Implementation Planning Adapted for Group-Based Training of Proactive Classroom Management Strategies

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IMPLEMENTATION PLANNING ADAPTED FOR GROUP-BASED TRAINING OF PROACTIVE CLASSROOM MANAGEMENT STRATEGIES

A Thesis
Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of Masters of Arts
in
The Department of Psychology

by
James Jaran Upright
B.A., North Carolina State University, 2012
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ABSTRACT

Proactive classroom management (PCM) strategies are preventative teacher practices implemented prior to the onset of problem behavior. PCM strategies have been widely demonstrated to be effective in preventing and reducing disruptive behavior while promoting academic engagement in the classroom. In practice, however, the use of proactive strategies is far less common than reactive strategies for managing student behavior. Although teachers are concerned about classroom management, many report a lack of training or support needed to successfully implement behavior management strategies. One promising approach for supporting teachers’ use of behavior management strategies is implementation planning. Implementation planning is an implementation support strategy used to assist teachers in working through the specific logistics for delivering an intervention in the target context and to identify and address possible implementation barriers. This study employed a between-group design with elementary and middle school teachers to examine the effects of group implementation planning for PCM strategies. All teachers received training on two PCM strategies (specific praise and precorrection) followed by either implementation planning (i.e., treatment condition) or a nondirected discussion group (i.e., control condition). Results of the mixed ANOVA indicated an interaction effect between conditions and specific praise. Participants in the training as usual condition had a significant increase in specific praise compared to the implementation planning condition. Additionally, a main effect of time was found for academic engagement, demonstrating that student academic engagement increased in all conditions following training. Results of an exploratory analysis of teachers’ perceived implementation barriers are also presented.
INTRODUCTION

The majority of teachers report being concerned about disruptive behavior in the classroom, and it is regularly listed as a desired area of support (Freeman, Simonsen, Briere, & MacSuga-Gage, 2014; Reinke, Stormont, Herman, Puri, & Goel, 2011). In order to facilitate an effective learning environment, teachers can implement proactive classroom management (PCM) strategies to reduce disruptive behavior and increase academic engagement (Rathvon, 2008, p. 73). An effective classroom management approach should rely on proactive, preventative strategies rather than reactive, punitive ones (Lewis & Sugai, 1999). However, the opposite is generally found to be the case (Reinke, Herman, & Stormont, 2013). To improve their use of educational strategies, many teachers attend professional development workshops (Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009). However, participating in these workshops does not generally result in changes to teachers’ classroom strategies (Yoon, Duncan, Lee, Scarloss, & Shapley, 2007), and most teachers do not receive training for behavior management (Darling-Hammond et al., 2009). One strategy that may help teachers improve their initial implementation of PCM is implementation planning (Sanetti, Collier-Meek, Long, Byron, & Kratochwill, 2015; Sanetti, Collier-Meek, Long, Kim, & Kratochwill, 2014). Implementation planning is a proactive implementation support strategy developed to assist teachers in preparing to use classroom-based interventions and to identify and address potential implementation barriers. The goal of this study was to examine the effectiveness of group implementation planning for PCM strategies, specifically precorrection and specific praise. The primary outcomes that were measured are teachers’ use of these PCM strategies and student academic engagement.
Classroom Management

In order to be an effective educator, a teacher must not only provide enriching academic instruction but also attend to the environment and behaviors of the students. A consistent relationship has been found between behavioral performance and academic performance such that disruptive behavior in the classroom negatively impacts students’ learning (Dunlap, Iovannone, Wilson, Kincaid, & Strain, 2010). When teachers spend time addressing disruptive behavior, they subsequently lose time for academic instruction. However, the use of empirically-supported classroom management strategies can create a more structured learning environment where problem behaviors are less likely to occur (Simonsen, Fairbanks, Briesch, Myers, & Sugai, 2008). A systematic review of the classroom management literature identified five empirically-supported, essential features for effective classroom management: (a) maximizing the structure (or physical arrangement) and predictability of the classroom; (b) posting, teaching, reviewing, monitoring, and reinforcing classroom expectations and routines; (c) actively engaging students in observable ways; and (d) using a range of effective strategies for responding to appropriate and inappropriate behaviors (Simonsen et al., 2008). These essential features have been updated and are organized into three broad domains of classroom management practice: foundations (i.e., provide structure, predictability and clarity of expectations), prevention (i.e., attempt to reduce the likelihood of problem behavior), and responses (i.e., provide consistent, timely ways of responding to behavior; Simonsen et al., 2014). Effective use of these practices promotes student engagement and academic outcomes and decreases disruptive behavior (Epstein, Atkins, Cullinan, Kutash, & Weaver, 2008).

Evaluations of teachers’ classroom management competency have found that this is an area where teachers often desire additional support (Begeny & Martens, 2006; Freeman et al.,
2014; Wei, Darling-Hammond, & Adamson, 2010). A 2011 survey of teachers found that 97% reported concerns with disruptive or acting out behaviors in their classrooms (Reinke et al., 2011). This information is in accord with findings that demonstrate that many professional teacher preparation programs do not emphasize classroom management and many teachers report that their training in classroom management was insufficient (Begeny & Martens, 2006; Freeman et al., 2014; Wei et al., 2010)

**Proactive Classroom Management.** Classroom management strategies can be proactive or reactive. Proactive strategies fall under the prevention domain of effective classroom management and, in contrast to reactive strategies, are implemented prior to the occurrence of problem behaviors. Previous research has found that classroom management should emphasize proactive, preventive strategies rather than reactive management procedures (Lewis & Sugai, 1999). PCM can be described as the use of strategies for whole classroom management to prevent off-task and disruptive behaviors and promote academic engagement (Rathvon, 2008, p. 73). PCM should integrate instruction and management into a comprehensive classroom strategy rather than treating instruction and classroom management as separate components to creating a productive classroom environment (Rathvon, 2008, p. 73). Common examples of PCM strategies include precorrection, high and varied rates of opportunities to respond, proximity or active supervision, choice making, and frequent specific praise (Simonsen et al., 2014).

In practice, PCM strategies are underutilized. When examining strategies that teachers are using within the classroom, it has been found that reactive strategies (e.g., reprimand, detention, office referral) are more commonly employed than proactive ones (Reinke et al., 2013). This is problematic because the primary use of punitive and exclusionary strategies focuses on the temporary reduction of undesirable behaviors without attending to promoting
appropriate, alternative ones (Mayer, 1995; Skiba, Peterson, & Williams, 1997). Additionally, when disruptions result in a student’s removal from the classroom, these exclusions can lead to adverse outcomes, including diminished quality of the student-teacher relationship and increases in future problem behavior (Gresham, 1991; Sugai, Sprague, Horner, & Walker, 2000). Mitchel & Bradshaw (2013) found that exclusionary discipline strategies were associated with less favorable ratings of school climate by students and that proactive and positive strategies fostered a more constructive and supportive learning environment. Thus, the consistent use of PCM strategies is a central part of effective classroom management.

**Evidence-based Proactive Strategies.** One PCM strategy that has consistently resulted in increases in the academic and prosocial outcomes of students is specific praise (e.g., Chalk & Bizo, 2004; Sanetti et al., 2015; Sutherland, Wehby, & Copeland, 2000). In a review of evidence-based classroom strategies, Simonsen and colleagues (2008) found various studies demonstrating that behavior contingent specific praise increased correct responses, work productivity and accuracy, on-task behavior, student attention, and student compliance. Praise can be defined as a verbal acknowledgment of desired appropriate social or academic behavior from the student (Cavanaugh, 2013). Specific praise requires not only an expression of approval but also the explicit acknowledgment of the appropriate behavior (e.g., “Good job standing in line silently”). However, research has found that teachers often use specific praise at low rates (Hawkins & Heflin, 2010) and more often rely on reprimands to modify student behaviors (Gable, Hester, Rock, & Hughes, 2009). This reliance can be problematic because it heavily focuses on redirecting or addressing behavior only after a student has displayed a problem. In contrast, specific praise focuses on preventing the appearance of problem behaviors by
acknowledging appropriate behaviors and reinforcing them to increase their likelihood in the future.

Another evidence-based PCM strategy is precorrection. When using precorrection, the educator provides specific behavioral prompts that describe what students should do when preparing for a task or transitioning between activities or settings (Lampi, Fenty, & Beaunae, 2005; Walker, Ramsey, & Gresham, 2004). Researchers have found that precorrection effectively increases desired behaviors in the classroom (De Pry & Sugai, 2002) and during transitions (Colvin, Sugai, Good, & Lee, 1997). Using systematic teacher feedback, Stormont, Smith, & Lewis (2007) supported teachers use of specific praise and precorrection with preschool students (aged 3 to 5) working in small groups. The results of their study showed that the intervention decreased teacher’s use of reprimands, decreased the rate of student problem behavior, and increased teacher’s specific praise. The use of precorrection provides a reminder to students about appropriate behaviors before they have the opportunity to engage in inappropriate behaviors. Using precorrection during transitions can be especially important because students who engage in problematic behaviors prior to the start of instruction may set a negative precedent for the rest of the class duration (Colvin et al., 1997). Furthermore, many students experience difficulty transitioning into the classroom from less structured settings (e.g., the hallway; Emmer & Stough, 2001). By using proactive strategies such as precorrection and specific praise, teachers can avoid the overuse of public reprimands, office discipline referrals, and exclusionary discipline, which can negatively impact the student-teacher relationship, contribute to lost instructional time, and produce limited changes in problem behaviors (Little & Akin-Little, 2008; Oliver & Reschly, 2007).
Supporting Teacher Implementation

More and more schools are acknowledging the importance of effectively attending to student behavior in the classroom, in large part due to its strong relation to academic achievement. However, school efforts for prosocial behaviors may fall short if teachers do not have the skillset to effectively implement behavioral supports in the classroom. When 292 teachers from urban, suburban, and rural school districts were surveyed, 20% of them rated their experience using behavioral intervention strategies as “none or minimal” and 48% reported “moderate” experience (Reinke et al., 2011). A different survey by Stormont, Reinke, & Herman (2011) found that many teachers lack confidence in selecting evidence-based practices. In this survey, only 44% of the educators were confident that the behavioral interventions they used have the desired impact on their students. These data highlight the need for effective professional development for teachers in the domain of classroom management.

In an attempt to enhance teachers’ knowledge and skills, teachers often receive continuing education in the form of professional development workshops, conferences, and training sessions during the school year. A survey of teachers during the 2003-04 school year found that 78% of teachers had professional development time scheduled into their contract year and nearly all teachers (92%) had participated in professional development over the past 12 months (Darling-Hammond et al., 2009). However, this same survey also revealed that nearly double the percentage of teachers reported receiving professional development on academic content (83% of teachers) in comparison to classroom behavior management (44% of teachers). Additionally concerning are findings that suggest that these short workshops often do not effectively change teacher practice nor improve student outcomes (Joyce & Showers, 2002; National Joint Committee on Learning Disabilities, 2000; Yoon et al., 2007). Although these
workshops allow for dissemination of information and techniques to large groups of teachers, it appears that many of them are not being structured or delivered in a way that is likely to produce the desired results.

Even in situations where teachers have received appropriate training and begun implementing new practices, these strategies may not be implemented effectively over time. Treatment integrity is the extent to which an intervention or practice is implemented as planned (Gresham, 1989), and prior research has found that educators often do not implement classroom-based interventions with acceptable treatment integrity for more than 10 days in the absence of systematic consultative support (Noell, Witt, Slider, & Connell, 2005). This is concerning because low levels of treatment integrity have been consistently found to be associated with diminished intervention outcomes (Wilder, Atwell, & Wine, 2006). One common strategy to improve treatment integrity is to provide systematic consultative support via performance feedback. To date, performance feedback is the only school-based implementation support strategy that has a systematic line of research demonstrating its efficacy and core components (Fallon, Collier-Meek, Sanetti, Feinberg, & Kratochwill, 2016; Noell & Gansle, 2014). Performance feedback customarily involves one-on-one support within a consultative relationship in which the consultant monitors the consultee’s intervention-related behavior and provides specific feedback regarding the accuracy and quality of behavioral performance (Noell et al., 2005). Although performance feedback has strong research support, the process may be too time and resource intensive for promoting a large number of teachers’ implementation simultaneously. Therefore time-limited support strategies that can proactively promote high levels of implementation via a group format may be of great benefit for schools.
Implementation Planning

One such implementation support strategy with emerging evidence is implementation planning, a component of the Planning Realistic Implementation and Maintenance by Educators (PRIME) model (http://implementationscience.uconn.edu/prime; Sanetti et al., 2015; Sanetti et al., 2014). Teacher implementation of PCM strategies, or school-based interventions in general, can be viewed as a form of adult behavior change. That is, educators are committing to enact new behaviors in the classroom and school to promote a more effective learning environment for students. Given this perspective, Sanetti et al. (2014) developed the PRIME model based on the Health Action Process Approach (HAPA), a theoretical model of adult health behavior change from health psychology (Schwarzer, 2008).

According to the HAPA model, the process of behavior adoption and maintenance occurs through, first, a motivation phase and then a volition phase. During the motivation phase, an individual develops an intention to adopt a new behavior or modify a pre-existing one. To develop an intention to act, the model proposes that an individual must believe (a) there is a need for behavior change, (b) that the outcomes of the behavior change will be beneficial, and (c) that the behavior change is attainable (i.e., self-efficacy). After the development of an intention, the behavior change is initiated and sustained in the volition phase. The volition phase begins with action and coping planning, which the HAPA model proposes to be the fundamental process that translates intention to successful behavior change. Action planning focuses on identifying and planning the logistics (e.g., when, where, duration, materials) of how the behavior change will be implemented within the target context. This is then followed by coping planning, which consists of identifying potential barriers to behavior change and the corresponding strategies to resolve those barriers. The use of action and coping planning has been shown to result in durable
behavior change for various health behaviors (Schwarzer, 2008) and findings suggest that the use of these activities together is more effective than the application of either one in isolation (Lippke, Wiedemann, Ziegelmann, Reuter, & Schwarzer, 2009).

The PRIME model adapts these HAPA processes for use in education. Unlike health behavior change, where the beneficiary is the person making the change, behavior change by educators is primarily beneficial to the student (e.g., increased instructional time) and secondarily beneficial to educators (e.g., reduced time addressing disruptive behavior). Under the PRIME model, action and coping planning are combined into one component, called implementation planning, and the implementation support process occurs over a single session between a consultant and an educator. The goal of implementation planning is to proactively promote the treatment integrity of newly required or recommended education strategies. During the action planning portion of implementation planning, the consultant reviews, revises, and records the intervention strategy with the educator. This process starts by first reviewing the standard intervention procedures with the educator, then the consultant and educator collaborate to identify any adaptations that need to be made to create a better “fit” for the educator’s intervention context. Lastly, the logistical steps of the intervention are planned and recorded (e.g., when, where, duration, materials needed). After establishing the intervention procedure, the educator then considers potential impediments during intervention implementation and plans procedures to resolve or circumvent these impediments. At the end of implementation planning, the consultant provides the educator with a summary of the session.

Using implementation planning as an implementation support following behavioral consultation, Sanetti, Williamson, Long, and Kratochwill (2017) demonstrated that implementation planning resulted in fairly immediate increases in treatment adherence and
quality of individual and classwide behavior management plans. Additionally, teachers who received implementation planning rated their consultants as effective, rated the implemented behavior support plan as acceptable, and rated implementation planning as understandable and compatible with their system climate (Sanetti et al., 2015). In comparison to performance feedback, which is usually delivered on an on-going basis, implementation planning requires only one meeting that averages 18-22 minutes in duration (Sanetti et al., 2015). Based on this demonstrated effectiveness and efficiency in increasing treatment adherence, implementation planning may be a more feasible option than multiple performance feedback sessions for many school psychologists.

Goal Setting

Another implementation support strategy is goal setting. Previous research on goal setting has shown it to be effective for increasing treatment integrity when paired with performance feedback (Duncan, Dufrene, Sterling, & Tingstrom, 2013; Martens, Hiralall, & Bradley, 1997). Additionally, the act of setting challenging personal goals has been consistently shown to lead to higher levels of task performance when applied as a strategy on its own (Locke & Latham, 2006). The addition of goal setting to implementation planning may further enhance the effectiveness of the procedure as a proactive implementation support strategy.

Purpose of Current Research

Although group training can efficiently disseminate information to a large number of teachers simultaneously, it often does not result in behavior change (Joyce & Showers, 2002; National Joint Committee on Learning Disabilities, 2000; Yoon et al., 2007). Furthermore, when teachers do implement learned classroom strategies, they typically do not maintain intervention integrity for more than 10 days in the absence of systematic feedback (Noell et al., 2005).
Although systematic consultative feedback, such as performance feedback, can improve teachers’ intervention implementation, the time and logistical demands required may make it unfeasible for targeting multiple teachers’ implementation needs at the tier one level. Thus, exploration of effective and efficient training procedures to proactively support high levels of integrity to classwide PCM strategies is needed. This project extends the research on implementation planning in two ways. First, although implementation planning is conceived as a proactive treatment integrity promotion strategy in the PRIME model, previous research has only evaluated its effectiveness following teachers intervention initiation and failure (Sanetti et al., 2015; Sanetti et al., 2014). This study examines its effectiveness by having teachers complete the process prior to intervention initiation (or immediately following a professional development training), which is consistent with the theoretical model upon which it is based (i.e., HAPA; Schwarzer, 2008). Second, this research applied implementation planning in a group format. To this date, previous research has only evaluated implementation planning in a one-on-one format between a consultant and consultee.

The primary purpose of this current study was to examine implementation planning as a group proactive implementation support strategy. Specifically, an investigation of whether group implementation support would increase teachers’ usage of two PCM strategies: specific praise statements and precorrections. The following research questions were addressed in this study: (a) Do teachers who receive implementation planning exhibit higher rates of specific praise statements and precorrections following training compared to teachers who do not? (b) If so, do the classrooms of teachers’ who receive implementation planning exhibit higher rates of student academic engagement compared to teachers who do not?
METHOD

Participants and Settings

Participants in this study were elementary school teachers recruited from three public charter schools within an urban area in the Southern United States. To determine the required sample size, two conservative power analyses were conducted based on results of a study of teacher self-monitoring on rates of specific praise use (Simonsen, MacSuga, Fallon, & Sugai, 2012) and specific praise training for teachers (Long, Renshaw, Hamilton, & Bolognino, February, 2015). Power analyses were then conducted using the G*Power 3.1 software (http://www.gpower.hhu.de/en.html) at the recommended power of .8 (Cohen, 1988). Based on these analyses, it was determined that a sample size between 20 and 40 participants would be sufficient to detect a significant difference between the control and treatment groups (effect size input = 1 and 1.2). Researchers recruited 31 teachers for this study, however, 6 teachers left prior to the completion of the study and 4 cases were removed due to missing data. A total of 21 teachers were included in the final analyses. All three schools from which teachers were selected provided instruction to grades kindergarten through 8th and operated under the same charter organization. Descriptive statistics regarding participants is provided in Table 1. Only teachers who instructed regular education classrooms were eligible to participate in this study. No other eligibility restrictions were used, however, all observations took place during direct instruction lessons. Prior to any data collection, teachers met with a researcher to discuss the study and provide informed consent.
### Table 1. Participant Demographics

<table>
<thead>
<tr>
<th></th>
<th>Training as Usual</th>
<th>Implementation Planning</th>
<th>Total</th>
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<tr>
<td></td>
<td>Freq.</td>
<td>%</td>
<td>Freq.</td>
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<tr>
<td>Participants</td>
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<tr>
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<td>48%</td>
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<tr>
<td>Black/African-American</td>
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<td>80%</td>
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<td>Latino/Hispanic</td>
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<td>10%</td>
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</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
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<tr>
<td>20-34</td>
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<td>50%</td>
<td>9</td>
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<tr>
<td>35-49</td>
<td>4</td>
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<td>50-64</td>
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<td>10%</td>
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<td>65+</td>
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<td>0</td>
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<tr>
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<td>Masters</td>
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<tr>
<td>K-2</td>
<td>5</td>
<td>50%</td>
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<td>3-5</td>
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<td>50%</td>
<td>4</td>
</tr>
<tr>
<td>6-8</td>
<td>0</td>
<td>0%</td>
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<tr>
<td>Average Experience</td>
<td>5.7 years</td>
<td>1.9 years</td>
<td>3.7 years</td>
</tr>
</tbody>
</table>

**Teacher Training**

A 45-minute training was provided to teachers in both the control (i.e., training as usual) and treatment (i.e., implementation planning) groups during a professional development seminar. The training was conducted at the end of the fall semester, prior to the two-week winter break. This presentation was one of several workshops that the teachers received throughout the day from multiple presenters. A direct training format was used following a tell-show-do structure. Training began with a description of the PCM target strategies (specific praise and precorrection)
including a summary of the research and data on the often low use of praise (i.e., tell). Next teachers were provided with exemplars of specific praise and precorrection statements (i.e., show). Finally, teachers actively participated by identifying the behaviors that they wish to see increase in their classrooms and generating examples on how specific praise or precorrection could be used to support the identified behaviors (i.e., do). After describing and practicing what constitutes specific praise and precorrection, the presenter reviewed the importance of taking active steps to plan for and promote one’s implementation of new practices. The presenter recommended that teachers consider applying a self-monitoring strategy during their first lesson of the day to help prompt their use of specific praise and precorrections throughout the school day. A brief description of possible self-monitoring tools was provided. Following this presentation, teachers attended either group implementation planning or a nondirected, researcher facilitated discussion group for 45 minutes. During the discussion group, a researcher asked teachers to share stressors they had experienced and to share how they addressed them. The inclusion of the discussion group operated as an active control and was done to balance the time participants spent interacting with researchers across the study conditions.

**Independent Variable: Implementation Planning**

Teachers in the implementation planning condition met in a separate room following the professional development seminar on PCM. As described earlier, implementation planning consists of two components: action planning and coping planning. During the action planning process, teachers established personal goals for strategy performance, selected the specific self-monitoring strategy that they would implement, and planned how and when they would utilize the selected self-monitoring strategy to promote their use of specific praise and precorrections. Two possible research-based self-monitoring options were provided for teachers’ consideration.
The first strategy recommended that the teacher count each instance of specific praise across a designated period of time (see Simonsen et al., 2012). The second strategy applied a smartphone app that prompted teachers’ use of specific praise with scheduled vibrations during a designated period of time. The use of the smartphone app served the same function as a MotivAider®, which has been found to be effective for prompting praise use in previous research (Cook et al., under review). Each vibration prompted the teacher to provide specific praise. After completing action planning, teachers then engaged in coping planning to identify possible implementation barriers and develop plans for how the PCM strategies could continue to be implemented if these barriers arose. A step-by-step overview of the protocol is described below and is highly consistent with that used in previous research (see Sanetti et al., 2015; Sanetti et al., 2014), with the exception that teachers were asked to set a performance goal (i.e., number of specific praise statements to deliver) as an addition to the action planning process.

**Step 1 – Explain the session purpose.** Teachers were provided with an overview of implementation planning. Then it was explained to the teachers that they would be focusing on planning the logistics of using precorrection and specific praise in their classrooms and the use of a self-selected self-monitoring procedure.

**Step 2 – Review student issues and intervention procedures.** A probe about the current disruptive classroom behaviors was conducted and teacher reviewed the specific praise and precorrection procedures and how they function to reduce these disruptive classroom behaviors. Teachers were provided with the opportunity to ask questions for further clarification.

**Step 3 – Identification of the logistics of implementation.** Teachers were asked to select a self-monitoring strategy and think through how to carry out the selected strategy in support of enhancing their rates of specific praise and precorrection within their unique
classroom contexts. Teachers were provided with an Action Plan Worksheet on which they wrote down the intervention procedures and outlined the details of their implementation plans. Then, teachers identified what resources they would need, as well as when and how to engage in the self-monitoring and PCM strategies. A researcher facilitated the process of completion of the Action Plan Worksheets as needed by teachers.

**Step 4 – Summarize the action plan.** The researcher summarized the implementation steps and provided tips about how teachers can enhance their action plans.

**Step 5 – Identify potential barriers and solutions.** Teachers were presented with the Coping Plan Worksheet and asked to identify major anticipated or current barriers to implementation. They were then asked to prioritize and write down up to 4 potential barriers. Following this, teachers were instructed to brainstorm with one-another about how these barriers could be resolved. Again, a researcher was available to help collaboratively identify resolutions if any teachers appeared to be stuck. After solutions were identified, the researchers asked the teachers to volunteer to summarize their barrier resolution strategies.

**Step 6 – Set goal and end session.** Teachers were guided through the process of setting challenging personal goals for rates of specific praise. The researcher provided teachers with their average observed specific and general praise usage and suggested that they set a new goal above their current level with a minimum of five specific praise statements over 15 minutes. Personal goals were operationalized by teachers in measurable terms and then written at the bottom of the Action Plan Worksheet. After determining their goal, teachers were asked if they had any additional questions about (a) the logistics of implementation or (b) the identified barriers and related solutions. All teachers were then provided with a progress monitoring sheet for their personal use. For teachers who chose to self-monitor using tally marks with pencil and
paper, tracking sheets consisted of a blank graph where the x-axis denoted the date of implementation of self-monitoring and the y-axis represents the number of praise statements for a corresponding session. By connecting each plotted point, the monitoring sheet created a line graph demonstrating progression over time. Teachers using a smartphone app that generated scheduled prompts received a similar graph. However, the y-axis of this graph corresponded to a self-rating from 1-5 on the statement “I provided praise after each reminder” (i.e., $1 = \text{None of the time}$ to $5 = \text{Every time}$). Lastly, researchers thanked the teachers for their time, participation, and effort. The implementation planning process was 45 minutes in duration.

**Dependent Measures**

The following data were collected by observers within teachers’ classrooms: (a) student academic engagement, (b) precorrection use, (c) specific praise statements, and (d) general praise statements.

To record teacher and student behaviors, trained data collectors conducted systematic direct observations (SDO). SDO data were collected over the course of 4 observations with each observation lasting 30 minutes in duration. Two observations were conducted before teachers participated in training and two were conducted after training. The length and duration of these observation sessions were based on Ferguson, Briesch, Volpe, and Daniels (2012), who found that two 30-minute observations produced a dependability coefficient of $\Phi=0.70$. Prior to data collection, all observers were trained to collect SDO data and required to meet or exceed 80% interobserver agreement (IOA) on two consecutive observation trials of recorded classrooms and then meet 80% IOA on an in-situ observation. Training included a meeting to review operational definitions and data collection procedures followed by practice observations of recorded classrooms. IOA was calculated by dividing the number of agreements by the number of
agreements plus disagreements and then multiplying by 100. A recording was considered an agreement when two observers recorded the same behavior in the same observation interval. Additionally, reliability checks were conducted during study data collection. To prevent observer drift, 20% of classroom observations included two observers to conduct IOA. IOA pairs were varied by swapping among the six data collectors. The average IOA for academic engagement was 88% (range, 81-100%); for teacher specific praise statements, it was 99% (range, 97-100%); for teacher general praise statements, it was 97% (range, 86-100%).

The recording of teacher precorrection statements was altered early in the study. It was the original intention of this research to count the number of precorrective statements provided by teachers prior to the start of a lesson or transition. Unfortunately, IOA above 80% was not being consistently demonstrated among data collectors for this dependent variable. Because there was a narrow window for data collection, it was decided by the researchers that observers would simply record the use (or non-use) of precorrection prior to engaging in a new activity. The IOA for this precorrection recording procedure was 100%.

**Systematic Direct Observation.** Observers used a combination of frequency and whole interval recording to document teacher and student behavior. Each observation was comprised of intervals lasting 10-seconds and a total of 150 intervals. Observers used a tracking sheet with 5 rows and 120 columns. Each row was individually labeled “GENERAL-praise”, “SPECIFIC-praise,” or “ENGAGED.” The definition and recording method for each dependent measure is listed below. In the first 5 minutes of the observation session, which corresponded with the start of the teacher’s lesson, the observers recorded whether the teacher used any precorrective statements.
**General Praise.** General teacher praise is defined as an audible statement from a teacher that is positive and indicates the teacher’s approval of a desired academic or social behavior engaged in by one or more students but provides no specific feedback about the behavior that was desirable (e.g., “Nice work.”). This was monitored using frequency recording and a tick mark was placed in the “GENERAL-praise” row of the appropriate interval column for each instance of teacher general praise.

**Specific Praise.** Specific teacher praise is defined as an audible statement that indicates the teacher’s approval of a desired academic or social behavior engaged in by one or more students and explicitly mentions the desirable behavior (e.g., “Good job standing in line silently.”). This was monitored using frequency recording and a tick mark was placed in the “SPECIFIC-praise” row of the appropriate interval column for each instance of teacher specific praise.

**Precorrection.** Precorrection is defined as audible statements that express desired or expected behavior before starting a task or entering a new setting (e.g., “When you get to your desk, silently get out your notebooks”). A checkmark was placed in the “PRECORRECT” box if the teacher used any precorrective statements at the start of the lesson.

**Student Academic Engagement.** Student academic engagement is defined as time when the student is actively attending to the assigned work or the teacher’s instruction. This includes activities such as writing, hand raising, listening to the lecture/instructions, looking at an academic worksheet, talking to a peer about an assignment material, or listening to a peer response to a question. This was recorded using whole interval time sampling. Observers watched a student during a 10-second time interval and if the student was academically engaged during the entire interval, the observer placed a check in the “ENGAGED” row of the
appropriate interval column. The observer cycled through each student in the classroom and repeated the process until the end of the observation period.

**Procedure**

A between groups experimental design with repeated measures was used to investigate the research questions for this study. All procedures performed in this study were done in accordance with the ethical standards of the institutional research committee. Prior to engaging in any study activities, potential teacher participants went through an informed consent process. Then, all consenting participants were randomly assigned to either the training as usual condition (i.e., control) or implementation planning (i.e., treatment) condition. Researchers coordinated with the director of special programs of the charter school organization to recruit teachers for the study. Information about this study was presented to teachers during a professional development seminar and then researchers approached teachers individually to solicit participation.

Trained observers conducted two direct observation sessions within each teacher’s classroom across a three-week window (with most being done in two weeks) immediately prior to the PCM teacher training. The training was conducted during the last teacher workday before the winter break at an all-day professional development seminar hosted by the charter organization. Over 60 teachers attended the professional development seminar. All teachers participated in the 45-minute PCM training conducted by the primary researcher. However, only those teachers participating in the study were taken to separate private classrooms, based on their study condition, following the PCM training. The ten teachers in the training as usual condition attended a researcher facilitated, nondirected discussion group on teacher stress and the 11 teachers in the implementation planning condition received implementation planning as
described above. The group implementation planning session and discussion group session both lasted 45 minutes in duration.

Following the teachers return to school after the winter break, a review e-mail was sent to all teachers summarizing the professional development seminar. The e-mails to participants in the implementing planning condition included the recommendation that they review their action and coping plans, as well as the goals they set for their precorrection and specific praise use. Researchers then resumed data collection in the second week of classes following the winter break. Consistent with pre-training data collection procedures, researchers conducted an additional two direct observations within each teacher’s classroom across a three-week window (with most being done in the first two weeks). Therefore, a total of four observations (i.e., two pre-training, two post-training) were collected for each classroom, with each observation lasting 30 minutes in duration. Researchers consulted with teachers to set a consistent observation schedule during which the same class activity could be observed for both observations pre- and post-training (e.g., 8:00 a.m. math lesson on Monday or Wednesday). Although this schedule was consistent for most teachers, a few observations were conducted during two different direct instructional times due to scheduling conflicts (e.g., conducting one observation during the 12:15 p.m. social studies lesson and one during the 8:00 a.m. math lesson). However, these scheduling conflicts only occurred for eight out of 84 observation sessions.

Data Analysis

To evaluate the effects of the group implementation planning, results were analyzed using parametric and non-parametric tests. Three mixed-design analysis of variance (ANOVA) tests were conducted for the variables (a) student academic engagement, (b) teacher specific praise, and (c) teacher general praise. This analysis allows for the examination of interaction
effects, within subject effects, and between subject effects. For precorrection, a Kruskal-Wallis H test was conducted to examine any significant differences between groups. Data from the two pre-training observations and two post-training observations were summed (i.e., precorrection usage) or averaged (i.e., student academic engagement, specific praise, general praise) to create two data points: pre-training and post-training. Prior to the analyses, data were examined for significant pre-existing differences between conditions on dependent variables so that group differences could be controlled for if present. Using these analyses, researchers were able to examine if participants outcomes were affected by their respective condition (i.e., interaction effects), if there were significant differences between the groups post-training behavior (i.e., between-subjects test), and whether there were any significant changes in behavior among participants within each condition pre- and post-training (i.e., within-subjects test).
RESULTS

Preliminary Analyses of Group Training Effects

Although pre- and post-training data was collected for 25 participants, 4 cases had incomplete data (i.e., one missing observation from pre- or post-training). A multiple imputation was initially considered to retain the cases with missing data, however, no common procedure for pooling multiple imputation data for a mixed-design ANOVA was found in the literature. Researchers thus chose to use the conservative method of listwise deletion. Inferential data analyses were conducted using only the 21 cases with complete data. Descriptive statistics for these participants are presented in Table 2. All assumptions for the use of mixed ANOVA and Kruskal-Wallis H test were met. Several univariate outliers were detected, however, they were not excluded from these analyses because they were likely indicative of credible response patterns. Using a Shapiro-Wilk criteria of 0.01, the test indicated that the distribution of some data significantly deviated from normality. Specifically, data for pre- and post-training specific praise in the implementation planning condition, pre-training general praise in both conditions, and post-training general praise in the implementation planning condition significantly deviated from normality. The distributions of these data revealed a natural floor effect that was creating a positive skew (i.e., many observations were at or close to 0 specific praise and general praise) and making data more leptokurtic. For positively skewed data, Tabachnick and Fidell (2007) recommend a logarithmic transformation to normalize a data set. Following a log10 transformation, all distributions became normal except for post-training specific praise in the implementation planning condition. Because ANOVAs are considered to be robust to violations of the normality assumption (Schmider, Ziegler, Danay, Beyer, & Bühner, 2010), a mixed ANOVA was still used to analyze specific praise.
No significant differences were found between conditions on pre-training academic engagement, \( t(19) = -1.135, p = 0.270 \); specific praise, \( t(19) = -0.855, p = 0.403 \); general praise \( t(19) = -1.606, p = 0.125 \); or precorrection, Mann-Whitney \( U = 52.00, p = 0.818 \).

Table 2. Descriptive Statistics for Study Variables

<table>
<thead>
<tr>
<th></th>
<th>Pre-Training</th>
<th></th>
<th>Post-Training</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( M (SD) )</td>
<td>Skew</td>
<td>Kurtosis</td>
<td>( M (SD) )</td>
</tr>
<tr>
<td>Academic Engagement</td>
<td>0.70 (0.09)</td>
<td>0.282</td>
<td>0.927</td>
<td>0.79 (0.1)</td>
</tr>
<tr>
<td>Precorrection</td>
<td>0.7 (0.82)</td>
<td>0.687</td>
<td>-1.043</td>
<td>0.7 (0.82)</td>
</tr>
<tr>
<td>Specific Praise</td>
<td>1.00 (0.75)</td>
<td>0.00</td>
<td>-1.334</td>
<td>1.65 (1.67)</td>
</tr>
<tr>
<td>General Praise</td>
<td>5.35 (5.83)</td>
<td>2.004</td>
<td>4.693</td>
<td>5.55 (4.59)</td>
</tr>
</tbody>
</table>

Primary Analysis

Data from the two pre-training and two post-training observations were used to create a pre-training and post-training sum (i.e., precorrection) or average (i.e., student academic engagement, specific praise, general praise) for each variable. A mixed ANOVA was conducted to determine whether there were any significant changes in teachers’ use of specific and general praise and classroom academic engagement following training. The mixed ANOVA included one within-subject factor (Time: pre- and post-training) and one between-subject factor (Condition: training as usual and implementation planning). The non-parametric Kruskal-Wallis \( H \) test was used to examine any differences between groups on precorrection following training.
Groups were roughly equal, with ten participants in the training as usual group and 11 participants in the implementation planning group. Levene’s Test of Error variance and Box’s test of covariance were not significant, indicating no violations of the homogeneity of variance or homogeneity of covariance, respectively.

An alpha level of 0.05 was utilized in the analyses. Results indicated there was a significant interaction on specific praise between training condition and time, $F(1, 19) = 8.627, p = 0.008, \eta^2_p = 0.312$; a large effect size was evident for the interaction. Participants in the training as usual condition had a greater increase in specific praise compared to implementation planning (see Figure 1). There was no significant interaction between training condition and time for student academic engagement, $F(1,19) = 3.956, p = 0.061, \eta^2_p = 0.172$, or teacher general praise use, $F(1, 19) = 2.883, p = 0.106, \eta^2_p = 0.132$.

![Figure 1. Average specific praise rates at pre-training and post-training](image-url)
Results revealed a significant main effect within groups for pre-training to post-training on student academic engagement, $F(1, 19)=4.543, p=0.046, \eta^2_p=0.193$; this effect was characterized by a large effect size. Student academic engagement increased from pre-training to post-training in both conditions (see Figure 2). No significant main effect for pre-training to post-training was found for teacher specific praise, $F(1, 19)=1.817, p=0.193, \eta^2_p=0.087$, or teacher general praise, $F(1, 19)=1.481, p=0.239, \eta^2_p=0.072$.

![Student Academic Engagement](image)

**Figure 2.** Average classroom academic engagement at pre-training and post-training

There was no significant main effect between groups on student academic engagement $F(1, 19)=0.00, p=0.992, \eta^2_p=0.00$; teacher specific praise $F(1,19)=0.114, p=0.74, \eta^2_p=0.006$; or teacher general praise $F(1, 19)=0.743, p=0.399, \eta^2_p=0.038$. Similarly, the Kruskal-Wallis H test indicated there were no significant differences between groups on teacher precorrection, $\chi^2(1) = 0.509, p = 0.476$
Social Validity

All teachers completed three subscales of the URP-IR regarding the acceptability, feasibility, understandability of the two proactive classroom management strategies on which they were trained. Scales ranged from 1 (strongly disagree) to 7 (strongly agree). Teachers rated that they “slightly agreed” that specific praise and precorrection were acceptable ($M=5.39, SD=0.87$) and feasible ($M=4.96, SD=1.01$), and they “agreed” that the classroom management strategies were understandable ($M=5.64, SD=1.27$). Teachers were also asked to rate the acceptability of either the discussion group or the implementation planning training depending on their condition. Teachers in the training as usual condition reported that they “agreed” that the discussion group was acceptable ($M=5.63, SD=0.21$) and teachers in the implementation planning condition rated that they “slightly agreed” that implementation planning was acceptable ($M=4.72, SD=0.43$).

**Post-Hoc Exploratory Analyses**

Beyond the original research goals of this study, an exploratory investigation of teachers’ perceptions of implementation barriers was conducted at the conclusion of the study. The researchers included these extra qualitative measures with the intent of further contextualizing the results of this study. Teachers were asked to list implementation barriers they most commonly encountered when attempting to increase their use of precorrection and specific praise. Implementation barriers were defined to teachers as circumstances, environmental conditions, or other factors that may impede or increase the difficulty of carrying out a planned action. Of the 21 total participants, ten participants reported encountering implementation barriers: four from the implementation planning condition and six from the training as usual condition.
The coding of free responses was based on the ecological and specific barriers put forth in Sanetti and Kratochwill (2009). Each response received two codes, an ecological level classification (i.e., external environment, organization, intervention, implementer) and a specific implementation barrier classification reflecting one of the 37 barriers outlined by Sanetti and Kratochwill. For example, a reported barrier like “Making seven specific praise statements before time was up,” would receive an ecological level classification of “intervention” and be given the specific barrier code of “ease of implementation.” For a more detailed description of coding procedures refer to Long et al. (2016). Teacher’s free responses were coded by two graduate-level students in school psychology who were trained in a standardized coding procedure to facilitate consistency in the assignment of codes. Training included (a) a discussion of the ecological levels and specific barriers included in Sanetti and Kratochwill (2009) and (b) a practice coding session with 10 sample implementation barriers. After being able to code the practice barriers with 100% agreement with the master code, the graduate students then independently coded the teachers’ free responses. Following the initial coding, the raters met to discuss any discrepancies and reach a consensus regarding the appropriate code.

Table 3 provides a descriptive overview of the reported barriers organized by ecological level and specific barrier classification. Overall, the most common barriers listed were at the level of the implementer ($n = 21, 81\%$). Implementer level barriers relate to characteristics and perspectives of the person carrying out the intervention that may impede implementation. The most common specific barriers at this ecological level included perceptions of intervention recipients (e.g., “When I praise a student, others become jealous and taunt that student”; $n = 17, 65\%$) and motivation to implement ($n = 3, 12\%$). Barriers at the intervention level ($n = 5, 21\%$) were the second most commonly reported, with the most common specific barriers at that level
being intervention compatibility (e.g., “Overlooks students that behave well all the time”; n = 2, 8%) and time/duration required (e.g., “Very busy classroom”; n = 2, 8%). These barriers relate to characteristics of the intervention itself that reduce the ease of its implementation or perceived compatibility in a target intervention context. No barriers were reported at the organization or external factors levels. Organizational barriers largely center on barriers related to leadership, climate, and technical assistance resources, while external factor barriers relate to hindrances to intervention implementation that stem from the broader context outside of the school (e.g., barriers stemming from external stakeholders or educational policy/legislation).

Table 3. Descriptive Statistics for Perceived Implementation Barriers

<table>
<thead>
<tr>
<th>Barriers to Implementation</th>
<th>Training as Usual</th>
<th>Implementation Planning</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Freq.</td>
<td>%</td>
<td>Freq.</td>
</tr>
<tr>
<td>Intervention</td>
<td>3</td>
<td>12%</td>
<td>2</td>
</tr>
<tr>
<td>Ease of Implementation</td>
<td>0</td>
<td>0%</td>
<td>1</td>
</tr>
<tr>
<td>Intervention Compatibility</td>
<td>2</td>
<td>8%</td>
<td>0</td>
</tr>
<tr>
<td>Time/Duration Required</td>
<td>1</td>
<td>4%</td>
<td>1</td>
</tr>
<tr>
<td>Implementer</td>
<td>10</td>
<td>38%</td>
<td>11</td>
</tr>
<tr>
<td>Perceptions of Recipient</td>
<td>9</td>
<td>35%</td>
<td>8</td>
</tr>
<tr>
<td>Motivation to implement</td>
<td>1</td>
<td>4%</td>
<td>2</td>
</tr>
<tr>
<td>Skill proficiency</td>
<td>0</td>
<td>0%</td>
<td>1</td>
</tr>
<tr>
<td>Organization</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>External Factors</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
</tbody>
</table>
Additionally, teachers were asked to rate how difficult it would be to overcome their listed barriers without additional support. Scales ranged from 1 (very easy) to 7 (very difficult). On average, teacher’s rated that they found intervention level barriers to be “Difficult” to overcome ($M = 5.5$; $SD = 2.12$) and implementer level barriers “Slightly Difficult” to overcome ($M = 4.85$; $SD = 1.82$).
DISCUSSION

The primary purpose of this research is to examine implementation planning as a group proactive implementation support strategy. All participants received training in two PCM strategies, precorrection and specific praise, followed by participating in either implementation planning (treatment condition) or a discussion group (control). To collect data, researchers directly observed student academic engagement and teacher use of precorrection, specific praise, and general praise pre- and post-training. These data were used to evaluate the effects of group implementation planning. Prior research has found that implementation planning promoted initial implementation integrity with teachers (Sanetti et al., 2015; Sanetti et al., 2014) when used in a one-on-one consultation context. This study extends that research by applying the implementation planning protocol to a group context (as opposed to the traditional one-on-one consultative setting). Additionally, participants were surveyed at the end of the study to obtain teachers’ perceptions regarding the social validity of the intervention and training, common barriers to implementation, and how difficult they found any experienced barriers. Direct input from teachers is important to further understanding how to provide adequate implementation support to promote high levels of treatment integrity and intervention sustainability in schools.

Analyses using a mixed ANOVA revealed a significant interaction effect between condition and specific praise. Specifically, participants in the training as usual condition had a significant increase in specific praise use compared to participants in the implementation planning condition. Analyses also demonstrated that student academic engagement increased for both groups following training. Teachers reported positive social validity for both traditional training and implementation planning. When asked about implementation barriers, nearly half of the participants reported some difficulty implementing PCM strategies. The most common specific barrier category was implementers’ perception of the recipients (i.e., difficulty due to
perceived reception of the intervention by classroom students). The findings of this study are similar to a recent investigation of teachers’ perceived implementation barriers. Long and colleagues (2016) found that the most common specific barrier reported at the implementer level was “perception of intervention recipient,” which made up 67.2% of the specific barriers reported at that level. Additionally, Long and colleagues found intervention compatibility and time/duration required to be the two most commonly reported barriers at the intervention level, each making up 37.5% of the specific barriers reported at that level. Unlike the current study, however, teachers in the Long and colleagues’ (2016) investigation reported barriers mostly at the intervention (37.5%) and organization (32.6%) level. The present study had a much more narrow scope than Long et al., (2016), which included 959 participants reporting on their experiences with varied classroom management strategies.

The experimental hypothesis that teachers in the implementation planning condition would use greater rates of specific praise and have higher classroom academic engagement was not supported by the results of this study. These results are in contrast to previous studies of implementation planning which have found the procedure to improve teachers’ and parents’ treatment integrity and child outcomes (Fallon et al., 2016; Sanetti et al., 2015; Sanetti et al., 2014; Sanetti et al., 2017) when compared to traditional one-on-one consultation. Reasons these discrepant findings may include differences in motivation to engage in behavior change. Participants in these previous studies received implementation planning only after requesting consultative help, whereas participants in the current study received implementation planning as part of a broader professional development training in which they were mandated to participate. Furthermore, participants in these studies collaborated with researchers to develop individualized interventions rather than receiving a standard behavior management strategy.
Limitations

There are several limitations to the current study. Of particular note is the lack of a motivational measure to account for participants’ intention to change behavior. During this study, the implementation planning session was unfortunately scheduled concurrently with an essential teacher workshop. Although teachers still attended the implementation planning session, it resulted in teachers having to make up the missed workshop at a later time. Researchers noted that many teachers appeared frustrated to be participating in the implementation planning session and some teachers did not appear to be putting forth their best effort. Though social validity measures were positive, teachers’ responses indicated that they only “slightly agreed” that specific praise, general praise, and implementation planning were acceptable procedures. The inclusion of a motivational measure to assess initial willingness to engage in behavior change could have further contextualized the results of this study and ensured teachers had a strong enough intent to implement for action and coping planning to be appropriate support procedures, per the theory (Schwarzer, 2008).

Additionally, due to the study design, researchers were not able to compare actual rates of teacher self-monitoring usage between groups. Because researchers attempted to observe classrooms at a consistent time and activity for all four sessions, it was sometimes the case that teachers planned their selected praise self-monitoring strategy outside of the originally scheduled observation time. For example, a teacher may have initially selected their 8 a.m. math lesson for targeting and observation but, after receiving training, decided that the use of self-monitoring to increase specific praise would be most feasible or beneficial during their 10:15 a.m. social studies lesson. For obvious ethical reasons, the researchers couldn’t require teachers to persist with their original plan during the post-training data collection period. Because participants in
the training as usual condition were not asked to implement self-monitoring during researchers’ observations, participants in the implementation planning condition were also not required to implement self-monitoring during observations so that a fair comparison could be made between the groups. Because of this design, researchers were not able to determine if any differences in specific praise self-monitoring occurred between groups and whether that affected teachers’ praise usage.

Researchers also encountered a delay between training and strategy implementation. Participants participated in the professional development seminar and implementation planning on their final workday before the December winter break. There was then a three-week interruption between teachers’ participation in professional development and the opportunity to implement PCM strategies. Researchers attempted to minimize any effects of this delay by providing teachers with “refresher” e-mails detailing information presented in their respective sessions. However, it is possible that the delay between the training and teachers’ return to school may have affected performance by decreasing the likelihood that individuals in the implementation planning condition would use their planned self-monitoring strategies.

Another limitation is that participants were not balanced by grade level during random assignment. In this study, the implementation planning condition had three participants who taught at the middle school level, whereas all participants in the training as usual condition taught elementary students. Prior research has found that teachers’ rates of praise are generally greater in lower elementary grades and progressively decreases at higher grade levels (White, 1975). Although no significant differences were found between the two groups on pre-training praise rates, any difference in teachers’ likelihood of utilizing specific praise related to
differences in feasibility or acceptability at different grade levels could have affected the study results.

**Future Directions**

Previous research has shown that implementation planning is effective in promoting initial treatment integrity with teachers when included in one-on-one consultation (Sanetti et al., 2015; Sanetti et al., 2014). However, all teachers in these studies had requested consultative support, suggesting that they were motivated to engage with the consultant and in behavior change. Under the HAPA model, from which implementation planning is adapted, Schwarzer (2008) posits that developing motivation is important to increase the likelihood of behavior change. Thus, considerations of participant motivation during training should not be overlooked. Although many group professional development seminars consist of people who attend of their own volition, many trainings are also conducted with teachers as part of mandatory professional development. In these trainings, the intention to adopt a proposed intervention can vary across the teachers. If including implementation planning as part of these trainings is to be considered, future research should examine how participants motivation to engage in future behavior change can be fostered in group settings.

Additionally, future research should also consider examining group implementation planning as part of a tiered support strategy for teachers. It has been suggested that intervention implementation supports could be efficiently and effectively provided in a multi-tiered framework similar to the response-to-intervention model for students (Myers, Simonsen, & Sugai, 2011). Although implementation planning was developed as a proactive implementation support strategy for consultative use, its application as part of a multi-tiered system of support for teachers is also feasible. Providing group implementation planning as a Tier II support for
teachers who struggle with implementation integrity following a Tier I direct training could be an economical use of resources.

Although there is a large number of hypothesized implementation barriers (see Sanetti & Kratochwill, 2009), the literature examining teachers perceived implementation barriers is sparse. More research is needed in this area to evaluate the actual impact of hypothesized barriers on intervention implementation and how these hypothesized barriers align with difficulties teachers report experiencing. Understanding teachers’ perceived implementation barriers can inform proactive actions that school psychologists can take to promote the success of intervention implementation.

Summary

The current study used a randomized treatment-control design to examine classroom outcomes for teachers who participated in a group proactive implementation support protocol. Teachers attended a professional development training on the use of two proactive classroom management strategies: specific praise and precorrection. Following the seminar, teachers in the treatment condition participated in implementation planning, a proactive implementation support strategy, while the teachers in the control condition participated in a researcher facilitated, nondirected discussion group. Twenty-one teachers were included in the analysis of this study and direct observational data was collected on precorrection, specific praise, general praise, and student academic engagement pre- and post-training. Researchers hypothesized that teachers in the implementation planning group would have higher levels of specific praise and, subsequently, higher levels of academic engagement compared to teachers who did participate in implementation planning. However, results of this study did not support the researchers’ hypotheses. Findings showed that, following the professional development seminar, participants
in the training as usual condition significantly increased their usage of specific praise compared to teachers in the implantation planning condition. The results also indicated that training increased classroom engagement increased for both groups. Additional exploratory research on teachers’ perceived implementation barriers found that 48% of teachers reported implementation barriers, 81% of those barriers were at the implementer level, and 65% were related to perceptions of their students’ response to the intervention. As this is a preliminary study, further research is needed to determine the effectiveness of group implementation planning. Future research should also attend to participants’ motivation and include measures of implementers’ intentions to engage in behavior change as part of their analysis of outcomes.
REFERENCES


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APPENDIX A: USAGE RATING PROFILE (URP) MODIFIED FOR IMPLEMENTATION PLANNING

**Directions:** Please consider the professional development on proactive classroom behavior management strategies you attended in December when answering the following items. The two proactive classroom behavior management strategies covered were specific praise and precorrection. Specific praise is the use of praise statements which specifically identify the desired behavior (e.g., Great job sitting quietly!). Precorrections are statements that describe behavior expectations prior to a transition or switching assignments (e.g., “Keep your hands to yourself and walk silently back to your desk”). These two strategies are the specific behavior support strategies that are being referenced when the phrase "classroom behavior management strategies” is used below. Circle the number that best reflects your agreement with each statement below using the scale provided.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Slightly Disagree</th>
<th>Neither agree nor disagree</th>
<th>Slightly Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>These classroom behavior management strategies (i.e., specific praise and precorrection) are an effective choice for addressing a variety of classroom behavior problems.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>I would be able to allocate my time to implement these classroom behavior management strategies.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>I understand how to use these classroom behavior management strategies.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>I am knowledgeable about the procedures for these classroom behavior management strategies.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>5</td>
<td>These classroom behavior management strategies are a fair way to handle children's behavior problems.</td>
<td>1</td>
<td>2</td>
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<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>6</td>
<td>The total time required to implement these classroom behavior management strategies would be manageable.</td>
<td>1</td>
<td>2</td>
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<td>6</td>
<td>7</td>
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<tr>
<td></td>
<td>Question</td>
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</tr>
<tr>
<td>7</td>
<td>I would not be interested in implementing these classroom behavior management strategies.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>I would have positive attitudes about implementing these classroom behavior management strategies.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>9</td>
<td>Preparation of materials needed for these classroom behavior management strategies would be minimal.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>10</td>
<td>Material resources needed for these classroom behavior management strategies are reasonable.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>11</td>
<td>I would implement these classroom behavior management strategies with a good deal of enthusiasm.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>12</td>
<td>These classroom behavior management strategies are too complex to carry out accurately.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>13</td>
<td>These classroom behavior management strategies would not be disruptive to other students.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>14</td>
<td>I would be committed to carrying out these classroom behavior management strategies.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>15</td>
<td>I understand the procedures of these classroom behavior management strategies.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>16</td>
<td>The amount of time required for record keeping would be reasonable.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
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</tbody>
</table>
### APPENDIX A (CONTINUED)

**Directions:** Please consider the implementation planning session you attended when answering the following items. During the implementation planning session, you were asked to select a self-monitoring strategy for tracking student praise, plan your implementation of the self-monitoring strategy (e.g., during what class, how many times per week), and identify potential barriers and solutions to the implementation of self-monitoring. Circle the number that best reflects your agreement with each statement below using the scale provided.

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Slightly Disagree</th>
<th>Neither agree nor disagree</th>
<th>Slightly Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Implementation planning would be effective process for planning a variety of classroom interventions (e.g., behavior support strategies).</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>Implementation planning is a reasonable way to plan classroom interventions (e.g., behavior support strategies).</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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</tr>
<tr>
<td>3</td>
<td>I would not be interested in participating in implementation planning.</td>
<td>1</td>
<td>2</td>
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<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>I would have positive attitudes about participating in implementation planning.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>5</td>
<td>I would participate in implementation planning with a good deal of enthusiasm</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>6</td>
<td>Participating in intervention planning would not be disruptive to my students</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>I would be committed to engaging in implementation planning.</td>
<td>1</td>
<td>2</td>
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<td>6</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>Implementation planning would easily fit with my current practices.</td>
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<td>7</td>
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</tbody>
</table>
APPENDIX A (CONTINUED)

Directions: Please think about any barriers you encountered when trying to increase your specific praise and/or precorrection use with your class or classes. Implementation barriers include circumstances, environmental conditions, or other factors that may impede or increase the difficulty of carrying out a planned action – in this case, the use of specific praise and/or precorrection. The following is an example of an implementation barrier at a school: The local education agency is requiring that all schools in the district begin an evidence-based reading intervention with their after-school students who are struggling readers. However, the school you are at is currently understaffed and all after-school teachers are already supervising large groups of students, thus making working with a select group of students difficult. In this situation, limited staff capacity would be a significant barrier to implementing the new educational practice for you and the other staff members in the after-school program.

List any barriers you encountered when trying to use specific praise and/or precorrection with your students. List them below in order of most common to least common and then use the scale to rate how difficult it was to overcome these barriers without support.

<table>
<thead>
<tr>
<th>Most common barrier</th>
<th>Very easy</th>
<th>Easy</th>
<th>Slightly easy</th>
<th>Neutral</th>
<th>Slightly difficult</th>
<th>Difficult</th>
<th>Very difficult</th>
</tr>
</thead>
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<td>7</td>
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<table>
<thead>
<tr>
<th>2nd most common barrier</th>
<th>Very easy</th>
<th>Easy</th>
<th>Slightly easy</th>
<th>Neutral</th>
<th>Slightly difficult</th>
<th>Difficult</th>
<th>Very difficult</th>
</tr>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>3rd most common barrier</th>
<th>Very easy</th>
<th>Easy</th>
<th>Slightly easy</th>
<th>Neutral</th>
<th>Slightly difficult</th>
<th>Difficult</th>
<th>Very difficult</th>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>4th most common barrier</th>
<th>Very easy</th>
<th>Easy</th>
<th>Slightly easy</th>
<th>Neutral</th>
<th>Slightly difficult</th>
<th>Difficult</th>
<th>Very difficult</th>
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</tbody>
</table>
APPENDIX B: INSTITUTIONAL REVIEW BOARD APPROVAL

ACTION ON EXEMPTION APPROVAL REQUEST

TO:       James Upright
          Psychology

FROM:     Dennis Landin
          Chair, Institutional Review Board

DATE:     November 10, 2016

RE:       IRB# E10207

TITLE:    Implementation Planning for Group-Based Training of Proactive Classroom Management Strategies


Review Date: 11/9/2016

Approved X Disapproved

Approval Date: 11/10/2016 Approval Expiration Date: 11/9/2019

Exemption Category/Paragraph: 2a

Signed Consent Waived?: No

Re-review frequency: [three years unless otherwise stated]

LSU Proposal Number (if applicable):

Protocol Matches Scope of Work in Grant proposal: (if applicable)

By: Dennis Landin, Chairman

PRINCIPAL INVESTIGATOR: PLEASE READ THE FOLLOWING – Continuing approval is CONDITIONAL on:

1. Adherence to the approved protocol, familiarity with, and adherence to the ethical standards of the Belmont Report, and LSU's Assurance of Compliance with DHHS regulations for the protection of human subjects*
2. Prior approval of a change in protocol, including revision of the consent documents or an increase in the number of subjects over that approved.
3. Obtaining renewed approval (or submittal of a termination report), prior to the approval expiration date, upon request by the IRB office (irrespective of when the project actually begins); notification of project termination.
4. Retention of documentation of informed consent and study records for at least 3 years after the study ends.
5. Continuing attention to the physical and psychological well-being and informed consent of the individual participants, including notification of new information that might affect consent.
6. A prompt report to the IRB of any adverse event affecting a participant potentially arising from the study.
8. SPECIAL NOTE: When emailing more than one recipient, make sure you use bcc. Approvals will automatically be closed by the IRB on the expiration date unless the PI requests a continuation.

* All investigators and support staff have access to copies of the Belmont Report, LSU’s Assurance with DHHS, DHHS (45 CFR 46) and FDA regulations governing use of human subjects, and other relevant documents in print in this office or on our World Wide Web site at http://www.lsu.edu/irb
VITA

James Upright completed his Bachelor of Arts in Psychology at North Carolina State University in 2012. During his undergraduate career, he assisted with research studying a reading intervention for elementary students and received an undergraduate research grant to examine the effects of peer monitoring on teachers’ treatment integrity of reading intervention implementation. After graduating, James worked as a research assistant for 3C Institute in Durham, North Carolina where he assisted with the development of computerized interactive social skills training programs for children and adolescents.

James was admitted to the Louisiana State University in 2015 and is studying to receive his doctorate of philosophy in school psychology under the supervision of Dr. Anna Long. His research interests include classroom behavior management strategies and teacher intervention implementation support strategies.