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ANTECEDENT STRATEGIES TO PROMOTE APPROPRIATE CLASSROOM BEHAVIOR

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In response to ongoing concerns with student academic and behavior problems, antecedent strategies have garnered increasing attention. Antecedent intervention approaches focus on structuring the environment to prevent problems and enhance motivation. At the class-wide level, implementation of these strategies can create a structured and orderly environment to which most students are responsive. In the case of persistent behavior problems, specific events that precede problem behavior can be removed or modified to create individualized antecedent interventions. The empirical literature base supporting the value of this approach has witnessed rapid growth. In this article, we offer a rationale for the use of antecedent strategies and provide literature-based examples of applications within school settings at both the class-wide and individual levels. In addition, we discuss practical considerations for implementing antecedent interventions. © 2007 Wiley Periodicals, Inc.

The fields of education and human behavior have long recognized the relationship between an individual's behavior and his or her surrounding environment. In practice, however, intervention approaches have not paralleled this understanding. That is, educators continue to exert change efforts toward the individual, particularly in the form of punitive responses, when academic or behavior problems arise (Martens, Peterson, Witt, & Cirone, 1986). Yet, a rapidly growing literature base offers evidence that this may not be an altogether effective, expedient, or comprehensive approach to academic and behavioral challenges (e.g., Newcomer & Lewis, 2004). Instead, intervention strategies that are likely to have a large impact and sustained effect must duly alter those environmental events that beget student challenges (Kern, Gallagher, Starosta, Hickman, & George, 2006).

One approach to environmental change is to focus on events that immediately precede problematic academic or behavioral performance. Interventions of this nature have come to be known as antecedent strategies, given their juxtaposition to behavior. To develop antecedent interventions, information is obtained about environmental events that appear to set the occasion for problematic behavior as well as those that are associated with desirable behavior. Modifications are then introduced so that events occurring before problems are either eliminated or changed in some way such that they no longer trigger the prior problems. Likewise, events associated with desirable behavior are enhanced.

Antecedent strategies, in the form of class-wide interventions, address the needs of most students in a given class. Thus, in the case of a generally disruptive classroom, these broader interventions are initially recommended. However, when problems persist, individualized interventions are called for. Rather than a trial-and-error approach, the process of functional assessment isolates variables associated with problem behavior, which then are translated into unique interventions. In this way, interventions become increasingly effective and efficient because they are tailored to address an individual student's needs.

Antecedent intervention strategies hold several distinct advantages over reactive approaches (Bambara & Kern, 2005). First, they can prevent problematic behavior from occurring. By removing or modifying the environmental events that precede problem behavior, the likelihood of the problem behavior is reduced or eliminated. This is important not only for creating a safe environment but also for fashioning an atmosphere in which learning can occur.

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A second advantage of antecedent strategies is that they tend to be quick acting (Kern, Barbara, & Fogt, 2002). Removing or altering the events that occasion problem behavior usually results in an immediate reduction of problem behavior. Though the evident benefit is in cases of dangerous or destructive behavior, the rapid elimination of any type of behavior problem is desirable from a classroom-management perspective.

Another strength of antecedent interventions is the ability to correct an environment that is contributing to problem behavior. Frequently, problem behaviors result from a mismatch between the environment and an individual's skills, strengths, or preferences. For instance, work assignments that are too difficult for a student are a common cause of problem behavior in the classroom (e.g., Kern et al., 2006). Appropriately matching instruction to a student's skill and performance corrects this environmental problem. Likewise, moving a student with poor vision to the front of the classroom corrects the problem of inappropriate visual expectations.

A final advantage of antecedent interventions is that they can enhance the instructional environment. Antecedent events associated with problem behavior are decreased or eliminated while those associated with desirable behavior are increased. Such carefully crafted environmental changes can create classrooms where students want to be and are motivated to learn. Further, as we will advocate, this approach holds promise for improving student achievement and productivity, even in the absence of problem behavior.

In this article, we provide an overview of empirically derived applications of antecedent intervention strategies in classroom settings. This overview includes intervention at both the class-wide level and the individual-student level. In addition, we offer some practical considerations for implementing antecedent strategies. First, however, we emphasize that antecedent interventions generally represent only one component of comprehensive support for students with ongoing behavior problems. Such students also require skill instruction, consequences for problem behavior, and perhaps lifestyle changes to complement antecedent interventions.

We begin with a summary of class-wide interventions because they require less effort than individualized approaches. Fortunately, most students in a given classroom are responsive to class-wide efforts. We then describe individualized approaches needed for those students who are not responsive to class-wide strategies. Finally, we discuss issues to consider when implementing antecedent interventions in applied settings.

CLASS-WIDE APPLICATIONS

Overview

Antecedent strategies implemented at the class-wide level seek to establish a classroom environment that is positive, orderly, predictable, and motivating (Sugai, Horner, & Gresham, 2002). These efforts result in increased student academic engagement that will ultimately promote appropriate behavior. We reiterate that class-wide strategies are the most efficient first step to managing student behavior. That is, the feasibility of implementation is enhanced when interventions target groups of students. Next, we delineate class-wide antecedent strategies that share strong empirical support. These strategies are summarized in Table 1.

Examples

Clear rules and expectations. Establishing, teaching, and reinforcing rules and expectations is one of the hallmarks of an effective classroom (e.g., Sugai et al., 2002). Research across several decades has demonstrated that consistent implementation of classroom rules is associated with improved student behavior at both the building level (Mayer & Leone, 1999) and at the classroom level (Johnson, Stoner, & Green, 1996). Johnson and colleagues (1996) illustrated the

Table 1
Summary of Antecedent Strategies

Classwide strategies	Individual strategies
<ul style="list-style-type: none"> • Establish clear classroom rules and expectations • Increase predictability in the environment • Increase praise for appropriate behavior, and increase behavior specific praise • Present material that is appropriately matched to student instructional level • Provide a high number of opportunities to respond to academic material • Arrange classroom seating so that it is appropriate to the instructional activity • Use effective instructions and commands • Intersperse brief and easy tasks among more difficult ones • Use a brisk pace of instruction • Provide opportunities for choice • Incorporate student interests and preferred activities 	<ul style="list-style-type: none"> • Present material that is appropriately matched to instructional level • Provide alternative modes of task completion • Incorporate student interests into academic material • Allow opportunities for choice • Provide scheduled attention to reduce the need for students to engage in attention-seeking behavior • Establish a clear and predictable schedule

power of this preventive approach. The effectiveness of three different interventions on seventh graders were compared. The interventions consisted of (a) a weekly class syllabus and individual student achievement assessment, (b) self-monitoring, and (c) active teaching of five class rules. Although all three interventions were associated with increased levels of appropriate behavior and decreased levels of inappropriate and disruptive behavior, active teaching of class rules was found to be the most effective.

Several guidelines should be considered that enhance the effectiveness of class-wide rules (e.g., Sugai & Horner, 2002). First, the number of rules should not exceed five. A limited number of rules ensures that they will be remembered by the students. Second, students should play a role in formulating the class rules, as their input and contribution fosters a sense of involvement. Third, rules should be simple, brief, and positively stated. Positively stated rules describe the appropriate behavior that is expected, which provides a framework for teaching students what to do rather than what *not* to do. For example, if a teacher wants to address calling-out behavior, an example of a positively stated rule would be: "Raise your hand to speak." Fourth, the class rules should be displayed prominently throughout the classroom so that they can be easily seen. This serves as a reminder to students and also prompts teachers to refer to the rules during ongoing instruction. Last, teachers should invest time in actively modeling and teaching the class rules, particularly at the beginning of the school year, using examples and nonexamples. This relatively simple strategy establishes and teaches expected behavior in the classroom setting.

Increasing predictability. When students can predict the events throughout their school day, they are more likely to be engaged and less likely to display problem behavior. One way to increase predictability in a classroom is to establish routines, particularly early in the school year. For example, creating procedures for arrival and dismissal, lining up, and activities to do upon work completion minimizes problem behavior. In addition, because transitions are frequently problematic, offering signals and cues of upcoming changes is likewise effective (Mace, Shapiro, & Mace, 1998). Other approaches to facilitate predictability include providing information about the content, duration, and/or consequences of future events and visually displaying schedules.

Similar to class rules and expectations, predictable routines should be established at the beginning of the school year. Bohn, Roehrig, and Pressley (2004) demonstrated the importance of introducing routines early on. Extensive observations were conducted in six classrooms (Grades K–2). Midyear measures of student engagement and literacy progress indicated that two of the teachers were more effective than were the others. Among other characteristics (i.e., higher teacher expectations, more frequent and specific teacher praise), the “effective” teachers paid more attention to establishing routines and procedures in the beginning of the school year. This illustrates the importance and ongoing impact of early planning.

Praise. Research has clearly demonstrated that delivering praise to students when they engage in appropriate behavior increases the likelihood they will continue to engage in appropriate behavior in the future (e.g., Madsen, Becker, & Thomas, 1968). As an antecedent strategy, it is speculated that students of teachers who use high rates of praise may be more likely to engage in appropriate behavior because they perceive that more praise is readily available in that environment. Unfortunately, research has indicated that teachers rarely use praise with general education students (Beaman & Wheldall, 2000) and are even less likely to use it with students who engage in challenging behavior (Shores et al., 1993). Increasing the frequency of teacher praise is a simple strategy that can have a very large impact on student behavior. Further, there is some evidence of a relationship between teacher praise and student self-appraisal over time (Montague & Renaldi, 2001). Consequently, the beneficial effects for students may be long lasting.

Research has demonstrated that behavior-specific praise, or that which specifically identifies the particular desirable behavior the student is performing, is most effective in promoting appropriate behavior (e.g., Chalk & Bizo, 2004). Behavior-specific praise statements can be directed at individual students or at the entire class. For example, if a teacher notices a student is in his seat and is focused on his work, the teacher might say, “Josh, I love how you are sitting quietly and working on your worksheet. Great job.” Thus, the statement explicitly identified and praised the student for the appropriate behavior in which he was engaged, but it also provided a prompt to the rest of the class that in-seat, on-task work is expected, and that positive attention from the teacher is available for engaging in said behavior. Sutherland, Wehby, and Copeland (2000) examined the effects of increased behavior-specific praise statements with a class of students with emotional and behavior disorders. They found that as the rate of specific praise statements delivered by the teacher increased, so did the on-task behavior of the class.

Praise need not be directly delivered to a student to be effective. Research has illustrated it has a vicarious effect, in that students who observe others being praised for a particular behavior are more likely to model that behavior. For example, Kazdin (1977) demonstrated that as a target student was praised for attentive behavior, the attentive behavior of an adjacent peer increased as well; however, note that the effects of vicarious reinforcement through praise can be short lived if the peers (i.e., students who were not the subject of the praise statements) are not praised as well, at least intermittently (Ollendick, Dailey, & Shapiro, 1983).

Task difficulty. Assigning work that exceeds students’ skill level is a common cause for off-task and problem behaviors. Further, it is critical that the curriculum is matched to students’ instructional levels for learning to occur. Center, Deitz, and Kaufman (1982) demonstrated the importance of this critical classroom feature in a study with a class of 15 boys (aged 8–12 years) with behavior disorders. They found that when there was a mismatch between the students’ instructional levels and the difficulty of a task, inappropriate behavior was higher. Thus, providing academic material that is within the instructional level of the students (i.e., not too difficult while still providing a challenge) can serve as an antecedent strategy to promote appropriate class-wide

behavior. This finding has been replicated numerous times across various populations and ages (Davis et al., 2004).

Opportunities to respond. “Opportunities to respond” refers to opportunities in which students have to actively respond to academic material or requests (i.e., reading aloud, writing answers to a problem, answering a question or responding to a teacher’s cue, writing a response). Increased opportunities to respond have been associated with improved academic performance, higher levels of student task engagement, and lower levels of disruptive behavior (e.g., Carnine, 1976; West & Sloane, 1986). To illustrate, Sutherland, Alder, and Gunter (2003) increased the number of teacher-presented opportunities to respond from 1.7 per minute during a baseline phase to 3.5 during an intervention phase in a class of nine students (aged 8–12 years) with emotional and behavioral disorders. The increase in opportunities to respond was associated with higher correct responding, lower disruptive behavior, and increased on-task behavior.

Classroom seating arrangements. The way that students’ desks are arranged in the classroom also can serve as an antecedent strategy to promote desired behavior. It is common to see desks in clusters or in groups, and seldom seen are arrangements that follow a more traditional “row” pattern; however, research has indicated that when students’ desks are arranged in rows, students are more on-task, talk out less, complete more work, and are generally more engaged with tasks (e.g., Bennett & Blundell, 1983; Wheldall & Lam, 1987). For instance, Wheldall, Morris, Vaughan, and Ng (1981) alternated the seating arrangements from groups of students seated at tables to students seated in rows for two classes of 10- and 11-year-old students, and observed higher levels of on-task behavior. In fact, improvements were strongest for students who showed lower initial levels of on-task behavior. Wheldall and Lam (1987) found similar improvements in on-task behavior and reduced levels of disruption with three classes of students with behavioral disorders and learning disabilities when seated in rows instead of at tables. Further, Bennett and Blundell (1983) found marked increases in the quantity of work completed and slight improvements in the quality of work completed when two classes of 10- and 11-year-old students were seated in rows as opposed to groups. Note, however, that a semicircle or a horseshoe arrangement may promote higher levels of student discussion or student question-asking.

Effective instructions and commands. Effective delivery of instructions and requests is a key strategy for promoting appropriate behavior. Features of an effective instruction or request include gaining the student’s attention, stating the instruction clearly in the form of a “do” command, giving one instruction at a time in a firm (but not angry) voice, and waiting for student compliance (e.g., Forehand & McMahon, 1981). Matheson and Shriver (2005) demonstrated the outcome of effective instructional commands. Teachers of second- and fourth-grade students were taught to use concise instructions that were precise, specific, direct, and issued one at a time. The teachers also delivered the requests using a quiet voice tone. Use of these effective requests resulted in increased student compliance and academic engagement. Further, additional improvements in student compliance and engagement were observed when teachers also increased the amount of praise they delivered to students who engaged in appropriate behavior.

Activity sequence. It is important to consider the manner in which activities are sequenced. Research has illustrated a variety of ways to order activities so that they promote learning and appropriate behavior. One instructional sequence strategy involves the interspersal of several easy and brief problems or tasks among other longer or more difficult tasks. For example, a single-digit multiplication problem may be interspersed after every third four-digit multiplication problem (e.g., Cates & Skinner, 2000). Research has demonstrated that this and similar strategies not only increases task performance but also decreases disruptive behavior (e.g., Skinner, Hurst, Teeple, & Meadows, 2002). An added benefit is improvements in student perceptions of, and preferences for,

assignments that were previously considered difficult (e.g., Cates & Skinner, 2000). To illustrate, Cates and Skinner (2000) examined assignment perceptions when remedial mathematics students in Grades 9 to 12 were administered two different types of math worksheets, one containing 15 three-digit by two-digit multiplication problems, and the other containing one-digit by one-digit multiplication problems interspersed after every third 3×2 digit problem. Students rated the interspersed math assignments as taking less time to complete, requiring less effort, and being less difficult than the assignment that was not interspersed. These findings are compelling particularly because the students preferred the assignments that actually contained *more* problems.

A similar approach, involving the delivery of a sequence of three to four brief, simple requests prior to a difficult request (referred to as *behavioral momentum*), has been shown to elicit compliance and reduce problem behavior. For instance, Ardoin, Martens, and Wolfe (1999) showed that second graders' difficult transition to a new activity was improved when their teacher delivered a series of five simple instructions just prior to the transition request. This approach likewise has been used to increase the rate of student academic responding. Lee and Laspe (2003) improved the journal writing of four students (aged 10–11 years) who had a history of noncompliance and a failure to persist at writing tasks by having the teacher ask the students to write a series of three simple words as soon as they stopped writing. This seemingly simple strategy increased student written production over time.

A final example of an activity-sequence intervention involves varying the type of task that is presented. Research has shown that rather than presenting a single, constant type of task, sequences of varied tasks and activities can reduce problem behavior. For example, Dunlap (1984) improved performance and reduced problem behavior among students with developmental disabilities by interspersing a variety of different types of tasks among a targeted, but repetitive, acquisition task.

Pace of instruction. There is long-standing research support that instruction delivered at a brisk pace results in higher levels of on-task behavior and student engagement. A brisk instructional pace can be accomplished either by increasing the overall rate of instruction (Darch & Gersten, 1985) or by decreasing pause time between student response and presentation of the next task (Carnine, 1976). In fact, Englert (1984) found that one of the factors differentiating between more and less effective teachers was that more effective teachers maintain a lesson pace that is brisk. Certainly, one variable that makes this approach effective is that a faster pace of instruction is associated with increased opportunities to respond, which (as described earlier) is related to improvements in student engagement.

Choice and preferred activities. Providing opportunities for students to make choices has been demonstrated to be an effective intervention in preventing problem behavior and increasing engagement. Although the literature most frequently illustrates this approach implemented at the individual level, Kern, Bambara, and Focht (2002) illustrated that it can be used class wide. A classroom of adolescent-aged students labeled with severe emotional disturbance was provided opportunities on a daily basis to choose the activities, materials, or task sequence within their science curriculum. Examples of choices presented to the class were to check an air-pollution experiment or begin a land-pollution experiment, watch a recycling video or begin a litter experiment, or review a posttest for an ecology unit or take a pretest for a pollution unit. Class choice making was conducted through the use of a student vote. In addition to providing opportunities for choice, the authors also incorporated activities that were of high interest to the students. These curricular modifications resulted in increased student engagement and decreased problem behaviors, as compared to a baseline phase.

INDIVIDUAL APPLICATIONS

Overview

Class-wide interventions generally have a powerful effect, and often address the needs of most students in a given classroom. Still, there remain a small number of students who, for a variety of reasons, will not respond to these broader efforts. In these cases, individualized intervention is needed.

Because broad and generalized interventions have been ineffective, individualized intervention efforts must be specifically tailored so that they are responsive to each student's particular and idiosyncratic needs. Such interventions require assessment information that explicates the role of both individual and environmental variables that are related to school difficulties. The process of functional behavioral assessment is uniquely designed to gather this type of relevant assessment information.

One particular outcome of the functional behavioral assessment process is the isolation of variables that immediately precede problem behavior. Once these variables are identified, antecedent interventions can be developed that are designed to alter those variables in some way so that they no longer evoke problematic behavior. The functional behavioral assessment process has been detailed in numerous publications (e.g., Dunlap & Kern, 1993; O'Neill et al., 1997) and will not be reiterated here. Instead, we focus on describing a collection of antecedent intervention strategies that benefit from a growing evidence base.

Note that many of the aforementioned class-wide interventions also are effective at the individual level. The following paragraphs provide literature-based examples of how they have been applied with individual students; however, we emphasize the importance of directly deriving interventions from assessment information.

Examples

Work difficulty. A student's school day is largely comprised of academic demands. Hence, those demands sometimes give rise to problem behaviors. When assessment information indicates that problem behaviors occur primarily in the presence of academic activities, it is important to implicate the specific aspect of the task that challenges the student. Often, work is too difficult and is beyond a student's skill repertoire. For example, Kern and colleagues (2006) conducted a comprehensive functional assessment of a student with developmental disabilities who engaged in high rates of aggressive and disruptive behavior. The assessment implicated difficult work as an antecedent to problem behavior. When changes were made to his curriculum that eliminated difficult academic tasks, problem behavior decreased to near-zero levels.

In some instances, assessment information may reveal that the academics are accurately matched to a student's skills, but the length of the assignment exceeds a student's endurance. Research has shown that decreasing the overall task length, or offering periodic breaks, can successfully reduce problem behavior in these circumstances (e.g., Dunlap, Kern-Dunlap, Clarke, & Robbins, 1991).

Mode of task completion. The mode required to complete a particular task also has been shown to have a relation to problem behavior. Several studies have illustrated that assignments requiring a great deal of written output can cause difficulties for students. Providing an alternative mode for work completion, such as a computer or tape recorder, may reduce problem behaviors, as was illustrated in a study by Kern, Childs, Dunlap, Clarke, and Falk (1994). A functional assessment indicated that the participant, an 11-year-old boy with "severe emotional disturbance," had fine motor skill deficits. The authors hypothesized that the deficits caused difficulties with written

work completion. Providing alternative nonwritten modes for task completion that circumvented his fine motor difficulties resulted in performance increases and decreases in problem behavior.

Incorporating student interests. Many of the tasks required of students throughout the school day are viewed by them as mundane or irrelevant, leading to disengagement and other problem behaviors. Adaptations in traditional types of academic assignments can be made so that their inherent interest is enhanced. For example, conventional worksheet and workbook assignments can be modified so that they integrate a student's interests or result in functional or meaningful outcomes. Clarke et al. (1995) implemented this type of antecedent intervention with a student with disruptive classroom behavior. Problem behavior frequently occurred during handwriting activities when copying passages from his handwriting book. The handwriting activity was modified so that he copied instructions from preferred video games rather than passages that were meaningless to him. The task modification resulted in decreases in problem behavior and increased work productivity.

Choice. As mentioned earlier, the literature describes numerous examples of choice implemented at the individual level to address problem behaviors, particularly in the context of task demands. It is believed that choice effectively reduces problem behavior in two ways (Kern et al., 1998). First, offering a choice of tasks allows a student to select the one that is more preferred. Second, allowing students to exert choices appears to hold reinforcing value independent of the selection made, perhaps for biologic reasons. The applied effectiveness of choice as an antecedent intervention has been empirically demonstrated in many variations, including choice of the specific task to complete (Dunlap et al., 1994), choice of materials used to complete a task (Kern et al., 1994), and choice of the order in which task sequences are completed (Kern, Mantegna, Vorndran, Bailin, & Hilt, 2001). The often broad impact of this straightforward approach makes it opportune in many situations.

Scheduled attention. In addition to academic and other types of demands, problem behaviors sometimes occur as a means for a student to gain attention. An antecedent intervention that addresses attention-seeking problem behavior is to periodically arrange for teacher attention, a process referred to as scheduled attention. For example, procedures that allow a student to occasionally "check in" with an adult at the school also can decrease attention-seeking problem behavior (Bambara & Kern, 2005). When a student seeks peer attention, arrangements can be made so that a student participates in peer tutoring or is paired with a peer during activities throughout the day. It warrants mention that inappropriate attention-seeking behaviors often emerge when a student lacks the social skills to gain attention in an appropriate fashion. Thus, appropriate peer interactions may need to be taught simultaneously.

Scheduling and predictability. A student's problem behavior may serve to obtain or prolong engagement with an activity. Several effective antecedent interventions can be used when functional assessment information indicates that a behavior serves a tangible function. Clear schedules and increased predictability help a student understand time allotments (e.g., Kern et al., 2006). In addition, providing warnings about an upcoming transition helps to prepare students that an activity will soon end. In some cases, several warnings may be more effective than a single warning (Mace et al., 1998).

A final note regarding antecedent intervention merits reiteration. Although antecedent interventions often successfully reduce problem behaviors, it is almost always best to combine them with other intervention approaches. Specifically, skill instruction as well as strategies for responding to problem behavior, should it occur, offer a comprehensive approach for fully addressing a student's needs.

IMPLEMENTATION CONSIDERATIONS

Although antecedent strategies are relatively straightforward and easily translated into classroom practice, several guidelines should be considered for their implementation. The first pertains to levels for intervention. Recent behavior-management efforts have focused on a comprehensive and multitiered approach with prevention and intervention strategies introduced at the school-wide, specific setting (e.g., class-wide), and individual level (Horner & Sugai, 2000). While the intent of this article was to describe interventions at the class-wide and individual levels, initial implementation of school-wide strategies appears to have a very broad impact on appropriate student deportment and are likely to reduce the need for intervention at the class-wide and individual levels (Nelson, Martella, & Galand, 1998). Following implementation of school-wide intervention, class-wide strategies should be introduced. Finally, because it can be time consuming to develop individualized interventions that rely on functional behavioral assessment information, this level of intervention should be reserved for situations where only one or a few students experience ongoing behavior problems.

A second consideration involves intervention selection at a given level. Although there are no definitive guidelines for intervention selection, developing a class-wide system of rules and expectations is a logical first step. The development of clear rules and expectations for student behavior is arguably the single most important strategy because it provides clarity to students on the behavior that is expected. Adherence to rules and expectations should be encouraged through systems of reinforcement, in the form of praise, privileges, and even tangibles, as well as clear and specific consequences for failing to adhere. Simultaneously, it is generally critical to establish a predictable environment. As described earlier, this can be accomplished through the use of routines and explicit posting of the days' events and activities. After the classroom rules and expectations have been developed and the classroom environment is predictable, attention then can be turned to implementing additional class-wide antecedent strategies such as increasing the number of opportunities to respond to academic material, improving the pace of instruction, and providing opportunities for choice or preferred activities. At the individual level, intervention selection will be linked to functional behavioral assessment results.

A final consideration is that intervention must be comprehensive. While antecedent strategies are frequently powerful and may prevent many or even most problem behaviors, alone they are seldom sufficient. That is, problem behaviors are often the result of skill or performance deficits such as the inability to perform the math problems assigned or the absence of social skills needed to enter an ongoing group game. Thus, in addition to antecedent strategies, intervention generally requires skill instruction. At the same time, consequences are needed, should problem behavior occur, to assure it is not reinforced. Skill instruction and consequence strategies are important components of a comprehensive intervention approach.

CONCLUSION

Antecedent strategies represent a powerful class of intervention approaches that can prevent problem behaviors, often in a rapid manner. In addition, such interventions can improve the general learning environment by enhancing appropriate and effective instruction and creating an orderly environment for learning to occur. Numerous types of antecedent interventions have been documented to be effective, both empirically and practically. When implemented in a comprehensive manner, across multiple levels of a school environment, they can promote appropriate behavior among *all* students in a positive and proactive way.

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