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A Model for Increasing the Fidelity and Effectiveness of Interventions for Challenging Behaviors

Prevent–Teach–Reinforce for Young Children

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A need exists for intervention strategies that are both effective in reducing challenging behaviors and practical for use by typical practitioners of early childhood care and education. In this article, we describe a model, *Prevent–Teach–Reinforce for Young Children*, which is based on extensive research and includes features designed to enhance fidelity of implementation by teachers and child care staff of toddlers and preschoolers. The article includes descriptions of the steps in the model and case stories that illustrate the model's implementation. **Key words:** *challenging behavior, functional behavioral assessment, function-based interventions, prevent–teach–reinforce for young children, positive behavior support*

CHALLENGING BEHAVIORS are recognized as perhaps the greatest barrier to young children's social–emotional development and the acquisition of skills necessary for school readiness (Strain & Timm, 2001). Challenging behaviors occur in many forms and can include disruptive acts such as tantrums, aggression, and property destruction, as well as more passive behavior patterns such as noncompliance, withdrawal, and unresponsiveness. The critical feature of challenging behaviors is that they interfere with learning and the development of positive social interactions (Smith & Fox, 2003). When challenging behaviors present persistent barriers to healthy social–emotional development, it is necessary to take deliberate steps to help the child establish an improved developmental trajectory and reduce or eliminate instances of challenging behavior. It is now acknowledged that such interventions can be essential for preventing short- and long-term histories of antisocial behavior and school failure (Dunlap et al., 2006 Shonkoff & Phillips, 2000).

Interventions for challenging behavior have been the focus of a great deal of research over the past few decades, with the vast majority of strategies being based on the principles of applied behavior analysis and the practical approach of positive behavior support (PBS) (Bambara & Kern, 2005; Carr

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et al., 2002; Cooper, Heron, & Heward, 1987; Sailor, Dunlap, Sugai, & Horner, 2009). For individualized PBS interventions, the selection of strategies is guided by data from a functional behavioral assessment (FBA) (Dunlap & Fox, 2011). Results from FBA are used to develop behavior intervention plans (BIPs) that are commonly composed of individualized elements from three procedural categories: (1) manipulations of antecedent and environmental stimuli (what happens before the behavior) that are associated with identified patterns of responding; (2) instructional strategies intended to establish behaviors that serve as effective replacements for the challenging behavior; and (3) adjustments of consequences (what happens after the behavior), with an emphasis on positive reinforcement for desirable responding (Bambara & Kern, 2005; Dunlap & Carr, 2007). Although most of the applied research on PBS and challenging behavior has been conducted with school-aged children, it is noteworthy that the same general findings have been found with toddlers and preschool-aged children (e.g., Conroy, Dunlap, Clarke, & Alter, 2005; Dunlap & Fox, 2009).

An acknowledged limitation of existing research pertains to implementation by typical teachers and child care providers. The majority of studies on intervention strategies have been conducted by researchers whose focus was dedicated solely to the research procedures and who were free from competing responsibilities. Even when studies were carried out by typical classroom personnel, those teachers and other personnel usually were guided by expert consultants (researchers) who insured that the assessment and intervention procedures were implemented with fidelity. Relatively little is known about the level of fidelity that would be observed when typical teachers are asked to implement documented intervention strategies in the course of their ongoing classroom activities. However, our experience and the reports of many colleagues indicate that it is rare for research-based strategies to be used with fidelity in typical classroom settings. This is a significant concern because, for obvious reasons, fidelity is closely associated with effectiveness.

There have been some attempts to increase the fidelity of procedural implementation with detailed manuals that are intended to be accessible and feasible for use by regular classroom personnel. For instance, one such manual describes the implementation of a model designed to reduce challenging behaviors of students in kindergarten through middle school. The model, *Prevent–Teach–Reinforce (PTR)* (Dunlap et al., 2010), was developed for use by teams of school personnel and incorporates a number of features that were intended explicitly to enhance fidelity of the PBS process. Among the features of the *PTR* manual are a step-by-step manualized process, user-friendly strategies of FBA and progress monitoring, menu-driven interventions, and self-evaluations following each step of the process. Evaluations of the *PTR* model have shown it to be effective in a group comparison study and in experiments using single-case experimental designs (e.g., Iovannone et al., 2009; Strain, Wilson, & Dunlap, 2011). A limitation, however, is that the *PTR* model is not always a good fit for early education and child care settings.

In response to this limitation, *Prevent–Teach–Reinforce for Young Children (PTR-YC)* (Dunlap, Wilson, Strain, & Lee, 2013) was developed to provide a standardized, effective, and feasible model of individualized PBS for classrooms serving toddlers and preschoolers. The model is based on the process of PTR, but it was thoroughly revised to meet the needs of early childhood educators, the features of early childhood care and education settings, and the developmental characteristics of young children with challenging behaviors. The remainder of this article describes the model and provides a discussion of features that are designed to facilitate quality implementation by typical early childhood classroom personnel. A complete description of the model, with forms, tools, and detailed case examples, is available in the published manual (Dunlap et al., 2013).

PREVENT–TEACH–REINFORCE FOR YOUNG CHILDREN

The *PTR-YC* is a model of PBS designed for use with toddlers and preschoolers who engage in persistent challenging behaviors that have not been resolved satisfactorily with less intensive guidance and intervention strategies. The model is intended for use in group child care, preschool, and Head Start classrooms. It is an individualized and relatively intensive approach that requires team meetings, data collection, FBA, and careful application of individualized and assessment-based intervention procedures.

It is important to emphasize that *PTR-YC* is intended for young children who already exhibit patterns of serious challenging behaviors, and that it should be part of a more comprehensive approach to promoting healthy social–emotional development and preventing challenging behaviors. In particular, *PTR-YC* is considered to be the most intensive component of a multitiered framework such as the Pyramid Model (Fox, Dunlap, Hemmeter, Joseph, & Strain, 2003). Therefore, before beginning the individualized *PTR-YC* process, it is strongly recommended that teams first conduct simple assessments to determine whether or not certain classroom-wide practices are being implemented with integrity. If the practices are not being implemented consistently and with a high level of quality, it is suggested that the classroom-wide practices be implemented prior to, or simultaneous with, the introduction of an individualized *PTR-YC* process. The reason for this is that high-quality implementation of the classroom practices often serves to reduce or eliminate challenging behaviors without the need for relatively effortful and intensive, individualized interventions. The classroom practices that are identified as important by the authors of the *PTR-YC* manual are:

1. Use of a 5:1 ratio of positive to negative or neutral attention;
2. Use of clear, predictable schedules that are prominently displayed and taught to all children;
3. Use of routines and routines within routines—that is, embedding multiple routines within the daily routines to enhance predictability;
4. Direct teaching of behavioral expectations within each of the contexts of the daily schedule; and
5. Direct teaching of peer-related social skills.

It is clear from extensive research (see Dunlap, Strain, & Fox, 2012; Dunlap et al., 2013) and our experience that consistent implementation of these five practices can greatly reduce the number and the intensity of challenging behaviors in group settings. Those challenging behaviors that continue to persist are candidates for individualized intervention, such as that provided by the *PTR-YC* model. The following paragraphs describe the steps of *PTR-YC*.

Step 1: Teaming and Goal Setting

To start the process for developing a BIP, a team must be convened. Team membership varies and can include any and all individuals who interact with the child on a frequent and regular basis and who are committed to helping the child with challenging behavior learn new and socially appropriate skills. It is essential for the classroom teacher and other classroom staff to participate on the team and it is highly recommended to include parents as much as it is possible and feasible. In this model, parent participation is not required (because the process is designed for classroom and child care settings) but is encouraged throughout and can occur in a variety of ways that are agreeable for the family.

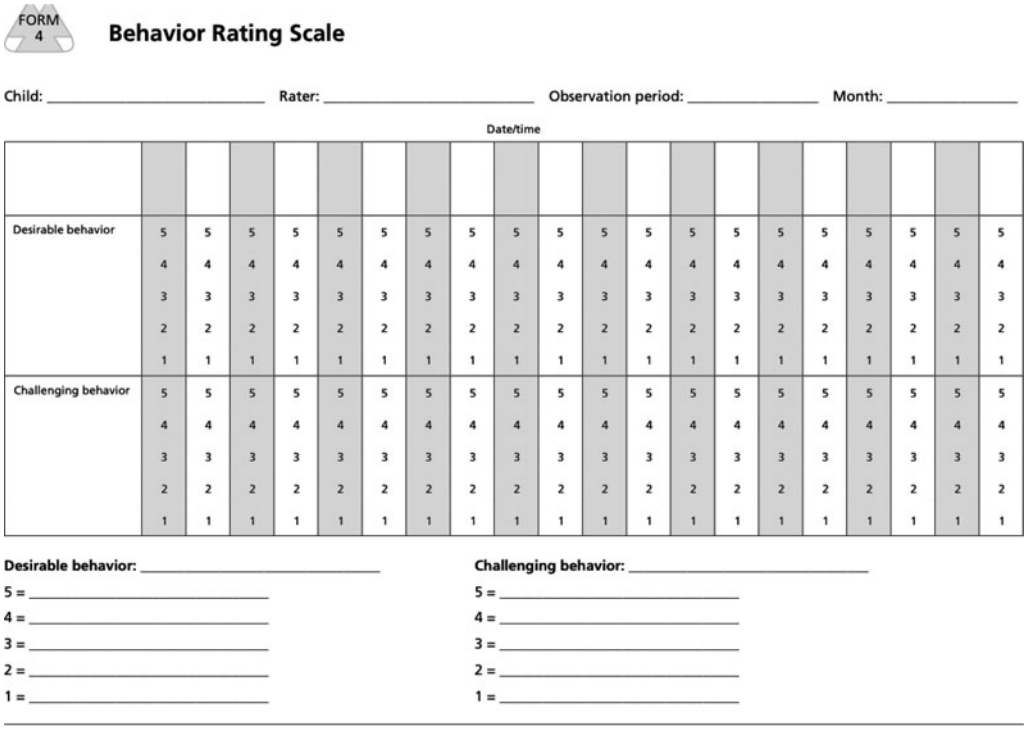
The individual who initiates the process should be the most familiar with PTR-YC and serves as the facilitator, but ultimately, decisions should be made by team consensus. Once all relevant team members are identified, the first of several team meetings should be scheduled as soon as possible.

At the first team meeting, short-term goals are identified, and a goal-setting form is included to help team members accomplish this task. When teams initially convene, there is

often a desire to problem-solve and quickly identify possible strategies to implement. However, this "shoot from the hip" approach is discouraged as various strategies have already proven to be unsuccessful (or there would not be a need for PTR-YC) and it is important for members to commit to each step of the PTR-YC process. The team identifies and prioritizes one challenging behavior to decrease and one desirable behavior to increase that can be realistically accomplished in 2–3 months. Only two behaviors are targeted at a time to enhance the team's focus and increase the likelihood of fidelity and successful outcomes.

Step 2: Data Collection

Once goals are identified, data collection is initiated to establish baseline levels of behavior and later, to determine whether the BIP is working. In PTR-YC, data collection is clear, simple, and valid, making it easy for teachers and other school staff to collect and use meaningful information on child progress. In PTR-YC, the preferred data collection method is to use behavior rating scales (BRS; Iovannone, Greenbaum, Wang, Kincaid, & Dunlap, 2014). Behavior rating scales are perceptual ratings of behavior completed after a designated time period and typically take only about 10 seconds or less to complete each day. Team members contribute to identifying how and when behavior will be measured and recorded, which increases the likelihood that data will be collected reliably and accurately. When the team identifies how they are going to measure behavior, they create a Likert-type scale and identify what each number or anchor corresponds to, on a scale of 1–5. So, when data are collected, classroom staff can circle a number (1–5) for the day to rate the corresponding rates or levels of behavior (see Figure 1). A


FORM 4

Behavior Rating Scale

Child: _____ Rater: _____ Observation period: _____ Month: _____

Date/time

Desirable behavior	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Challenging behavior	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Desirable behavior: _____

5 = _____

4 = _____

3 = _____

2 = _____

1 = _____

Challenging behavior: _____

5 = _____

4 = _____

3 = _____

2 = _____

1 = _____

Figure 1. Example of a Behavior Rating Scale (BRS) form. *Source: Prevent-Teach-Reinforce for Young Children: The Early Childhood Model of Individualized Positive Behavior Support* by Glen Dunlap, Kelly Wilson, Phillip Strain, and Janice K. Lee. Copyright © 2013 Paul H. Brookes Publishing Co., Inc. All rights reserved. Provided with permission from Brookes Publishing Co. Not to be reproduced or distributed without permission of the publisher (rights@brookespublishing.com).

second option for data collection is to use frequency counts if behaviors are obvious, distinct, and easy to count. This may be a preferred option if teams are already documenting frequency of the challenging behavior.

Team members decide which data collection measure to use (BRS or frequency counts), the dimension of behavior to measure (frequency, duration, intensity, percentage of time, or percentage of opportunities of a particular behavior), the BRS anchors for the identified desirable and challenging behaviors (if the BRS is used), and what time period during the day to observe and measure the data (a problematic routine or activity, a problematic time of day, or all day/session). Once the details of data collection have been determined, data collection should begin the next day and continue for the duration of the PTR-YC process. After 2 or 3 days, the facilitator should check to make sure that data are being collected, that it reflects what is happening in the classroom, and that the rating matches the teacher's perception of the behavior. If there are concerns about the data or how they are being measured, adjustments may need to be made to the BRS anchors and/or data collection period.

Step 3: Functional Behavioral Assessment

As in any BIP, an FBA is necessary to identify the factors that contribute to the challenging behavior and determine the function or purpose of that behavior, which guides team members to identify appropriate intervention strategies to implement. The FBA process is intended to be as effective and efficient as possible, by using checklists with multiple-choice and open-ended response options that are common in preschool classrooms. The checklists take about 10–15 minutes to complete, and each team member should fill out the checklists on the basis of the identified challenging behavior. Figure 2 presents examples of questions from the FBA checklists.

At the next meeting, team members bring the completed checklists to review and summarize. The summarized information is used to complete the FBA summary table to identify patterns and factors that contribute to the challenging behavior. This information is used to develop a hypothesis statement, a succinct and complete statement that reflects the team's view of the elements that contribute to the child's challenging behavior. The hypothesis statement is used to identify appropriate strategies for the BIP. Data collection using the BRS or frequency counts continues.

Step 4: Behavior Intervention Plan

Once the FBA is completed and a hypothesis statement is created, it is time to create the BIP. The design of the BIP in the PTR-YC process must include at least one strategy from each of the three categories—Prevent (contextual and antecedent manipulations), Teach (instructional strategies), and Reinforce (adjustments of consequences). The requirement that a plan must include at least one strategy from each of the categories means that the plan is more robust, meaning that any inadequacies in the implementation of any one component are likely to be compensated for by the effects of other components. Since the teacher is typically the primary interventionist, she or he should have the greatest input into identifying appropriate and feasible intervention strategies to implement in the classroom. The manual contains additional details about each of the intervention strategies, including complete descriptions, considerations, when to consider using a strategy, and various examples of ways to implement each strategy. Although there is no one right way to develop a BIP, team members need to select interventions that match the function of the challenging behavior (identified in the hypothesis statement) while meeting the needs and preferences of the team members who will be implementing the strategies. The strategies included in PTR-YC are evidence-based and are common strategies implemented in preschool settings. See Table 1 for brief descriptions of the strategies. If other evidence-based strategies are preferred, those are welcome to be included in the BIP, as the strategies identified in the

PTR Functional Behavioral Assessment: Prevent Component

Challenging behavior: Person Responding: Child:

1. Are there ***times of the day*** when challenging behavior is ***most likely*** to occur? If yes, what are they?

___ Morning ___ Before meals ___ During meals ___ After meals ___ Prepare meals
___ Afternoon ___ Evening ___ Nap time

Other:_____

2. Are there ***times of the day*** when challenging behavior is ***least likely*** to occur? If yes, what are they?

___ Morning ___ Before meals ___ During meals ___ After meals ___ Prepare meals
___ Afternoon ___ Evening ___ Nap time

Other: _____

3. Are there ***specific activities*** when challenging behavior is ***very likely*** to occur? If yes, what are they?

___ Arrival ___ Nap time ___ Peer interactions ___ Snack
___ Dismissal ___Toileting/diapering ___ Centers/Free play ___ Transitions (specify)
___ Large group times ___ Special event ___ Meals _____
___ Small group (specify)
_____

Other: _____

PTR Functional Behavioral Assessment: Teach Component

Challenging behavior: Person Responding: Child:

1. Does the *challenging behavior* seem to be exhibited in order to ***gain attention from other children***?

___ Yes *List the specific peers:* _____
___ No

2. Does the *challenging behavior* seem to be exhibited in order to ***gain attention from adults***? If so, are there particular adults whose attention is solicited?

___ Yes *List the specific adults:*
___ No

3. Does the *challenging behavior* seem to be exhibited in order to ***obtain objects*** (toys or games, materials, food) from other children or adults?

___ Yes *List the specific objects:* _____
___ No

PTR-YC Functional Behavioral Assessment: Reinforce Component

Challenging behavior: Person Responding: Child:

1. What ***consequence(s)*** usually follow the child's *challenging behavior*?

___ Sent to time-out ___ Gave personal space ___ Verbal reprimand
___ Sent out of the room ___ Assistance given ___ Review classroom rules
___ Verbal redirect ___ Physical prompt
___ Sent to quiet spot ___ Delay in activity ___ Peer reaction
___ Calming/soothing ___ Activity changed ___ Physical restraint
___ Talking about what just happened ___ Activity terminated ___ Removal of reinforcers (such toys, items, attention)
___ Removed from activity ___ Natural consequences (Specify)
_____

Other:_____

2. Does the child ***enjoy praise*** from adults and children? Does the child enjoy praise from some people more than others?

___ Yes *List specific people* _____
___ No

3. What is the likelihood of the child's ***appropriate behavior*** (e.g., participating appropriately; cooperation; following directions) resulting in acknowledgment or praise from adults or children?

___ Very likely ___ Sometimes ___ Seldom ___ Never

Figure 2. Examples of items from the *Prevent–Teach–Reinforce for Young Children* (PTR-YC) functional behavioral assessment checklists for each of the three components: Prevent, Teach, and Reinforce.

Table 1. Brief Descriptions of Intervention Strategies for the Prevent, Teach, and Reinforce Categories

	Brief Description
Prevent strategy	
Provide choices	Provide acceptable choices throughout the day and across routines, activities, and environments
Intersperse difficult or nonpreferred tasks with easy or preferred tasks	When tasks are difficult, embed (mix in) easier or preferred tasks to decrease the difficulty of the difficult or nonpreferred task
Use visual supports and schedules	Use pictures (actual photographs, drawings, or visual representations of activities) to improve the child's understanding of the task or expectation and independently follow directions
Embed preferences into activities	Incorporate the child's preferences and interests into activities as much as possible
Enhance predictability with schedules	Often used in conjunction with visual supports, create predictable schedules so the child can anticipate and learn the sequence of routines and activities throughout the day
Alter physical arrangement of the classroom	Change, eliminate, or move elements of the physical classroom environment
Remove triggers for challenging behaviors	Remove or avoid something or someone that serves as an immediate trigger for challenging behavior
Teach strategy	
Teach communication skills	Identify the function or purpose of the child's challenging behavior and teach a more appropriate, communicative behavior that serves the same function or purpose
Embed multiple instructional opportunities	Create multiple planned instructional opportunities throughout the day, embedded in a variety of routines and activities or create multiple planned instructional opportunities throughout a particular routine or activity.
Teach peer-related social skills	Intentionally teach skills for effectively and positively interacting with peers
Self-monitoring	Teach the child to observe his or her own behavior, by being able to identify when appropriate behavior is occurring
Tolerate delay of reinforcement	Purposefully teach how to wait for reinforcement or gratification
Teach independence with visual schedules	Directly teach the child to use and follow visual schedules to increase independence
Reinforce strategy	
Reinforce desirable behavior	Identify desirable behavior and use positive reinforcement to increase the desirable behavior
Reinforce physically incompatible behavior	Identify a desirable behavior that cannot be exhibited at the same time as the challenging behavior and use reinforcement to increase the desirable behavior
Remove reinforcement for challenging behavior	Identify what is reinforcing the challenging behavior (current consequences when challenging behavior occurs) and stop responding to challenging behavior in the same way—also known as extinction
Emergency intervention plan	When needed, create a clear plan for ensuring the safety of everyone and calming the situation to resume classroom activities

manual are not exhaustive. Teams can create a BIP that meets their needs as long as the strategies address the function of the challenging behavior, include at least one component from each of the three categories, and can be implemented by classroom personnel. The BIP should be a written document that includes the identified strategies, detailed steps about how the strategy will be implemented, and what materials and training or coaching is needed to implement the plan. All the details for implementing the plan need to be addressed before actual implementation begins. Each strategy should include scripts or task analyses of how the strategy should be implemented, any supplies, materials, or resources that are required, specific information about when, how often, and who will implement the strategy, and finally, what positive consequences will be delivered when the child successfully engages in the socially appropriate behavior.

Fidelity of implementation of the BIP is crucial to the effectiveness of PTR-YC, as in any individualized plan that is written. It may be necessary to provide specific training, coaching, and/or technical assistance to classroom staff to ensure that the BIP is being implemented with fidelity. Sometimes, the plan that is developed is harder to implement than it seems when it is being discussed hypothetically, and new strategies can be difficult to implement when there are many other things that classroom staff are expected to do at the same time. The PTR-YC manual contains forms and methods for assessing fidelity of implementation and could be used when implementation of the plan is more difficult than anticipated or to provide feedback to team members. Data collection continues, and once the intervention strategies are implemented, this should be noted on the data sheet for future evaluation of the BIP.

Step 5: Using Data and Next Steps

When the BIP has been implemented for at least 2 weeks, the team should review the data and evaluate how the plan is working. If the data indicate improvement in the desirable behavior and decreases in challenging behavior, and the team is satisfied with the progress, the team can agree to continue implementing the BIP as designed. Once the improvements in behavior have met team expectations and the new behaviors have been consistent for a few weeks, the team may discontinue the interventions, may decide to continue with the interventions, and/or may create new goals for additional challenging and desirable behaviors to extend the skills that have been attained.

If the data suggest that inadequate progress has occurred, then several steps can be implemented to identify the problems and incorporate modifications: (1) Assess the fidelity with which the BIP is being implemented, and make corrections as needed; (2) make certain that the positive reinforcers are, in fact, consequences that serve to strengthen behavior and, if not, take steps to ensure that the reinforcers and other consequences are effective for the targeted behavior and context; and (3) if necessary, redo the FBA to ensure that the BIP is congruent with the functions of behavior. The procedures for implementing these steps and creating an effective plan are explained in detail in the manual.

CASE ILLUSTRATIONS

The two cases stories provided below are intended to illustrate the process of the PTR-YC model with preschool children.

Jacob

Jacob was a typically developing 4-year-old boy who attended school 4 days per week for 3 hours each day at a nonprofit, inclusive childcare center. The classroom consisted of 2 teachers with 13 children. The teachers reported that two of the children had identified disabilities and one student in addition to Jacob had a BIP.

Jacob's teachers cotaught and shared responsibilities. However, each student was assigned a "lead teacher" whose responsibilities involved communicating with families and outside service providers, organizing and

developing supports within the school and classroom, and performing assessments and progress monitoring tasks. Jacob's lead teacher had 10 years' teaching experience with an associate's degree. Prior to initiation of the PTR-YC process, Jacob's teachers employed planned ignoring to target his challenging behavior and they periodically administered verbal praise to target his desirable behavior.

Step 1: Teaming and goal setting

Jacob's team included a PTR-YC facilitator, his two classroom teachers, and the childcare center's Director of Education. Jacob's lead teacher became the team leader, and the team did not elect to add any additional staff to the team. Jacob's family was invited to participate in the PTR-YC process, but, because of scheduling difficulties, they did not attend meetings or engage as active members of the team. Jacob's lead teacher provided the family with information throughout the PTR-YC process, and the family provided updates regarding his behavior in the home setting on a weekly basis for the team.

The team and family agreed that the long-term vision for Jacob would be for him to independently engage in school activities without the demonstration of challenging behavior. Jacob's family was considering transferring him to a language immersion preschool, so his ability to independently participate in school activities was of high priority. In regard to Jacob's short-term goals, the team ultimately identified two challenging behaviors for reduction and one desirable behavior to increase. Jacob's challenging behavior, aggression, consisted of hitting and pushing peers. His demonstration of property destruction included throwing toys, dumping items from bins, drawing on walls, and ripping and tearing paper and tape to throw throughout the room. The team chose peer prosocial behavior as the desirable behavior to increase. Specifically, they operationally defined prosocial behavior as sharing items and toys and/or gaining a peer's attention appropriately (i.e., tapping peer, saying peer's name, looking at peer).

Step 2: Data collection

Jacob's team developed a data collection system to track his challenging and desirable behaviors. They agreed to track the frequency of behavior by using the PTR-YC BRS. Frequency for Jacob's behavior was measured by the total number of times aggressive, destructive, and prosocial behaviors were observed during the data collection period. The team reported that the most challenging times of the day (i.e., when the most challenging behavior was observed) for Jacob were those that required social interactions with peers. Therefore, as a team, it was decided that behavioral data would be tracked during arrival, center time, large group, and snack time. The team understood that collecting data over an extended period of time might create more difficulty than choosing a shorter, more specific time of the day; however, they believed that collecting data this way would be more accurate, and the team noted that using the BRS was more feasible compared to their past efforts at significantly more intense data collection procedures. Anchors were set for all behaviors, and Jacob's lead teacher was chosen as the person responsible for data collection. The team began using the BRS immediately to establish baseline data before creating and implementing the BIP.

Step 3: PTR-YC assessment (Functional Behavioral Assessment)

Prior to the completion of the FBA, the team reviewed the classroom-wide practices outlined in the PTR-YC manual to ensure that no practices, or lack thereof, were inadvertently affecting Jacob's challenging behavior. No areas of concern were noted. Following the review, the team opted to complete the FBA by answering all questions on the PTR-YC FBA Checklists together. The PTR-YC FBA checklists were completed and summarized in a 1-hr team meeting during which the PTR-YC facilitator posed the checklist questions to all team members who responded on the basis of their

knowledge of Jacob's behavior in the classroom. A summary of the checklists helped the team confirm that Jacob's challenging behavior most often occurred during unstructured social situations. His challenging behavior was frequently followed by adult and peer attention. The FBA summary also led to the following hypothesis statement with respect to the perceived function of Jacob's challenging behavior: when Jacob is in an unstructured social situation, he will engage in aggression and property destruction; as a result, he will gain attention and sustain interactions with adults and peers.

Step 4: PTR-YC intervention

The development of Jacob's BIP occurred during a 1-hour team meeting facilitated by the PTR-YC facilitator. In consideration of the hypothesis statement, the team ranked and selected interventions from each PTR-YC intervention component (Prevent, Teach, and Reinforce). They chose one intervention from each of the Prevent and Reinforce components and three interventions from the Teach component. As a Prevent intervention strategy, the team elected to use visual supports and schedules. Three Teach interventions were chosen to build new skills that increase independence with visual schedules, self-monitoring, and peer-related social skills. As a Reinforce intervention, reinforce desirable behavior was chosen.

Once intervention strategies were chosen from each of the three PTR-YC core components, Jacob's team worked to develop a BIP. It was decided that Jacob's lead teacher would be responsible for much of the plan implementation each day, but all members of the team understood the plan, and they were also included as plan implementers for certain daily routines. The team outlined the specific steps to be followed for BIP implementation, and they obtained and created materials and planned activities and routines to support consistent implementation of the plan. For example, his teachers created materials for his visual schedule and supports, and tangible reinforcers were obtained per his noted preference on the PTR-YC Reinforce Checklist. A self-monitoring program was also developed in the form of a simple chart with visual cues. In addition, Jacob's BIP involved embedding peer-related social skills instruction into his daily routines, so his team planned multiple, regularly occurring opportunities for facilitated practice of peer-related social skills throughout his day. Following the BIP development, the PTR-YC BIP Summary Form was completed.

BIP implementation and coaching

During the PTR-YC intervention meeting, the PTR-YC facilitator trained the team in a discussion format to ensure their understanding of plan. The facilitator visited Jacob's classroom on the initial day of BIP implementation and coached his teacher using immediate, verbal feedback as she implemented the plan. In addition, written feedback was provided to the teacher summarizing the PTR-YC facilitator's recommendations. Coaching during the initial visit was based on the team's implementation of the BIP as outlined in the Behavior Intervention Plan Summary Form and also on the PTR-YC Fidelity of Strategy Implementation form. The visit took place during a scheduled fidelity check that lasted for approximately 90 minutes. Following this initial coaching, further support primarily took the form of a brief check-in (5–10 min) after the completion of a fidelity check and/or a written summary of the PTR-YC facilitator's observations and recommendations from the day provided through e-mail. Recommendations were directly related to the ability of the team to complete strategies outlined in the Behavior Intervention Plan Summary Form and on the PTR-YC Fidelity of Strategy Implementation form described later. Given the structure of the PTR-YC process, the team's access to the PTR-YC manual, and the fact that Jacob's team was involved in all procedural stages including the development of the BIP, the team's individual need for direct coaching by the PTR-YC facilitator remained relatively low throughout their participation in the study.

Fidelity of intervention

Jacob's team monitored fidelity by using the PTR-YC Fidelity of Strategy Implementation form. After the initial fidelity check visit, which, as previously stated, also included coaching, fidelity checks were performed at least one time per week by the PTR-YC facilitator. Fidelity check visits lasted for approximately 90 min. During the initial fidelity check visit, the team was observed implementing the plan 78%. Two subsequent fidelity observations noted 100% fidelity of implementation. At the third fidelity check visit, the team scored an 89%. The PTR-YC facilitator checked in with the team following the observation and made recommendations through written feedback regarding the reasons for a drop in their fidelity score by indicating that they needed to embed opportunities during two routines in which they did not and that they should provide reinforcement as outlined in the BIP. The subsequent fidelity check again reached 100%.

Step 5: Using data and next steps

Behavior rating scale data showed a decreasing trend in Jacob's challenging behavior and an increasing trend in desirable behavior. At baseline, Jacob's teachers rated his average frequency of property destruction a 3.5 (out of 5, with 5 being high rates of property destruction) and his average frequency of aggression a 3.5 (out of 5, with 5 being high rates of aggression). Ratings of his frequency of prosocial behavior averaged a 1 (out of 5, with 1 being low levels of prosocial behavior). At the end of the PTR-YC intervention process (11 weeks), average ratings of Jacob's property destruction and aggression were 1 and 1, respectively, and average ratings for his prosocial behavior were 5.

The team continued to track and review BRS data on a daily basis and data were reviewed each week in regard to the BIP during weekly planning time. As a result of participating in PTR-YC, Jacob's family was able to enroll him in a language immersion preschool, which was their primary long-term goal at the beginning of the process.

Landon

Landon, a 3-year-old boy, was enrolled in an inclusive preschool classroom housed in an elementary school at his local public school. He attended school 4 days per week in the morning. Landon experienced developmental delays and was receiving support through an Individualized Education Plan. His classroom had 13 students, 6 of which had special needs. The classroom composition also included one teacher, one Early Childhood Special Educator (ECSE), an assistant teacher, a special education aide, and a rotating ancillary support staff member (i.e., speech and language pathologist, occupational therapist). His teacher had 2 years' experience teaching preschool and an associate's degree. When the PTR-YC process was initiated, Landon's classroom team was using verbal and physical prompting, interspersing nonpreferred and preferred activities, and employing a token reinforcement system to manage his challenging behaviors and promote desirable behaviors. During baseline observations, Landon required constant support (oftentimes in the form of physical prompting and guidance) from at least one staff member to address his challenging behavior.

Step 1: Teaming and goal setting

Landon's team consisted of the PTR-YC facilitator and preschool staff members, including the classroom teacher, ECSE, speech and language pathologist, assistant teacher, special education aide, and Landon's family. Given the number of school staff members in Landon's classroom, it was imperative to ensure that all individuals were fully included in the PTR-YC process. Meetings were held at lunchtime so that all team members could attend. It was decided by the team that the classroom ECSE would take the lead in regard to the PTR-YC process. Landon's family was unable to attend PTR-YC meetings, but they were included as team members through communication with Landon's teacher and

the classroom ECSE and by completing forms such as the PTR-YC FBA Checklists to provide information when possible.

The team's long-term vision for Landon was for him to be able to engage independently in school routines and to play cooperatively with peers by the time he entered kindergarten. Short-term goals were related to Landon's challenging and desirable behaviors that would be targeted throughout the PTR-YC process. Landon's team selected one challenging behavior and one desirable behavior target. The challenging behavior, refusal, was operationally defined as escaping and/or leaving center or work areas, screaming, and hitting. Following directions was chosen as the desirable behavior target, and it was defined as completing play and/or activity sequences.

Step 2: Data collection

For data collection, the team chose to track the frequency of Landon's challenging and desirable behaviors through the use of the PTR-YC BRS. Anchors were developed, and the team tracked refusals by the number of times Landon was prompted to return to a center or work area. Following directions was measured by the number of 3-step play sequences Landon completed. Landon's team decided to track behavioral data at center time, and the classroom ECSE was chosen to be the primary person responsible for data collection. Data were tracked immediately following the development of the data collection system, to establish a baseline before the implementation of the BIP began.

Step 3: PTR-YC assessment (Functional Behavioral Assessment)

To complete the individualized FBA, the team answered the questions on the PTR-YC FBA Checklists in a group format during a 1-hr meeting facilitated by the PTR-YC facilitator. Landon's family confirmed the occurrence of the same challenging behavior at home and provided a completed PTR-YC FBA for the team's use. All FBA information was compiled and used to complete the PTR-YC FBA Summary Table. Data from the summary table indicated that Landon's challenging behavior most often occurred during center time, transitions, and free play to escape or terminate activities and/or demands, to gain attention, and to obtain objects such as toys, food, and items kept on his teacher's desk. These conclusions led the team to develop the following hypothesis statement regarding the perceived function of Landon's challenging behavior: when Landon experiences times that are less structured (i.e., center time, transitions, and free play), then he will engage in refusal behavior; as a result, he will escape activities, gain adult attention, and/or obtain objects.

Step 4: PTR-YC intervention

Landon's BIP was developed by the team in a 1-hr meeting. The classroom team began the process of developing his BIP by ranking and selecting interventions from the Prevent, Teach, and Reinforce components included in the PTR-YC Menu of Intervention Strategies. Landon's team chose two Prevent strategies (provide choices and use visual supports and schedules), one Teach strategy (teach independence with visual schedules), and one Reinforce strategy (reinforce desirable behavior). Although all team members were involved in the development of the BIP, it was decided that the classroom ECSE and the classroom special education aide would be responsible for daily implementation of the plan. This choice was made because they spent the most time in the classroom directly working with students, and particularly Landon, during center time.

To develop the BIP, Landon's team created a task analysis outlining the steps of the plan. Materials were created in the form of visual supports for activity and play sequences (e.g., play sequences were broken down into three steps with a picture depicting each step), and the supports were hung in differing center areas. A simple visual schedule was also created for Landon to use during his transitions between centers and to act as a visual cue to remind him that following expectations resulted in earning his chosen reinforcer. The team used the task analysis to complete the

PTR-YC Behavior Intervention Plan Summary Form and the PTR-YC Fidelity of Strategy Implementation form.

BIP implementation and coaching

Following the 1-hr PTR-YC BIP meeting, the PTR-YC facilitator and ECSE, who also supported the special education aide with coaching on Landon's PTR-YC BIP when the PTR-YC facilitator was not present, met for an additional 30 min to thoroughly discuss, prepare, and practice the plan. During the team's first implementation of the BIP, the PTR-YC facilitator visited the classroom during center time for approximately 60 min at which time immediate feedback and coaching were provided for the team. The initial fidelity check also occurred at this time. Two additional fidelity check visits required immediate feedback and coaching, but all subsequent visits involved only PTR-YC facilitator fidelity observations. Each time the PTR-YC facilitator visited the classroom, including visits involving only fidelity observations, written feedback was provided through e-mail that summarized observations and recommendations based on the team's ability to perform the BIP strategies outlined in the PTR-YC Behavior Intervention Plan Summary Form and on the PTR-YC Fidelity of Strategy Implementation form.

Fidelity of intervention

The PTR-YC facilitator measured fidelity during each 60-minute fidelity check visit. As previously noted, fidelity measures indicated that three fidelity check visits also necessitated coaching due to low levels of BIP implementation. During these first three visits, Landon's team achieved fidelity measure scores of 44%, 67%, and 56%. Following the third fidelity check visit that included direct coaching of BIP strategies, Landon's team demonstrated 100% fidelity on two subsequent fidelity measures. Landon's classroom team required more coaching to implement his BIP at high levels of fidelity when compared to Jacob's team. However, in-person coaching was needed only for 4 days and a total of approximately 3 hr and 30 min.

Step 5: Using data and next steps

Landon's BRS data showed that his refusal behavior decreased throughout the PTR-YC process and that he followed directions more frequently as time passed. At baseline, Landon's mean rating for challenging behavior was 4.3 (out of 5, 5 being high), and his average rating for desirable behavior was 2.3 (out of 5, 5 being high). After intervention (6 weeks), his average rating for challenging behavior was 3, and his mean rating for desirable behavior was 3. Following an evaluation of the data, the team reported their satisfaction with the decrease in Landon's challenging behavior due to the fact that on many days he received a mean rating of 1 for his refusals. In addition, the mean increase in his ability to follow directions correlated with an improvement in his ability to follow 2 to 3 more steps per play and activity sequence, so satisfaction with this increase was also noted by the team.

At the end of the team's involvement in the PTR-YC process, they chose to continue with their full implementation of the BIP. They continued collecting BRS data on Landon's challenging and desirable behaviors on a daily basis, and the data were discussed at weekly meetings to determine whether any changes should be made to his plan. Key behavioral changes for Landon during the PTR-YC process included his continued engagement in classroom routines without adult physical prompting and with greatly reduced verbal prompting and his increased ability to complete play sequences during center time.

CONCLUSION

The PTR-YC model is based on extensive research in the area of PBS (Brown, Anderson, & DePry, 2015; Sailor et al., 2009), including investigations of the model's predecessor, Prevent–Teach–Reinforce (e.g., Iovannone et al., 2009; Strain et al., 2011). Data in the form of case studies with young children have been obtained, and a large group comparison investigation of PTR-YC is under way in Nevada and Colorado (Dunlap & Strain,

2012). Preliminary findings have been presented at national conferences (e.g., Dunlap, Lee, & Strain, 2014). PTR-YC represents an advancement in the way that early childhood professionals can address serious challenging behaviors of young children. There is nothing specific in the PTR-YC model that is novel, except that it presents evidence-based practices in a complete package and in such a way as to enhance the feasibility and fidelity of implementation. By making effective procedures of assessment and intervention accessible to a wider population of early childhood professionals, a larger number of children will benefit from the implementation of effective interventions designed to reduce challenging behaviors and increase child social and intellectual competence.

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