

# Individualized Behavioral Supports at 15 Years: It's Still Lonely at the Top

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*Positive behavior support (PBS) has evolved over the past 15 years from an individualized approach to behavior management to one with an increased focus on universal applications. Although there are clear areas of convergence between individualized and universal supports, it is also clear that the provision of individualized supports is an independent activity and an area where there is still much left to be accomplished. We assert that the research agenda is unfinished, crucial research-to-practice questions remain unresolved, and knowledge about the extent to which individualized PBSs are available is incomplete at best. We argue that individualized supports need to be a primary consideration in research and training, particularly as aspects of individualized supports are mandated considerations under the Individuals with Disabilities Education Act (IDEA). Emphasis on individualized supports is important not only because they demonstrate promise but also because of their potential to protect the interests of individuals with severe disabilities.*

**DESCRIPTORS:** positive behavior support, school-wide positive behavior support, functional behavioral assessment, FBA, behavior intervention plan, IDEA

Fifteen years have passed since the term positive behavior support (PBS) first emerged in the literature (Horner et al., 1990). PBS involves three components: examining persistent problem behaviors in broader life contexts, such as the educational, social, and physical environments; modifying these environments as needed; and providing instruction on appropriate skills. Over these years, PBS literature has provided demonstrations of enhanced functioning, reductions in problem behaviors, and improved quality of life for thousands of individuals. Early PBS studies were so compelling that one could argue that they led to the inclusion of the approach in the 1997 reauthorization of the Individuals with Disabilities Education Act (P.L. 105-17, hereafter referred to as IDEA 1997).

This inclusion in legislative language appears to have had multiple intents and consequences. The primary intent of IDEA 1997 as related to problem behavior was the increased use of the functional behavioral assessment (FBA) and positive behavior intervention plan (BIP) for students with behaviors that impeded learning. The broad intent behind the mandate was to contribute toward the IDEA goals of appropriate education in the least restrictive environment, thus ensuring inclusive education and with the hope of improving outcomes for students with disabilities. The process of compliance with the law began slowly as schools awaited federal and state regulations on its exact requirements. As schools began their training efforts to comply with the law, they confronted a perhaps unintended consequence of IDEA. FBA and BIP procedures, which initially demonstrated predominantly with students with severe disabilities and persistent behavior problems (representing perhaps 1% of all students at most), were now required consideration for all students in special education with impeding behaviors.

Among the significant implications was a burgeoning demand for trained personnel in the schools; this need was complicated because the exact requirements of the FBA or BIP were not specified in law or regulation. Schools were obligated to apply these approaches to students, some of whom may have engaged in relatively infrequent but significant behavior problems, without being exactly sure of how to do so. Education's response to IDEA 1997 led to the recognition that in some schools, student behavior was likely a product of systemic problems in the social and academic environments. Undoubtedly, providing individualized supports for all students was neither feasible nor advisable. Therefore, a growing acknowledgement of the need for system-wide applications emerged. The 2004 reauthorization of the IDEA (P.L. 108-446, hereafter referred to as IDEA 2004) recognized the need for more universal approaches to behavior problems, which were specifically included in the law as a focus of training for teachers and administrators.

In this article, we discuss a number of concerns related to the apparent evolution of PBS from a technology focused on the needs of individual students to

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broader, universal applications. In so doing, we examine areas of convergence and divergence between PBS approaches designed to address the needs of individuals (individualized PBS, hereafter referred to as IPBS) and applications commonly referred to as universal or school-wide. Diffusion of IPBS is warranted on legislative and philosophical grounds, but it is hampered by gaps in the knowledge base and challenges in translating research to practice. We assert that the field lacks consensus on what is required to deliver effective IPBS; argue that key questions related to reliability, validity, and availability remain unanswered; and advocate for increased consumer and family involvement in research and practice.

Acknowledging the extent to which school-wide initiatives embed individualized approaches within training and curricular efforts, we submit that the specialized nature of IPBS, especially for students with severe disabilities, requires the dedication of substantial resources to support their effective delivery. Without making a false dichotomy, we offer that individualized supports diverge from other components of universal initiatives in the preparation, skills, resources, and expertise required. Staff training in IPBS appears to occupy a relatively small space in school-wide training initiatives and may occur months to years into implementation. Although efforts to validate this "nested" model are now underway (see other articles in this issue), there is little evidence that universal supports improve the behavior of students with chronic difficulties (Safran & Oswald, 2003).

Are differences in emphasis, training, method, and outcome substantial enough to warrant reconsideration of current PBS models? Can training in IPBS, as embedded in larger, school-wide initiatives, provide the personnel preparation needed to deliver effective individual supports? Can effective program evaluation be conducted within this model? These are empirical questions and, as we discuss later, ones that we cannot fully answer today. Our inability to answer key questions about reliability, validity, and fidelity may argue against nesting IPBS within universal models of training and implementation; if the science is incomplete regarding either individualized or universal PBS, combining them may serve to complicate inquiry and practice without directly serving the needs of individuals with severe disabilities.

Whereas the school-wide movement has important potential for general education, our central concern is that scarce educational resources will be less available to the small minority of students whose behavioral challenges warrant individualized supports—that is, the students at the "top of the triangle" presented by Walker and Horner (1996) and to whom we refer in our title. The triangle schematic reflects a public health approach to problem behavior, depicting universal, specialized group interventions, and individualized PBS interven-

tions as equivalent to primary, secondary, and tertiary prevention practices. (For a description of the U.S. Public Health Service's conceptual model of prevention as applied to behavior problems, see Walker and Horner, 1996. See Baker, 2005, for a discussion of how this model evolved as a heuristic within PBS.)

We argue that there is unfinished agenda in providing individualized supports if we are to meet the legislative requirements of the IDEA, insofar as it was intended to protect the rights of students with disabilities, promote inclusion, and encourage better outcomes. School-wide approaches demonstrate emerging support and promise, especially as means of addressing high-incidence behavior problems. Their potential preeminence, however, raises familiar questions: how can we best assure individual rights and simultaneously create an optimal context for the entire learning community? It's still lonely at the top of the triangle because our progress in meeting the needs of individual students has far to go. We are *not* saying that primary and secondary prevention should be given less emphasis; they are important to many. We are saying that individualized, tertiary interventions need "equal time" because they are critical for the success of the few.

## What Does IDEA Have to Say About PBS?

Perhaps it is important to first provide a brief review of the IDEA as it relates to students with disabilities. The law dates in its earliest form to the passage of the Education for All Handicapped Children Act (P.L. 94-142), which recognized that all students have the right to "a free and appropriate education" in the "least restrictive environment." For this to be accomplished, some students were likely to require additional supports and specialized instruction, for which the federal government would pay a portion of the additional costs. Over the years, the law has been reauthorized numerous times, often broadening its scope (e.g., the extension of services to children between birth and age 3), including new approaches (e.g., requiring the consideration of assistive technology), and addressing procedural problems (e.g., defining and refining the appeals process). However, throughout this time, IDEA has remained a civil rights law, protecting the rights of students with disabilities to equal access to an education.

IDEA recognizes that rights have limits. It has established processes for review, appeal, and dispute resolution that have evolved over the years. The issues of behavior problems and discipline have always galvanized the field, particularly when a student's behavior puts himself or herself, peers, or instructional staff at risk. Educators have argued that students with disabilities should be held to the same discipline standards as other students. Advocates have responded that schools should not deprive students of an education because of behaviors that may be caused by their disabilities.

IDEA 1997 specifically addressed a number of issues relating to problem behaviors in the section on procedural safeguards. It introduced the process of manifestation determination, that is, the assessment as to whether a behavior is caused by the child's disability and, if so, ensuring that the school's response must be different than it would be for other students. It added language, "in the case of a child whose behavior impedes his or her learning or that of others, consider, when appropriate, strategies including positive behavioral interventions, strategies, and supports to address that behavior" [Section 614(d)(3)(B)(i)]. Whereas in practice, most consider the FBA to be a component of "positive behavioral interventions," IDEA 1997 makes specific reference to FBA and BIP only for those students who have been suspended from school for 10 days or more.

The legislative mandate of PBS in IDEA 1997 provided a significant push toward more widespread adoption of PBS technology. Turnbull, Wilcox, Stowe, and Turnbull (2001) point out that the FBA and BIP are the *only* specific approaches referenced in the IDEA related to "impeding behaviors." These authors maintain that individualized PBS thus attained the legal status of "preferred strategy" for responding to problem behavior.

IDEA 2004 preserved the core requirements of manifestation determination, positive behavior interventions, and FBA and BIP for students suspended for 10 days or placed in alternative educational settings. However, the law made a number of changes in language. For example, the section quoted above was modified to "in the case of a child whose behavior impedes the child's learning or that of others, consider the use of positive behavioral interventions and supports, and other strategies, to address that behavior." Some of the procedures related to manifestation determination were changed. The requirement to conduct an FBA and develop a BIP was added for those students whose behaviors relate to their disabilities. Also, for those students with existing behavior plans, the law required that the plan be reviewed and modified as necessary to address the behavior. All in all, the behavioral provisions of IDEA 2004 as they relate to individual students are quite consistent with IDEA 1997.

IDEA 2004 also contained a number of references to the broader use of PBS. It included, for example, a specific reference to the importance of "preservice preparation" in "positive behavior intervention and supports" in the *Findings and Statement of Purpose* section. Later sections cite that an appropriate use of IDEA funds is for professional development related to "behavioral supports" and "systemic school interventions," including "training...in positive behavioral interventions and supports, behavioral intervention planning, and classroom and student management techniques; joint training...on effective strategies...that focus on the prevention of behavior problems; and developing or implementing specific curricula, programs,

or interventions aimed at addressing behavioral problems" [Section 665(b)(1)(B-D)].

We argue in this paper that this added emphasis to IDEA reflects a recognition of the importance of school culture and climate as a contextual variable for the behavior problems of individual students. As important an addition as this is, we point out that the addition of "systemic school interventions" is not likely to be enforceable under the law in the same way that an individual civil right might be.

## Evolution of PBS Inquiry and Practice

Individualized and universal PBS applications emerge from the same philosophical substrate; share empirical, methodological, and pragmatic features; and now have a common legislative mandate, yet they appear to be evolving into separate silos of application. Here, we use the term universal to refer to school-wide, system-wide, and other group-focused PBS initiatives. We also consider secondary interventions for students deemed at risk to be an essential component of a universal system, especially to the extent that they involve procedures different from those in individualized supports. Universal approaches certainly recognize that there will always be some students requiring individualized interventions. What we argue here is that individualized supports require specific training to ensure staff competence to provide them.

Where does PBS stand in its widespread adoption as an approach? As with any new technology, even one grounded in a 40-year history in applied behavior analysis (ABA) and special education, PBS is unfamiliar to many educators. Although we discuss a number of reasons for this later, it is in many ways to be expected. Blackman (1999), for example, estimates that the time for diffusion of new technologies ranges from 5 to 50 years, depending on factors such as the users, available resources, costs, and regulation.

Perhaps 1997 was the year when PBS began its evolution to include universal approaches. A review of the peer-reviewed social science and educational journals published between 1990 and 2005 (Farrell, Kimball, & Crimmins, 2005) revealed more than 600 articles with reference to the terms "positive behavior support" and "positive behavioral supports" with an increasing trend over this period. References to the terms "universal," "classroom-wide," and "school-wide" in conjunction with the term "positive behavior support" were virtually absent from the literature until 1997 and had an upward trend after that year. The number of articles employing terms more closely associated with individualized supports (e.g., FBA, functional behavior assessment, behavior intervention plan) grew annually until 2000, after which a downward trend was noted. We believe that this reflects a fundamental shift in emphasis from individualized support to universal PBS, resulting at

least in part from the need to disseminate the technology in response to the requirements of IDEA.

Early iterations of PBS involved behavioral assessment and intervention approaches applied to individuals with severe problem behavior. Individualized PBS emerged from within the field of developmental disabilities; its efficacy was established initially through work with individuals whose severe disabilities were accompanied by intractable challenging behaviors. A major goal of PBS was and continues to be to support the inclusion of individuals with disabilities in mainstream society, including regular education, as well as improving quality of life for individuals with severe disabilities (Bambara & Kern, 2005; Lucyshyn, Horner, Dunlap, Albin, & Ben, 2002; Reid, 2000). Whereas formal interest in PBS in schools became visible only recently, functional assessment has a long history in education (Ervin, Ehrhardt, & Poling, 2001), and today, many resources exist in support of individualized PBS (e.g., Bambara, Dunlap, & Schwartz, 2004; Bambara & Kern, 2005; Crimmins, Farrell, Smith, & Bailey, in press; Crone & Horner, 2003; Lucyshyn, Dunlap, & Albin, 2002; Watson & Steege, 2003).

Universal supports (described in detail elsewhere in this volume) are data-driven, population-based approaches to the prevention and reduction of problem behaviors in schools (Sugai & Horner, 2002). They employ long-term preparation, planning, staff training, implementation, and data collection to establish, encourage, and maintain positive behaviors among all students in the community. Indeed, there is an impressive and growing body of literature supporting their use (Lohrmann & Talerico, 2004; Nelson, Martella, & Galand, 1998; Nersesian, Todd, Lehmann, & Watson, 2000; Netzel & Eber, 2003; Sugai & Horner, 2002; Taylor-Greene & Kartub, 2000; Todd, Haugen, Anderson, & Spriggs, 2002).

Whereas individual supports and universal PBS converge in many aspects, these two applications also diverge in meaningful ways. We believe that it is important to distinguish them, both to preserve implementation fidelity and to protect the interests of those students who benefit most from individualized supports, that is, the relatively small proportion of students at the top of the triangle (a group likely composed of a disproportionate number of individuals with severe disabilities).

Student behavior is a primary concern of teachers, administrators, and parents, and both individualized and universal PBSs have demonstrated effectiveness in dealing with problem behavior. As increasing demands are placed on educators and schools, however, resource limitations may restrict implementation of both approaches. As such, it is important to consider the extent to which individualized and universal PBS efforts can be adopted from a shared infrastructure or whether they in fact require two independent skill sets. Clearly, dedicated resources and specialized preparation are required to provide both approaches. In

addition, effective future application of PBS will depend on the preparedness of school personnel to participate in both endeavors.

Consider, for example, one area of divergence: the focus on data management for populations of students versus individuals. Both approaches require the expanded use of quantifiable information for decision making. However, universal supports require data reduction procedures to monitor group trends along a finite number of dimensions, whereas individualized supports involve data expansion to consider contextual details surrounding the individual student in far greater detail than is typically examined. This is not to suggest that proponents of universal PBS ignore individualized approaches or vice versa; in fact, many individuals rightly advocate both. Rather, divergent emphases can bring individual and group needs into conflict, especially when there are competing demands for limited resources such as the time required for staff development and the internal and external resources needed to achieve both.

### **The Need for Ongoing Emphasis on Individualized Supports**

The PBS literature and IDEA mandates suggest that individualized PBS interventions be developed for students whose behavioral difficulties place them at risk for negative outcomes such as reduced achievement, discipline, and movement to more restrictive educational settings. The central component of individualized PBS is the FBA, which is conducted to develop an understanding of the function of a problem behavior and, subsequently, to develop effective behavior support plans based on the assessment results. The process often requires multiple intervention strategies and outcome measures and attends closely to issues of ecological validity.

The FBA process typically involves a series of steps designed to arrive at a statement regarding the function of problem behavior, including an understanding of how setting events and antecedents (referred to as slow and fast triggers by Lohrmann-O'Rourke, Knoster, & Llewellyn, 1999) contribute to problem behavior and how consequences may (inadvertently) reinforce it. Three main steps comprise the FBA: gathering information in order to develop a hypothesis about the underlying function of behavior, testing the hypothesis by manipulating the putative controlling variables, and developing an intervention plan based on the results of the hypothesis test.

The BIP involves interventions targeted at reducing the effects of environmental contributors, often in the form of instructional or environmental manipulations or accommodations. Contingency management procedures such as differential reinforcement and extinction may be applied with the intention of reducing problem

behaviors. Finally, BIPs include student-centered interventions designed to teach adaptive alternatives to problem behaviors, known commonly as replacement behaviors. Researchers and interventionists have an array of strategies and skills from which to choose, among them functional communication training (Durand, 1990), social skills (Goldstein, 1999; Gresham, Sugai, & Horner, 2001), and self-management and self-regulation (Ninness, Ellis, Miller, Baker, & Rutherford, 1995; Perry, Van de Kamp, Mercer, & Nordby, 2002). Once an alternative behavior has been properly identified, essentially the entire bodies of ABA, behavior therapy, and education literatures serve as intervention resources. Consistent with person-centered practice, the BIP often includes both decelerative and accelerative behavior goals, that is, to decrease the frequency, intensity, and severity of problem behavior, while increasing alternatives that may serve the individual within and beyond the immediate context.

Our concern is that there is a distinct knowledge base and set of skills required to conduct an FBA and develop a BIP. In the last several years, there has been an increasing emphasis on fusing universal and individualized PBS into single curricula for the purposes of training and implementation, with training in individualized supports essentially embedded within a school-wide model (OSEP Center on Positive Behavioral Interventions and Supports, 2004; Sugai, Horner, Lewis-Palmer & Todd, 2005). Examining two nationally prominent school-wide curricula, we note that IPBS strategies appear to comprise less than 20% of training content, and that content may be undertaken several to many months into program implementation. Although this approach may be pedagogically and practically sound (e.g., sequence of training permits acquisition of principles of change that underlie both individual and universal supports such as the common need to build infrastructure and garner broad support), its face validity with respect to expertise in IPBS may be questionable. As Safran and Oswald (2003) note, convincing evidence for the "trickle down" of universal supports to improvements in chronic individual problem behavior is not yet available.

Whereas the nested approach offers advantages if it is effective in imparting the requisite skill sets, our concern is that there is more likely to be a diminished emphasis on individualized supports. Whether we can afford to package them together depends to some extent on the current state of research and practice in each arena. Stating the trickle down notion differently, we do not know whether universal PBS interventions make individualized supports less necessary in a school. Evaluating the effects of universal prevention efforts in any field is often a slippery slope because the large majority of any population may never develop the problem that is the focus of the effort. With regard to PBS, the majority of students will never have significant behavior problems. Because these students—and a subset of students at risk—respond favorably to *any*

intervention, conclusions about the effectiveness of a specific practice are often nonspecific or even (at times) misguided (Jackson & Panyan, 2002).

This is not to suggest that universal PBS approaches lack value, validity, or support; indeed, the reverse is true. We acknowledge and applaud their implicit comprehensiveness and emphasis on prevention. Universal adoption of PBS, in fact, may provide the ideal implementation context for individualized supports. A school or district that improves its organizational culture in service of positive behavior promotes the knowledge, attitudes, and competencies that may prevent some problem behaviors and mitigate others. Indeed, this broad-based training may ameliorate some of the challenges inherent in the "separate workforce" problem articulated by Jackson and Panyan (2002). They assert that our current education infrastructure supports the preparation and existence of two workforces, one for students with disabilities (special education and related services) and one for students without (general education); rarely are professionals competent, let alone expert, in both.

Our question is this: do universal PBS initiatives provide adequate staff training, expertise, and support to deal with the inevitable appearance of problem behaviors in individual students? Consider a scenario in which innovations in preventive medicine demonstrably reduce the occurrence of disabling strokes in the population. It would nevertheless be ill advised to divest expertise in rehabilitative specialties because stroke-induced disability will occur in a small percentage of persons despite the population-based effort. Broad-based training in PBS has the potential to benefit almost all students, but some students, particularly those with disabilities, will likely still engage in problem behaviors known to serve as barriers to inclusion, graduation, and quality of life.

One objective of incorporating the FBA and BIP in the IDEA was ensuring that students with disabilities and behavior problems would be assured continuing access to education. Because of the increased risk of interfering behaviors, students with severe disabilities and those with emotional or educational and behavioral disorders (EBD) are among those likely to be placed in restrictive educational settings. Does protecting the interests of these students require the commitment of dedicated resources and expertise? Our knowledge base does not currently demonstrate whether broad-based, school-wide training provides sufficient expertise to allow professionals to support students with severe disabilities effectively.

### **What is Required to Deliver Effective Individualized Positive Supports?**

In this section, we identify several factors relating to the state of research, training, and practice in IPBS,

including resources such as preparation, IPBS components and practices, time and effort required, and current workforce capacity. Our purpose here is to extract and evaluate emerging consensus, if any, on the resources required to conduct IPBS. In the section that follows, we discuss current issues in providing individualized supports, which emerge both as implications of resource issues and as separate concerns about availability, reliability, validity, and consumer involvement. We do not constrain our discussion to research conducted only with individuals with severe disabilities (relatively low-incidence disabilities). As such, the reader will note references to school-based research focused on students with emotional and behavioral disorders (relatively high-incidence disabilities). We believe this research is relevant to the extent that both populations are at increased risk for problem behavior and its consequences in education (e.g., discipline, segregated placement). Further, school-based research involving students with EBD has the potential to inform all endeavors to promote staff competence in IPBS procedures.

### *Preparation*

Conducting individualized PBS requires extensive commitment to the individual student, with time estimates for individual FBAs and BIPs ranging from a few hours to many days. For the purposes of this article, we define preparation as the amount and type of training required for providers (educators) to reach minimal competence in conducting essential elements of IPBS, the FBA and BIP. Our team training in individualized PBS (Crimmins et al., in press), for example, requires 15 to 25 h of didactic instruction paired with workshop activities, between-session assignments and team meetings, and several contacts with external coaches. Rotholz and Ford (2003) describe a graduate training model of nine semester hours. Other authors report similar in-service training duration (e.g., Reid et al., 2003); some report longstanding, multistep initiatives (e.g., Scott, Nelson, & Zabala, 2003), and others described training of shorter duration depending on the model and context (e.g., Scott, Liaupsin, Nelson, & McIntyre, 2005). One noted concern is that "scaled down" training in FBA may result in less time-consuming but also less effective practice (Conroy, Clark, Fox, & Gable, 2000).

In sum, it is not possible to state unequivocally what quantity or type of training is required for competence in IPBS, nor do we know what duration and type brings superior performance with specific groups of students. Published reports, however, suggest that current practice includes inservice duration equivalent to approximately one full week of training with field-based follow-up, or up to nine semester hours of classroom training. In addition, the field has yet to systematically examine the influence of intervening variables such as

prerequisite experience and expertise in training participants and context factors in IPBS delivery (school and student factors). An ever-present theme in the FBA training literature is striking a balance between what is feasible and practical for schools against the need to maintain conceptual and procedural integrity.

### *IPBS Components and Practices*

In this section, we focus primarily on the FBA, which has been studied much more extensively than other aspects of IPBS, including the BIP and team collaboration. Inasmuch as others have described the conceptual foundations (Drasgow, Bradley, & Shriener, 1999; Bambara & Mitchell-Kvacky, 1994; Gresham, Watson, & Skinner, 2001; Horner et al., 1990) and conducted extensive analysis and review of the existing literature on FBA (e.g., Blakeslee, Sugai, & Gruba, 1994; Ervin, Radford, et al., 2001; Fox & Davis, 2005; Gresham, 2004; Horner, Carr, Strain, Todd, & Reed, 2002; Snell, Voorhees, & Chen, 2005), the current discussion addresses the question of whether there is emerging consensus regarding evidence-based practice in IPBS. Relevant questions concern the definition of IPBS procedures such as the FBA, the extent to which IPBS components have been reliably utilized in various contexts, and the composition of teams providing individualized supports. This review is far from exhaustive and is restricted to evidence we find salient to evaluating whether a coherent set of IPBS practices exists among published reports. If so, such a consensus might frame future education and training, serve as emerging practice guidelines, and obviate some questions about blending IPBS and universal supports within a single paradigm.

Scott, Meers, and Nelson (2000) surveyed 60 individuals involved in FBA research and training, inquiring as to the necessary and sufficient procedures (preassessment, assessment, validation of hypothesis, intervention) for conducting FBAs with high-incidence populations. They found little consensus regarding conditions that should trigger the FBA, the activities and approaches that comprise it, whether functional hypotheses require validation, and how FBA results might be used to shape interventions.

Reid and Nelson (2002) reviewed 14 published FBA studies conducted regarding high-incidence behavior problems displayed by 43 students in three types of school settings (special school, self-contained special education classrooms, and general education classrooms). They found that the FBA demonstrated adequate utility; that is, the outcome of the FBA was the identification of function in 12 of 14 studies (86%). Only 4 of the 14 studies examined the social validity (acceptability) of the FBA process as rated by teachers. Of note is the absence of acceptability ratings by other consumers, including family members, related services providers, and students.

With respect to the validity of FBAs, Reid and Nelson (2002) noted that none of the researchers appeared to include teachers and other constituents as full members of the FBA team; their roles were limited to input on hypothesis development. Thus, in most of the published literature examining the FBA-BIP process, collaborations did not reflect typical school operations. Reid and Nelson essentially concluded that the social validity and acceptance of the FBA have yet to be demonstrated, as procedures were designed by highly expert researchers rather than available school personnel.

Gresham, Watson, et al. (2001) assert that experimental evidence is inconclusive regarding the conditions and behaviors requiring FBA over more efficient procedures. They note the absence of guidelines for determining when to conduct an abbreviated, extensive, or no FBA. They also state that visual inspection of single-case study graphical displays, the empirical strategy typically employed in the field to determine function, lacks sufficient reliability. Consistent with other authors (Horner et al., 1990; Kern, Hilt, & Gresham, 2004), Gresham et al. note that much of the literature on FBA was conducted in analog or clinical contexts, rather than the classrooms, hallways, and cafeterias in which school professionals practice. As such, external validity of these practices is at issue.

Ervin, Radford et al. (2001) conducted a descriptive analysis and critique of more than 100 studies on FBA published between 1989 and 1997. These authors found functional assessment to be largely useful for ascertaining variables contributing to high-frequency problem behaviors in students with low-incidence disabilities. The most common method of assessment was descriptive, and 90% of participants underwent an experimental (functional) analysis. In approximately half of the studies reviewed, FBA data were used to generate intervention plans. Both antecedents and consequences were manipulated for 69% of hypothesis tests completed; in more than half the cases, experimenters conducted these manipulations. School personnel and experimenters collaborated in less than one quarter of the hypothesis tests.

The most common interventions utilized in the Ervin et al. review were consequences (42%), antecedents (31%), skills training (21%), or a combination (36%). Interestingly, the function of problem behavior was different for students with disabilities (most commonly escape) and without them (most commonly attention seeking). Multiple functions were more common among students without disabilities. In most cases, functional assessment data produced at least short-term gains; however, long-term outcomes were monitored in only one study, in which lasting effects were achieved for half the participants. Ervin et al. also note that procedural integrity was measured in 57% of cases, whereas only 12% reported treatment acceptability data (most often by querying school personnel and not including

students or family members). The social validity of outcomes was discussed in just five of the cases reviewed, such that the functional impact of change was rarely assessed.

More recently, Snell et al. (2005) examined team involvement in over 100 assessment-based interventions published between 1997 and 2002. These authors reported that functional assessment methods were used singly in 18% of qualifying single-case designs, whereas 53% employed functional analysis, and 29% used both. With the functional analyses, most (63%) involved manipulation of consequences, and a minority (21%) employed antecedent manipulations (modifying context factors, for example, applying environmental or instructional accommodations). In this review, the settings for the majority of FBAs could be described as restrictive (inpatient hospitals and special education classrooms). Less than half of FBAs and behavior interventions were conducted in natural settings such as general education classrooms, homes, other school settings, or in the community.

Similarly, Quinn et al. (2001) cite several gaps in research and practice that underscore the absence of uniform standards and workforce competencies in such areas as validation of observations and hypotheses; operational definitions of behavior; and BIP development, implementation, and efficacy evaluation.

The answer to the consensus question, in broad terms, is that there is ample evidence and agreement regarding the effectiveness of FBA procedures in analog or clinical (e.g., highly controlled) settings, even if there is disagreement about the procedures necessary. A major problem, however, is the question of external validity—essentially the application of FBA technology into natural settings. Blakeslee et al. (1994) expressed doubt about the extent that FBA procedures were being adopted across researchers, clinicians, and settings. They further commented on the limited number of researchers authoring publications on FBA. Although the number of publications, range of authorship, the type of problem behavior, disability status of participants, and, to some extent, the contexts of FBA research have all increased in number and diversity, problems of external validity continue to plague the literature. This hampers emerging consensus on evidence-based practice, its perceived utility, and the ultimate diffusion of FBA as a technology.

### ***Time and Effort Required***

Related to the larger question of training and support needed to conduct effective individualized PBS is the amount of time needed to complete an FBA. Among the studies reviewed by Reid and Nelson (2002), 10 included information regarding the time required. Some reported the length of hypothesis testing only, whereas others included time spent developing the hypothesis, and one reported the duration of the analog

assessment. Specificity ranged from vague estimates (patterns emerging after a few days of data collection) to precise ones (less than 6 h over 3 days). The general impression, however, was that data collection procedures required at least 3 to 4 days and as many as 18 to 20 days. The mean length of observation interval per day was approximately 90 min, most often interspersed in a manner suggestive of time sampling or interval recording. These time estimates refer to published studies conducted under the leadership of expert researchers; they may not aptly represent the effort required in school settings.

Kern et al. (2004) analyzed FBA procedures in 20 published reports for 43 participants with or at risk for emotional and behavioral disorders. The most commonly employed assessment procedures were direct observation (85%) and interview (80%). Analog (functional) analysis, record review, rating scales, and person-centered planning were employed in fewer than 20% of the cases reviewed. Among studies reviewed, the total duration of observation ranged from 1 to 60 h, with a median of 3 and an average of approximately 17 h. As these authors aptly articulated, the "length of time required to complete a functional assessment has yet to be explicated" (Kern et al., 2004, p. 449).

Rather than stemming from flaws in design or process, variance in length of the FBA process may in fact reflect the individualized nature of IPBS (the history, nature, severity, and frequency of a student's problem behavior), the preparedness of individuals supporting the student, and other context factors such as administrative support and family involvement. Kern et al. (2004) reported that, in some cases, data collection was extended to obtain experimental rigor. Although this no doubt improves the quality of the research product, it complicates attempts to understand what constitutes appropriate practice and may diminish the perceived utility and feasibility of FBA procedures in applied settings.

### *Capacity*

How prepared is the education work force to provide individualized supports? What proportion of educators and related service personnel are familiar with, proficient in, or expert at conducting IPBS? Considering the lack of consensus on exactly what constitutes appropriate practice, this question is difficult to answer. Further, there are no data verifying that states, regions, or districts require FBA and BIP procedures in keeping with federal law or recommended practice (Gresham, Watson, et al., 2001), and there are no relevant tracking or reporting requirements in the law. Thus, the number, features, and quality of individualized PBS practice remain largely unknown. The reviews described previously in this article suggest that wide variations in practice exist among experts, researchers, and school personnel.

Teachers rate classroom and behavior management as priorities, particularly for students with emotional and behavioral disorders, which compete for time with academic instruction (Fink & Janssen, 1993). The majority of teachers do not feel well prepared to meet the needs of students with disabilities (Imbimbo & Silvernail, 1999; National Center for Education Statistics, 1999). Technology diffusion requires exposure, learning, adoption, and application; these factors, in turn, require resources in the form of time and human capital. Earlier we mentioned the seeming proliferation of literature regarding PBS and school-wide initiatives. Despite this, there is a dearth of data regarding the amount of training needed to bring personnel to minimal competence in PBS practices to support individual students.

A recent review of the National Council for Accreditation of Teacher Education (NCATE) standards, for example, found no reference to the specific requirements of IDEA related to student discipline or behavior in teacher preparation standards. Thus, teachers reach the classroom with general concerns about student behavior management (Mitchell & Arnold, 2004), specific concerns about meeting the needs of students with disabilities, and little explicit education and training in supporting these students.

Conroy et al. (2000) questioned whether we are "headed in the right direction" in building competence in FBA. Noting that only a modest amount of FBA research has been conducted with students with emotional and behavioral disorders, these authors decry the "tension" between brief and extended FBAs, owing in part to insufficient personnel training, knowledge, and skills (Gable, 1996) as well as time pressure. Results of these shortcomings, they argue, include reactive (versus proactive) use of the FBA; reduction of a complex, time-consuming, resource-demanding endeavor into an overly positive outlook; and failure to correctly identify the function of problem behavior. In response to these concerns, Conroy et al. suggest specific training content and process for FBA training; among their recommendations are extensive preservice and inservice training (they warn against "one shot" training), including modeling and in vivo mentoring. Whereas these concerns are expressed specifically regarding students with EBD, they apply to students with severe disabilities for two main reasons. One, as mentioned earlier, both groups are at increased risk for challenging behavior and its consequences. Two, while PBS has been demonstrated success with students with severe disabilities, much of this research has occurred in restrictive settings, and much is to be learned about the application of IPBS in inclusive ones.

Smith (2000) examined the status of the behavioral and discipline requirements of IDEA 1997 by exploring due process and legal proceedings related to key elements of the law. He found significant discrepancies

between competency expectations for and performance of student support teams. These gaps revealed themselves in formal complaints, hearings, and legal decisions related to FBA, manifestation determinations, behavioral interventions, and placements in alternative educational settings. Support rates for team decisions and actions ranged from 10% (FBA) to 57% (manifestation determination); a majority of cases were decided in favor of the student, indicating that responses of school teams were judged as failing to meet the IDEA standard. Because he examined due process and legal claims against schools, Smith's sample includes cases in which at least one party was unhappy with the outcome and felt that the procedures were deficient, essentially comprising a biased sample. One might assume, however, that the extant literature is biased in the opposite direction (i.e., unsuccessful FBA endeavors would generally not be published), suggesting that the state of practice falls somewhere in between.

Van Acker, Boreson, Gable, and Potterton (2005) examined FBAs and BIPs developed by school teams across one state following a statewide training initiative. These authors found the majority of BIPs and FBAs had significant flaws when compared to best practice standards. They frequently lacked clear definitions of target behavior, failed to validate functional hypotheses, and did not meaningfully link FBA findings into the BIP. Since some individuals and teams who had not participated in training submitted FBAs and BIPs for review, the researchers had opportunity to evaluate the specific effects of training. Alarming, trained groups did not fare better than their untrained counterparts in operationally defining target behaviors or in making antecedent modifications (environmental or instructional accommodations). Training did differentiate the groups along the dimensions of the ability to validate hypotheses, consider function in the development of alternative behaviors, embed positive strategies, and include efficacy assessments into the ongoing BIP.

Scott et al. (2005) state that team-based collaboration in individualized PBS is underutilized. They also note that published reports of team FBAs and BIPs typically involve researcher-led procedures; thus, their external validity is limited. They queried participants attending 1-day team training sessions to learn their perceptions and concerns about students currently receiving supports. Most participating teams initiated FBAs because a student was in crisis (11 of 13) and had not responded to reactive strategies (12 of 13). Participants reported staff interviews and observations to be the most useful data collected during the FBA. With respect to prior interventions, team members unanimously selected strategies that were already in place in their schools and expressed a reliance on student exclusion in 4 of 13 incidences. The authors conclude that, although acquisition-level training is necessary before teams embark on IPBS, this is not sufficient to facilitate tech-

nically sound procedures in applied settings. Team members relied on a preexisting and limited repertoire of support strategies, predominantly punishment.

Among the recommendations from Scott et al. (2005) was the development of decision rules that trigger supports for individual students. More problematic was the continuing reliance of school personnel on punitive strategies, which may be negatively reinforced for instructors but are likely to result in problem escalation over time, ending in crisis. None of Scott et al.'s respondents selected intervention strategies from training materials, texts, or research. Despite being out of step with currently articulated values in education, negative consequences continue to outpace the use of positive alternatives in both general and special education settings (Skiba & Peterson, 2000). This underscores a significant lag in personnel preparedness as well as substantial training challenges.

As suggested earlier, there are some data regarding the perceived utility and feasibility of the FBA. Reid and Nelson (2002) found FBAs to demonstrate utility apparently because they effectively identified the function of problem behavior and, in some cases, resulted in curriculum or instructional modifications (context variables) rather than consequence-based interventions. Nevertheless, these authors conclude that research has not included direct service providers to an extent that permits evaluation of the practicality of the FBA in schools; nor does it inform the field as to what outcomes would be achieved in the absence of expert support. They note that if individualized supports are viewed as impractical or unwieldy, they will not be implemented. This remains to be an unmet dissemination challenge.

### **Current Issues in Providing Individualized Supports**

In the previous section, we identified several issues related to the state of research, training, and practice in IPBS, including resources such as preparation, IPBS components and practices, time and effort required, and current workforce capacity. In this section, we address what is known about the availability, reliability, and validity of IPBS for students with disabilities and discuss the state of family and consumer involvement in research.

#### ***Availability***

When an individual student's circumstances trigger the student support team to conduct an FBA (in keeping with IDEA requirements), are appropriately trained personnel available to do so? Are available personnel trained to recognize when more proactive use of FBA procedures might enhance outcomes for a student? Availability refers to the ready presence of qualified, trained personnel to serve as team members, leaders, or coaches and to effectively conduct at least a minimal FBA and BIP. Arguably, we have the knowledge base

to provide individualized supports to thousands of students who need them; however, since IDEA does not mandate record keeping in this regard, we are largely in the dark as to the number of students for whom individualized supports have been attempted, successful or not.

Because perceptions of feasibility and utility affect adoption, Nelson, Roberts, Rutherford, Mathur, and Aaroe (1999) surveyed special education administrators and school psychologists. They queried fundamental knowledge about the FBA, its purpose, procedures, and outcomes. FBAs were considered acceptable for low-level chronic behaviors such as noncompliance. Respondents viewed them as optimally conducted in a proactive rather than reactive manner but were uncertain as to whether FBAs are acceptable for discipline problems and considered educators unaware of and unwilling to use them. Respondents also believed that educators lack knowledge about and training in FBA procedures. Although this is a small sample and generalizability is limited, it is of concern when one considers other data suggesting educators are not informed.

Conroy et al. (2000) note that IDEA 1997 mandates preservice and inservice education but does not prescribe specific strategies, competencies, or implementation levels. The result is wide variation in training, support, and practice. Butera, Klein, McMullen, and Wilson (1998) surveyed special and general education personnel and found that the majority believed that modification of discipline measures for students with IEPs is unnecessary. Fewer than half reported that they regularly examine the IEPs of students with disabilities who were involved in discipline incidents. Qualitative themes included concerns that most training related to discipline lacked sufficient depth to inform staff regarding effective supports and that IEPs were largely viewed as irrelevant and cumbersome.

Hence, we lack consensus and legal guidance on what comprises an appropriate FBA. The existing research suggests that individuals and teams, even when trained, do not reliably operationalize target behaviors and do not implement the "gold standard" of the FBA, actually testing their hypotheses before moving on to the BIP. When teams properly identify the function of behavior, they struggle to link function meaningfully to the BIP. Further, it is unclear how much training and support is required for teams to demonstrate minimal competence in FBA and BIP procedures.

#### ***Reliability and Validity***

Thus far, we have reviewed several limitations in our knowledge base regarding individualized supports and, in so doing, cite limitations in the psychometric properties of FBA practices. We concur with several other authors (e.g., Gresham, 2004, Shriver et al., 2001) who underscore continuing concerns about the reliability and the internal, external, and social validity of FBA

procedures, while still endorsing their use with individuals with severe disabilities. Most demonstrations with this population, however, have occurred in fairly restrictive settings, such that utilization in inclusive contexts may be questioned. A continuing concern is that individualized PBS studies conducted in schools and communities have been conducted predominantly by researchers and have largely failed to meaningfully include school personnel and consumers.

Conceptually, an additional limitation of research in individualized PBS is the traditional reliance on the single-case design as a measure of efficacy. Although this is a legitimate and appropriate method for use in individualized supports, an inherent limitation is the restricted number of statistical procedures available for use in single-case research (Parker et al., 2005) and the cumbersome nature of translating this information into common metrics such as effect size. Phenomenologically, the consumer of IPBS research continues to face many single-case designs that, although innovative and significant, do not advance our understanding of how these methods can be reliably and validly replicated in different contexts.

#### ***Consumer and Family Involvement***

Earlier we noted the absence of families and students on PBS teams and in treatment acceptability inquiry. This raises many issues. How well informed are consumers, namely, students and families, about PBS? Although some authors report effective partnerships with families (e.g., Lucyshyn et al., 2002), there are scant to no data available regarding family knowledge of and perceptions regarding PBS methods, particularly in schools.

#### **Perspectives on Individualized and Universal PBS**

Horner et al. (1990) mused that PBS values may be better defined than their technology. Although this might not be entirely the case today, it is important to consider the extent to which we may be overreaching our knowledge base, both in the continuing implementation of individualized supports and in subsuming them within a larger paradigm of universal PBS.

Prior to 1997, the literature on PBS included a disproportionate number of studies conducted with individuals with severe disabilities and relatively frequent, often extreme behaviors in settings with expert staffing and ample supervision. These circumstances both promoted quality outcomes for individuals supported and also ensured that demonstrations of PBS were completed and disseminated. These critically important demonstrations related to a relatively small percentage of students in the overall population. Ironically, however, the policies articulated within IDEA 1997 most clearly embraced the aspects of individual PBS that were less firmly validated by research.

Currently, schools face increasing pressure to meet achievement standards while maintaining or increasing the proportion of students with disabilities served in inclusive settings. At the same time, rare but appalling episodes of student violence compel schools to implement zero tolerance policies for certain behaviors. There is ample documentation of schools failing to meet the fundamental needs of students (e.g., Lewis & Sugai, 1999); perhaps the most striking are reports that teachers view student behavior as their biggest problem (Elam, Rose, & Gallup, 1994), that nearly one third of students experience bullying (Nansel et al., 2001), and graduation rates for students with disabilities, although improving, lag behind those of their peers (Office of Special Education Programs [OSEP], 2002).

Universal behavior supports offer a natural fit in terms of addressing population-level issues, that is, high incidence problems. Universal initiatives involve all levels of administration and staff and large numbers of students. Indeed, they may render more intensive and individualized supports unnecessary in some cases. In theory, they contribute to an improved organizational capacity with shared language and values relative to dealing with behavior problems. That is, effective universal PBS initiatives create expectations that behavior emerges as an interaction between student characteristics and their environments and that replacement behaviors offer the best long-term solution to behavior problems. Sufficiently absorbed into the educational milieu, this belief could serve as the basis of crucial attitude change in support of PBS philosophy and practice at the individual and universal levels.

These expectancies are crucial in the context of school reform, increased accountability, and concerns about school violence. The potential of universal initiatives can only be realized, however, to the extent that they are validated by ongoing research that delineates features necessary for success and distinguishes PBS from other initiatives that might bring good outcomes for a majority of students (Jackson & Panyan, 2002). School-wide systems work, and so do individualized positive behavior supports; how they are optimally interlaced is not yet clear. Schools are faced with the limited capacity to meet the individualized behavioral needs of large numbers of students receiving special education services, especially while also responding to demands for greater inclusion and better educational outcomes.

As Jackson and Panyan (2002) assert, there has traditionally been a separate workforce for students with disabilities. A school-wide approach that lacks substantial investment in individualized supports may serve to complicate this trend; schools may be forced to rely on a small number of in-house experts who may lack expertise on essential components of individualized supports.

Adoption of effective universal supports may well provide the ideal infrastructure for delivering individualized supports, and the best universal endeavors should entail comprehensive training in both school-wide and individualized PBS. Yet common practice, even among professionals explicitly trained in individualized PBS, may fall well short of the ideals iterated as best practice. In situations where implementation of universal supports is less than ideal, individualized PBS may be further degraded. Further, because prevention efforts inevitably will not "work" for all students, they may inadvertently imbue schools with a notion that has perpetuated the segregation of students with disabilities: if some students do not respond to global efforts, perhaps they do not "fit" in regular education.

Even when universal supports promote demonstrably improved outcomes for most, do they indeed benefit the students at the "top of the triangle?" As stated earlier, the evidence is not yet clear. However, the corresponding philosophical and pragmatic tensions are apparent. The inherent goal of primary prevention is the best outcome for the greatest number, yet IDEA's original intent was to protect the *individual's* right to a free and appropriate public education in the least restrictive environment. School-wide supports are not equivalent to a well-designed and well-executed FBA and BIP, and economics constrain the extent to which education can invest in both approaches to problem behavior.

Again, the tension is familiar: PBS aims to ensure individual rights and simultaneously create an optimal context for the entire learning community. This must be integrated and accomplished with limited resources and competing demands. The basis of IDEA lies in assuring the civil rights of individuals with disabilities—a traditionally marginalized group.

### Where Do We Go From Here?

Individualized behavioral supports are a required consideration under the law for students with impeding behaviors. With this status, they are enforceable as a civil right for individual students in a way that universal PBS cannot be; that is, there are no due process procedures compelling schools to acquire staff competence in universal PBS in the way that an FBA or BIP could be a required activity for a specific student. This regulatory requirement will ensure a need for continued attention to this area for the foreseeable future. With that said, the effective application of individualized supports still depends on developing the scientific base for the field, ensuring that the practice requirements meet high professional standards, and diffusing the technology widely.

In closing, we urge the reader to bear in mind three obstacles noted by Hendrickson, Gable, Conroy, Fox, and Smith (1999) with respect to the adoption of individualized supports. One, public education is in transition. The diversity of the American classroom is growing

by any definition (language, culture, disability status, etc.), thus complicating the work of teachers and researchers alike. Two, schools persistently hold a view of the FBA as an unfunded legal mandate with which they are forced to comply, rather than an opportunity to consider revision of instructional practices in service of prevention and amelioration of problem behavior. Three, few special educators and support staff are adequately prepared to engage in collaborative teaming necessary for effective PBS. Meeting these challenges may enhance our ability to better support students with and without disabilities. Improving the quality, capacity, and diffusion of IPBS requires continuing attention to research, education, training, and dissemination-efforts that we discuss below as recommendations.

### Research, Education, and Training

In a synthesis of research addressing the IEP since 1997, Sopko (2003) echoes others' comments about the limited body of evidence on FBA and BIP procedures for students with mild disabilities. This criticism can be repeated on behalf of students with severe disabilities. Lauding recently issued technical assistance guides for educators and parents, Sopko also decries the absence of empirical research relating individualized PBS components to the IEP. She concurs with other authors in recommending preservice coursework, ongoing inservice, and certification for behavior support as well as regulatory guidance with general individualized PBS parameters (as opposed to either existing indeterminacy or overly prescriptive mandates).

Deschler (1996) advocated for a coordinated, IDEA-driven research agenda to capitalize on ever-improving capacity for integrated national initiatives. Better meeting the needs of individuals with disabilities would require empirical validation of practices that have legislative mandate and better information as to the state of practice in the field, current workforce capacity, and preferred methods of personnel preparation and training. IDEA 2004 requires states to report on the numbers of interim alternative educational settings and acts precipitating those removals; however, this data reporting will prove insufficient to inform us as to how schools respond to discipline problems or to the effectiveness of PBS endeavors.

In sum, several avenues of research require continuing attention. One general area concerns the reliability and validity of FBA practices, including procedural integrity (fidelity), social validity, feasibility, acceptability, and intervening (context) variables in IPBS. Quinn et al. (2001) advocated applied research to examine the utility of FBA and BIP procedures for high-incidence behavior problems; this approach may help delineate essential elements of effective practice for individuals with a range of disabilities from severe to mild to none. Currently, the circumstances under which an FBA and

a BIP are necessary (regardless of disability status) over more informal assessment and intervention procedures are often not clear. Deschler's (1996) vision of better integrated and coordinated research agenda is relevant in contemplating these broad issues as well as the specific application of IPBS under IDEA.

An ironic aspect of the legal requirement for the consideration of individualized supports is that the law is most clear where the science is the weakest. An FBA is mandated for a student who has been suspended for more than 10 days or for whom an alternative placement is being recommended. Unfortunately, these students tend to be rather poor candidates for participation in planned research. They have usually engaged in a low-frequency, high-intensity behavior—the type most likely to require suspension under a school's discipline code. They may be out of school and therefore unavailable for direct observation, yet the IEP team is responsible for conducting the FBA and developing a BIP for this student; this is but one of several intervening factors needing examination. Research demonstrating effective accomplishment of PBS goals in a variety of settings and circumstances, with personnel of varying background, in reactive versus proactive applications, and with diverse groups of students is needed. Scale-up studies examining the influence of training and other forms of preparation, background of training participants, and setting (context) variables in PBS implementation are warranted.

Other interesting avenues of research include examining the effectiveness of FBAs of varying duration and complexity; exploring further innovations and practices such as structural analysis (Stichter & Conroy, 2005), concept mapping (Fesmire, Lisner, Forrest, & Evans, 2003), maintenance and generalization procedures (Gable & Hendrickson, 2000), cognition, affect and self regulation (Nichols, 2000), and social skills training (Gresham, Sugai, et al., 2001). A crucial yet largely ignored issue in the social validation of IPBS is the involvement of key constituents (families, teachers, related services providers, education leadership) in research, both as partners and participants.

Another key set of research questions relates to education and training. Future studies should examine the amount and type of preservice or inservice training required for professionals from relevant professions to reach minimal competence in IPBS practices. Studying decision-making processes among expert versus novice practitioners, especially regarding such matters as matching intervention to problem function and severity (Gresham, 2004), may assist in the articulation of practice guidelines. Particular attention should be paid to the relative effectiveness of training alone or in combination with coaching, mentoring, and follow-up in the field. Field studies are needed to validate the shared delivery of universal and individualized supports and/or the extent to which specialized training is needed.

Finally, existing research suggests that school teams struggle to match BIP components meaningfully to FBA findings; this leaves a gap that may reduce significantly the long-term impact of individualized PBS.

### Dissemination

Advances in research may enable the field to move to broader consensus and eventually to practice guidelines. As such, we advise the convening of diverse workgroups whose mandate is to synthesize existing knowledge and translate this into guidelines, with the goal to not simply organize knowledge but also to spur new research into their validation.

Each advance in the PBS knowledge base generates new research-to-practice challenges enhancing the field but potentially increasing the gap between the academy and the community (noted by Snell, 2005). So, although practice guidelines may articulate the state of knowledge at any given point in time, there needs to be greater investment in preservice education in PBS. This will require advocacy through professional organizations, within higher education, and in the political arena. Dissemination efforts should include specific strategies for teachers such as those articulated by Ruef (1998) but also surpass them. To move beyond reliance on traditional, reactive approaches to problem behavior, preservice curricula in education must directly address PBS. Preservice training in PBS should be mandated and available for general and special educators, as well as school psychologists and related services personnel.

Whereas there are many unanswered questions, there is also a need to disseminate existing knowledge regarding individualized PBS. In part, this requires more effective public and consumer education. There is a clear need to inform educators and families about all forms of PBS and partner with them in training and delivery.

### Conclusions

As we close, "be careful what you wish for" is the cliché that comes to mind. As PBS practitioners, we got what we wished for and more. Since 1997, individualized behavioral supports have been a required consideration under the IDEA under certain circumstances. Following the argument of Turnbull et al. (2001), they are the only response mentioned specifically in the law and can therefore be seen as serving as a preferred strategy for dealing with the behavior problems of individual students.

We applaud the increasing use of universal PBS in the schools. Our concerns, however, are twofold. First, individualized PBS is still an incomplete technology requiring skills that may be independent from those needed to provide universal supports. The second is that staff development efforts may be a zero-sum game; that is, increasing effort put into school-wide PBIS will come

at a cost of a diminished investment in individualized supports. It's still lonely at the top of the triangle, and we may not get the results we want for individual students by embedding training on individualized supports into universal paradigms. We need to maintain a concerted effort in enhancing the practice of individualized behavioral supports.

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