie's attention-seeking behavior will be reduced when
 - a. The staff ignores instances of tattling.
 - b. The staff ignores inappropriate attempts to gain attention.
 - c. She is taught appropriate methods for soliciting attention.
 - d. The staff provides praise for polite and appropriate social interactions.

Figure 1 also indicates that Callie tended to exhibit attention-seeking behavior during the snack-lunch and free time-recess contexts. Average occurrence of all problem behavior during the snack-lunch context was 11.75

and ranged from 4 to 20, with a mean of 3.5 for escape-only and 8.25 for attention-seeking behavior. Average occurrence of problem behavior during the free time-recess context was 8.7, with a range from 3 to 17. Escape-only behaviors during this context averaged 1.0, while attention-seeking behaviors averaged 7.7.

The assessment results indicated clearly that, from the standpoint of frequency, escape-motivated behavior during academic demands constituted our greatest concern. The assessment results also identified the academic context as the antecedent *setting* most likely associated with this behavior. Therefore, in conjunction with the teacher, we (a) selected escape-motivated behavior as the dependent variable worthy of immediate intervention, and (b) used functional analysis results from the academic-demand context as our baseline data.

We developed several hypotheses and interventions based on our assessment data. We did not develop or implement specific interventions to manage Callie's attention-seeking behavior because of our aforementioned decision to prioritize and immediately address escape-motivated behavior. Figure 2, however, includes some approaches

Tip 5: Consider the Alternatives

Functional behavior assessment (FBA) and positive behavioral support (PBS) interventions range from informal and simple to formal and comprehensive. You can apply PBS to individual students, classrooms, and school systems. Simple changes within a classroom teacher's control include

- Making task or instructional modifications.
- Incorporating student interests.
- Chunking or reducing assignments.
- Providing advance organizers.
- Using peer tutors or models.
- Allowing student choice.
- Teaching alternative forms of communication.
- Limiting homework assignments to tasks that the student has clearly mastered previously.

Table 1. Interventions We Used to Help Callie Do Academic Work

Name of Intervention	Description
DRA (Miltenberger, 2001)	Positive verbal reinforcement for on-task behavior, plus extinction/no response for inappropriate behavior.
DRA and task modification	DRA plus modification of academic tasks to include student's interests (Barbie doll accessories, pink rather than standard paper/pencil, and stencils).
DRA and social breaks	DRA plus a short social break consisting of 2-3 minute conversations with the Educational Assistant (EA). The social break was provided contingent on assignment completion.
DRA and choice of task and break activity	DRA plus choice of task and choice of break activity. Choice of tasks was allowed for all academic seatwork. After completing 3 tasks, a 5-minute break was provided. To ease transitions from break back to work, Callie was asked what she would like to do for her next break. This was written on her assignment as a visual reminder.

Note. DRA = differential reinforcement of alternate behavior.

that, if needed, might help Callie and her teacher address both escape-motivated and attention-seeking behaviors.

Phase 2: Intervention

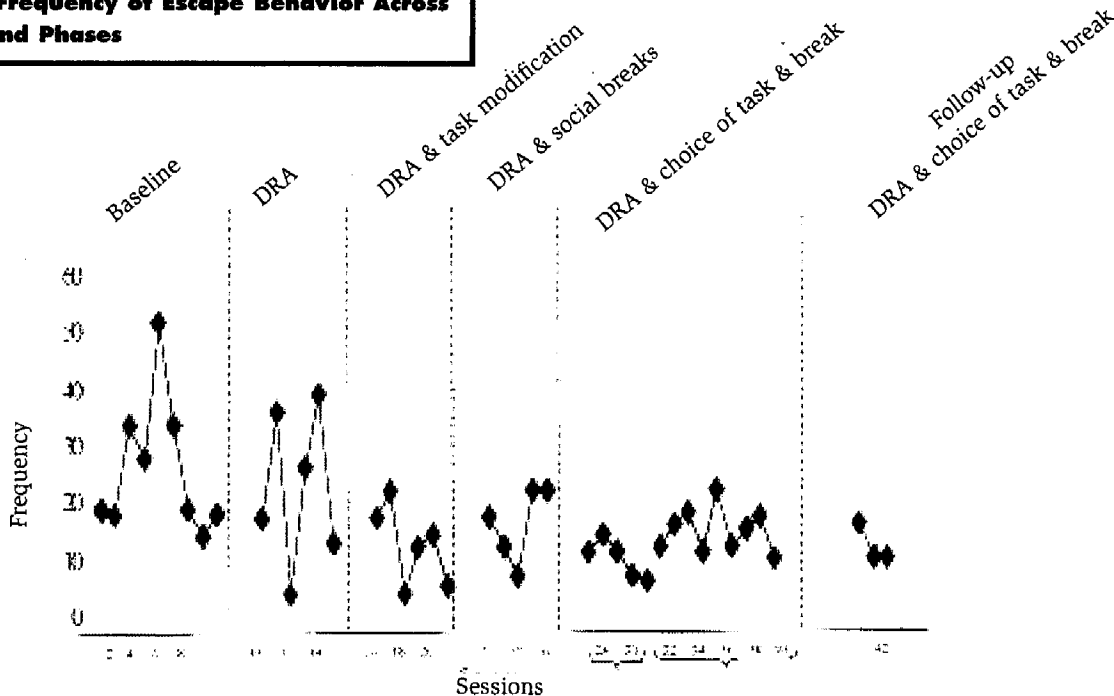
We based our interventions on assessment results. Because escape-motivated behavior occurred almost entirely in the presence of academic demands, we chose to modify curricular activities and reinforcement contingencies that the teacher used during academic periods.

Four Interventions

We implemented four interventions (see Table 1) in the following order: differential reinforcement of alternative behavior (DRA) = 6 sessions during 1 morning; DRA and task modification = 6 sessions during the next morning; DRA and social breaks = 5 sessions during the next morning; and DRA and choice = 14 sessions during the next 2 mornings, with 5 sessions 1 morning and 9 sessions the next morning.

We collected data for the final intervention for 2 days, rather than 1 day, because the teacher expressed a strong interest in this intervention. Finally, 19 days after Intervention 4, we collected data for three sessions, during 1 morning, to assess maintenance of intervention results. Intervention 4 conditions

Figure 3. Frequency of Escape Behavior Across Sessions and Phases



Resources for Positive Behavioral Support

Seek out PBS resources, which are readily available via Web sites, books, journals, conferences, and professional associations.

- **www.pbis.org** Office of Special Education Programs (OSEP) Technical Assistance Center on Positive Behavioral Interventions & Support (U.S. Department of Education). Includes a series of PBS Practices (two-page how-to-do papers plus resource lists) on
 - Conducting FBAs.
 - Collaborative teaming in PBS.
 - Proactive support strategies.
 - Teaching replacement skills.
 - Systems change in PBS.
 - Using competing behavior models.
 - Group action planning and PBS.
 - Addressing cultural and economic diversity in PBS.
- **www.nichcy.org** National Information Center for Children and Youth with Disabilities (NICHCY). On the NICHCY Web site you will find a useful bibliography for using PBS in schools, home, and community. While this document is now out of print, it is still available on the Web site and contains useful information for practitioners. To locate, follow the links starting at the home page: publications, out of print, Resource list (BIB3).
- **www.beachcenter.org** Beach Center on Disability. An organization devoted to improving the quality of life for families and individuals affected with disability. Members of this organization conduct research, provide training and technical assistance, and service at the local, state, and national level. Current research topics include PBS, law and public policy, self-determination, family quality of life, access to the general curriculum, and school-community partnerships reform. To access information regarding PBS, follow links on home page: General topics, Positive Behavior Support, and then select a resource type.
- **http://www.apbsinternational.org** An organization dedicated to the advancement of positive behavior support. Members of this organization receive newsletters, conference discounts, and a subscription to *The Journal of Positive Behavior Interventions*.
- **http://cfs.fmhi.usf.edu/dares/apbs/PBS05Call Final.pdf** International Conference on Positive Behavior Support; The World of PBS: Science, Value, & Vision
- *Journal of Positive Behavior Interventions*. Pro-Ed
- *Journal of Applied Behavior Analysis*. University of Kansas
- Carr, E. G., Levin, L., McConnachie, G., Carlson, J. I., Kemp, D. C., & Smith, C. E. (1994). *Communication-based interventions for problem behavior: A user's guide for positive change*. (1994) Baltimore, MD: Brookes Publishing.
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were in effect during these last three sessions.

Intervention Results

Figure 3 shows that occurrences of Callie's escape behavior slightly decreased from baseline ($M = 26.2$) to the initial DRA intervention ($M = 22.5$). Escape behavior was considerably less frequent during subsequent interventions including: DRA plus task modification ($M = 12.3$); DRA plus social breaks ($M = 16.0$); DRA plus choice of task or break ($M = 13.0$); and follow-up ($M = 12.0$).

Beginning and Expanding Use of PBS—A Matter of Professionalism

Our experiences with Callie and her teacher, our own students, and the research literature suggested that teachers can use PBS effectively to manage disruptive behaviors, within the context of ongoing classroom routines, when they have sufficient assistance and expertise. Callie's improvement provides further support that PBS strategies, specifically those incorporating curricular modifications, improve problematic behaviors (Carr et al., 1976; Horner, Day, & Day, 1997). More widespread use of PBS may depend on teachers' successful experiences with efficiency and practicality of PBS applications in their classrooms, as well as changes in teachers' perceptions of the program's success.

Moreover, researchers and practitioners must continue to address many pragmatic issues if PBS is to become a more routine tool among educators, especially in more inclusive settings, including general education classes where teachers typically manage classroom environments with 20 to 35 students per instructional period. In this

Visit www.pbis.org for a series of PBS Practices (two-page how-to-do papers plus resource lists).

study, with just four students in a self-contained classroom, we experienced firsthand the give-and-take necessary to implement FBA and PBS in a manner that balanced the needs of both researchers and practitioners like teachers and administrators.

Indeed, in this case study, we did not pursue certain research-based standards of practice to get PBS into practice within the classroom. For example, based largely on the teacher's preferences and existing daily routines, we limited data collection within each phase of this study to multiple sessions across just 1 or 2 days. In addition, we did not collect interobserver agreement data. Finally, we eliminated a design element (reversal) that would have permitted definitive conclusions about the functional control of the intervention over Callie's escape-motivated behavior. These were three limitations of our study from a research standpoint.

Throughout this article, we have provided tips for "New-to-PBS" professionals, as well as an updated and extended list of PBS resources (see boxes). Our hope is that this article prompts teachers to adapt FBA and PBS for use in their own and colleagues' classrooms, and in other school settings (e.g., playground, cafeteria, and hallways), where research and experience suggest that disruptive behavior is most likely to arise. We propose that by investing time in FBA and PBS now, teachers—and their students—will learn to manage

challenging behavior more proactively, and accrue dividends by enhancing engaged academic time and corresponding academic outcomes.

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