Using Data to Support Educators' Implementation of Positive Classroom Behavior Support (PCBS) Practices

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Abstract

Research suggests (a) students benefit when educators implement positive and proactive classroom behavior support practices (e.g., maximizing structure, teaching expected behaviors, delivering engaging instruction) and (b) educators benefit when school leadership teams invest in positive and proactive professional development support systems (e.g., training, coaching, performance feedback). Unfortunately, implementation is complex, and educators and school leadership teams implement key practices and systems at lower rates than desired. To increase the likelihood of successful implementation and desired outcomes, we encourage educators and leadership teams to collect and use data to guide decision-making. In this paper, we discuss the types and purposes of data to guide decision-making, describe a cycle for collecting and using data, and share examples of how individual educators and school leadership teams use data to guide implementation of practices to support students and systems to support educators.

Keywords: data, evaluation, educators, teachers, classroom management, behavior support, data-based decision-making, professional development

Decades of research have established an array of empirically supported and proactive positive classroom behavior support (PCBS) practices that are associated with desired social behavior and academic outcomes (Brophy, 1988; Marzano, Pickering, & Pollock, 2003; Office of Special Education Programs [OSEP], 2015; Simonsen, Fairbanks, Briesch, Myers, & Sugai, 2008). For example, research suggests educators design their classroom to provide structure (e.g., Ahrentzen & Evans, 1984; Burgess & Fordyce, 1989; Susman, Huston-Stein, & Friedrich-Cofer, 1980), develop and explicitly teach routines and expectations (e.g., Greenwood, Hops, Delquadri, & Guild, 1974; Johnson, Stoner, & Green, 1996), prompt and pre-correct for desired behavior (e.g., Colvin, Sugai, Good, & Lee, 1997; Faul, Stepensky, & Simonsen, 2012; Sprague & Thomas, 1997), plan and deliver engaging instruction that includes high rates of opportunities to respond (e.g., Carnine, 1976; MacSuga-Gage & Simonsen, 2015; Sutherland, Alder, & Gunter, 2003), provide specific feedback (praise or corrections) contingent on students' social behaviors and academic responses (e.g., Abramowitz, O'Leary, & Futtersak, 1988; Sutherland, Wehby, & Copeland, 2000), and implement a continuum of consequences to acknowledge appropriate and discourage inappropriate behavior (e.g., Davies & Witte, 2000; Kehle, Bray, & Theodore, 2000; Yawkey, 1971). For additional information about core PCBS practices, see OSEP's guide on *Supporting and Responding to Student Behavior* (OSEP, 2015). Despite clear evidence supporting these core PCBS practices, researchers have documented

that practices are often missing (e.g., prompts) or implemented at low levels (e.g., specific praise, opportunities to respond; Reinke, Herman, & Stormont, 2012; Scott, Alter, & Hirn, 2011) in classrooms. It is critical that (a) educators implement core PCBS practices to support student behavior, (b) the school leadership teams support educators' implementation, and (c) educators and leadership teams use data to monitor and adjust supports for students and educators, respectively.

Educators Implementation of Core PCBS Practices

When educators implement the core set of PCBS practices (i.e., maximizing structure, explicitly teaching positive classroom expectations, actively engaging students in learning, and effectively responding to student behavior), students benefit behaviorally and academically (e.g., OSEP, 2015; Simonsen et al., 2008). Specifically, students

- increase appropriate behavior (e.g., on-task behavior, academic engagement; Christle & Schuster, 2003; Ferguson, & Houghton, 1992; Lambert, Cartledge, Heward, & Lo, 2006; Johnson, Stoner, & Green 1996; Rosenberg, 1986; Sharpe, Brown, & Crider, 1995; Sutherland et al., 2003; Sutherland, et al., 2000; West & Sloane, 1986; Wilcox, Newman, & Pitchford, 1988),
- decrease inappropriate behavior (e.g., off-task behavior, disruptions; De Pry & Sugai, 2002; Huston-Stein, Friedich-Cofer, & Susman, 1977; Johnson et al., 1996; Nelson, Johnson, & Marchand-Martella, 1996; Rosenberg, 1986; Sharpe et al., 1995; Sutherland et al., 2003; West & Sloane, 1986), and
- improve academic outcomes (e.g., correct responses, quiz scores; Christle & Schuster, 2003; Craft, Alber, Heward, 1998; Good, Eller, Spangler, & Stone, 1981; Greenwood, Delquadri, & Hall, 1989; Lambert et al., 2006; Roca & Gross, 1996; Simmons, Fuchs, & Fuchs, 1995; Sutherland & Wehby, 2001; Wolford, Heward, & Alber, 2001).

Therefore, experts recommend that educators implement this core set of PCBS practices, monitor their fidelity of implementation, and evaluate the effects of implementation in a manner that is socially valid and promotes equity for *all* students, regardless of language, race, ethnicity, ability, religion, sex, gender identity, sexual orientation, socioeconomic status, or other demographic characteristic (Sugai, O'Keeffe, & Fallon, 2012; Skiba, Ormiston, Martinez, & Cummings, 2016; Weinstein, Curran, & Tomlinson-Clarke, 2003). To increase the likelihood of educators implementing core PCBS practices, it is critical that educators receive support.

Supporting Educators' Implementation of Core PCBS Practices

Given the complexities of implementing core PCBS practices to meet the needs of *all* students, most educators require training and ongoing support to be successful. However, scholars have consistently demonstrated that educators typically (a) do not receive sufficient training in PCBS practices (Begeny & Martens, 2006; Chelsey & Jordan, 2012; Freeman, Simonsen, Briere, & MacSuga-Gage, 2014), (b) are concerned about students' behavior and classroom discipline (Stough, 2006), (c) implement PCBS practices at lower rates than recommended (Reinke et al., 2012; Scott et al., 2011), and (d) require additional support to implement PCBS practices effectively (Authors, 2018; Halford, 1998; Lane, Wehby, & Barton-Arwood, 2005). Therefore, school leadership teams (e.g., school administrators, school psychologists, behavior specialists, instructional leaders, mentor educators) must be ready to support educators' implementation of PCBS practices.

An emerging literature base suggests key elements of positive and proactive professional development (PD) support systems (Fixsen, Naoom, Blasé, Friedman, & Wallace, 2005; Darling-Hammond, Hyler, & Gardner, 2017; Simonsen et al., 2014), including explicit training (e.g., Duchaine, Jolivete, Fredrick, 2011; Gorman-Smith, Beidel, Brown, Lochman, & Haaga, 2003), modeling (e.g., Greenwood, et al., 1974; Gorman-Smith et al., 2003), coaching (e.g., Gorman-Smith et al., 2003; Joyce & Showers, 2002), performance feedback (e.g., Codding, Livanis, Pace, Vaca, 2008; Duchaine et al., 2011; Simonsen, Myers, & Deluca, 2010), and self-management (e.g., Reinke, Lewis-Palmer, & Merrel, 2008; Simonsen et al., 2017). For additional information about core systems features, see OSEP's National Technical Assistance Center on Positive Behavioral Interventions and Supports' recently released technical brief on *Systems to Support Teachers' Implementation of Positive Classroom Behavior Support* (Freeman et al., 2017). To design appropriate PD support systems, leadership teams must implement and evaluate PD supports in a manner that is socially valid and promotes equity (i.e., matched to educators' background, learning history, needs, content area, population, etc.). Unfortunately, just as research indicates educators implement PCBS practices at lower rates than recommended, national data suggest that school leadership teams rarely provide PD support systems for educators in classroom management (e.g., Wei, Darling-Hammond, & Adamson, 2010).

Further, educators and schools may also benefit from a broader cascade of supports, including district- and state-level supports. That is, beginning with a focus on student benefit, educators implement

PCBS practices to support students within their classrooms, school leadership teams support educators within their buildings, district-level teams support the schools within their districts, and state-level teams support districts within their states. At each level, a leadership team is needed to (a) provide leadership (i.e., secure stakeholder support and funding, promote policy and systems alignment, and develop workforce capacity), (b) support implementation (i.e., coordinate training, coaching, evaluation and performance feedback; develop behavioral expertise), and (c) develop local implementation examples (OSEP Technical Assistance Center on Positive Behavioral Interventions and Systems [PBIS], 2015, 2017). Educators, as individuals or members of teams at each level, need data to drive their decision-making. This article addresses how educators and leadership teams can use data to support implementation of PCBS practices; however, the logic presented may be extended to the district and state levels, as described by Fixsen, Blase, Metz, & van Dyke, 2013 (Fixsen, Blase, Duda, Naoom, & van Dyke, 2010; Fixsen et al., 2005).

Using Data to Drive Decision-Making

Taken together, there is a critical need for educators and school leadership teams to implement empirically supported PCBS practices and PD support systems, respectively (OSEP 2015; Freeman et al., 2017). For educators and school leadership teams, implementation requires a series of decisions related to implementing and evaluating the effects of core strategies in a manner that is socially valid and promotes equity among *all* students and educators. To increase the likelihood of these decisions leading to desired outcomes, educators and leadership teams need information, or data, and a logical process to guide their decision-making (Simonsen & Sugai, 2007). In this paper, we describe (a) a general cycle for using data to support educators' implementation of PCBS practices and school leadership teams' implementation of PD support systems and (b) purposes and considerations for data collection. Thus, we describe parallel processes for an educator to engage in data-based decision-making within a classroom and a leadership team to engage in data-based decision-making within a school. We conclude with a table that illustrates how individual educators use data within their classrooms to support their implementation of PCBS practices and how school leadership teams use data to inform their school-wide PD support systems for all educators, and we provide a checklist to assist educators and leadership teams in this process.

Cycle for Data-Based Decision-Making

To assist educators and leadership teams in effectively using data to support decision-making, we propose a general process (see Figure 1) that can be applied at the classroom or school-wide level to support educators and leadership teams, respectively. Although data-based decision-making is a recursive process that may be entered at any "step," educators and school leadership teams benefit from implementing core features of empirically supported PCBS practices (e.g., structure, expectations, engaging instruction) and PD support systems (e.g., training, coaching, performance feedback), respectively, to increase the likelihood of success. Thus, implementation fidelity of core practice and system features is the first consideration (Box 1 at the top of Figure 1). To address this question, educators and leadership teams should examine data related to both content and process elements of implementation fidelity. If features are implemented with fidelity, the next consideration is whether individuals are achieving desired outcomes (Box 2 on the right of Figure 1). To address this question, educators and leadership teams should monitor outcomes. If educators or leadership teams are either not implementing features with fidelity or if students or educators are not achieving desired outcomes, respectively, educators and school leadership teams should begin a structured problem-solving sequence (e.g., Deno, 2005) to identify and precisely define the problem (Box 3 on the bottom of Figure 1). Specifically, educators and leadership teams should (a) employ screening data to consider *who* (all, some, few) is not implementing with fidelity or achieving desired outcomes and (b) use diagnostic data to determine *what* challenges the individual is experiencing and *why* the challenges exist. After defining the problem, educators and leadership teams move toward a solution by identifying how they would enhance (intensify, modify, or add features) implementation to improve fidelity or outcomes for students and educators (Box 4 on the left of Figure 1). Then, they monitor the fidelity of implementation of the enhanced features and begin the cycle again.

In addition, for each element, educators and leadership teams consider whether the selected assessment, practice or system feature, and implementation approach are socially valid and equitable (questions at the bottom of Figure 1). As stated, this general process can be applied to support individual educators' implementation of PCBS practices and school leadership teams' implementation of school-wide professional development systems.
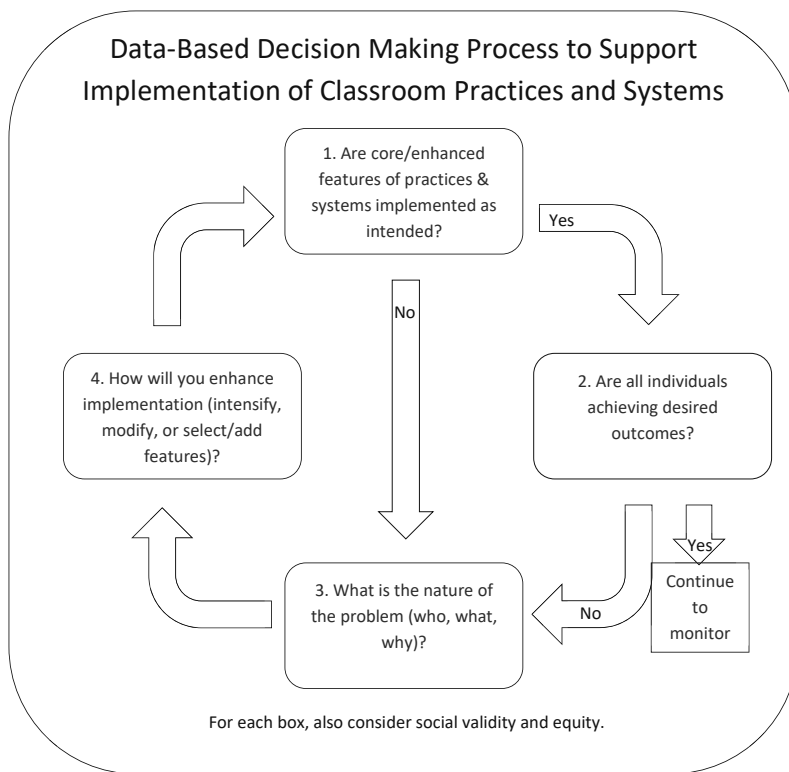
Figure 1. This cycle illustrates how (a) individual educators can evaluate and make decisions to enhance their implementation of PCBS practices and (b) school leadership teams can evaluate and make decisions to enhance PD support systems for educators in a building.

Purposes and Considerations for Data Collection

To effectively implement the general data cycle, educators and members of school leadership teams collect and use data for a variety of purposes (Crawford, 2014; Lane, Beebe-Frankenberger, Lambros, & Pierson, 2001), including (a) assessing how well core PCBS practices or PD system supports are being implemented (fidelity; Box 1 of Figure 1), (b) monitoring progress toward desired goals (outcomes) and evaluating the extent to which individuals are meeting desired outcomes with universal implementation of core practices or systems support (screening; Box 2 of Figure 1), (c) identifying areas in need of improvement (diagnostic) and other relevant information to describe

the nature of the problem (Box 3 of Figure 1), and (d) using data to make decisions about how to enhance implementation (intensify, modify, or select/add features; Box 4 of Figure 1). Also, data-based decisions occur in a context; therefore, it is critical to consider local norms and values in selecting implementation and measurement approaches (social validity) and ensure selected approaches work for all (equity; questions at the bottom of Figure 1). The following sections describe the types and purposes of data and provide examples at two levels: educator (focused on implementation of PCBS practices) and leadership team (focused on implementation of PD support systems).

Fidelity of Implementation

Before assessing whether a specific practice or system feature is effective (i.e., results in desired outcomes), it is critical to determine whether that feature is being implemented with fidelity (Box 1 of Figure 1; e.g., Gresham, Dart, & Collins, 2017; Lane, Jolivette, Conroy, Nelson, & Benner, 2011). Fidelity of implementation (also known as treatment integrity) refers to whether an intervention is being implemented as intended (Gresham, 1989; Gresham, Gansle, Noell, Cohen, & Rosenblum, 1993; O'Donnell, 2008; Yeaton & Sechrest, 1981). Research consistently demonstrates fidelity of implementation impacts intervention outcomes (e.g., Benner, Beaudoin, Chen, Davis, & Ralston, 2010; Flannery, Fenning, Kato, & McIntosh, 2014; McGraw, Sellers, Stone, & Bebchuk, 1996; O'Donnell, 2008; Simonsen et al., 2012). More specifically, when school leaders, coaches, and other support providers implement key PD support systems features (training, coaching, and feedback) with fidelity, teachers increase their implementation fidelity of key PCBS practices (Darling-Hammond et al., 2017; Simonsen et al., 2014); and when teachers implement key PCBS practices with fidelity, in the context of school-wide PBIS, school outcomes improve (Childs, Kincaid, George, & Gage, 2016) and schools become more likely to sustain implementation of school-wide PBIS (Matthews, McIntosh, Frank, & May, 2014). Thus, educators' and leadership teams' implementation fidelity of PCBS practice and systems, respectively, is critical to achieve and sustain desired outcomes.

Scholars have established that fidelity has at least five dimensions: adherence (components "delivered as prescribed"), exposure (duration or frequency of participation), quality ("qualitative aspects" of implementation), participant responsiveness to intervention (observed indicators during intervention), and program differentiation (ensuring participants in each group of an experimental study "received only planned interventions"; Dane & Schneider, 1998, p. 43). These dimensions reflect content (adherence, exposure/duration, and

differentiation) and process (quality and participant responsiveness) variables (Gresham et al., 1993; Power et al., 2005). Thus, data collected on the fidelity of educators' implementation of PCBS practices and school leadership teams' implementation of PD support systems should incorporate both content and process variables.

There are a variety of strategies to assess the fidelity of implementation, including direct observations, review of permanent products, surveys, interviews, and self-report (Ledford & Gast, 2014; O'Donnell, 2008; Paulson, Post, Hendrickx, & Risser, 2002). Further, multiple strategies may be employed to assess various dimensions of fidelity (e.g., Reinke, Herman, Stormont, Newcomer, & David, 2013), and fidelity may be measured and reported by intervention component or day (Gresham et al., 1993; Power et al., 2005). When possible, educators and outside observers should assess implementation fidelity, as educators may inflate ratings of their implementation (Hansen, Pankratz, & Bishop, 2014) and there are benefits to forming a collaborative partnership to monitor and support implementation (Power et al., 2005).

Outcomes and Screening

After ensuring that educators are implementing PCBS and leadership teams are implementing key PD support systems with sufficient fidelity, it becomes possible to evaluate whether the intervention results in desired outcomes (Box 2 of Figure 1). Typical outcomes of educators' implementation of PCBS practices include improved student behavior (e.g., increased prosocial behavior, increased on-task or academically engaged behavior, decreased office referrals), increased academic outcomes, and related indicators of students' behavior (Simonsen et al., 2008).

Typical outcomes of school leadership teams' implementation of PD support systems focus on educator behavior, for example, the extent to which educators in a school implement key PCBS practices with fidelity, overall school-wide summaries of educators' implementation, educators' perceptions of school climate, educator attendance, and educator retention (Simonsen et al., 2014). Educators and leadership teams may use a variety of approaches to assess progress toward outcomes, including direct observation (e.g., walk-throughs, scheduled observations), checklists, rating scales, and permanent products (Simonsen et al., 2014). Many of these tools may be used (a) formatively, with repeated measures across time, to monitor progress or (b) summatively to evaluate whether PCBS practices and PD support systems are resulting in desired effects for students and educators, respectively.

As we consider outcomes, we also engage in screening to identify individuals who may need more support than universal implementation of core PCBS practices and school-wide systems, placing them at-risk for not meeting outcomes or being identified with a more significant need (Deno, 2005; Lane, Menzies, Ennis, & Oakes, 2015). A simple approach to screening is to use formative data collected to monitor progress toward outcomes and identify individuals whose performance places them at risk for not meeting outcomes (based on prior norms or an overall criterion). For example, educators may use direct observation or a brief direct behavior rating (http://dbr .education.uconn.edu) to efficiently monitor student behavior relative to their peers or established norms. In addition, there are free access and commercially available tools that may be used to screen for students with specific or general behavior challenges (e.g., Systematic Screening of Behavior Disorders; Walker, Severson, & Feil, 2014).

Similarly, school leadership team members may perform brief walk-through observations or collect self-monitoring data to monitor educators' implementation of PCBS practices and screen for educators who may require more support with classroom management. In addition, they may employ free access or commercially available tools to assess educators' implementation of PCBS practices (e.g., *Classroom Assessment and Scoring System*; Pianta, La Paro, & Hamre, 2008). Regardless of approach, the key to using data for screening is identifying individuals whose behaviors are considered at-risk and require more support.

Describing the Nature of the Problem: Diagnostic Data

Diagnostic data, as the name implies, enable accurate and specific description or "diagnosis" of a problem (Box 3 of Figure 1). Whereas screening data identify individuals who may not be making sufficient progress toward outcomes, diagnostic data describe *what* the individuals' challenges "look like" (what behaviors are they engaging in at what levels) and *why* challenges may be occurring (e.g., "can't do" vs. "won't do"). At both the classroom and school levels, precise diagnostic data are helpful in determining how to approach a problem and develop a solution. For example, if a student is identified as exhibiting higher than average levels of off-task behavior, educators may collect additional data to describe the behavior and the context (i.e., antecedents and consequences) in which it occurs. Based on this detailed information, the student's educator may develop an action plan to enhance existing supports or request assistance to develop a more targeted or individualized behavior support plan. Similarly, members of a leadership team may work with an educator who is observed de-

livering frequent loud reprimands without providing specific praise. Diagnostic data allow the leadership team to understand the nature of the challenges in the classroom, identify an appropriate goal (e.g., implement a 5:1 ratio of praise to corrections; Cook et al., 2017), and develop an action plan that incorporates teaching critical classroom management skills and supporting implementation via performance feedback (e.g., Myers, Simonsen, & Sugai, 2011).

Social Validity

Social validity refers to the social "significance of the *goals*," "appropriateness of the *procedures*," and the "importance of the *effects*" (Wolf, 1978, p. 207). Social validity data reflect information from key stakeholders about whether the goals and outcomes are important, implementation procedures are acceptable, and effects are meaningful. For an educator, the social validity of PCBS practices may be established by all stakeholders (educators, students, and family members) agreeing on key outcomes (goals; e.g., students will engage in safe and respectful behavior), implementing specific PCBS practices with good contextual fit (procedures), and evaluating whether student behavior improved in a noticeable and important manner (effects). For the leadership teams, social validity may be promoted by securing buy-in for enhancing implementation of PCBS practices (goals), investing in job-embedded and empirically supported features of professional development (procedures), and determining whether enhanced educators' implementation resulted in meaningful changes for students (effects).

Social validity affects educators' implementation of PCBS practices (Wehby, Maggin, Moore Partin, & Robertson, 2012). Educators may assess social validity using a variety of measures (Lane et al., 2001), including (a) brief surveys, such as the Intervention Rating Profile (IRP; Martens, Witt, Elliott, & Darveaux, 1985; Witt, Martens, & Elliott, 1984), the Usage Rating Profile (URP-R; Chafouleas, Briesch, Neugebauer, & Riley-Tillman, 2011), and Children's Intervention Rating Profile (CIRP; Witt & Elliott, 1985); (b) evaluation of treatment integrity and outcome data; (c) intervention-specific measures; and (d) qualitative approaches.

Equity

To promote equity, educators consider whether their goals and outcomes, procedures, and effects are equitable across *all* subgroups within their classroom or school (Sugai et al., 2012). To increase the likelihood of equitable outcomes, implementation, and effects, educators may (a) select empirically supported practices that have

demonstrated efficacy with diverse populations; (b) recruit feedback from a variety of stakeholders (e.g., students, families) when implementing and evaluating practices; and (c) examine disaggregated data to determine if the effects are equitable across sub-groups (Sugai et al., 2012).

Data-Based Decisions to Adjust Implementation

As educators and leadership teams collect and use the sources of data at each step of the cycle depicted in Figure 1, they ultimately use their data to drive decisions about how they will adjust their implementation of PCBS practices and PD support systems (Box 4 of Figure 1). During this process, educators and school leadership teams use their own expertise to consider their data in the context of their own observations and experiences of student and staff needs. For example, if data indicate that educators are not implementing PCBS practices with fidelity (Box 1), school leadership teams may enhance PD supports by providing additional coaching (Box 4). If school leadership teams find that they are not implementing coaching with fidelity (Box 1), they may implement a more rigorous system for prompting and

Table 1
Examples of Data-Based Decision-Making Process

	Individual Educator Implementation	School-wide Implementation
STEP 1: Evaluate Implementation Fidelity of Classroom Practice Features	Educator counts OTR or praise statements during selected lessons to ensure rate is adequate Educator uses a checklist to ensure all critical features of a class-wide reinforcement system are in place	School leadership team uses a checklist to ensure that all staff have received training on all critical features of classroom management Leadership team arranges opportunities for all staff to receive feedback (from self, peer, coach) on their use of each skill
STEP 2: Assess Outcomes	Educator reviews pattern of student behavior referrals Educator uses momentary time sampling to estimate student time on task during selected lessons	Behavior coach conducts walk-though assessments in each classroom to determine the extent to which PCBS practices are in place Educators complete a self-assessment of their use of classroom management practices

Table 1 (continued)

	Individual Educator Implementation	School-wide Implementation
STEP 3: Engage in Problem Solving Process	Educator collects data to determine how many students are struggling to master the homework routine Educator asks a peer to collect data and give feedback on rate and quality of OTRs during a select lesson	School leadership team reviews data to determine the number of educators implementing PCBS practices with fidelity and identify those who are not Leadership team collects data to determine the specific skills educators still need support on
STEP 4: Develop Plan to Enhance Implementation	Educator determines that most students have not mastered the homework routine and decides to reteach the procedures and develops a reinforcement system to support the routine Educator determines that the rate of OTRs declines at the end of lessons and creates a self-management plan to increase OTR rates during that time	School leadership team determines that a small group of educators need additional support using specific praise statements and provides a targeted PD session for those educators with opportunities for peer feedback School leadership team provides 1:1 consultation for teachers demonstrating significant need
ALL STEPS: Consider the Cultural and Contextual Fit for All Practices and Measures	Educators allow students to select reinforcers used in the class-wide reinforcement system Educators ask students to share preferences for OTR types (e.g., verbal, written, gestural) Educators adjust implementation to meet the unique needs and backgrounds of their learners	School leadership team provides educator choice when implementing professional development systems School leadership team provides information and support on how to consider social validity and promote equity when implementing and evaluating evidence-supported practices

monitoring their coaching activities (Box 4). Table 1 provides specific examples of each of these steps for both individual educators and school leadership teams. Figure 2 presents a checklist that prompts educators and leadership teams to select approaches to collect data for each step of this process, consider social validity and equity of each approach, and develop action steps toward collecting relevant data.

Consider Purpose of Data	Select Approach(es)	Consider Social Validity & Equity	Develop Action Steps
1. Are core/enhanced features of practices & systems implemented as intended (implementation fidelity)?			
a.Supports for students			
i. **Content**: Adherence, exposure/duration, and/or differentiation	❑ Direct observation ❑ Permanent product ❑ Survey, rating scale, or checklist ❑ Interview or self-report	❑ **Social validity**: Are supports acceptable to students? ❑ **Equity**: Are supports implemented appropriately for *all* students?	
ii. **Process**: Quality and/or participant responsiveness	❑ Direct observation ❑ Permanent product ❑ Survey, rating scale, or checklist ❑ Interview or self-report	❑ **Social validity**: Are supports acceptable to students? ❑ **Equity**: Are supports implemented appropriately for *all* students?	
b. Supports for educators			
i. **Content**: Adherence, exposure/duration, and/or differentiation	❑ Direct observation ❑ Permanent product ❑ Survey, rating scale, or checklist ❑ Interview or self-report	❑ **Social validity**: Are supports acceptable to educators? ❑ **Equity**: Are supports implemented appropriately for *all* educators?	
ii. **Process**: Quality and/or participant responsiveness	❑ Direct observation ❑ Permanent product ❑ Survey, rating scale, or checklist ❑ Interview or self-report	❑ **Social validity**: Are supports acceptable to educators? ❑ **Equity**: Are supports implemented appropriately for *all* educators?	
2. Are all individuals achieving desired outcomes?			
a. **Student Outcomes**: Behavior, attendance, school nurse visits, academics, etc.	❑ Direct observation ❑ Permanent product ❑ Survey, rating scale, or checklist ❑ Interview or self-report	❑ **Social validity**: Are outcomes important and effects meaningful? ❑ **Equity**: Are outcomes relevant and effects equitable for *all* students?	
b. **Educator Outcomes**: Implementation, climate, attendance, retention, etc.	❑ Direct observation ❑ Permanent product ❑ Survey, rating scale, or checklist ❑ Interview or self-report	❑ **Social validity**: Are outcomes important and effects meaningful? ❑ **Equity**: Are outcomes relevant and effects equitable for *all* educators?	

Figure 2. This checklist provides guidance to educators and leadership teams as they (a) select approach(es) to collect data for specific purposes (linked to steps in the process depicted in Figure 1), (b) consider social validity and equity for their selected approach(es), and (c) develop action steps toward collecting data for each purpose (e.g., adopt an existing tool, identify existing data sources, or develop a tool to meet a local need).

Summary

When individual educators approach data-based decision-making, they focus on their implementation of PCBS practices to support students in their classroom. When school leadership teams approach data-based decision-making, they focus on supporting classroom practice implementation for all educators. At both levels, educators and school leadership teams (a) collect data to monitor the fidelity of implementation of core practice and system features, (b) monitor progress toward relevant outcomes, (c) use data to screen for students and educators who require more support and engage in problem-solving process to "diagnose" or precisely identify problems, (d) develop an action plan to enhance implementation of key practice or

system features, and (e) monitor implementation fidelity of the enhanced features. By collecting and using data to guide decision-making, educators and leadership teams support the implementation of PCBS practices that maximize outcomes for students.

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