

Positive Greetings at the Door: Evaluation of a Low-Cost, High-Yield Proactive Classroom Management Strategy

Journal of Positive Behavior Interventions
1–11

© Hammill Institute on Disabilities 2018

Reprints and permissions:

sagepub.com/journalsPermissions.nav

DOI: 10.1177/1098300717753831

jpbj.sagepub.com

Clayton R. Cook, PhD¹, Aria Fiat, BA¹, Madeline Larson, BA¹,
Christopher Daikos, MiT, EdS², Tal Slemrod, PhD³,
Elizabeth A. Holland, PhD⁴, Andrew J. Thayer, EdS¹ ,
and Tyler Renshaw, PhD⁵

Abstract

Externalizing behavior is a significant concern among teachers. Teachers could benefit from incorporating proactive strategies to prevent problem behaviors and promote academic engagement as students transition into the classroom learning environment. The purpose of this study was to conduct an experimental investigation of the Positive Greetings at the Door (PGD) strategy to improve middle school students' classroom behavior. Teachers were nominated by their principals for participation and then randomly assigned to the PGD or attention control condition. Observational data on academic engaged time and disruptive behavior were collected pre- and post-implementation. Results revealed that the PGD strategy produced significant improvements in academic engaged time and reductions in disruptive behavior. Moreover, results from a social validity questionnaire indicated that teachers found the PGD strategy to be feasible, reasonable, and acceptable. The limitations of this study and implications of these findings for teacher pre- and in-service trainings are discussed.

Keywords

classroom intervention, challenging behavior, social relationships/interactions

Externalizing behaviors undermine learning environments, yet many teachers report receiving inadequate preservice training to manage these behaviors in the classroom (Christofferson & Sullivan, 2015). Disruptive, aggressive, and noncompliant behaviors constitute the majority of externalizing problems that negatively affect classroom learning environments (E. Little, 2003; E. Little & Hudson, 1998). These problem behaviors interfere with instructional delivery, contribute to an unproductive learning atmosphere, and compromise students' ability to stay focused and learn (Walker, Ramsey, & Gresham, 2004). Students who exhibit classroom problem behaviors are likely to experience negative short- and long-term outcomes, including poor grades, absenteeism, exclusionary discipline, conduct problems, school dropout, and incarceration (e.g., Broidy et al., 2003; Doll & Cummings, 2008; Gilliam, 2005). Moreover, evidence suggests that student externalizing behaviors become increasingly resistant to change over time (Webster-Stratton, Reid, & Hammond, 2001). Therefore, it is imperative to support teachers to deliver evidence-based classroom management practices that effectively prevent externalizing behaviors and promote behavioral engagement in the classroom.

Traditional Classroom Management as Reactive and Punitive

Effective teaching requires the delivery of evidence-based practices to successfully manage classroom behavior and promote high rates of engagement in learning (Brophy & McCaslin, 1992; Melnick & Meister, 2008). However, a significant proportion of teachers are unaware of and are not adequately trained to manage student behavior (Christofferson & Sullivan, 2015; Stormont, Reinke, & Herman, 2011). For example, in a survey of elementary school teachers, more than 90% reported that they needed more professional development in behavior management

¹University of Minnesota, Minneapolis, USA

²University of Washington, Seattle, USA

³California State University, Chico, USA

⁴Florida State University, Tallahassee, USA

⁵Utah State University, Logan, USA

Corresponding Author:

Clayton R. Cook, University of Minnesota, 56 East River Road,
Minneapolis, MN 55455, USA.

Email: crcook@umn.edu

Action Editor: Brandi Simonsen

(Wolery, Werts, Lisowski, Caldwell, & Snyder, 1995). Moreover, findings suggest that most postgraduate teacher candidates in their study felt ill-prepared to manage disruptive behavior (DB) in the classroom (Bromfield, 2006). This is consistent with a nationwide survey that found teachers across all grade levels reported needing more behavioral management training and ongoing support in classroom management practices (American Psychological Association, Coalition for Psychology in Schools and Education, 2006).

Historically, teachers' classroom behavior management has relied more on reactive, as opposed to proactive, strategies (Sprick & Borgmeier, 2010). Reactive behavior management includes responses that may involve punitive interactions (e.g., public reprimands that embarrass or shame a student) and the use of exclusionary discipline methods, such as office referral, detention, or suspension (Mayer, 1995; McIntosh, Filter, Bennett, Ryan, & Sugai, 2010; Morrissey, Bohanon, & Fenning, 2010). In addition, reactive, punitive discipline can damage teacher–student relationships, result in loss instructional time, and perpetuate student problem behavior (S. G. Little & Akin-Little, 2008; Mayer, 1995). Furthermore, by responding to infractions with considerable attention (e.g., verbal reprimands) or removal from instruction, teachers risk inadvertently reinforcing a student's misbehavior by allowing the student to successfully avoid unwanted academic work (S. G. Little & Akin-Little, 2008). Despite overwhelming evidence that such strategies are ineffective, many teachers rely on reactive methods for classroom behavior management (Sprick, Knight, Reinke, & McKale, 2006).

Given the ineffectiveness of reactive methods, there is a need for teachers to invest in proactive classroom management (PCM) practices. Although effective reactive strategies are necessary to respond to problem behaviors, research indicates that using PCM strategies to promote desired behavior can prevent many of the externalizing behaviors (e.g., DB) that negatively affect the learning environment (e.g., Simonsen, Fairbanks, Briesch, Myers, & Sugai, 2008). Moreover, PCM strategies have been shown to enhance classroom climate, foster positive teacher–student relationships, and prevent classroom problem behavior (Kern & Clemens, 2007).

PCM

PCM is described as an approach to managing classroom behavior that emphasizes the strategic promotion of high levels of academic engagement as being incompatible with classroom problem behaviors (Rathvon, 2008). Three core features distinguish PCM from other classroom management frameworks. First, it is a preventive approach that seeks to boost academic engagement and thereby curtail inappropriate behaviors that inhibit learning (Gettinger,

1988). Second, it fuses instruction and management into a unified classroom system, rather than treating them separately (Rathvon, 2008). Stated differently, teachers utilizing a PCM approach integrate academic instruction with classroom management strategies. Third, PCM emphasizes the use and benefits of strategies targeting the classroom as a whole rather than focusing on individual students (Gettinger, 1988).

Several PCM practices have demonstrated effectiveness in reducing classroom problem behaviors (Simonsen et al., 2008), including precorrection (De Pry & Sugai, 2002), class-wide self-monitoring (Rock & Thead, 2007), teacher proximity (Kazdin, 1973), practicing transitions (Coddling & Smyth, 2008), and providing students multiple opportunities to respond (Sutherland & Wehby, 2001). Notwithstanding the importance of this work, additional research is needed to explore novel PCM strategies to address specific challenges teachers face when attempting to proactively manage student behavior.

Positive Greetings at the Door (PGD)

One common struggle for teachers is to promote a smooth and productive start to the day or class, which is critical to creating the initial momentum for academic engagement. Indeed, many students have difficulty transitioning into the classroom from less structured settings (e.g., hallway, recess, physical education), and as a result may misbehave or appear unprepared to learn (Emmer & Stough, 2001). However, when students exhibit these problematic behaviors at the beginning of class before instruction begins, these behaviors may exert momentum and set a negative tone for the remainder of the class period (Colvin, Sugai, Good, & Lee, 1997). Moreover, teachers may react to problem behaviors with public reprimands and other punitive measures, thereby negatively affecting the relationship with the student and unintentionally contributing to a negative classroom climate (Oliver & Reschly, 2007). Given the importance of successfully transitioning into a more structured learning environment, teachers could benefit from learning feasible and effective PCM strategies to briefly connect with and welcome students, remind students of expected behavior, and motivate them to be academically engaged in the learning activity that awaits them. Moreover, by intentionally promoting successful transition into the classroom learning environments, teachers can take an active role in helping students be better prepared and ready to learn.

As discussed above, antecedent strategies that attempt to prevent disruptive classroom behaviors (i.e., PCM) hold distinct advantages over reactive approaches (Bambara & Kern, 2005). With this and results from previous research in mind, the PGD was developed as a multipronged PCM strategy that attempts to prevent problem

behaviors from occurring during transitions into the classroom learning environment. Although largely unstudied, previous research has been conducted by Allday and Pakurar (2007) and Allday, Bush, Ticknor, and Walker (2011) to examine the impact of teacher greetings on student behavioral outcomes. The first study (Allday & Pakurar, 2007) involved a multiple baseline design across three middle school students, with results indicating students' on-task behavior increased from 45% to 72% after introduction of the greetings strategy. The second study (Allday et al., 2011) also employed a multiple baseline design across students and found that teacher greetings were effective at reducing latency to task engagement for all participants. Both of these studies, however, employed single case designs on a small subset of students with behavioral problems. There is a need to examine the use of teacher greetings as a universal strategy when applied at the classroom level.

The PGD approach developed and examined in this study utilized four teacher-initiated strategies to promote more orderly transitions: (a) positively connecting with each student via a verbal or nonverbal greeting, (b) delivering pre-corrective statements to remind the whole class of expected behaviors as they transition into the classroom, (c) privately pre-correcting and encouraging individual students who struggled with their behavior the previous day, and (d) delivering behavior-specific praise statements to certain students to reinforce desired behavior. The PGD strategy was developed based upon three lines of prior research: classroom climate, pre-correction, and positive reinforcement. PGD represents a straightforward method of teachers greeting students at the door in a positive, intentional, and strategic way. The PGD procedure has three core features. First, teachers greet students positively as they enter the classroom to connect relationally with each student and establish a positive classroom climate in which students feel a sense of connection and belonging. This is particularly important considering the research demonstrating that achievement motivation is often a by-product of social belonging (Walton, Cohen, Cwir, & Spencer, 2012) and that pre-session attention can establish momentum for desired behavior (McComas, Thompson, & Johnson, 2003). Second, teachers deliver preplanned, precorrective statements to increase the likelihood of students transitioning successfully into the classroom and engaging as quickly as possible in the planned learning activity. Last, teachers strategically provide behavior-specific praise statements to reinforce desired behavior and capitalize on social learning. Together, these core features of the PGD strategy help create behavioral momentum for behavioral engagement, maximize instructional time, and prevent the occurrence of problem behaviors that interfere with learning.

Purpose of This Study

The purpose of this study was to experimentally evaluate the impact of the PGD on middle school students' classroom behavior. A matched randomized controlled design was utilized, and data were collected on a pre-post basis using direct observations of student classroom behavior to enable low-inference interpretation of the efficacy of the PGD. Three main research questions guided this study:

Research Question 1: Do students exposed to PGD exhibit gains in academic engaged time (AET) when compared with students in attention control classrooms?

Research Question 2: Do students exposed to PGD exhibit reductions in DB when compared with students in attention control classrooms?

Research Question 3: Do teachers find the PGD strategy to be acceptable, appropriate, and feasible for use?

Based on these research questions, we hypothesized that the PGD strategy would result in significant improvements in academic engagement and reductions in disruptive classroom behavior. We also hypothesized that teachers would perceive the PGD strategy to be acceptable, appropriate, and feasible to implement.

Method

Setting and Participants

Participants were students in 10 classrooms from two middle schools in the Pacific Northwest of the United States. The middle schools were relatively large (enrollment: School One 968 students and School Two 1,068 students) and served a racially (percent non-White: School One 68% and School Two 73%) and economically (free and reduced lunch: School 1, 52% and School 2, 64%) diverse student population. Classes were recruited for participation using a multiple gating procedure. For the first gate, principals nominated language arts and math classrooms typified by a high rate of disruptive and off-task behaviors, indicating a need to improve PCM. This resulted in the identification of 12 classes across the two schools. The second gate consisted of conducting direct observations in the 12 classrooms to confirm lower than expected AET (observation procedures described below). Classrooms that displayed AET lower than 65% of the observed intervals were considered for participation in this study. Last, an even number of language arts and math classes was represented to include an equal number of classes across the two subject areas in the intervention and control conditions. In total, five classes from each school, totaling 10 (four sixth-, three seventh-, and three eighth-grade classes), passed through both gates. The 10 classes were broken down into six language arts and four math classes. Teachers and the parents of all students in

the 10 classes were asked to consent before beginning any research activities. All of the teachers consented to participate, and 94% of the students' parents provided passive consent for participation.

A total of 203 students and 10 teachers participated in the study. The majority of student participants were female ($n = 102$; 50%) and in sixth grade ($n = 81$; 40%). With respect to ethnicity, the sample was largely European American ($n = 136$; 67%), followed by African American ($n = 36$; 18%), Asian/Pacific Islander ($n = 18$; 9%), Latino ($n = 11$; 6%), and Other ($n = 2$; 2%). The ethnic breakdown for teachers was eight European American and two Asian American. As a group, teachers were predominantly female ($n = 8$; 80%) and reported an average of 8.7 ($SD = 7.9$) years of teaching experience. Only one teacher reported having received a full course in classroom management during preservice preparation.

Procedure

A randomized block design was used to evaluate the efficacy of the PGD strategy. Classes were matched (i.e., blocked) and placed into five pairs according to baseline estimates of AET and DB gathered via direct observation using time-based procedures (i.e., momentary time sampling, partial-interval recording) and class subject taught. Each class within the matched pair was then randomly assigned to either the intervention (i.e., PGD group) or attention control condition. Baseline estimates were comparable across groups for percent AET, $t(1) = 1.57$, $p = .12$, and DB, $t(1) = -1.11$, $p = .27$ as reported by the classroom teachers. Moreover, teachers did not differ with regard to their demographics: years of teaching experience, $t(1) = 2.25$, $p = .06$, and gender, $\chi^2(1) = .48$, $p = .49$.

Trained behavioral consultants collected pre- and post-observation data and were kept blind to the condition of the teachers. Prior to beginning data collection, observers had to reach at minimum 90% agreement with the lead observer (an advanced graduate student). For each of the data collection periods, observations were conducted over the course of two 1-hr time blocks during whole- or small-group instruction, and the average was taken to represent the individual student and class-wide scores (see below for details about the observation measure).

Teachers in the intervention group received training in how to deliver the PGD strategy during two 1-hr sessions. The training sessions used a *tell-show-do* approach. More specifically, teachers received instruction in the PGD strategy, watched the various components modeled, and finally had opportunities to role-play implementing the PGD. Finally, teachers received feedback based on their performance. Teachers in the intervention group also received protocol scripts to review prior to and during implementation of the PGD. To facilitate delivery of PGD with fidelity,

teachers were asked to complete a daily implementation log that involved indicating whether or not they had delivered each component of the PGD strategy. The school counselor also provided coaching on two separate occasions to those teachers whose fidelity data indicated low implementation (<50% fidelity). This involved delivering performance-based feedback via a graph indicating which components the teacher was implementing well and which could be improved upon. In addition, the counselor engaged teachers in a problem-solving process to address barriers to delivering PGD with fidelity.

Teachers in the attention control condition met with their school administrators for the same length of time as the training sessions for the teachers in the intervention condition. The school administrators were kept blind to the specifics of the PGD condition to minimize contamination (i.e., treatment diffusion) and were instructed to meet with particular teachers to engage them in discussions about their classroom management practices. Moreover, teachers in the attention control condition received the same amount of follow-up support (two sessions) as the teachers in the intervention condition. Follow-up support entailed a teacher on special assignment (TOSA) meeting with control teachers to discuss their culturally responsive instructional practices. TOSAs were naturally embedded within each of the participating schools as part of ongoing equity work within the school district to facilitate improved instruction and equitable outcomes for students. TOSAs used a cycle of inquiry approach to engage teachers in a process of prompting questions to reflect upon current practices and identify areas for enhancement.

Baseline data were collected in the fall of the academic year, whereas post-data were collected in the winter. There was a 2-month window between pre- and post-data collection. Given limited financial and human resources to support the continuation of the study, no follow-up data were collected to examine the maintenance of implementation and student outcomes.

Intervention

PGD strategy. As discussed, the PGD strategy integrates three lines of research (i.e., classroom climate, precorrection, and positive reinforcement) into a single strategy. These lines of research informed the three intervention components on which teachers received training and implementation support, with the end goal of creating behavioral momentum for academically engaged behavior. The first component, which sought to increase social belonging and promote a positive classroom climate, involved specific positive interactions (i.e., greeting using the student's name, handshake) with each student as they enter the classroom. Teachers stand at the door and engage in positive verbal (e.g., greeting using the student's name, statement

expressing interest in the student, etc.) or nonverbal (e.g., handshake, fist bump, pat on the shoulder, head nod indicating approval, etc.) positive interactions (i.e., greetings) with each student as they enter the room. The second component entailed providing both individual student and whole class precorrective statements to facilitate students' successful transition into the classroom setting. An effective precorrective statement reminds the student of the behaviors that will result in success, prior to the students beginning classroom activities (Colvin et al., 1997). As part of the precorrection, teachers prepared a structured learning activity that was ready for students as they transitioned into the classroom. Teachers also delivered precorrective, encouraging messages to specific students who had struggled with their behavior the previous day to increase the likelihood the student would comply with the instructional requests. Last, a positive reinforcement contingency is included so teachers contingently recognize students' behavior for being on time to class to decrease truancy and facilitate on-time behavior. Although it is incorporated to decrease truancy, data on this outcome were not gathered or reported as part of this study. All of these strategies were combined into the PGD, and teachers received implementation support in the form of training and coaching with performance feedback.

Measures

Class-wide and individual student behavioral observations. Class-wide and individual student behavior was coded and recorded using a behavioral observation system grounded in the Behavioral Observation of Students in Schools (BOSS; Shapiro, 2004). Behaviors were recorded under one of two categories: AET and DB. AET can be described as any instance where students attended to instruction, watched the teacher or speaker, or concentrated on their classwork. Examples of AET involved writing, reading aloud, waiting patiently for assistance, communicating about assignments, or researching details of an assignment. DB encompasses behaviors not pertinent to the assigned task that cause disruption to the learning environment. Examples of DB included speaking out of turn, leaving one's seat, distracting or disrupting peers, and using objects inappropriately.

Observations were divided into 10-s intervals, with AET measured on a momentary time-sampling basis at the beginning of each interval and DB measured using a partial-interval recording format. Observers observed all participating students on a rotating basis for 10 s at a time, recording AET at the beginning of the interval and recording DB, if it occurred, at any point during the 10-s interval. This was continued on the same student until six intervals of data were collected lasting a total of 1 min in duration. Once the six 10-s intervals of data were collected, observers moved on to the next student. Each pre- and post-data collection period

involved two separate 60-min observations with the average of the two used to represent the score for that data collection period. To obtain student estimates of AET and DB, observers were instructed to identify characteristics of the student (gender, clothing item, and hair color) on the roster of participants to link the student data within and across observation sessions. Once reaching the end of the class roster of enrolled student participants, observers were instructed to go to the student at the beginning of the list and repeat the same process until the observation time elapsed. By the end of each observation session, there were approximately 360 class-wide intervals recorded and 20 intervals per student recorded. Given the class-wide nature of this observational system, conducting two observations per data collection period was deemed appropriate and is consistent with published group-based intervention studies that employ observational methods (Conduct Problems Prevention Research Group, 1999; Low, Cook, Smolkowski, & Buntain-Ricklefs, 2015).

Prior to the observations, three graduate students underwent training on the class-wide and individual student behavioral coding system. Observers had to reach at least 90% agreement on a 30-min classroom observation, prior to initiating baseline data collection. Interobserver agreement (IOA) was obtained for 20% of the observation sessions and averaged 88% (minimum = 68% and maximum = 100%), which is considered acceptable (Bailey & Burch, 2002).

Social validity measure. The Intervention Rating Profile (IRP-15) was used to measure the PGD's social validity. The IRP-15 was selected because it is widely used to evaluate teachers' perceived acceptability of interventions (Martens, Witt, Elliott, & Darveaux, 1985). The items are rated on a 6-point Likert-type scale, ranging from *strongly disagree* to *strongly agree*. The IRP-15 has acceptable evidence supporting its reliability and validity (Lane et al., 2009).

Fidelity of implementation. Teachers completed daily implementation logs to track the extent to which they delivered PGD with fidelity. The log included a total of four items to which teachers responded yes or no: (a) Did you stand near the door as students entered the classroom from a nonclassroom setting? (b) Did you positively greet each student as they entered into the room? (c) Did you provide class-wide precorrective statements to remind students of expectations as they entered into the room? and (d) Did you privately engage in a precorrective, encouraging interaction with individual students who exhibited challenging behavior the previous period or day? A total fidelity rating was calculated by determining the percentage of "yes" responses for each day and averaging those percentages across all days of the study.

Data Analytic Approach

Descriptive and inferential statistics were calculated to provide insight regarding the PGD's impact. More precisely, measures of central tendency and variability (standard deviation, maximum, and minimum) were obtained and evaluated. In addition, analyses included inferential statistics (i.e., ANOVAs) to examine how the PGD strategy affected the main dependent variables—AET and DB—separately. Specifically, interaction effects between time (pre and post) and intervention condition (intervention vs. attention control) were interpreted as further evidence of the intervention's impact. Data were collected and analyzed at the individual student level—not the classroom level. Although students are nested within classrooms, the small number of classrooms limits the statistical power to detect a significant effect. Moreover, consistent with the preliminary nature of this study, more emphasis was placed on interpretation of effect sizes than p values. In fact, many have argued against using p values to gain permission to interpret effects (Nuzzo, 2014). Use of hierarchical linear modeling does not alter the magnitude of the obtained effect size but instead adjusts the standard error estimate, which in turn affects the obtained p value (Raudenbush & Bryk, 2002). Considering the low number of classrooms and the emphasis on interpreting effect sizes, conducting a mixed factorial ANOVA and examining effect sizes was determined to be the most appropriate analytic plan.

Standardized mean difference effect sizes (SMDESs) were calculated to provide estimates of the magnitude of the effect produced by PGD strategy. The chosen formula (see below) enables one to control for prior differences between treatment and control groups (Morris, 2008).

$$\text{SMDES} = \left[\frac{(M_{\text{post},T} - M_{\text{pre},T}) - (M_{\text{post},C} - M_{\text{pre},C})}{SD_{\text{pre}}} \right]$$

This formula subtracts the change in pre–post means scores from the control group from the change in the pre–post mean scores from the treatment group and divides this number by the standard deviation of pretest scores. This difference is interpreted in standard deviation units.

Results

Descriptive Statistics

Measures of central tendency demonstrated that students in the intervention and control classrooms were academically engaged on average for 58.75% ($SD = 16.67$; range = 21%–100%) and 54.75% ($SD = 19.55$; range = 6%–100%) of the time at pretest, respectively. Whereas the means for the intervention group increased across pre and post ($\Delta = 20\%$; Post $M = 79.70\%$; $SD = 10.93$; range = 45%–100%), the means stayed roughly the same for the attention control

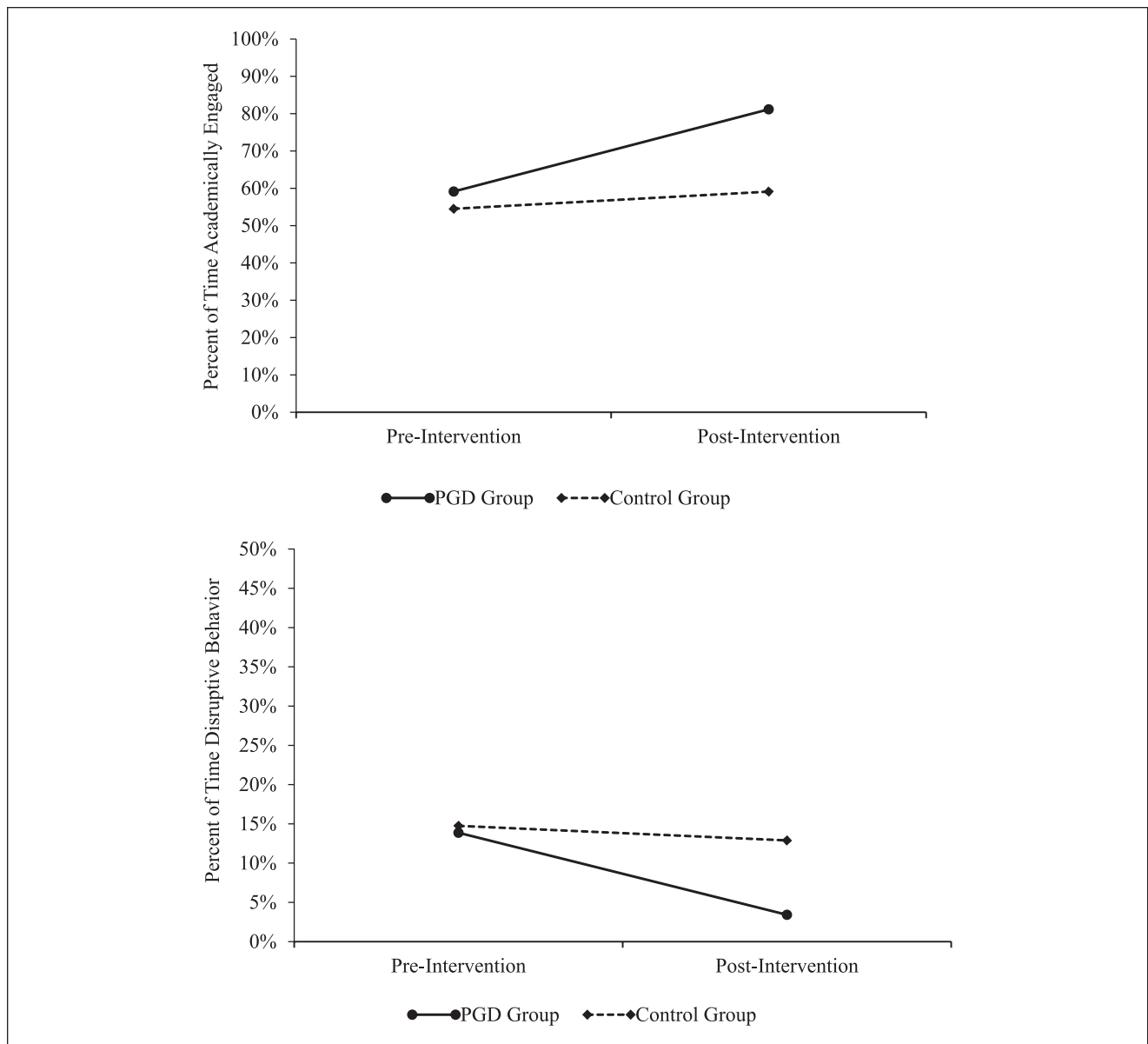
group ($\Delta = 4.80\%$; Post $M = 59.54\%$; $SD = 19.91$; range = 10%–100%). As for the DB data, descriptive statistics reflected a notable decrease in the means from pre ($M = 13.68\%$; $SD = 8.31$; range = 0%–39%) to post ($M = 4.13\%$; $SD = 2.97$; range = 0%–14%) for the intervention group ($\Delta = 9.55\%$) relative to the pre ($M = 15.13\%$; $SD = 10.17$; range = 0%–37%) and post ($M = 12.53\%$; $SD = 7.93$; range = 0%–28%) means for the attention control group ($\Delta = 2.60\%$). Moreover, correlational analyses revealed a moderate relationship between student AET and DB at pre ($r = .17$) and post ($r = .41$). Also, pre–post change in AET was significantly correlated with change in DB ($r = -.28$). Results from the treatment integrity data indicated that intervention teachers implemented the PGD strategy with high levels of adherence ($M = 96\%$; minimum = 88% and maximum = 100%). All teachers demonstrated the highest degree of integrity on two components—*standing near the door* and *positive greetings* ($M = 100\%$)—and demonstrated the lowest level of integrity on *precorrection* ($M = 84\%$; minimum = 76% and maximum = 100%). Two of the teachers were provided with follow-up consultative support due to initially low levels of implementation (<50%), but these teachers' integrity demonstrated observable improvements after the consultation sessions.

Inferential Statistics

AET. Prior to performing the mixed factorial ANOVA, assumptions of sphericity, multivariate normality, and homoscedasticity were assessed and met. The mixed factorial ANOVA utilized one within-subject factor (time: pre and post) and one between-subject factor (condition: intervention and control). Table 1 displays the results of the mixed factorial ANOVA. An important initial step in the analyses involves examining the significance of the interaction effect, given that a statistically significant interaction effect essentially invalidates the main effect (Tabachnick & Fidell, 2007). Results point to a significant interaction effect between time and condition, $F(1, 201) = 26.70, p < .001$. To aid with interpretation of the significant interaction, the pre- and post-means for the treatment and control groups were plotted in a graph (see Figure 1). Both groups displayed similar AET at baseline; however, upon introduction of the PGD strategy, AET increased for the intervention group and remained relatively constant for the control group. The SMDES associated with the AET analysis was Cohen's $d = .93$. This suggests that the change in AET for the intervention group was nearly one standard deviation larger than the AET change for the control group. According to Cohen's (1988) guidelines, this falls in the range of a large effect that represents a meaningful impact. Moreover, calculations indicated that students in the intervention classrooms demonstrated an average increase in AET of 20.95%.

Table 1. Results of the Mixed-Factorial ANOVAs for Academic Engaged Time and Disruptive Behavior.

Source	<i>df</i>	<i>F</i>	<i>p</i> value
Academic engaged time			
Within factor: Time	1, 201	67.85	<.001
Between factor: Condition group	1, 201	45.58	<.001
Interaction: Time × Intervention Group	1, 201	26.70	<.001
Disruptive behavior			
Within factor: Time	1, 201	88.74	<.001
Between factor: Condition group	1, 201	30.33	<.001
Interaction: Time × Intervention Group	1, 201	29.17	<.001

**Figure 1.** Academic engaged time and disruptive behavior time by condition plot.

Note. PGD = Positive Greetings at the Door.

DB. Again, all assumptions were assessed prior to performing and interpreting the mixed factorial ANOVA. The DB data had a slightly nonnormal distribution, but we proceeded with the analyses without transforming the data because ANOVA is relatively robust to deviations from normality (Harwell, Rubinstein, Hayes, & Olds, 1992). The results of this analysis are displayed in Table 1. Results revealed a significant interaction effect between time and intervention group, $F(1, 201) = 29.11, p < .001$. To interpret the significant interaction, the pre- and post-means for the treatment and control groups were examined (see Figure 1). Although both groups had comparable rates of DB at baseline, upon implementation of the PGD strategy, the intervention group displayed a greater decrease in DB compared with the control group. Similarly, this effect was associated with a SMDES of Cohen's $d = .87$, approaching a one standard deviation difference between the pre-post DB change for the intervention group relative to the change for the attention control group. According to Cohen (1988), this signifies a large effect that would likely be observable by a layperson.

Social Validity

Only the teachers in the intervention group were asked to complete the social validity questionnaire—IRP-15 (Martens et al., 1985). The results for the IRP-15 suggest that teachers found the PGD strategy to be reasonable, acceptable, and effective. The average rating across all 15 items for the five teachers was 5.5 on a scale from 1 to 6 (minimum = 5.1 and maximum = 6.0), indicating that teachers as a whole either agreed or strongly agreed with items assessing the reasonableness, acceptability, and likely effectiveness of the strategy.

Discussion

Beginning class on a positive note plays an important role in effective instruction, yet when students exhibit problem behaviors during their transition into the classroom, it can interfere with teachers' ability to ensure an orderly and productive start to class (Simonsen & Meyers, 2014). Moreover, in an effort to respond to problem behavior, some teachers may interact negatively with students; not only does such a reaction perpetuate undesirable student behavior but it can also feed into a negative classroom climate. Given the compelling research documenting the benefits of positive behavior support strategies (Simonsen et al., 2008), the present study sought to train teachers on a proactive and structured way of promoting academic engagement through a relatively feasible yet potentially high-yield strategy—PGD.

As hypothesized, this experimental study found that classrooms in which teachers received training and support

to use the PGD strategy were associated with diminished DB and greater AET than those in the attention control. In practical terms, students in the PGD classes evidenced a 20% gain in AET, which corresponds to an extra 12 min of on-task behavior per instructional hour or an additional hour of engagement over the course of a 5-hr instructional day. On a larger scale, use of the PGD strategy could potentially result in gains of several more hours of additional academic engagement over the course of the academic year, which could produce significant improvements in actual academic achievement. It is important to note that these findings were obtained from a sample of teachers who had low baseline levels of academic engagement and classroom management practices. It is unlikely that the effect size obtained here would apply to a randomly selected sample of teachers, as some teachers are likely to have high academic engagement and, therefore, less room to demonstrate change.

These findings may also have implications for improving teacher effectiveness and retention, given the link between student behavior problems and work-related stress and job dissatisfaction among teachers (Byrne, 1994; Marvel, Lyter, Peltola, Strizek, & Morton, 2006). In this study, teachers reported satisfaction with the intervention and its outcomes, suggesting that the PGD strategy may improve teachers' qualitative experiences by preventing problem behavior and improving student academic engagement. Moreover, PGD may serve to enhance teacher-student relationships, thereby creating a more positive classroom climate for all.

In addition, preservice preparation programs should consider providing training on evidence-based behavior management strategies, such as the PGD, that are relatively quick, easy to implement, and effective. As noted in the introduction, teachers express significant frustration and concern about DBs in the classroom, yet frequently report inadequate training in behavior management (Christofferson & Sullivan, 2015). Teachers incur no additional costs by increasing their proactive and positive interactions with students during transition periods, but there will likely be significant barriers (e.g., time, beliefs about student behavior) to the successful uptake and use of PGD and other evidence-based strategies (Forman et al., 2013). Researchers should continue to explore implementation supports that facilitate the adoption, use, and sustainment of evidence-based classroom practices.

Limitations

As with all studies, this study has several limitations that warrant acknowledgment. First, this study did not perform multilevel modeling to examine whether the effects of PGD on student behavior are nested within particular classrooms. Future studies should examine the PGD across

multiple classrooms and utilize multilevel modeling procedures to examine classroom-level moderators of student outcomes. Moreover, this study did not investigate the differential or additive effects of PGD to assess which components (or combination of components) drive the positive outcomes. In addition, no follow-up data were collected to indicate whether teachers continued to utilize the PGD strategy upon completion of the study. Future research should include follow-up measures to examine the maintenance of implementation and student outcomes associated with the PGD. Another limitation reflects the use of teacher self-reported fidelity of implementation. Although prior research has demonstrated the unreliability of self-report (Wickstrom, Jones, LaFleur, & Witt, 1998), more recent research has indicated that with well-operationalized intervention components, self-report can provide a feasible and accurate source of fidelity data (Sanetti & Kratochwill, 2011). Nonetheless, future studies should corroborate the findings from self-report with more objective methods, such as direct observation. Relatedly, no data were gathered by the implementation logs regarding teachers delivery of the positive reinforcement component of PGD. Thus, it is unclear whether this component of PGD was delivered as intended and how it affected overall integrity. The relatively small sample of teachers ($n = 10$) was another limitation that lessens the generalizability of the study findings. Future studies should include a larger sample of teachers from economically and geographically diverse schools. Finally, future research should replicate the present findings in different contexts and settings, with culturally diverse teachers and students.

Conclusion

Teachers can benefit from developing an understanding of proactive, relationship-oriented strategies that promote more orderly and productive behavior. The results from this study suggest that teachers who spend time on the front end to implement strategies such as the PGD will eventually save more time on the back end by spending less time reacting to problem behavior and more time on instruction. Future research should continue to explore feasible yet high-yield classroom strategies that enable teachers to promote better academic engagement and classroom behavior among students, while also potentially increasing students' sense of connection and belonging to the classroom.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

ORCID iD

Andrew J. Thayer  <https://orcid.org/0000-0002-4982-978X>

References

- Allday, R. A., Bush, M., Ticknor, N., & Walker, L. (2011). Using teacher greetings to increase speed to task engagement. *Journal of Applied Behavior Analysis, 44*, 393–396.
- Allday, R. A., & Pakurar, K. (2007). Effects of teacher greetings on student on-task behavior. *Journal of Applied Behavior Analysis, 40*, 317–320.
- American Psychological Association, Coalition for Psychology in Schools and Education. (2006). *Report on the teacher needs survey*. Washington, DC: Center for Psychology in Schools and Education, American Psychological Association.
- Bailey, J. S., & Burch, M. R. (2002). *Research methods in applied behavior analysis*. Thousand Oaks, CA: SAGE.
- Bambara, L. M., & Kern, L. (2005). *Individualized supports for students with problem behaviors: Designing positive behavior plans*. New York, NY: Guilford Press.
- Broidy, L. M., Nagin, D. S., Tremblay, R. E., Bates, J. E., Brame, B., Dodge, K. A., . . . Vitaro, F. (2003). Developmental trajectories of childhood disruptive behaviors and adolescent delinquency: A six-site, cross-national study. *Developmental Psychology, 39*, 222–245.
- Bromfield, C. (2006). PGCE secondary trainee teachers and effective behaviour management: An evaluation and commentary. *Support for Learning, 21*, 188–193.
- Brophy, J., & McCaslin, M. (1992). Teachers' reports of how they perceive and cope with problem students. *The Elementary School Journal, 93*, 3–68.
- Byrne, B. M. (1994). Burnout: Testing for the validity, replication, and invariance of causal structure across elementary, intermediate, and secondary teachers. *American Educational Research Journal, 31*, 645–673.
- Christofferson, M., & Sullivan, A. L. (2015). Preservice teachers' classroom management training: A survey of self-reported training experiences, content coverage, and preparedness. *Psychology in the Schools, 52*, 248–264. doi:10.1002/pits.21819
- Codding, R. S., & Smyth, C. A. (2008). Using performance feedback to decrease classroom transition time and examine collateral effects on academic engagement. *Journal of Educational and Psychological Consultation, 18*, 325–345.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.
- Colvin, G., Sugai, G., Good, R. H., & Lee, Y. Y. (1997). Using active supervision and pre-correction to improve transition behaviors in an elementary school. *School Psychology Quarterly, 12*, 344–363.
- Conduct Problems Prevention Research Group. (1999). Initial impact of the Fast Track prevention trial for conduct problems: II. Classroom effects. *Journal of Consulting and Clinical Psychology, 67*, 648–657.
- De Pry, R. L., & Sugai, G. (2002). The effect of active supervision and pre-correction on minor behavioral incidents in a sixth grade general education classroom. *Journal of Behavioral Education, 11*, 255–267.

- Doll, B., & Cummings, J. A. (2008). *Transforming school mental health services: Population-based approaches to promoting the competency and wellness of children*. Thousand Oaks, CA: Corwin Press.
- Emmer, E. T., & Stough, L. M. (2001). Classroom management: A critical part of educational psychology, with implications for teacher education. *Educational Psychologist, 36*, 103–112.
- Forman, S. G., Shapiro, E. S., Coddling, R. S., Gonzales, J. E., Reddy, L. A., Rosenfield, S. A., . . . Stoiber, K. C. (2013). Implementation science and school psychology. *School Psychology Quarterly, 28*, 77–100.
- Gettinger, M. (1988). Methods of proactive classroom management. *School Psychology Review, 17*, 227–242.
- Gilliam, W. S. (2005). *Prekindergarteners left behind: Expulsion rates in state prekindergarten systems*. New Haven, CT: Yale University Child Study Center.
- Harwell, M. R., Rubinstein, E. N., Hayes, W. S., & Olds, C. C. (1992). Summarizing Monte Carlo results in methodological research: The one- and two-factor fixed effects ANOVA cases. *Journal of Educational and Behavioral Statistics, 17*, 315–339.
- Kazdin, A. E. (1973). The effect of vicarious reinforcement on attentive behavior in the classroom. *Journal of Applied Behavior Analysis, 6*, 71–78.
- Kern, L., & Clemens, N. H. (2007). Antecedent strategies to promote appropriate classroom behavior. *Psychology in the Schools, 44*, 65–75.
- Lane, K. L., Kalberg, J. R., Bruhn, A. L., Driscoll, S. A., Wehby, J. H., & Elliott, S. N. (2009). Assessing social validity of school-wide positive behavior support plans: Evidence for the reliability and structure of the Primary Intervention Rating Scale. *School Psychology Review, 38*, 135–144.
- Little, E. (2003). *Kids behaving badly: Teacher strategies for classroom behaviour*. Frenchs Forest, Australia: Pearson Education.
- Little, E., & Hudson, A. (1998). Conduct problems and treatment across home and school: A review of the literature. *Behaviour Change, 15*, 213–227.
- Little, S. G., & Akin-Little, A. (2008). Psychology contributions to classroom management. *Psychology in the Schools, 45*, 227–234.
- Low, S., Cook, C. R., Smolkowski, K., & Buntain-Ricklefs, J. (2015). Promoting social-emotional competence: An evaluation of the elementary version of Second Step®. *Journal of School Psychology, 53*, 463–477.
- Martens, B. K., Witt, J. C., Elliott, S. N., & Darveaux, D. X. (1985). Teacher judgments concerning the acceptability of school-based interventions. *Professional Psychology: Research and Practice, 16*, 191–198.
- Marvel, J., Lyter, D. M., Peltola, P., Strizek, G. A., & Morton, B. A. (2006). *Teacher attrition and mobility: Results from the 2004–05 teacher follow-up survey* (NCES No. 2007-307). Washington, DC: National Center for Education Statistics, U.S. Department of Education.
- Mayer, G. R. (1995). Preventing antisocial behavior in the schools. *Journal of Applied Behavior Analysis, 28*, 467–478.
- McComas, J. J., Thompson, A., & Johnson, L. (2003). The effects of pre-session attention on problem behavior maintained by different reinforcers. *Journal of Applied Behavior Analysis, 36*, 297–307.
- McIntosh, K., Filter, K. J., Bennett, J. L., Ryan, C., & Sugai, G. (2010). Principles of sustainable prevention: Designing scale-up of school-wide positive behavior support to promote durable systems. *Psychology in the Schools, 47*, 5–21.
- Melnick, S. A., & Meister, D. G. (2008). A comparison of beginning and experienced teachers' concerns. *Educational Research Quarterly, 31*(3), 39–56.
- Morris, S. B. (2008). Estimating effect sizes from pretest-posttest-control group designs. *Organizational Research Methods, 11*, 364–386.
- Morrissey, K. L., Bohanon, H., & Fenning, P. (2010). Positive behavior support: Teaching and acknowledging expected behaviors in an urban high school. *Teaching Exceptional Children, 42*(5), 26–35.
- Nuzzo, R. (2014). Scientific method: Statistical errors—P values, the “gold standard” of statistical validity, are not as reliable as many scientists assume. *Nature, 506*, 150–152.
- Oliver, R. M., & Reschly, D. J. (2007). *Effective classroom management: Teacher preparation and professional development*. Washington, DC: National Comprehensive Center for Teacher Quality.
- Rathvon, N. (2008). *Effective school interventions: Evidence-based strategies for improving student outcomes*. New York, NY: Guilford Press.
- Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods* (2nd ed.). Thousand Oaks, CA: SAGE.
- Rock, M. L., & Thead, B. K. (2007). The effects of fading a strategic self-monitoring intervention on students' academic engagement, accuracy, and productivity. *Journal of Behavioral Education, 16*, 389–412.
- Sanetti, L. M. H., & Kratochwill, T. R. (2011). An evaluation of the treatment integrity planning and two schedules of treatment integrity self-report: Impact on implementation and report accuracy. *Journal of Educational and Psychological Consultation, 21*, 284–308.
- Shapiro, E. S. (2004). *Academic skills problems workbook* (Rev. ed.). New York, NY: The Guilford Press.
- Simonsen, B., Fairbanks, S., Briesch, A., Myers, D., & Sugai, G. (2008). Evidence-based practices in classroom management: Considerations for research to practice. *Education and Treatment of Children, 31*, 351–380.
- Simonsen, B., & Meyers, B. (2014). *Classwide positive behavior interventions and supports: A guide to proactive classroom management*. New York, NY: Guilford Press.
- Sprick, R., & Borgmeier, C. (2010). Behavior prevention and management in three tiers in secondary schools. In H. Walker & M. Shinn (Eds.), *Interventions for achievement and behavior problems in a three-tier model including RTI* (pp. 435–468). Bethesda, MD: NASP Publications.
- Sprick, R., Knight, J., Reinke, W., & McKale, T. (2006). *Coaching classroom management: Strategies and tools for administrators and coaches*. Eugene, OR: Pacific Northwest Publishing.
- Stormont, M., Reinke, W., & Herman, K. (2011). Teachers' knowledge of evidence-based interventions and available school resources for children with emotional and behavioral problems. *Journal of Behavioral Education, 20*, 138–147.
- Sutherland, K. S., & Wehby, J. H. (2001). Exploring the relationship between increased opportunities to respond to

- academic requests and the academic and behavioral outcomes of students with EBD. *Remedial and Special Education, 22*, 113–121.
- Tabachnick, B., & Fidell, L. (2007). *Using multivariate statistics* (5th ed.). Boston, MA: Allyn & Bacon.
- Walker, H. M., Ramsey, E., & Gresham, E. M. (2004). *Antisocial behavior in schools: Evidence-based practices* (2nd ed.). Belmont, CA: Wadsworth.
- Walton, G. M., Cohen, G. L., Cwir, D., & Spencer, S. J. (2012). Mere belonging: The power of social connections. *Journal of Personality and Social Psychology, 102*, 513–532.
- Webster-Stratton, C., Reid, M. J., & Hammond, M. (2001). Preventing conduct problems, promoting social competence: A parent and teacher training partnership in head start. *Journal of Clinical Child Psychology, 30*, 283–302.
- Wickstrom, K. F., Jones, K. M., LaFleur, L. H., & Witt, J. C. (1998). An analysis of treatment integrity in school-based behavioral consultation. *School Psychology Quarterly, 13*, 141–154.
- Wolery, M., Werts, M. G., Lisowski, L., Caldwell, N. K., & Snyder, E. D. (1995). Experienced teachers' perceptions of resources and supports for inclusion. *Education and Training in Mental Retardation and Developmental Disabilities, 30*, 15–26.