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Prevent-Teach-Reinforce for Function-based Behavior Intervention Planning in Positive Behavior Support

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Prevent-Teach-Reinforce for Function-based Behavior Intervention Planning in Positive Behavior Support

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Dedication

This dissertation is dedicated to my incredibly brave and patient fiancé, Britta, who has shown me that I can accomplish anything in this world and that it's okay to ask for help when things get difficult.

To my family who have provided me with not only financial stability as I embarked on this long journey but also moral support. They never gave up on me and for that I am forever thankful.

To my advisor, Dr. Kevin Filter, and the rest of the Psychology Department at Minnesota State University, Mankato for providing me with an amazing education and an excellent opportunity to succeed in life.

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Abstract of the Dissertation

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by

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Doctor of Psychology in School Psychology
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The present study assessed the effectiveness of Prevent-Teach-Reinforce (P-T-R), an assessment-based model for students with behavior problems, using an A-B-A-B design with follow-up. Participants included three students in grades kindergarten, fourth, and fifth in a rural Midwestern school district. Results indicated that PTR was effective in reducing disruptive behaviors and increasing academic engaged time across all three participants. The results also indicated that the teacher participants were able to implement the behavior interventions with fidelity and with high levels of perceived social validity.

CHAPTER I

INTRODUCTION AND LITERATURE REVIEW

With an increasing demographic shift in school-age students, educators have been forced to face increasingly heterogeneous student populations. This heterogeneity has required educators to implement educational supports and interventions that may or may not be conducive to learning. Furthermore, schools and educators must not only meet the needs of general mainstream students but also meet the needs of those with disabilities that may be struggling because of behavior, social, and/or cognitive impairments. Dunlap and Fox (2009) listed three reasons why there is an increased attention towards challenging behavior in schools. First, research is beginning to reveal an alarming prevalence of inappropriate and persistent behaviors. Lavigne and colleagues (1996) reported that 21% of preschool children had been determined to have a diagnosable psychiatric disorder. Additionally, Campbell (1995) found that 10-15% of young children exhibited significant behavior problems. Second, Dunlap and Fox noted the general public is starting to realize challenging behaviors do not simply fade away but can persist into adulthood. Finally, the general public and government have been demanding that schools increase their focus on social-emotional development of children as a preventative measure. In an effort to meet the needs of such a heterogeneous population, schools must provide and maintain an environment that not only facilitates learning within an academic domain but also fosters positive life experiences and skills.

This heightened awareness to meet the needs of such a diverse student population led to cornerstone legislation with the 1997 reauthorization of P.L. 94-142 into P.L. 105-17, also known as the Individuals with Disabilities Education Act (IDEA 1997). One important element of this legislation is that it mandated functional behavior assessments (FBAs) for individualized behavior plans. Educators are now required to implement some form of an FBA and develop behavior plans based on that data for students experiencing behavior problems within a school setting (Weber, Killu, Derby, & Barretto, 2005). The requirements for completing FBAs during disciplinary procedures was maintained in the 2004 re-authorization of the bill, now known as the Individuals with Disabilities Education Improvement Act (Von Ravensburg & Tobin, 2006).

Functional Behavior Assessments in Schools

FBAs are based on the principles of applied behavior analysis and more than a half century of experimental research demonstrating the relationship between environment and behavior (McIntosh, Brown, & Borgmeier, 2008). FBAs inform interventions that are aimed towards eliminating any reinforcers that a student may be receiving from the environment by exhibiting the target behaviors and, instead, changing or eliminating the target behavior by teaching and reinforcing appropriate alternative behaviors. Sugai and colleagues (2000) define FBA as a systematic process of identifying problem behaviors and the antecedent and consequence events that reliably predict occurrence and nonoccurrence of problem behaviors across time. Additionally, Sugai, Lewis-Palmer, and Hagan (1998) stated that FBAs are designed to help educators understand the function of behaviors, focusing on the necessity of obtaining a visual

picture of what the target behavior looks like (operational definitions) in a variety of settings. Subsequently, educators should use FBAs to determine possible setting events, triggers (antecedents), and factors that maintain the behavior (consequences). With the focus trending towards accountability and evidence based interventions, schools have no choice but to employ a powerful playbook of function-based interventions that are derived from the data found in FBAs. Educators develop behavior intervention plans (BIPs) by siphoning the FBA data and then modifying the contextual variables that serve to maintain and support challenging behaviors (Dunlap, 1993; Gresham, 1991).

The idea of conducting systematic and data-driven assessments and interventions can be seen as daunting, time-consuming, and complex, however, it is likely that school personnel might already be partaking in certain aspects of FBAs, such as direct observations and conducting interviews. School personnel can use FBAs to help their understanding of a student's behavior in a multitude of settings and domains, to develop setting event strategies, antecedent strategies, behavior-teaching strategies, and consequence strategies. By identifying target behaviors, settings events, antecedents, and consequences, educators can modify the classroom/school environment in a multitude of ways that will reduce problem behavior occurrences and foster positive behaviors (Horner, 1994; Sugai et al., 2000). Sugai and colleagues state, "FBA is a best and preferred practice for all challenging behavior, not just for behavioral events that result in suspensions or other disciplinary actions" (p.137). Recent research has provided additional and ample evidence for the support of FBA as an effective approach to informing treatment in school settings (e.g., Carter & Horner, 2007, English & Anderson,

2006; Filter & Horner, 2010; Hoff, Ervin, & Friman, 2005; Kern, Gallagher, Starosta, Hickman, & George, 2006; March & Horner, 2002; McIntosh et al., 2008; Stage et al., 2006).

FBA Procedures

While FBA is a highly supported research based practice and mandated by IDEA during disciplinary procedures, IDEA and the United States Department of Education (USDOE) have not identified specific assessment practices regarding FBA. The legal mandates regarding FBA forces schools to rely on external perspectives for FBA procedures. The federal government and the USDOE (1999) released subjective and rather incomplete sets of FBA procedures, which have caused inconsistencies with assessment interpretation. Although OSEP and USDOE do not provide a standard practice, it is likely that practitioners will agree that while conducting an FBA, it is important to (a) collect information regarding conditions under which problem behavior is and is not observed and more appropriate behavior is required (b) develop testable and malleable hypothesis and (c) collect direct observation information.

There have been multiple FBA procedures/models commonly cited in the literature. O'Neil and colleagues (1997) state five procedural steps to functional behavior assessment: (1) problem identification, (2) identification of the circumstances and setting events that are consistently associated with the behavior, (3) identification of the factors that maintain the target behavior, (4) development of summary statements and/or hypotheses in relation to the function of the behavior, and (5) data collection through direct measures to support hypotheses. Sugai and colleagues (2000) described a six step

model of functional behavior assessment: (1) collect contextual information about target behavior/s, (2) develop testable and malleable hypotheses, (3) collect direct observation data, (4) design behavior support plans, (5) develop an implementation script, and (6) evaluate BIPs through data collection. Although it appears that there are small differences within these two FBA procedures, the underlying concepts such as problem identification, development of a hypothesis, data collection, and evaluation are similar and necessary components. It is important to note that the purpose of FBA is to develop a behavior intervention plan that is most likely to be effective and therefore, FBAs and BIPs go hand in hand and serve as a basis for effective interventions.

The FBA process utilizes a wide variety of sources that are crucial to the reliability and validity of the process. Data sources include (a) indirect data collection sources such as student records, interviews, rating scales, checklists, and/or permanent product; and (b) direct data collection sources such as non-systematic direct observation and systematic direct observation on teacher/peer behavior across multiple settings and groups. Indirect data collection techniques obtain information through subjective reports from individuals whereas direct data collection techniques provide information from data that is collected during observations (Johnston & O'Neill, 2001). Van Acker, Boreson, Gable, and Potterton (2005) conducted a study that examined FBAs and BIPs that were developed by school teams across Wisconsin and found that indirect data collection techniques (i.e., semi-structured interviews, rating scales, checklists) were found to be utilized in 90% of the FBAs with interviews and student history (record) as the most common. Additionally, they found that direct observation was the most common method

of direct data collection found in 49% of the FBAs. An additional major component of functional behavior assessment is a functional analysis, which is a brief-experiment to test out each of the possible functions of the target behavior (Iwata, Dorsey, Slifer, Bauman, & Richman, 1982/1994). Although this is an effective and reliable method, it is rarely used in the schools because of its difficulty to implement in the classroom and lack of ecological validity (Solnick & Ardoin, 2010).

Challenges Implementing FBAs

With OSEP and USDOE not providing a clear standard of practice in regards to FBA, it forced schools to rely purely on interpretation of regulations as required in IDEA, which indicate when an FBA must be completed, but not what it must entail. Subsequently, most schools were caught off guard and unequipped to handle the complexity of FBAs (Conroy, Katsiyannis, Clark, Gable, & Fox, 2002; Van Acker, Boreson, Gable, & Potterton, 2005). Consequently, each state educational agency developed their own FBA procedures to meet federal requirements (Weber, Killu, Derby, & Barretto, 2005). With unique FBA procedures and guidelines for each state, it becomes pertinent for schools to be consistent with their assessments and measures in order to develop standardized, valid, and reliable interventions (Department of Education, 1999).

Many of the studies conducted on the validity and efficacy of function-based interventions and FBAs have been plagued by a magnitude of extraneous variables such as lack of treatment fidelity, lack of training, and lack of teacher buy-in. It appears that the limitations do not lie within the actual FBA, but rather those who conduct them. Van Acker and colleagues (2005) examined the quality of FBAs/BIPs submitted by various

schools in Wisconsin and found that the majority of school-based teams that submitted FBA/BIPS for critical review failed to clearly operationally define the target behavior. Additionally, there was a general failure to identify or verify the hypothesized function of the behavior before attempting the chosen intervention, and an alarming number of school-based teams did not take the function of the behavior into consideration during the development of the behavioral intervention. Benazzi, Horner, and Good (2006) found that having an individual with knowledge of behavioral theory on school-based teams has a significant impact on the perceived technical adequacy of behavior support plans. The results showed that behavior support teams would be more successful at using FBA results to design behavior support plans when there was at least one person trained in behavioral assessment. What does this mean for the future of FBAs within the schools? Ultimately, it means that although the empirical support for function-based approaches is well established, it is crucial for school-based teams to be knowledgeable in the field of applied behavior analysis, knowledgeable about the student in question, and knowledgeable about available resources.

Positive Behavior Interventions and Support

The United States educational system is in the midst of comprehensive system-change initiatives and it is imperative that educators face the current challenges by emphasizing identification, adoption, and sustained use of empirically supported principles and practices. There is a growing shift towards school accountability and additional focus on schools to establish broad social, culture, and individual three-tiered behavior supports needed to promote both academic success and prosocial behavior for

students (Blonigen et al., 2008). This perspective change has identified school-wide positive behavioral interventions and support (PBIS) as an approach that will meet the needs of students in a three-tiered model. PBIS is the school-wide application of positive behavior support, which was developed as an alternative approach for working with individuals with severe disabilities in the mid-1980s (Durand & Carr, 1985; Meyer & Evans, 1989). PBIS has emerged as an approach that allows schools and educators to meet the challenges of the continually increasing heterogeneous student population including students with and without disabilities (Colvin, Kame'1enui, & Sugai, 1993; Todd, Horner, Sugai, & Spraque, 1999). Horner (2009) estimated that school-wide PBIS was being implemented by more than 9,000 schools across the United States in at least 44 states. This is a considerable increase from the report by the U.S. Department of Education in 2005 that estimated 5,000 schools across 40 states had adopted the PBIS approach.

The PBIS process uses data-driven problem solving and individualized planning processes to establish appropriate interventions for all students across three levels: (1) Primary (Universal), (2) Secondary (Targeted), and (3) Tertiary (Intensive). PBIS has been built and shaped around the empirically sound principles and features of behavioral theory and applied behavior analysis (Carr et al., 2002) as well as (a) behavioral sciences, (b) practical interventions, (c) social values, and (d) a systems perspective (Sugai et al., 2000). As a result, PBIS uses behavior principles to reach a wider-range of students, regardless of their current academic or behavior placements by combing comprehensive, logical, and collaborative frameworks. PBIS has been proven time after time to be an

effective and established school-wide approach for addressing the needs of children who have been identified as having challenging behaviors (Bradshaw, Mitchell, & Leaf, 2010; Marquis et al., 2000; Carr et al., 1999; Clarke, Worcester, Dunlap, Murray, & Bradley-Klug, 2002).

Until recently, the primary focus of interventions and PBIS has been on decreasing problem behaviors. However, there is a trending shift in PBIS. This shift focuses on enhancing student quality of life as a primary goal of PBIS and decreasing challenging behaviors as a secondary priority. While a focus on increasing student lifestyle may provide a set of core expectations for positive social skills, it has become clear that there needs to be additional reform within the PBIS model that will continue to effectively deal with more persistent challenging behaviors, not just lifestyle improvements. The emergence of the Prevent-Teach-Reinforce (P-T-R) model appears to be a promising development in terms of increasing the quality of FBA and tertiary PBIS interventions that supports the difficult issues inherent in the expansion of PBIS into dealing with quality of life issues.

Prevent-Teach-Reinforce (P-T-R)

Most of the "evidence-based" interventions that schools are implementing to meet the needs of individuals exhibiting behavioral problems are non-function-based, reactive techniques that rely on punishment, reprimands, and other various implicit verbal redirects (Blood & Neel, 2007). Although the law requires schools to utilize FBAs in the development of BIPs for students with disabilities facing disciplinary action, schools find themselves struggling to effectively integrate this component into their assessment

repertoire due to a lack of a clear, definite standard of practice. The result is a large portion of interventions having poor outcomes. Tilly, Reschly, and Grimes (1998) note that assessments that explain behavior but do not indicate effective interventions are generally useless and potentially harmful to educators and students looking for improved outcomes, and although many state educational agencies have developed their own FBA procedures to meet federal guidelines, there is room for improvement (Weber, Killu, Derby, & Barretto, 2005). The benefits and need for standardized, function-based, and explicit behavior assessments that lead to empirically supported interventions are evident. One such strategy is P-T-R, a standardized, function-based model of PBIS for students with persistent and challenging behavioral problems such as screaming, hitting, talking out, chronic daydreaming, lack of responsiveness, and withdrawal. P-T-R is a data-driven, manual-guided process designed for school-based teams who are working on developing and implementing behavior support plans for individual students. Dunlap and colleagues (2010) describe the P-T-R strategy as:

> A standardized approach to the development and implementation of individualized, school-based positive behavior support. . . . The P-T-R model was created in response to the critical need for a standardized and manualized approach that is effective and feasible in addressing serious behavior problems in typical school circumstances. (Foreward p. x)

The P-T-R strategy relies heavily on FBAs and behavior support plans by combining the principles and procedures of applied behavior analysis and PBIS (Bambara & Kern, 2005; Carr et al., 2002). P-T-R fits into the tertiary level of PBIS,

wherein students with intensive behavioral needs are supported using function-based, individualized interventions. Additionally, the P-T-R approach focuses on manipulating and changing both the learning environment and the way educators teach their students in order to maximize positive outcomes through three pivotal components: (a) Prevent, (b) Teach, and (c) Reinforce. Each component consists of its own assessment protocol that is included in the student's behavior support plan (Dunlap, Iovannone, Wilson, Kincaid, & Strain, 2010).

The "Prevent" component of P-T-R focuses on antecedent manipulations. During the Prevent component of the FBA, data collected will help identify the environmental circumstances associated with the occurrence of the target behavior and guide in redesigning both the teaching and learning environments to decrease the development of problem behaviors. Additionally, the Prevent component emphasizes the importance of educators being proactive in their assessments and interventions.

The "Teach" component focuses on instructional strategies for teaching students as well as directly and clearly providing ample opportunities for students to learn appropriate behaviors that can replaced problem behaviors. The Teach component of the FBA will provide information that will help educators identify the function of the problem behavior and guide the school-based team in selecting appropriate alternative behaviors to teach.

The "Reinforce" component of P-T-R focuses on the identification of reinforcement contingencies. This component hinges on effectively shaping behavior that is appropriate and generalizable. The Reinforce component of the FBA provides data that

will help identify why the student may continue to engage in the target behavior and help the school-based team eliminate the reinforcing properties of such behavior and deliver reinforcement contingent on appropriate/positive behaviors (Dunlap et al., 2010a).

Implementing the P-T-R model is an extensive process and requires effective collaboration within the school-based team. All team members involved need to know the steps and become committed to following through with the recommended steps and frequent team meetings. The P-T-R model manual released in 2010 provides explicit directions for the P-T-R process along with user-friendly forms and self-assessments. The P-T-R process as set forth by Dunlap and colleagues (2010) is explained below.

P-T-R procedure 1: Team building. At minimum, school-based P-T-R teams should include the student's primary education teacher and a P-T-R consultant. The P-T-R consultant can be anybody trained in the P-T-R process or a university-based research consultant. Team building establishes the core-members of the team and sets forth the responsibilities of each team member. Additionally, it is desirable for the team to consist of as many professionals as possible such as school administrators, school psychologists, para-educators, and or counselors and social workers. Parents and family members are also encouraged to become a part of the P-T-R team. During the team building process, a schedule of four to five team meetings are arranged to allow team members to prepare and become trained in the P-T-R process (Dunlap et al., 2010a).

P-T-R procedure 2: Goal setting. The primary focus and purpose of the goal setting step is to identify the student's target behaviors of which the team members consider to be the most important to address. Additionally, team members will agree on

the team's "vision" and develop both long term and short term goals for the team as well as for the student. If the student is already receiving special education services and has an individualized education plan then the P-T-R goals may be similar to that of the student's individualized education plan. Ideally, the student should have three broad goals. The idea behind this P-T-R step is to focus on behavior outcomes, and social relationships as well as academic achievement. Furthermore, team-members must have well-established operational definitions of not only the target behaviors but for each of the goals. By doing so, communication and implementation of the intervention will prove to be a lot easier and more effective. The team will be able to more effectively monitor the student's progress towards those goals and determine whether or not the challenging behavior is actually decreasing and if the appropriate behavior is being exhibited adequately. The goal-setting step of the P-T-R also includes establishing data collection techniques. Dunlap and colleagues provide the Behavior Rating Scale (BRS; Kohler & Strain, 1992), which is a 5-point Likert-type scale, to aide in the daily data collection of the student's target behavior. It is crucial for the P-T-R team to have established operational definitions of the target behaviors in order to maximize the efficacy of the BRS. Finally, the P-T-R team needs to determine how they will measure the target behaviors on the BRS such as frequency, duration, latency, or intensity. To end the goal-setting and data collection step, the team must establish appropriate anchor points for the BRS in order to determine if the student's behavior improves or deteriorates throughout the week/intervention (Dunlap et al., 2010a).

P-T-R procedure 3: P-T-R assessment. The P-T-R Assessment is akin to a FBA and serves to identify specific information regarding the student's target behaviors and ultimately determine the function of the behavior. It is during this step that the antecedents, setting events, and consequences of the student's challenging behavior are identified. Subsequently, the function of the behavior will be the foundation of the upcoming intervention selection. The P-T-R Assessment is in a checklist format consisting of three categories relating to the Prevent component (antecedents and triggers), the Teach component (determining function of the behavior and appropriate alternative behaviors), and the Reinforce component (consequences). Each component of the P-T-R strategy has its own protocol and tools designed specifically to collect data on that particular area. Once the P-T-R assessment has been completed for each of the student's target behaviors, the P-T-R team organizes the information onto the P-T-R Summary form provided in the manual, which will allow the team to develop a hypothesis statement. Additionally, the team develops a hypothesis for the appropriate alternative behavior that matches the hypothesized function of the target behavior. It is at this time that the team-members can start using the P-T-R Assessment data to rank possible interventions (Dunlap et al., 2010a).

P-T-R procedure 4: Intervention selection. After the P-T-R Assessment team completes the FBA for each P-T-R component along with developing a hypothesis statement, the team focuses on developing the student's BIP. A student's behavior intervention plan consists of three components based on the FBA developed from the P-T-R Assessment: (a) a Prevent intervention, (b) a Teach intervention, and (c) a Reinforce

intervention. When selecting a Prevent intervention, it is pertinent that the team reviews the Prevent data from the FBA and identifies the environmental circumstances associated with the occurrence of the student's target behavior. By evaluating the Prevent data, the team can effectively select a prevent intervention from a wide variety of choices as provided in the P-T-R manual that best fits the function of the student's behavior. The P-T-R should follow the same procedures (evaluating the FBA) and select a Teach intervention as well as one Reinforce intervention. One way for the team to come up with one intervention for each component is to have each team member rank order at least three possible interventions for each component and select the intervention that is ranked the highest on average. This allows all team members to share in the process. Once the P-T-R interventions have been selected, implementation should begin. Any coaching or training should be done during this step for team members that will be implementing the interventions. It is crucial that each team member knows and understands each of the steps to ensure adequate fidelity and treatment reliability (Dunlap et al., 2010a).

P-T-R procedure 5: Evaluation. Evaluation of the P-T-R interventions selected should be frequent and as objective as possible. Daily measures of the target behavior should be taken through the BRS as described in step 2 of the P-T-R process. Additionally, team members should be meeting as regularly as possible throughout the school year to ensure that everybody is maintaining their responsibilities and keeping up to date with any intervention changes. If the interventions are providing successful and positive outcomes, then the team must consider the possibility to expanding and generalize these outcomes into other settings. Additionally, teachers should complete a

social validity rating scale that will measure the extent of the intervention acceptability within the classroom. The BRS outcome data combined with the P-T-R Fidelity of Implementation and Teach Social Validity Scale scores provide the team with adequate information to assist them in making appropriate data-based decisions regarding the future of the student's behavior intervention plan (Dunlap et al., 2010a).

Empirical Support for P-T-R

PBIS and applied behavior analysis can be seen as effective approaches for decreasing problem behaviors and increasing socially appropriate tendencies. P-T-R has integrated and developed the widely supported components of these approaches into a manualized function-based process. To date, four studies have evaluated the efficacy and treatment validity of the P-T-R strategy. Iovannone et al. (2009) conducted a randomized, controlled trial investigating the efficacy of Prevent-Teach-Reinforce. Iovannone and colleagues wanted to determine if students receiving the P-T-R interventions would see significantly greater improvements in social skills, academic engagement, and problem behaviors compared to those who did not receive the P-T-R interventions. The study consisted of 245 students in grades K-8 that were selected from five public school districts from Colorado and Florida that were randomly assigned to either a control group or an experimental group. In the control group students received the usual interventions and processes the schools normally provided to students with behavioral problems and students in the experimental group received P-T-R. Results showed that students who received P-T-R interventions had significantly lower problem behaviors, and significantly higher social skills and academic engaged time in

comparison to students in the control group. Students receiving P-T-R interventions saw significantly higher decreases in problem behaviors on average (as reported by the Problem Behaviors subscale on the SSRS) compared to the comparison group who saw average decreases corresponding to an effect size of 0.44. Students receiving P-T-R interventions had significantly higher increases in academic engaged time compared to their counterparts corresponding to a main effect of 0.51. Students in the P-T-R group increased in standard scores from baseline to post-treatment in regards to social skills versus the comparison group corresponding to an effect size of 0.52. Additionally, data collected on the social validity of the P-T-R process indicated that teachers accepted the strategy and thought very highly of it (Iovannone et al., 2009).

Dunlap and colleagues (2010b) illustrated two case studies selected from within the large-scale evaluation and found that the students who received interventions from within the P-T-R strategy had significantly lower occurrences of problem behavior and increased occurrences of prosocial behaviors. Strain, Wilson, and Dunlap (2011) evaluated the efficacy of P-T-R interventions on three elementary school students with autism spectrum disorders (ASD) and serious problem behaviors using a multiple baseline across participants design. Results of the study showed reductions in problem behaviors and increases in academic engagement across all participants. A recent study in 2012 (Sears, Blair, Iovannone, & Crosland) reported similar findings when they examined the feasibility and effectiveness of a modified family-centered P-T-R strategy. Using a multiple baseline design across conditions, the researchers examined changes in target behavior for two young males with ASD. Findings from the study showed a

reduction in child problem behavior and increases in appropriate alternative behavior in both target and non-target routines. In addition, the researchers found that parent participants were able to implement the behavior intervention plan with high levels of fidelity, and both families rated the P-T-R intervention as having high levels of social validity

Purpose of the Current Study

Although there is a solid research examining the effectiveness of function-based interventions, there is very limited research that evaluates the standardized and manualized approach of P-T-R. Furthermore, the current research examining the overall effectiveness of P-T-R is in its infancy with only three studies having evaluated the strategy. Therefore, the purpose of the current study was to assess the overall effectiveness of interventions developed using the manualized P-T-R strategy on children who were exhibiting challenging behavior problems in general education classrooms using a single-subject experimental research design. In addition, the study assessed whether or not teachers perceived the P-T-R strategy and interventions as effective and practical within the confines of their classrooms. The following research questions were investigated:

1. Do students show improvement in the areas of problem behaviors and academic engaged time as a result of the P-T-R interventions?
2. Do classroom teachers consider the implementation of P-T-R to be teacher-friendly and easy to use?

CHAPTER II

METHODS

Participants & Setting

A total of three students were selected from two rural public schools located in north central Minnesota. Student participants were nominated by their teachers on the basis of problem behavior and not on their disability status, response to lower level interventions, or any additional demographic variable. Students engaging in self-injurious behaviors and who are considered to be a danger to others were excluded from the study.

Three teachers were recruited on a voluntary basis by the special education director to participate in the study. Once the teachers were selected, the special education director provided the principal investigator with their contact information, at which time the student selection process began.

The teachers participating in the study nominated students who were engaging in persistent disruptive behaviors in the classroom environment through the use of the Systematic Screening for Behavior Disorders (SSBD; Walker & Severson, 1990). The SSBD is a multiple gating screening procedure designed to identify children who are at risk for serious behavior disorders as well as improve the quality of in-class referrals.

The first gate of SSBD required the participating teachers to rank order five students who were exhibiting problem behaviors in their classroom. The top three students ranked in Gate 1 moved onto the next gate. Gate 2 required the teachers to complete the Critical Events Inventory (CEI; Walker & Severson, 1990), which is a behavioral events checklist that reports adaptive and maladaptive behaviors that have

been exhibited during the past 6 months. The students obtained a score ranging from zero (i.e., no observable problematic behaviors) to 35 (i.e., 35 types of observable problematic behaviors). The teachers were required to answer the following questions on a supplemental form:

1. What is the frequency of the problem behavior?
2. How long has the problem behavior been occurring?
3. How often does the student miss school per week?

Student participants were considered eligible for the study if they had (a) a minimum of five critical events on the CEI of the SSBD, (b) behavior that has persisted for at least two months, and (c) behavior that is exhibited at least once a week. The caregivers of the top ranked student from across all participating classrooms were contacted by the student's teacher to determine if they would be interested in allowing their child to participate in the study. Interested parents and caregivers were contacted by the principal investigator and briefed on the details of the study and were asked to provide informed consent.

After the nomination and consent process, three students were included and participated in all phases of the study. Charlie was a kindergarten boy who had been identified by his classroom teacher as being severely disruptive during large group classroom activities. Information collected through the SSBD indicated that Charlie frequently challenged teacher-imposed limits such as classroom rules, frequently created a disturbance during class activities, and was frequently overly-affectionate with both peers and adults. Charlie only sometimes complied with teacher requests and commands.

He had no identified disabilities and attended kindergarten in the general education setting two to three days a week. Gary was a fifth grade boy who had been identified by his classroom teacher as being disruptive during independent work time and math. Information collected through the SSBD indicated that Gary exhibited sad affect, depression, and feelings of worthlessness to such an extent as to interfere with normal peer and classroom activities as well as demonstrated obsessive-compulsive behaviors, particularly pulling out his eyelashes and hair. Additionally, Gary was reported as frequently arguing with teachers after re-direction and needing punishment before terminating inappropriate behavior. He had no identified disabilities and attended school full time in the general education setting. Hank was a fourth grade boy who had been similarly identified by his classroom teacher as exhibiting persistent and challenging behaviors throughout the day in a variety of settings. Information collected through the SSBD indicated that Hank demonstrated obsessive-compulsive behaviors, frequently ignored teacher warnings or reprimands, frequently required punishment before he terminated inappropriate behavior, and frequently created a disturbance during classroom activities. He had no identified disabilities and attended school full time in the general education setting.

Measurement

Dependent measures for this study focused on both student and teacher outcomes. Student outcomes measured two main dependent variables: (a) problem behavior and (b) academic engaged time. Treatment fidelity and social validity were also measured.

Problem behaviors. Prior to data collection, each teacher identified the problem behaviors exhibited by their student that was most concerning through the use of the SSBD (Walker & Severson, 1991). Operational definitions were then refined during the P-T-R interview process.

All three participants were exhibiting similar problem behaviors that were considered disruptive by their teacher. Charlie's most challenging problem behaviors were off-task, wrecking peers work, making distracting audible vocalizations, and being out-of-seat at inappropriate times. Gary engaged in problem behaviors such as being off-task, arguing, responding inappropriately, blurting out, and walking away from the teacher. Hank's problem behaviors were similar to that of Charlie and Gary with off-task, disruptive audible vocalizations, and purposely distracting his peers by making faces being the most concerning for the teacher. Since target behaviors were similar across all three participants, it was determined that one operational definition of disruptive behavior would be appropriate. Disruptive Behavior was operationally defined as "Student is exhibiting any behaviors or audible vocalizations that are disruptive, interfering with learning, or impeding instructional delivery." Specific examples included fidgeting, drawing on body parts of self or peers, talking out, disruptive interaction with peer(s) that interferes with learning, leaving the assigned instructional area, and making audible vocalizations not related to the instructional task such as singing, humming, or talking back.

Problem behaviors were measured using a 10-second partial-interval direct observation procedure. Direct observations occurred on a daily basis during baseline and

intervention phases in 20-minute sessions. Data from each observation session was summarized as percent of intervals with problem behavior.

Academic engaged time. The operational definition of academic engaged time (AET) was (a) student is looking at instructional materials, (b) student is raising hand, (c) student is working on tasks that the teacher specified, and/or (d) student is engaged in communication with his/her peers or teacher that is relevant to the task at hand.

AET was measured daily using a 10-second whole-interval, direct observation procedure during baseline and intervention phases in 20-minute sessions. AET was measured concurrently with the direct observation of problem behavior.

Behavior Rating Scale (BRS). In conjunction with daily direct observations by the researchers, the BRS was used by the teachers as a supplemental data collection measure. The BRS is a five-point daily rating scale designed specifically for the P-T-R model that measures the frequency, duration, severity, and/or latency of the target behavior based on the goals of the P-T-R team and that of the student(s) (Dunlap et al., 2010a). For this particular study, frequency was used across all three participants. The BRS consisted of behavior anchors (problem behaviors v. appropriate behaviors) that allowed each teacher to avoid having to use a stop-watch to directly count/tally behavior. Since the BRS uses anchor points, which are only estimates or approximations of how often the student engaged in each behavior, it was used as a supplemental data collection measure. Teachers were taught how to use the BRS before baseline and their daily use of the measure was monitored by the primary investigator throughout the study.

P-T-R self-evaluation: Social validity. The P-T-R Social Validity Form, a 15-item scale based on the Treatment Acceptability Rating Form (TARF-Revised; Reimers & Wacker, 1988), was used to measure social validity. This form identified the teachers' perceptions regarding the effectiveness and acceptability of the intervention plan developed by the team. The form contained 15 questions using a 5-point Likert-type scale (e.g., 1 = *not at all acceptable* and 5 = *very acceptable*) with an additional section for any comments the teacher may have had.

Examples of items on the P-T-R Social Validity Form are, (1) Given this student's behavior problems, how acceptable do you find the P-T-R behavior plan? (e.g., 1 = *not at all acceptable* and 5 = *very acceptable*) (2) How well will carrying out this behavior plan fit into the existing routine? (1 = *not well at all* and 5 = *very well*) (3) How willing are you to carry out this behavior plan? (1 = *not at all willing* and 5 = *very willing*). The P-T-R Self-Evaluation: Social Validity Form (see Appendix 2.1) was completed by the teachers at the conclusion of the study.

Treatment fidelity. Treatment fidelity was assessed using the P-T-R Fidelity of Implementation Guide after the teacher had been trained to 90% integrity on each of the interventions or had received 12 hours of coaching support from the principal investigator (see appendix 5.6; Dunlap et al., 2010a). A limit to the amount of coaching a teacher could receive was put into place to control for interference that a large amount of coaching may have had on student outcomes and to keep the amount of coaching similar across teacher participants. Fidelity checks were conducted by the principle investigator directly observing the teachers during implementation of the interventions. Fidelity

checks ensured that teachers were implementing the strategies as intended as well as to evaluate the behavior plan's effectiveness and contextual fit. Teachers were scored on adherence to the intervention steps (completeness) and the quality of the implementation (competence).

Treatment fidelity was measured in 50% of sessions across all participants. Fidelity checks were conducted periodically throughout all phases of the study to ensure that the intervention(s) or components of the intervention(s) were not being implemented during baseline phases. Treatment fidelity was 0% across all three participants in all baseline phases and 100% across participants in all intervention phases when measured during observation sessions. Treatment fidelity was 100% for Charlie's teacher during the follow-up session. Treatment fidelity was 20% for Hank's teacher during follow-up session; however it should be noted that the teacher was no longer implementing the P-T-R interventions but still had a visual cue poster hanging on the classroom wall. A fidelity check for Gary's teacher during a follow-up session was not possible because no follow-up session was conducted.

General Observation Procedures for Problem Behavior and AET

Observers were a school psychologist assigned to the school and school psychology graduate students selected on a voluntary basis. Observers were trained as described below in the section "Interobserver Agreement" and used a stopwatch and observation form to conduct observations. Observers positioned themselves as unobtrusively as possible in the back of the room such that they were a minimal distraction to the class while still being able to clearly see the target student's behavior.

Observers made every effort to avoid identifying which student was being observed by scanning the room during observations.

Interobserver agreement. Interobserver agreement for problem behavior and AET was calculated using the total agreement formula. The formula used to calculate total agreement was: divide the number of agreements by the number of agreements plus disagreements and multiply by 100%. The definition of "agreement" used to calculate total agreement was defined as 'agreement on occurrence or non-occurrence' for both problem behavior and academic engaged time.

Prior to data collection, observers were trained to 90% total agreement on problem behavior and academic engaged time using verbal instruction (i.e., operational definitions, examples, and non-examples) in the classroom on the student participants. Interobserver agreement was collected during 40% of the sessions throughout baseline and intervention phases across all participants.

The mean total agreement during all data collection on Charlie was 98.4%, ranging from 96.7% to 100%. The mean total agreement during all data collection on Gary was 98.34%, ranging from 95.8% to 99.2%. The mean total agreement during all data collection on Hank was 98.7%, ranging from 97.5% to 100%.

Procedures

The procedures of the current study followed the five manualized steps of the P-T-R process (1) Team Building, (2) Goal Setting and Data Collection, (3) P-T-R Assessment, (4) P-T-R Intervention, and (5) Evaluation with follow-up. The effectiveness of the interventions developed during P-T-R were evaluated using a multiple baseline

design across subjects. The following sections provide a detailed description of each step as described in the P-T-R manual (Dunlap et al., 2010a).

Team building. The P-T-R assistance team consisted of the students' primary teacher, the P-T-R consultant, which for the purpose of the study, was the principle investigator, the school psychologist, and a school psychology graduate student. The teacher and P-T-R consultant met between once and twice a week to review all available and relevant data, brainstorm ideas, discuss and make data-based decisions, and gain consensus on what interventions to utilize and the steps of those interventions.

Goal setting and data collection. The P-T-R Goal-Setting Form (see appendix 1.1; Dunlap et al., 2010a) was used by the P-T-R assistance team in developing student goals. The first step of the P-T-R assistance team was to develop broad goals for the student in the areas of behavior, social, and academics, even though for the purpose of this study only changes in behavior was recorded. The broad goals included (a) behavioral outcomes, (b) social interactions or relationships, and (c) necessary behavior changes to achieve positive changes in achievement. An example of a broad behavior goal was, "Charlie will sit in his seat without being disruptive during large group activities."

Next, the P-T-R assistance team developed short-term goals for the student in the areas of behavior, social, and academics. The short-term goals addressed two specific areas, (1) the specific problem behaviors that the team would like to see decrease, and (2) the appropriate behaviors the team would like the student to exhibit in place of the problem behaviors. Each of the student's goals was given clear operational definitions

that were observable, measurable, and significant. For example, Hank's short-term goal for a behavior the team would like to see decreased was "Hank will decrease audible vocalizations that disrupt the classroom such as blurting inappropriate comments and making noises." (See Appendix D for long-term and short-term goals developed for each participant).

Once the P-T-R assistance team developed broad goals and short-term goals for each participant, the team completed the BRS (see Appendix 1.2; Dunlap et al., 2010a), which was the data collection tool by teachers. The first step in developing the BRS was determining appropriate operational definitions of each target behavior. The team utilized the short-term goals previously established in order to construct the BRS. Once the behaviors were clearly defined, the team determined the method of measurement, which for this study was frequency across all three participants. Once the most appropriate method of measurement was determined the team developed anchor points for each BRS. Anchor points were goals along a continuum (Anchor 1 – Anchor 5) that the team wanted to achieve by the end of the intervention and were established for both challenging behaviors and for appropriate behaviors. For example, when setting the first anchor point for Hank's problem behaviors, the team estimated the behavior's occurrence on a normal day. It was estimated that Hank's problem behaviors occurred an average of 8-9 times per day, which then became Anchor 4. Anchor 1 was where the team wanted the occurrence of the problem behaviors to be on an extremely good day (e.g., 0-2 times per day). Anchors 2, 3, and 4 were set for intermediate problem behavior occurrences (e.g., Anchor 2 = *between 3 and 5 times per day*). Anchor 5 was defined as the worst

case scenario of daily problem behavior occurrences (e.g., 10 or more times per day – extremely bad day).

Once the P-T-R assistance team determined goals, developed the BRS, and established anchor points for each student participant, the team selected a start date for collecting data. At this point, the researchers began collecting baseline data via direct classroom observations, and the teachers started using the BRS at the end of each day/routine/observational period by circling the number that best corresponded with their perception of their student's behavior during that measurement period.

P-T-R assessment. At this step in the P-T-R process, the P-T-R assistance team completed functional behavior assessments (FBAs) using the P-T-R FBA Checklist (see Appendix 1.3; Dunlap et al., 2010a) for each participant. The team completed each component (Prevent, Teach, Reinforce) of the FBA Checklist for each of the student's target behaviors. The Prevent component of the FBA identified setting events and antecedents that may be triggering the target behaviors. The Prevent component helped the team determine environmental events and circumstances that were associated with more desired prosocial behaviors for each of the participants. Examples of items on the Prevent component are, "Are there times of the school day when problem behavior is most likely to occur?" and "Are there specific activities when problem behavior is very likely to occur?" The Teach component helped the team determine the function of the students' target behaviors. Examples of items on the Teach component are, "Does the problem behavior seem to be exhibited in order to gain attention from peers?" and "Does the problem behavior seem to be exhibited in order to get away from a non-preferred

classmate or adult?" The Reinforce component of the FBA helped the team identify consequences that were occurring after the problem behavior that could thus be used to increase more appropriate alternative behaviors. Examples of items on the Reinforce component are, "What is the likelihood of the student's problem behavior resulting in acknowledgement (e.g., reprimands, corrections) from teachers or other school staff?" and "Does the student enjoy praise from teachers and other school staff? Does the student enjoy praise from some teachers more than others?" Direct systematic classroom observations are not explicitly built into the P-T-R process, as such; none were conducted during this portion.

Once the P-T-R assistance team completed the FBA Checklist, the data was summarized using the FBA Summary Table (see appendix 1.4; Dunlap et al., 2010a). The team listed each problem behavior as well as prosocial behavior on the summary table and listed setting events, antecedents, and consequences. At this point, the team looked for patterns that could explain when a specific behavior may occur and why. The team recorded possible hypotheses and then selected specific replacement behaviors for each participant.

P-T-R intervention. During this step of the study, the P-T-R assistance team reviewed all of the Prevent interventions, Teach interventions, and Reinforce interventions listed and described in the P-T-R manual. Upon reviewing the interventions, the team completed the P-T-R Intervention Checklist (see Appendix 1.5; Dunlap et al., 2010a) to select possible interventions/strategies that not only best fit the team's hypotheses but also were feasible for the teacher to implement. Using the

intervention checklist, the team rank ordered two to four interventions from each component that were considered best suited for the student. After the team selected at least three strategies (one from each component) across participants, a step-by-step behavior plan using the P-T-R Behavior Intervention Plan Hypothesis form (see Appendix 1.7; Dunlap, et al.) and the P-T-R Behavior Intervention Plan form (see Appendix 1.8; Dunlap, et al.) was developed, which outlined how each intervention was to be implemented. After the team developed a detailed behavior plan, the P-T-R consultant provided training and technical assistance to the classroom teachers using the P-T-R Training Checklist (see Appendix 1.9; Dunlap, et al.). Technical assistance was provided until the teacher implementing the interventions demonstrated accurate implementation of the plan to 90% accuracy. At this point in the study, the teachers began implementing the interventions.

The development of the interventions for each participant was based on the results obtained throughout the P-T-R process. One intervention from each component (Prevent, Teach, Reinforce) was selected and then combined to form each of the participant's P-T-R intervention plan. Since the interventions were individualized, descriptions of the interventions and implementation procedures will be provided separately for each participant.

Charlie's Interventions. Charlie's P-T-R Behavior Intervention Plan consisted of one intervention from each of the P-T-R components (Prevent, Teach, Reinforce). The intervention plan developed by the team was to provide Charlie with environmental supports, which was boundary identification during whole-class floor activities and visual

cues (Prevent), teaching Charlie an appropriate alternative behavior that was physically incompatible with his problem behaviors (Teach), and reinforce the replacement behavior while simultaneously extinguishing problem behavior (Reinforce). Extinction of target behaviors was attempted by no longer allowing Charlie to escape or avoid tasks contingent on him exhibiting disruptive behaviors.

The team integrated the three selected P-T-R interventions into one intervention plan, which was called the "5-Star Listener" intervention. The first step of the intervention provided Charlie with a taped off section on the floor, which indicated clear a clear boundary for him since he consistently moving and distracting his peers during floor-time activities. Second, the teacher provided Charlie with a hand-held 5-star listener cue card that he subsequently would have with him during large group activities. A larger version of the cue card was also posted on the classroom wall. While the environmental supports were provided, the teacher taught Charlie and the rest of the classroom the five steps of being a 5-star listener 1.) Eyes are watching 2.) Ears are listening 3.) Lips are closed 4.) Hands are still, and 5.) Feet are quiet. Prior to each large group activity, the teacher reminded the whole class to be 5-star listeners and briefly reviewed each part. The last part of the intervention plan (Reinforce component) was aimed at increasing the likelihood that Charlie would be a 5-star listener. The teacher met with him privately and immediately after each large group activity. At which time, the teacher provided Charlie with explicit feedback on whether or not he was a 5-star listener. When Charlie exhibited all five parts of being a 5-star listener, the teacher provided him with verbal praise and a

sticker for his progress sheet. At the end of the day if he met his daily goal he was immediately awarded a graham cracker or other treat of his choice.

Gary's Interventions. The same intervention process was used as described above. At least one intervention was selected from each of the P-T-R components (Prevent, Teach, Reinforce). Gary's intervention plan consisted of providing him with environmental support and increase non-contingent reinforcement (Prevent), teaching him an alternative appropriate behavior that is functionally equivalent to his problem behaviors (Teach), and reinforcing the replacement behavior in a functionally equivalent manner (Reinforce). Extinction of target behaviors was attempted by no longer allowing Gary to escape or avoid activities and tasks contingent on him exhibiting disruptive behaviors.

The team integrated the selected P-T-R interventions into one intervention plan, which was called the "Red-Green Card" intervention. The first step of the intervention consisted of the teacher providing Gary with a laminated card that was red on one side and green on the other side. The card was fastened to his class desk with VELCRO®. The teacher explained the reasoning behind the red-green card and the rules for using it. Gary was taught that the card would initially be showing green and when he became frustrated or started feeling like he may become frustrated, he could turn the card over to show red. At which point the teacher would come over to his desk and provide him with support, depending on his needs at that time. From that point on, the teacher would increase non-contingent reinforcement. If Gary continued to be frustrated and left the card red, he was taught to raise his hand and ask for a break. As a result of exhibiting the appropriate

alternative behavior (raising hand), the teacher reinforced the behavior by allowing him to escape the task for a short period of time and verbally praising him for exhibiting the replacement behavior. After the brief break, the teacher would prompt Gary to return to his desk and/or activity. The length of the break varied, depending on the current classroom activity, ranging from 1-3 minutes.

Hank's Interventions. Hank's intervention plan consisted of providing him with opportunities for prosocial behavior and environmental supports (Prevent), teaching him alternative appropriate behaviors that were functionally equivalent to his problem behaviors (Teach), and reinforcing the replacement behavior in a functionally equivalent manner (Reinforce). Extinction of target behaviors was attempted by no longer providing Hank with opportunities for peer attention contingent on him exhibiting disruptive behaviors. During the intervention phases, students were instructed to ignore their peers who were being off-task or disruptive.

The team integrated the P-T-R interventions into one intervention plan, which was called the "Modified Tootling" intervention. The goal of Hank's intervention plan was to assist him in obtaining peer and/or adult attention in an appropriate way. To accomplish this goal, the teacher first introduced the concept of tootling to the classroom using a script provided by the researchers. The procedural script described what tootling was, examples of tootling behaviors, and how to tootle. For the purpose of the study, tootling was defined as, "providing social reinforcement and praise contingent on positive appropriate behavior for that activity or setting (opposite of tattling)". In previous research, tootling consisted of having students report peers' prosocial behaviors (i.e.,

tootle) to teachers (Skinner, Cashwell, & Skinner, 2000). Examples included but weren't limited to: following directions, paying attention to the teacher, working quietly on assignment, sharing, and using materials appropriately. Once the teacher taught the classroom the rules of tootling, the examples were posted on large posters on a wall in the classroom to serve as visual cues and reminders. Hank, as well as his peers, was provided tootling progress sheets so he could keep track of the number of times he was tootled on. Once the teacher introduced the concept of tootling and specific examples, the teacher provided tootling opportunities throughout the day simply by saying "Tootle". At which point, each student looked to his or her partner, who changed throughout the day, and if the peer was exhibiting tootle worthy behaviors, they would reinforce one another by giving verbal praise. Every time Hank or any student got tootled on, he marked it down on his tootling progress sheet. At the end of the day, the student with the most tootles earned a tangible reward, usually a piece of candy.

Evaluation. Evaluation of the P-T-R interventions were done using the daily data collected by the teacher using the BRS and visual analysis of direct observation data collected by the researchers. The team reviewed the baseline data and compared it with the data collected during the intervention phases of the study.

Design and Analysis

The study examined the effectiveness of P-T-R on children with problem behaviors using an A-B-A-B design with follow-up; Component A being baseline with normal classroom services and component B being P-T-R interventions. Follow-up sessions were conducted at varying times after the last intervention phase for each

participant. A follow-up session was conducted at one week for Charlie and four weeks for Hank. Due to time constraints, no follow-up session was conducted for Gary. Visual analysis of level, trend, overlapping data points, and immediacy of effect was used to determine the effectiveness of the P-T-R strategy for each participant.

CHAPTER III

RESULTS

P-T-R Functional Behavior Assessment

Interviews with the three teacher participants using the P-T-R Functional Behavior Assessment Checklist produced the following target behavior hypotheses. To exemplify the information summarized below see the corresponding FBA Summary Table for each participant in Appendix D as developed by the team.

When Charlie is instructed to stay on-task during large group activities, he will move around, talk to peers, fidget, and engage in audible vocalizations that are disruptive. As a result, he is able to temporarily escape the task/activity. It was hypothesized that Charlie's problem behaviors were escape-maintained.

When Gary becomes frustrated, re-directed, or reprimanded, he will roll his eyes, argue, blur out, or walk away. As a result, Gary is temporarily allowed to escape the task/activity. The behaviors were occurring throughout the day but happened at a higher rate during math and group-work. It was hypothesized the Gary's behaviors were escape-maintained.

When Hank is in large or small group activities or settings, he will make audible vocalizations and/or engage in other behaviors that disrupt others around him. As a result, Hank obtains attention via re-direct, verbal reprimands, and/or peer or adult attention. It was hypothesized that Hank's disruptive behaviors were attention-maintained.

P-T-R Interventions

Charlie. Figure 1 depicts the results of the baseline and intervention phases for Charlie. During the first baseline phase Charlie engaged in disruptive behaviors a mean of 16% of the time and academically engaged a mean of 65%. Both dependent variables were stable when the first intervention phase began.

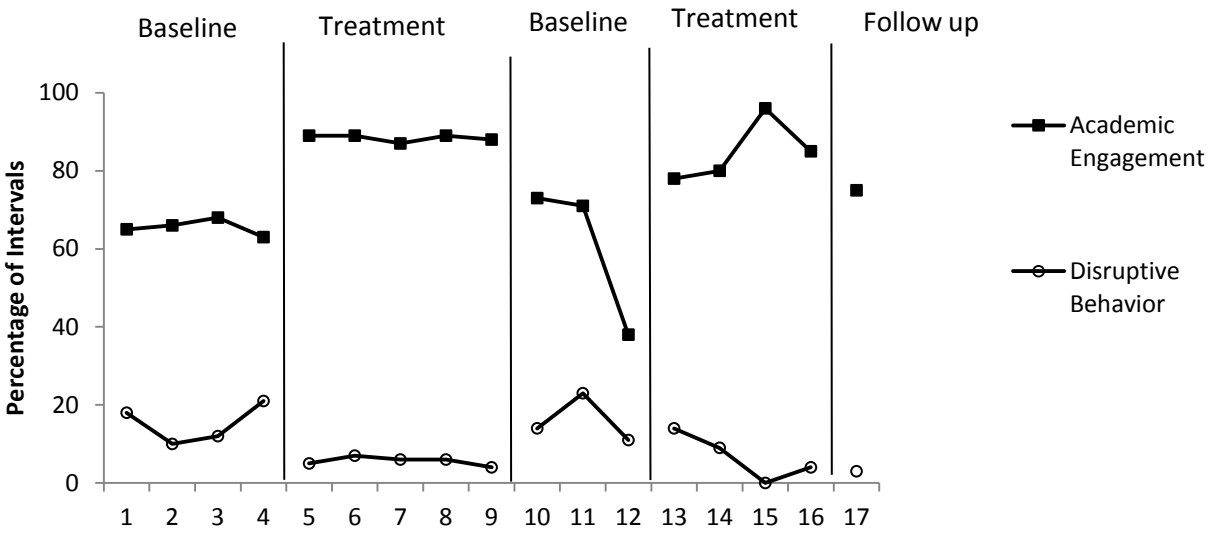

Figure 1. Percent of intervals during which Charlie was engaged in disruptive behaviors and was academically engaged during baseline and intervention conditions.

During the first intervention phase, Charlie engaged in disruptive behaviors an average of 6% of the time and academically engaged an average of 88%. Percentage of intervals with disruptive behavior and academic engagement were very stable throughout

the first intervention phase. Both dependent variables were stable when the second baseline phase began.

When the second baseline phase began, Charlie's disruptive behaviors more than doubled from 6% to 14%. Academic engagement saw a decrease from 88% to 73%. During the second baseline phase he engaged in disruptive behaviors a mean of 16% and was academically engaged a mean of 61%. Charlie's academic engagement was in a downward trend at the end of the second baseline phase, having dropped 33% from the previous data point.

During the second intervention phase, Charlie's disruptive behaviors decreased from the previous baseline mean of 16% to a mean of 7%. Academic engagement increased from the previous baseline mean of 61% to a mean of 85%.

A follow-up session was conducted a week after the second intervention phase was concluded. Disruptive behaviors were observed a total of 3% of intervals and academic engagement was observed a total of 75% of intervals. The 5-star listener intervention was still being implemented by the teacher during the follow-up session.

In summary, a visual analysis shows that the intervention phases decreased Charlie's disruptive behaviors and increased his academic engagement. In addition, phase changes produced immediate effects on both dependent variables as was evident in Figure 1.

Gary. Figure 2 depicts the results of the baseline and intervention conditions for Gary. Throughout the first baseline condition, he was observed engaging in disruptive behaviors a mean of 7% of intervals and was academically engaged a mean of 54% of

intervals. Both dependent variables were fairly stable at the conclusion of the first baseline phase.

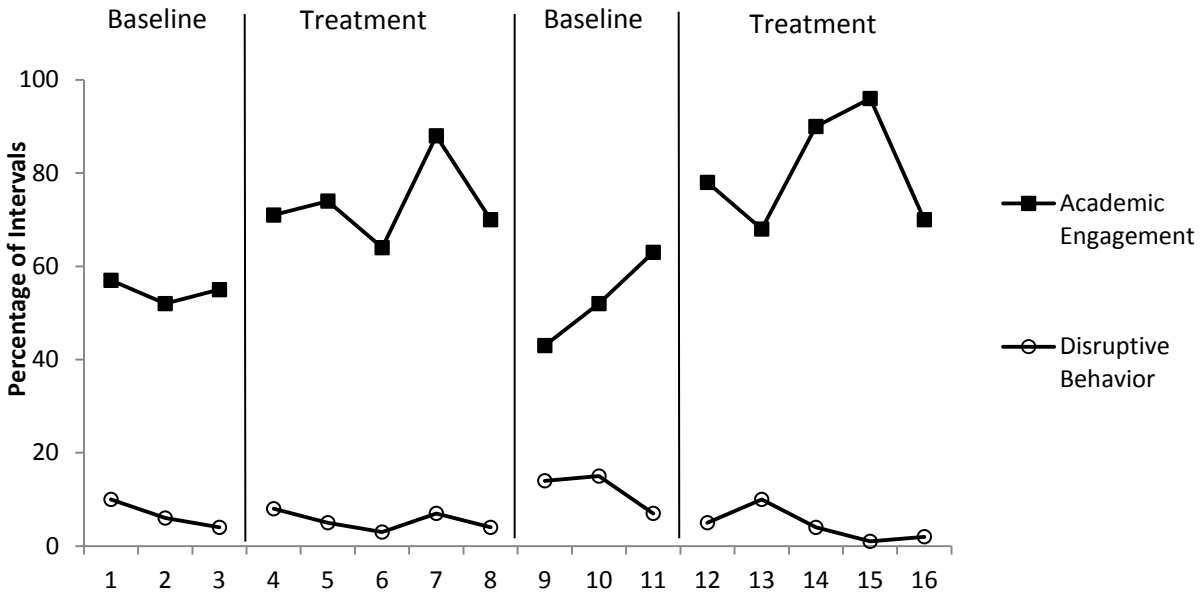

Figure 2: Percent of intervals during which Gary was engaged in disruptive behaviors and was academically engaged during baseline and intervention conditions.

During the first intervention phase, Gary was observed engaging in disruptive behaviors a mean of 5% of intervals and was academically engaged a mean of 74%. There was an initial increase of disruptive behaviors at the start of the first intervention phase from baseline, with an increase from 4% to 8%; however they returned to below-baseline levels soon after.

The return to baseline phase resulted in sharp decreases in academic engagement and increases in disruptive behaviors. Disruptive behavior was observed a mean of 12% of intervals and academic engagement was observed a mean of 53% of intervals, similar to first baseline phase percentages. Disruptive behaviors were on a downward trend at the conclusion of the second baseline phase and academic engagement was on an upward trend.

During the second intervention phase, Gary's disruptive behaviors decreased from the previous baseline condition from a mean of 12% of intervals to 4%. Gary's academic engagement increased substantially from a mean of 53% of intervals to 81%. There was significant variability throughout the second intervention phase for academic engagement, while disruptive behaviors showed slight fluctuations.

In summary, a visual analysis shows that the P-T-R intervention phases resulted in decreases in Gary's disruptive behaviors and increases in academic engagement. A follow-up session was not conducted after the conclusion of this phase due to the school year ending before the researchers could get back into the classroom for an observation.

Hank. Figure 3 depicts the results of the baseline and intervention conditions for Hank. Throughout the first baseline condition, Hank was observed engaging in disruptive behaviors a mean of 20% of intervals and was academically engaged a mean of 42% of intervals. Due to time constraints of the study, it was decided to move onto the first intervention phase even though disruptive behavior was trending downward.

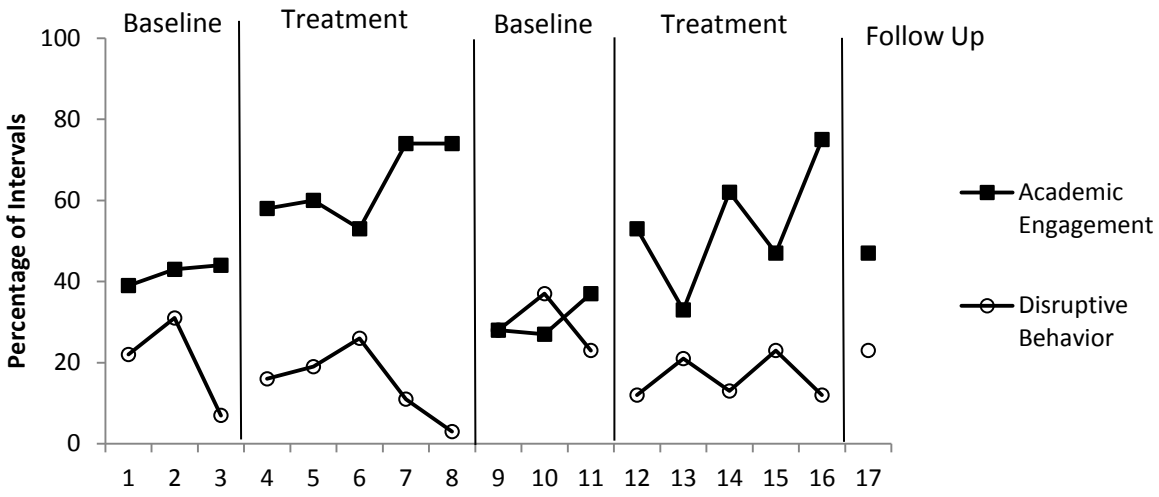

Figure 3: Percent of intervals during which Hank was engaged in disruptive behaviors and was academically engaged during baseline and intervention conditions.

During the first intervention phase, Hank engaged in disruptive behaviors a mean of 15% of intervals, a decrease from 20% from baseline and was academically engaged a mean of 64%, an increase from 42% from baseline. Disruptive behaviors increased sharply at the start of the first intervention phase from baseline, with an increase from 7% to 16%; however they returned to below baseline levels by the end of the intervention phase.

Return to baseline resulted in immediate drastic decreases in academic engagement (74% to 28%) as well as significant increases in disruptive behaviors (3% to 28%). Disruptive behavior was observed a mean total of 29% of intervals and academic

engagement was observed a mean total of 31% of intervals. Although academic engagement and disruptive behavior levels were not very stable and were trending in positive directions at the end of the return to baseline phase, it was decided by the team to move onto the second intervention phase because of the still high rate of disruptive behaviors.

During the second intervention phase, Hank's disruptive behaviors decreased from the previous baseline phase mean total of 29% of intervals to 16%. His academic engagement significantly increased from a mean total of 31% of intervals to 55%. There was significant variability throughout the second intervention phase for academic engagement while disruptive behaviors varied slightly throughout the condition. Academic engagement was trending upwards at the end of the intervention condition while disruptive behaviors saw a decrease from 23% to 12% at the end.

A follow-up session was conducted 4 weeks after the second intervention phase was concluded. At follow-up, disruptive behaviors were observed in 23% of intervals and academic engagement was observed in 47% of intervals. The modified tootling intervention was not being implemented by the teacher during the follow-up session.

In summary, a visual analysis shows that both P-T-R intervention phases slightly decreased Charlie's disruptive behaviors but significantly increased his academic engagement. It is also evident that phase changes produced immediate effects on both dependent variables as was evident in Figure 3.

BRS Data. While the data collected by teachers using the BRS can provide valuable information throughout the intervention implementation process, perceptual

ratings collected are not as reliable as data collected through systematic direct observations. Subsequently, for the purpose of this study, only narrative summaries of the BRS data were provided.

As indicated previously, teacher participants used the BRS in daily collection of the student's targeted behaviors. Charlie's teacher collected daily ratings on disruptive behaviors only, defining the 5-point anchor system in terms of percentage of target behavior occurrence (Anchor 1 = <20% of the time, & Anchor 5 = 81-100% of the time). The BRS was filled out at the end of the day and based on perceived occurrences of disruptive behavior during large group activities. Overall, the BRS data indicates that occurrences of Charlie's disruptive behaviors remained fairly stable throughout all phases of the study with slight decreases in perceived disruptive behaviors during intervention phases.

Gary's teacher collected daily data on disruptive behaviors only using the same methods as Charlie's teacher. Overall, the BRS data indicates that disruptive behavior occurrences remained fairly constant throughout all phases of the study for Gary.

Hank's teacher collected daily data on disruptive behaviors only, using a frequency count for target behaviors (Anchor 1 = 0-2 occurrences & Anchor 5 = 10+ occurrences). The BRS was filled out at the end of the day and based on perceived occurrences of disruptive behaviors throughout the entire school day. The BRS data indicated that Hank had a stable pattern of disruptive behavior occurrences throughout all phases of the study.

Social validity

Analysis of the data provided from the P-T-R Social Validity Forms indicated that the P-T-R process and interventions developed were perceived by the teachers as not only acceptable and teacher friendly, but also were perceived as generally effective, likeable, and non-time-consuming. Additionally, the teachers reported that the PTR interventions easily fit into their existing routine and strongly matched classroom goals. All three teachers expressed willingness to continue the interventions after the study had concluded and were confident that the process could lead to positive outcomes. It is important to note that one of the three teachers indicated that the intervention that had been developed did produce side effects that were noticeable in student behavior and that the interventions did not seem effective. The teacher reported that the student did not like being "singled-out" and periodically complained about the environmental supports that were provided to him. However; this same teacher did report that the intervention was acceptable and not disruptive to the class. Overall, the P-T-R process and interventions developed were perceived as teacher-friendly, acceptable, and easy to implement. To exemplify the information summarized see Social Validity Summary Table in Appendix D.

CHAPTER IV

DISCUSSION

Systematic, data-driven assessments and interventions can be seen as not only complex and time-consuming, but also impractical in real world school settings. School staff, including teachers, may feel under trained and overwhelmed when it comes to effectively and efficiently undertaking these tasks, such as conducting thorough FBAs. Sugai, Lewis-Palmer, and Hagan (1998) reported that FBAs are designed to help educators understand the function of behaviors and to help them obtain a visual picture of what the target behavior looks like in a variety of settings. However, there still exist barriers that keep educators from fully utilizing FBAs to their fullest potential (Conroy, Katsiyannis, Clark, Gable, & Fox, 2002; Van Acker, Boreson, Gable, & Potterton, 2005). These barriers have led to the need for standardized, function-based, and explicit behavior assessments, which is one of the primary reasons for the present study. The Prevent-Teach-Reinforce strategy attempts to eliminate those barriers by providing teachers with an easy to use, teacher friendly, process that is not only standardized but also manualized (Dunlap et al., 2010a).

The Prevent-Teach-Reinforce strategy was developed in 2009 and subsequently only a handful of empirical studies have been conducted to evaluate its effectiveness. In a pilot study Iovannone and colleagues (2009) evaluated 245 students in a randomized controlled trial and found that the students receiving P-T-R interventions had significant gains from pretest to posttest in social skills and academic engaged time and had statistically significant reductions in problem behavior compared to the services-as-usual

group. In 2010, Dunlap and colleagues further analyzed two case studies from within the large-scale pilot study and found that the students who received interventions from within the P-T-R strategy had significantly lower occurrences of problem behavior and increased occurrences of prosocial behaviors. Strain, Wilson, and Dunlap (2011) evaluated three elementary school students with autism spectrum disorders and serious problem behaviors. The results from their study indicated that problem behaviors were reduced and engagement was increased for all of the participants. A more recent study published in 2012 by Sears, Blair, Iovannone, and Crosland examined the feasibility and effectiveness of implementing a modified family-centered version of P-T-R. Results showed a reduction in child problem behavior and increases in appropriate alternative behavior.

The purpose of the present study was to assess the overall effectiveness of interventions developed using the P-T-R strategy on children who were exhibiting persistent, challenging behavior problems. The study attempted to answer two primary questions, "Do students show improvement in the areas of challenging problem behaviors and academic engaged time, as a result of the P-T-R interventions?" and "Do classroom teachers consider the implementation of P-T-R to be teacher-friendly and easy to use?" Also, although the majority of student participants in previous P-T-R studies had disabilities, the participants of the current study did not have any identified disabilities and spent all of their time in the general education classroom.

Similar to the results of previous studies, the current study shows reductions in disruptive behaviors and increases in academic engagement across all three participants

as a result of P-T-R interventions. Although all student participants demonstrated overall decreases in mean problem behavior and increases in mean AET when the P-T-R interventions were implemented, the degree of clinical significance of the improvements varied between students. For example, the improvements in Gary's problem behavior were very difficult to discern on the line graph but the effects on his AET were very easy to discern visually. In fact, it was generally the case that the effects were most apparent for AET as compared to problem behavior.

Discerning the effects of the P-T-R interventions becomes even more convoluted when looking at other pieces of visual analysis such as overlapping data points and trends. There were instances of overlapping data points between baseline and intervention conditions, particularly in regards to problem behavior, across all three participants. For example, visual analysis of Gary's line graph shows there is significant overlap of disruptive behavior data points between baseline and treatment conditions. Another instance of overlap can be seen between Hank's first baseline and intervention phase, where there is overlap on numerous data points between the two conditions. The existence of overlapping data points is problematic because it suggests that, in certain instances, there was a lack of stimulus control of the problem behavior when alternating between baseline and intervention phases.

Further visual analysis of the data shows instances of data trends in undesired directions for two of the three participants. For example, during Gary's first baseline condition, disruptive behaviors trends downward throughout the phase, decreasing from 10% to 4%. Additionally, throughout the second baseline condition for Gary, academic

engaged time trends in a positive direction, increasing from 43% to 63%. A third instance of trending data points can be seen in the first baseline condition for Hank; a positive trend in academic engaged time with an increase from 39% to 44%. Despite instances of data trends, transitions were sometimes made between conditions despite the lack of stability.

When these observations are combined with the lack of clear effectiveness of the intervention indicated in the subjective BRS scores (measures of teacher perception of problem behavior), it is probably most accurate to state that the P-T-R interventions in the present study produced varying degrees of effect but that the effects always trended in the positive direction.

Social validity of the P-T-R strategy was also investigated in the current study. Results show that teachers perceived P-T-R as teacher-friendly and easy to use, which aligns with findings from previous studies. Overall, teachers in the present study found the P-T-R interventions to be acceptable, likeable, non-time consuming, and a good fit for their current classroom routine. Additionally, the teachers indicated that they would be willing to continue implementing the interventions after the conclusion of the study, and they felt that other teachers would also find the P-T-R process acceptable.

Treatment integrity was measured via fidelity checks during 50% of the sessions. Teachers were scored on adherence to the intervention steps and the quality of the implementation. Results showed that teachers implemented the P-T-R interventions with 100% fidelity across all conditions. These findings align with the findings of previous

studies showing that teachers are able to implement P-T-R interventions with integrity over substantial periods of time.

Implications for Future Research

Since the P-T-R strategy is only recently emerging as a viable function-based approach, more research is needed to truly establish its effectiveness in reducing student's problem behavior and increasing academic engaged time. The results of the present A-B-A-B designed study are promising, particularly as the need for single subject research examining P-T-R becomes increasingly warranted. Not only has the present study added to the limited pool of P-T-R studies, but it supports existing literature that has examined the value of FBAs in developing function-based interventions. Future research should also focus on evaluating the efficacy of function-based P-T-R in comparison to non-function based behavioral interventions using the same general procedures that have recently been employed to support the treatment validity of FBA in general (Filter & Horner, 2009; Ingram et al., 2005; Newcomer & Lewis, 2004). It may also be beneficial for future studies to evaluate whether building level teams can be trained in the P-T-R strategy to the level where they can effectively progress through the 5-step P-T-R process without an expert P-T-R consultant. If building level teams can effectively utilize the P-T-R strategy and implement subsequent interventions without consultation from the P-T-R expert, it would provide a substantial benefit to classroom teachers, indicating that generalizing these supports and interventions into the classroom instruction is feasible.

Iovannone and colleagues (2010) found that teachers discontinue implementing the P-T-R interventions after problem behavior decreases or once the study had concluded. It is not known why teachers and staff discontinued effective interventions that seem to have high social and treatment validity. It is recommended that future research looks into why school-based teams and teachers discontinue implementing effective P-T-R interventions. Researchers should also continue to focus on fidelity measures to ensure that P-T-R teams continue to proceed with the standardized steps of the Prevent-Teach-Reinforce strategy as it becomes a more broadly-adopted approach within PBIS.

Limitations

There were several limitations to the study that should be discussed as they may have influenced the findings of the study. The first limitation is sample population. The sample size was small, limited to one gender, and one race/ethnicity. Only three students participated in the study and they were all Caucasian male. Although participants ranged in grade (kindergarten, fourth, and fifth), the sample was inherently limited because the participants were from one rural public school district. Although the limitations caused by the sample size may hinder generalization toward larger populations, they do not affect the internal validity as that was controlled for by the study's A-B-A-B design.

A second limitation of the study is the recruitment method for student participants. Even though students were nominated by their teachers on the basis of problem behavior using the Systematic Screening for Behavior Disorders (SSBD; Walker & Severson, 1990), it was still based on perceived levels of problem behavior and not

supported by any other measure. This was particularly evident during data collection when Gabe was only exhibiting a small percentage of disruptive behaviors. Analysis of the effectiveness of the interventions may have been more straight-forward if the participants had been exhibiting problems behaviors at a higher rate.

The third limitation of the study is the low amount of follow-up sessions. Due to time-constraints, school-attendance of both student and teacher, and school-year ending, a follow-up session was not conducted for Gary. Additionally, the single follow-up session for Charlie was conducted only a week after the conclusion of the last intervention phase. Although there was a follow-up session for Hank at 4 weeks, it was the only one. Additional follow-up sessions would have strengthened the support for the interventions' effectiveness had they been conducted at two, four, and eight weeks from the conclusion of the last condition across participants.

A fourth limitation of the study is that certain condition shifts were made even though stability within the dependent variables was not documented. In particular, a phase shift from Gary's second baseline to second intervention occurred even though there were trending data points in a direction that was unexpected (e.g., increases in academic engagement during baseline).

The last limitations are not necessarily ones of the study, but rather of the inherent weakness within P-T-R. First, while the daily ratings by teachers provide valuable information in terms of progress monitoring, the BRS is a perceptual scale which subsequently puts the reliability of the ratings into question. Additionally, as evident with the current study, the anchor point system within BRS limits the team from

detecting subtle changes in behavior that were evident in the systematic direct observation data that served as the primary data for this study. Second, the FBA component within P-T-R relies heavily on anecdotal information derived from the P-T-R FBA Checklist and not necessarily on systematic classroom observation data. This can be problematic if a P-T-R assessment team lacks expertise in the principles of applied behavior analysis. Consequently, it may be difficult for teams to develop accurate function-based hypotheses.

Conclusion

The present study assessed the effectiveness and social validity of Prevent-Teach-Reinforce, an assessment-based model for students with persistent and challenging behavior problems, using an A-B-A-B design with follow-up. Results showed that P-T-R was marginally effective in reducing disruptive behaviors and generally successful in increasing academic engaged time across all three participants; however in certain instances it was difficult to discern using visual analysis the clinical significance of the improvements. Further, teachers who participated in the study perceived P-T-R as teacher-friendly and easy to use.

P-T-R offers building level teams the opportunity to close the research-practitioner gap by providing them a manualized approach to FBA. In addition to contributing to the ease of development and implementation of function-based interventions, P-T-R can help schools enhance their assessment to intervention supports and facilitate further development of efficient and effective PBIS systems.

APPENDIX A:

CONSENT AND ASSENT FORMS

1. Teacher Consent Form
2. Principal Consent Form
3. Parent/Guardian Consent Form
4. Student Assent Form

Teacher Consent Form

Informed Consent

We are interested in conducting a research project in your school district. At this time, it is our prospect to train teachers such as yourself to use the Prevent-Teach-Reinforce (PTR) strategy, an assessment-based model of Positive Behavior Support (PBS) for students with persistent and challenging behavioral problems such as screaming, hitting, talking out, chronic daydreaming, lack of responsiveness, and withdrawal. Research has shown that the PTR strategy is effective in reducing persistent and challenging problem behaviors in a variety of student populations as well as improving academic engagement.

This proposed research project is in association with the School Psychology Doctoral Program at Minnesota State University, Mankato and has passed review by the human subjects' research board. If you have any questions as to you or your students' rights in participating in this study you can contact the Dean of Graduate Studies, Dr. Barry Ries at (507) 389-2321. In addition, Kevin Filter, Ph.D. is supervising this research, which is being proposed by Brett DeJager, School Psychology Doctoral Graduate Student. If there are any research oriented questions, feel free to call Dr. Filter (507) 389-5828 or Brett DeJager (605) 310-2843.

The following is a description of the research we are requesting to perform:

You will be working closely with a PTR consultant that will help you throughout the entirety of the study and will meet with a PTR team on a weekly basis, depending on the schedules of the team members. Together we will use the PTR strategy to develop interventions that will help decrease problem behaviors for a specific student participant in your classroom. After we develop the intervention(s) with you, we will be in the classroom for about four to six weeks during which time we will ask you to alternate between implementing the intervention(s) and not implementing the intervention(s). The researchers will be collecting implementation fidelity by observing how many of the detailed steps of the intervention you implement. This will also help determine whether the intervention is what is actually causing improvement for the student. Additionally, the researchers will have no interaction with the student participants and will only be conducting daily observations to measure the effectiveness of the intervention(s).

You will collect daily observation data on the student participant(s) using a simple behavior rating scale. The PTR consultant will guide you throughout the PTR 5-step process: (1) Team Building, (2) Goal Setting and Data Collection, (3) PTR Assessment, (4) PTR Interventions, and (5) PTR Evaluation. It is our prospect that you will see decreases in persisting and challenging problem behaviors as well as increases in academic engaged time in the classroom; leading to better student-teacher relationships, less disruption in the classroom, and better school performance.

At no time will we record any behavior of the children in the classroom or an individual who has not consented to our observation. In addition, no identifying information regarding the students will be taken and any identifying information about the teachers will be kept in our secured research lab at Minnesota State University, Mankato in a locked cabinet. The data will be kept for seven years and then destroyed. Only the researchers will have access to the data and the locked cabinets.

Data will be analyzed by Dr. Filter and students associated with our research team in the School Psychology Doctoral Program at Minnesota State University, Mankato who are trained in proper methods of informed consent and confidentiality.

Risks:

We do not anticipate that you or any students in your classroom will experience any harmful effects from participating in this study. However, there is a possibility that the student participant's target behavior may increase during the initial baseline phase of the study until the interventions start, which may create unforeseen problems in the classroom and/or at home. It should also be noted that the school district will see the final data, which creates the potential risk for tension between the teacher and the school management depending on the intervention outcomes. Although this is not likely, it still remains a potential risk.

Benefits:

It is possible that the student participant will not benefit from the study. However, participants that do benefit from the study may see decreases in persisting and challenging problem behaviors as well as increases in academic engaged time in the classroom. This may lead to better student-teacher relationships, less disruption in the classroom, and better school performance.

We intend to complete this study this spring and anticipate working with your school. We appreciate your time in considering working with us on this endeavor. Again, please feel free to contact Dr. Filter at (507) 389-5828 if you have any questions. If you have questions regarding the rights and treatment of human subjects participating in research studies, you can contact the Dean of Graduate Studies, Dr. Barry Ries at (507) 389-2321.

We would greatly appreciate you working with us and request that you complete the below form if you consent to participate.

Sincerely,

Kevin Filter, Ph.D.
Associate Professor of School Psychology

Brett DeJager
Doctoral Graduate Student

^Retain this portion for your records

I have read the above description of the research study on Prevent-Teach-Reinforce (PTR) to be conducted by Kevin Filter, Ph.D. in conjunction with students from the School Psychology Doctoral Program at Minnesota State University, Mankato.

I give consent for researchers associated with this study to observe me in my classroom, collect fidelity data on the implementation of the PTR interventions, and to use the daily rating scale data I provide them.

I understand that refusal to participate in the study will involve no penalty or loss of benefits otherwise entitled to me. I understand that this participation is entirely voluntary; I can withdraw consent at any time without penalty

Teacher's Name (Print): _____

School: _____Grade/Classroom: _____

Level of Education Licensure: _____

Teacher's Signature_____Date_____

Agency Consent Form (Principal)

Dear _____,
Date_____

We are interested in conducting a research project with teachers in your school district. At this time, it is our prospect to train teachers to use the Prevent-Teach-Reinforce (PTR) strategy, an assessment-based model of Positive Behavior Support (PBS) for students with persistent and challenging behavioral problems such as screaming, hitting, talking out, chronic daydreaming, lack of responsiveness, and withdrawal. Data on the instances of problem behaviors as well as academic engagement will be recorded and analyzed through visual analysis of the data. The teachers we are requesting to work with are those working in elementary schools teaching children in general education or special education classrooms.

This proposed research project is in association with the School Psychology Doctoral Program at Minnesota State University, Mankato and has passed review by the human subjects' research board. If you have any questions as to you or your students' rights in participating in this study you can contact the Dean of Graduate Studies, Dr. Barry Ries at (507) 389-2321. In addition, Kevin Filter, Ph.D. is supervising this research, which is being proposed by Brett DeJager, School Psychology Doctoral Graduate Student. If there are any research oriented questions, feel free to call Dr. Filter (507) 389-5828 or Brett DeJager (605) 310-2843.

The following is a description of the research we are requesting to perform:

It is our desire to obtain the consent of teacher(s) within your school district in order to obtain data from their classrooms throughout the entirety of the study. The study will examine the effectiveness of PTR on children with problem behaviors using a single-subject A-B-A-B experimental design with follow-up; Component A being baseline with normal classroom services and component B being PTR interventions. Follow-up sessions will be conducted at two, four, and eight weeks after the last phase of the study has been completed. Each baseline and experimental phase will last approximately one week for a total of at least 4 weeks of data collection before follow-up. Student data will be collected via direct observation and teacher data will be gathered via brief treatment acceptability questionnaires. Research has shown that the PTR strategy is effective in reducing persistent and challenging problem behaviors in a variety of student populations as well as improving academic engagement. Teachers will be provided with a PTR consultant throughout the study as well as given a PTR manual. Additionally, teachers participating in the study will collect daily observation data on the student participant(s) and implement one PTR intervention for each component (Prevent, Teach, Reinforce). The PTR consultant will guide the teacher throughout the PTR 5-step process: (1) Team Building, (2) Goal Setting and Data Collection, (3) PTR Assessment, (4) PTR

Interventions, and (5) PTR Evaluation. It is our prospect that teachers will see decreases in persisting and challenging problem behaviors as well as increases in academic engaged time in the classroom; leading to better student-teacher relationships, less disruption in the classroom, and better school performance.

At no time will we record any behavior of the children in the classroom or an individual who has not consented to our observation. In addition, no identifying information regarding the students will be taken and any identifying information about the teachers will be kept in our secured research lab in a locked cabinet.
Each of the teachers who agree to participate in our study will be asked to give formal consent to the observation of them in their classroom. With agency and teacher consent, the study should take approximately three months.

It is anticipated that the teachers and students of the classroom(s) involved will not experience any harmful affects whatsoever from participating in this study. In this respect, in no way would any information gained from the observation be used in a judgmental manner toward the teacher(s) or be shared with the public in a judgmental manner. Additionally, data will be analyzed by Dr. Filter and students associated with our research team in the School Psychology Doctoral Program at Minnesota State University, Mankato who will be trained in proper methods of informed consent and confidentiality.

We intend to complete this study this spring and anticipate working with your school. We appreciate your time in considering working with us on this endeavor. Again, please feel free to contact Dr. Filter at (507) 389-5828 if you have any questions. If you have questions regarding the rights and treatment of human subjects participating in research studies, you can contact the Dean of Graduate Studies, Dr. Barry Ries at (507) 389-2321.

We would greatly appreciate you working with us and request that you complete the below form giving permission for schools in your district to participate in our research.

Sincerely,

Kevin Filter, Ph.D.
Professor of School Psychology

Brett DeJager
Doctoral Graduate Student

^Retain this portion for your records

I have read the above description of the research study on Prevent-Teach-Reinforce (PTR) to be conducted by Kevin Filter, Ph.D. in conjunction with students from the School Psychology Doctoral Program at Minnesota State University, Mankato. In addition, I understand that participation in this study is voluntary.

I give permission for _____ School to participate in this research study.

In addition, I give permission for the following classrooms to be contacted regarding this study:

_____
___
_____
___
_____
___

Principal's
Name _____ Date
_____

Parental Consent Form for Participation in Research

I give consent for my child _____) to participate in the research titled, "Prevent-Teach-Reinforce as a Model for Function-based Behavior Intervention Planning in Positive Behavior Support," conducted by Kevin Filter, Ph.D. (Professor of School Psychology) and Brett DeJager (School Psychology Doctoral Graduate Student) in association with Minnesota State University, Mankato. Refusal to participate will involve no penalty or loss of benefits otherwise entitled to your child. I understand that this participation is entirely voluntary; I can withdraw consent at any time without penalty and have the results of the participation, to the extent that it can be identified as my child's, removed from the research records or destroyed.

1. The reason for the research is to investigate the effectiveness of the Prevent-Teach-Reinforce (PTR) strategy on decreasing problem behaviors as well as improving academic engagement. The PTR approach focuses on manipulating and changing both the learning environment and the way educators teach their students in order to maximize positive outcomes through three pivotal components, (a) Prevent, (b) Teach, and (c) Reinforce. Each component consists of its own assessment protocol that is included in the student's behavior support plan. It has been suggested by your child's primary teacher that your child may benefit from receiving the additional support provided by this research study.

2. Data collection procedures for this research study will take place over a period of four weeks. During that time, the researchers, along with your child's primary teacher, will be collecting data using daily direct observations in the classroom. Direct observations will occur on a daily basis during baseline and intervention in 20-minute sessions. Your child's primary teacher will fill out a daily rating scale that measures the frequency, duration, severity, and/or latency of certain target behaviors based on the goals of the PTR team and that of your child.

3. Your child will attend classes as usual, but may be working his/her teacher on some new things such as learning new ways to deal with stressful situations, setting daily behavioral goals, and earning rewards (e.g., additional play time) for behaving and following classroom rules. There may be times where your child is rewarded with tangible objects, such as a toy or piece of candy. If this is the case, you will be notified prior to make sure there are not any concerns. These are just a few examples of things your child may be doing if he/she participates in this study.

4. There will be no interaction between the researcher and your child during the daily classroom observations. The researcher will sit in the back of the classroom and observe in a manner that is not noticeable and/or distracting to your child and other students.

5. The results of this participation will be confidential, and will not be released in any individually identifiable form without the prior consent. No identifying information regarding your child, such as your child's name, will be reported. All research materials (e.g., daily observation data, consent forms) will be kept in a lock cabinet in our secured research lab at Minnesota State University, Mankato for seven years. After seven years the information will be destroyed. Only the researchers will have access to the locked cabinet.

Risks:

1. It is anticipated that the teachers and students of the classroom(s) involved will not experience any harmful affects whatsoever from participating in this study. However, there is a possibility that your child's target behavior may increase during the initial baseline phase of the study until the interventions start, which may create unforeseen problems in the classroom and/or at home.

2. Data will be analyzed by Dr. Filter and students associated with our research team in the School Psychology Doctoral Program at Minnesota State University, Mankato who will be trained in proper methods of informed consent and confidentiality.

Benefits:

1. It is possible that your child will not benefit from the study. However, participants that do benefit from the study may see decreases in persisting and challenging problem behaviors as well as increases in academic engaged time in the classroom. This may lead to better student-teacher relationships, less disruption in the classroom, and better school performance.

We intend to complete this study this spring and we appreciate your time in considering working with us on this endeavor. Feel free to contact Dr. Filter at (507) 389-5828 if you have any questions. If you have questions regarding the rights and treatment of human subjects participating in research studies, you can contact the Dean of Graduate Studies, Dr. Barry Ries at (507) 389-2321.

We would greatly appreciate you working with us and request that you sign the below form giving permission for your child to participate in our research.

Sincerely,

Kevin Filter, Ph.D.
Professor of School Psychology

Brett DeJager
Doctoral Graduate Student

_____ _____
_____
_____

Signature of Researchers | Signature of Parent/Guardian | Date

Student Participant Assent Form

A. Purpose and Background

Under the supervision of Dr. Kevin Filter (Psychology Department at Minnesota State University, Mankato), Brett DeJager, a graduate student researcher, is conducting research on the effectiveness of a new classroom model that provides teachers with strategies to help kids stay on task during classroom activities and for helping students dealing with daily problems that may come up.

B. Procedures

If my parents and I agree for me to participate in this research study, the following will occur:

1. I will attend my classes as usual, but I may be working with my teacher on some new things. I may be learning new ways to deal with stressful situations, like when I get upset. I may have daily-goals that I will be working towards meeting, and I may even earn prizes and rewards for behaving and following classroom rules. These are just a few examples of things that I may be doing if I participate in this study.

2. Participation in this study will be over a period of four to six weeks.

3. There will be no consequences if I choose to not participate.

4. There will be no costs to me as a result of taking part in this research study.

5. Identifying information from this study is confidential, which means that my name will not be included in the final results. All other data and study materials will be kept in the secured research lab at Minnesota State University, Mankato in a locked cabinet for seven years and then destroyed.

C. Questions

I have spoken with Brett DeJager about this study and have had my questions answered. If I have any further questions about the study, I can ask them at any time. I can contact Brett DeJager at (605) 310-2843 or have my parents/teacher contact him.

D. Consent

I understand that this participation is entirely voluntary; I can withdraw consent at any time without penalty and have the results of the participation removed from the research records or destroyed. This can be done by letting my parent(s) know I no longer want to participate in the study. The research records containing information pertaining to me will be destroyed if I decide to be removed from the study.

Kevin Filter, Ph.D.	Brett DeJager
Professor of School Psychology	Doctoral Graduate Student
_____	
_____	_____
Signature of Researchers	Signature of Student

APPENDIX B:

OBSERVATION FORMS

1. Researcher Observation Form
2. P-T-R Behavior Rating Scale (BRS)

Participant #_____ Observer Name _____ Date _____

OBSERVATION FORM

1 DB AE	**2** DB AE	**3** DB AE	**4** DB AE	**5** DB AE	**6** (1min) DB AE	**7** DB AE	**8** DB AE	**9** DB AE	**10** DB AE	**11** DB AE	**12** (2min) DB AE	**13** DB AE
14 DB AE	**15** DB AE	**16** DB AE	**17** DB AE	**18** (3min) DB AE	**19** DB AE	**20** DB AE	**21** DB AE	**22** DB AE	**23** DB AE	**24** (4min) DB AE	**25** DB AE	**26** DB AE
27 DB AE	**28** DB AE	**29** DB AE	**30** (5min) DB AE	**31** DB AE	**32** DB AE	**33** DB AE	**34** DB AE	**35** DB AE	**36** (6min) DB AE	**37** DB AE	**38** DB AE	**39** DB AE
40 DB AE	**41** DB AE	**42** (7min) DB AE	**43** DB AE	**44** DB AE	**45** DB AE	**46** DB AE	**47** DB AE	**48** (8min) DB AE	**49** DB AE	**50** DB AE	**51** DB AE	**52** DB AE
53 DB AE	**54** (9min) DB AE	**55** DB AE	**56** DB AE	**57** DB AE	**58** DB AE	**59** DB AE	**60** (10min) DB AE	**61** DB AE	**62** DB AE	**63** DB AE	**64** DB AE	**65** DB AE
66 (11min) DB AE	**67** DB AE	**68** DB AE	**69** DB AE	**70** DB AE	**71** DB AE	**72** (12min) DB AE	**73** DB AE	**74** DB AE	**75** DB AE	**76** DB AE	**77** DB AE	**78** (13min) DB AE
79 DB AE	**80** DB AE	**81** DB AE	**82** DB AE	**83** DB AE	**84** (14min) DB AE	**85** DB AE	**86** DB AE	**87** DB AE	**88** DB AE	**89** DB AE	**90** (15min) DB AE	**91** DB AE
92 DB AE	**93** DB AE	**94** DB AE	**95** DB AE	**96** (16min) DB AE	**97** DB AE	**98** DB AE	**99** DB AE	**100** DB AE	**101** DB AE	**102** (17min) DB AE	**103** DB AE	**104** DB AE
105 DB AE	**106** DB AE	**107** DB AE	**108** (18min) DB AE	**109** DB AE	**110** DB AE	**111** DB AE	**112** DB AE	**113** DB AE	**114** (19min) DB AE	**115** DB AE	**116** DB AE	**117** DB AE
118 DB AE	**119** DB AE	**120** (20min) DB AE	Unique Conditions _____			Total Interval with Problem Behavior _____		Percent Intervals with Problem Behavior _____				

Disruptive Behaviors (DB): Student is exhibiting any behaviors or audible vocalizations that were disruptive, interfering with learning, or impeding instructional delivery. Specific examples include fidgeting; drawing on himself; talking out; disruptive interaction with peer(s) that interferes with learning; leaving the assigned instructional area; and making audible vocalizations not related to the instructional task (e.g., singing, humming, or talking back).

Academic Engaged Time (AET): Student is looking at materials (gaze can leave task for up to 3 seconds) , raising hand, working on tasks that the teacher specified, and/or engaged in communication with his peers or teacher that is relevant to the task at hand.

Appendix 3.2.

PTR Behavior Rating Scale

Student ______________________ School ______________________

Behavior	Date																			
		5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1
		5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1
		5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1
		5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1

APPENDIX C

P-T-R DATA COLLECTION FORMS

1. P-T-R Goal Setting Form
2. P-T-R Functional Behavior Assessment Checklist
3. P-T-R Functional Behavior Assessment Summary Table
4. P-T-R Intervention Checklist
5. P-T-R Intervention Scoring Table
6. P-T-R Behavior Intervention Plan Hypothesis
7. P-T-R Behavior Intervention Plan
8. P-T-R Training Checklist
9. P-T-R Fidelity of Implementation
10. P-T-R Self-Evaluation: Social Validity

PTR Goal-Setting Form

Directions:

1. Identify one broad goal in each category.
2. Under each broad goal, identify the behavior(s) to be decreased and the prosocial behavior(s) to be increased to achieve the broad goal.
3. Clearly define or operationalize the goals so that each goal is
   a. Observable (seen or heard)
   b. Measurable (counted or timed)
   c. Significant (impact on student's life)

Goals for: _____
(student's name)

	Behavioral	**Social**	**Academic**
Broad goals			
Short-term goals decrease			
Short-term goals increase			

Problem behavior: _____ Person responding: _____ Student: _____

PTR Functional Behavior Assessment Checklist

Directions:

1. The following Prevent-Teach-Reinforce (PTR) functional behavioral assessment (FBA) has three sections—Prevent, Teach, and Reinforce—and is 6 pages in length.
2. Complete one FBA for each problem behavior targeted on the behavior rating scale (BRS). For example, if both *hitting others* and *screaming* are listed on the BRS, two FBAs will be completed.
3. Do not complete the assessment on any prosocial/desired behaviors targeted on the BRS.
4. List the problem behavior on the top of each assessment form to ensure responses are given for that behavior only.
5. Answer each question by checking all the appropriate areas that apply, or by writing the response(s) that best describe events related to the problem behavior specified.

PTR Functional Behavior Assessment — PREVENT Component

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

❒ Morning ❒ Before meals ❒ During meals ❒ After meals ❒ Arrival
❒ Afternoon ❒ Dismissal Other: _____

1b. Are there ***times of the school day*** when problem behavior is ***least likely*** to occur? If yes, what are they?

❒ Morning ❒ Before meals ❒ During meals ❒ After meals ❒ Arrival
❒ Afternoon ❒ Dismissal Other: _____

2a. Are there ***specific activities*** when problem behavior is ***very likely*** to occur? If yes, what are they?

❒ Reading/LA	❒ Writing	❒ Math	❒ Science
❒ Independent work	❒ Small-group work	❒ Large-group work	❒ Riding the bus
❒ One-on-one	❒ Computer	❒ Recess	❒ Lunch
❒ Free time	❒ Peer/cooperative work	❒ Centers	❒ Discussions/Q&A
❒ Worksheets, seatwork		❒ Specials (specify) _____	❒ Transitions (specify) _____

Other: _____

2b. Are there ***specific activities*** when cooperative and prosocial behavior is ***very likely*** to occur? What are they?

❒ Reading/LA	❒ Writing	❒ Math	❒ Science
❒ Independent work	❒ Small-group work	❒ Large-group work	❒ Riding the bus
❒ One-on-one	❒ Computer	❒ Recess	❒ Lunch
❒ Free time	❒ Peer/cooperative work	❒ Centers	❒ Discussions/Q&A
❒ Worksheets, seatwork		❒ Specials (specify) _____	❒ Transitions (specify) _____

Other: _____

Prevent-Teach-Reinforce: The School-Based Model of Individualized Positive Behavior Support by G. Dunlap, R. Iovannone, D. Kincaid, K. Wilson, K. Christiansen, P. Strain, and C. English.

PTR FUNCTIONAL BEHAVIOR ASSESSMENT CHECKLIST

Problem behavior: _____ Person responding: _____ Student: _____

Prevent component (continued)

3a. Are there ***specific classmates or adults*** whose proximity is associated with a high likelihood of problem behavior? If so, who are they?

- ❒ Peers (specify) _____
- ❒ Teacher(s) (specify) _____
- ❒ Paraprofessional(s) (specify) _____
- ❒ Other school staff (specify) _____
- ❒ Other family member (specify) _____
- ❒ Bus driver
- ❒ Parent

Other: _____

3b. Are there ***specific classmates or adults*** whose proximity is associated with a high likelihood of cooperative and prosocial behavior? If so, who are they?

- ❒ Peers (specify) _____
- ❒ Teacher(s) (specify) _____
- ❒ Paraprofessional(s) (specify) _____
- ❒ Other school staff (specify) _____
- ❒ Other family member (specify) _____
- ❒ Bus driver
- ❒ Parent

Other: _____

4. Are there ***specific circumstances*** that are associated with a high likelihood of problem behavior?

- ❒ Request to start task
- ❒ Being told work is wrong
- ❒ Reprimand or correction
- ❒ Told "no"
- ❒ Seated near specific peer
- ❒ Task too difficult
- ❒ Task too long
- ❒ End of preferred activity
- ❒ Task is boring
- ❒ Peer teasing or comments
- ❒ Transition
- ❒ Student is alone
- ❒ Unstructured time
- ❒ Novel task
- ❒ Change in schedule
- ❒ Task is repetitive (same task daily)
- ❒ Start of nonpreferred activity
- ❒ Teacher is attending to other students
- ❒ Removal of preferred item
- ❒ Down time (no task specified)

Other: _____

5. Are there conditions in the ***physical environment*** that are associated with a high likelihood of problem behavior? For example, too warm or too cold, too crowded, too much noise, too chaotic, weather conditions….

- ☐ Yes (specify) _____
- ☐ No

6. Are there circumstances ***unrelated to the school setting*** that occur on some days and not other days that may make problem behavior more likely?

- ❒ Illness
- ❒ Allergies
- ❒ Physical condition
- ❒ Hunger
- ❒ Change in diet
- ❒ No medication
- ❒ Change in medication
- ❒ Home conflict
- ❒ Fatigue
- ❒ Change in routine
- ❒ Drug/alcohol abuse
- ❒ Bus conflict
- ❒ Sleep deprivation
- ❒ Parties or social event
- ❒ Parent not home

PTR FUNCTIONAL BEHAVIOR ASSESSMENT CHECKLIST

Problem behavior: _____ Person responding: _____ Student: _____

Prevent component (continued)

❒ Hormones or menstrual cycle

❒ Stayed with noncustodial parent

Other: _____

Additional comments not addressed above in the ***Prevent component:***

PTR Functional Behavior Assessment **TEACH Component**

1. Does the *problem behavior* seem to be exhibited in order to ***gain attention from peers***?
   - ☐ Yes *(list the specific peers)* _____
   - ☐ No

2. Does the *problem behavior* seem to be exhibited in order to ***gain attention from adults***? If so, are there particular adults whose attention is solicited?
   - ☐ Yes *(list the specific adults)* _____
   - ☐ No

3. Does the *problem behavior* seem to be exhibited in order to ***obtain objects*** (e.g., toys or games, materials, food) from peers or adults?
   - ☐ Yes *(list the specific objects)* _____
   - ☐ No

4. Does the *problem behavior* seem to be exhibited in order to ***delay a transition*** from a preferred activity to a nonpreferred activity?
   - ☐ Yes *(list the specific transition)* _____
   - ☐ No

5. Does the *problem behavior* seem to be exhibited in order to ***terminate or delay*** a nonpreferred (e.g., difficult, boring, repetitive) task or activity?
   - ☐ Yes *(list the specific nonpreferred tasks or activities)* _____
   - ☐ No

6. Does the *problem behavior* seem to be exhibited in order to ***get away from*** a nonpreferred classmate or adult?
   - ☐ Yes *(list the specific peers or adults)* _____
   - ☐ No

PTR FUNCTIONAL BEHAVIOR ASSESSMENT CHECKLIST

Problem behavior: _____ Person responding: _____ Student: _____

Teach component (continued)

7. What ***social skill(s)*** could the student learn in order to reduce the likelihood of the *problem behavior* occurring in the future?

❒ Peer interaction ❒ Sharing objects ❒ Taking turns
❒ Play skills ❒ Sharing attention ❒ Losing gracefully
❒ Joint or shared attention ❒ Conversation skills ❒ Making prosocial statements
❒ Waiting for reinforcement ❒ Accepting differences
❒ Getting attention appropriately

Other: _____

8. What ***problem-solving skill(s)*** could the student learn in order to reduce the likelihood of the problem behavior occurring in the future?

❒ Recognizing need for help ❒ Note-taking strategies ❒ Staying engaged
❒ Asking for help ❒ Assignment management ❒ Working independently
❒ Ignoring peers ❒ Graphic organizers ❒ Working with a peer
❒ Making an outline ❒ Self-management
❒ Move ahead to easier items, then go back to difficult items
❒ Using visual supports to work independently
❒ Making choices from several appropriate options

Other: _____

9. What ***communication skill(s)*** could the student learn in order to reduce the likelihood of the problem behavior occurring in the future?

❒ Asking for a break ❒ Raising hand for attention ❒ Asking for help
❒ Requesting information ❒ Requesting wants ❒ Rejecting
❒ Active listening ❒ Commenting ❒ Responding to others
❒ Expressing emotions (frustration, anger, hurt)

Other: _____

Additional comments not addressed above in the ***Teach component:***

PTR FUNCTIONAL BEHAVIOR ASSESSMENT CHECKLIST

Problem behavior: _____ Person responding: _____ Student: _____

PTR Functional Behavior Assessment | **REINFORCE Component**

1. What ***consequence(s)*** usually follow the student's *problem behavior*?

❒ Sent to time-out ❒ Gave personal space ❒ Verbal reprimand
❒ Chair time-out ❒ Stated rules ❒ Head down
❒ Sent to office ❒ Sent home ❒ Calming/soothing
❒ Assistance given ❒ Verbal redirect ❒ Delay in activity
❒ Activity changed ❒ Activity terminated ❒ Physical prompt
❒ Peer reaction ❒ Physical restraint ❒ Removal of reinforcers
❒ Sent to behavior specialist/counselor
❒ Natural consequences (specify) _____
Other: _____

2. Does the student ***enjoy praise*** from teachers and other school staff? Does the student enjoy praise from some teachers more than others?

☐ Yes (*list specific people)* _____
☐ No

3. What is the likelihood of the student's ***appropriate behavior*** (e.g., on-task behavior, cooperation, successful performance) resulting in acknowledgment or praise from teachers or other school staff?

☐ Very likely ☐ Sometimes ☐ Seldom ☐ Never

4. What is the likelihood of the student's ***problem behavior*** resulting in acknowledgment (e.g., reprimands, corrections) from teachers or other school staff?

☐ Very likely ☐ Sometimes ☐ Seldom ☐ Never

5. What school-related items and activities are ***most enjoyable*** to the student? What items or activities could serve as special rewards?

❒ Social interaction with adults ❒ Music ❒ Art activity
❒ Social interaction with peers ❒ Puzzles ❒ Computer
❒ Playing a game ❒ Going outside ❒ Video games
❒ Helping teacher ❒ Going for a walk ❒ Watching TV/video
❒ Extra PE time ❒ Line leader ❒ Reading
❒ Going to media center ❒ Extra free time
❒ Sensory activity (specify) _____
❒ Food (specify) _____
❒ Objects (specify) _____
Other: _____

PTR FUNCTIONAL BEHAVIOR ASSESSMENT CHECKLIST

Problem behavior: _____ Person responding: _____ Student: _____

Reinforce component (continued)

Additional comments not addressed above in the ***Reinforce component:***

PTR Functional Behavior Assessment Summary Table

Directions:

1. Gather all Prevent-Teach-Reinforce (PTR) Functional Behavior Assessments (FBAs) completed for one problem behavior (see Appendix 4.1).
2. List the problem behavior on the FBA Summary Table.
3. Starting with one completed FBA, list events in the respective Prevent, Teach, and Reinforce columns, beginning to identify and group information in patterns.
4. Do the same for events marked for the prosocial behavior.
5. Continue grouping information into the current patterns (or new ones as needed) as the remaining completed FBAs are summarized.
6. As a team, identify the data in the Prevent section that are most likely to result in problem behavior *or* that are most likely to result in problem behavior that is most disruptive to the classroom. List the agreed-upon events in the *When* box of the possible hypothesis.
7. As a team, discuss any discrepancies in the teaching and reinforcement data to ensure an accurate function of problem behavior is identified. List the agreed-upon events in the *as a result* box of the possible hypothesis.
8. As a team, identify the broad category of behavior or the specific replacement behavior the student needs to be taught. List the agreed-upon behavior in the *replacement behavior* box of possible hypotheses.

Student _____ **School** _____ **Date** _____

Behavior	PREVENT data	TEACH data	REINFORCE data

Possible hypotheses

	When	Then	As a result
Problem behavior			
Replacement behavior			

PTR Intervention Checklist

Directions:

1. After reading the summaries of the interventions in Chapter 5, review your hypothesis statement on the PTR Functional Behavior Assessment Summary Table from Chapter 4.
2. Select the interventions that match the information in your hypothesis. Please select *at least two interventions* but *no more than four* in each category (Prevent, Teach, Reinforce). The interventions marked with asterisks are required and must be selected.
3. Rank order the selected interventions by placing a *1* in the box next to the most highly preferred, a *2* next to the second most preferred, and a *3* next to the third most preferred.

Student _____ **School** _____
Date _____ **Completed by** _____
Hypothesis

PREVENT Interventions

__ Providing choices
__ Transition supports
__ Environmental supports
__ Curricular modification (eliminating triggers)
__ Adult verbal behavior (just be nice)
__ Classroom management
__ Increase noncontingent reinforcement
__ Setting event modification
__ Opportunity for prosocial behavior (peer support)
__ Peer modeling or peer reinforcement

TEACH Interventions

****Replacement Behavior**
__ Functionally equivalent
__ Physically incompatible
__ Specific academic skills
__ Problem-solving strategies
__ General coping strategies
__ Specific social skills
__ Teacher-pleasing behaviors
__ Learning skills strategies
__ Self-management (self-monitoring)
__ Independent responding
__ Increased engaged time

REINFORCE Interventions

****Reinforce Replacement Behavior**
__ Functionally equivalent
__ Physically incompatible
__ Discontinue reinforcement of problem behavior
__ Group contingencies (peer, teacher)
__ Increase ratio of + to – responses
__ Home-to-school reinforcement system
__ Delayed gratification

Does the severity or intensity of the student's problem behavior pose a threat to self or others? ❑ Yes ❑ No

If yes, is a crisis intervention plan needed? ❑ Yes ❑ No

**All interventions marked with asterisks need to be selected and included in the student's PTR intervention plan.

PTR Intervention Scoring Table

Directions:

1. Gather all completed PTR Intervention Checklists (see Appendix 5.1).
2. List the interventions ranked first, second, and third by each team member until all interventions are listed.
3. Determine the mean rank of all interventions selected.
4. List the interventions in order of rank.
5. Place an asterisk next to the interventions selected as *1* (one) by the teacher.
6. As a team, discuss the ranked interventions and come to a consensus on at least one Prevent, one Teach, and one Reinforce strategy.

Student _____ **School** _____
Date _____ **Completed by** _____
Hypothesis

Prevent	Rank	Teach	Rank	Reinforce	Rank
1.		1. **Replacement behavior** ❑ Functionally equivalent ❑ Physically incompatible		1. **Reinforce replacement behavior** ❑ Functionally equivalent ❑ Physically incompatible	
2.		2.		2.	
3.		3.		3.	
4.		4.		4.	
5.		5.		5.	
6.		6.		6.	
7.		7.		7.	

A replacement behavior must be included in the student's PTR Behavior Intervention Plan.

PTR Behavior Intervention Plan Hypothesis

Directions:

1. Write the hypothesis developed in Chapter 4 on the top of the Behavior Intervention Plan.
2. List the Prevent intervention strategy in the appropriate *Intervention type* box.
3. Write a step-by-step plan for implementation of the Prevent intervention.
   a. When writing the step-by-step plan, think about each step the intervention agent should perform while implementing the plan. Be as specific as possible.
   b. It also might be helpful to write exactly what the teacher is to say (or provide examples).
   c. List where materials should be kept, when materials should be given to the student, and the number of materials to be given, for example.
   d. List each step the student is to perform.
4. Repeat steps 2 and 3 for all remaining intervention strategies.

Student _____ **School** _____

Hypothesis

PREVENT Behavior Interventions

Intervention type	Specific steps

TEACH Behavior Interventions

Intervention type	Specific steps

REINFORCE Behavior Interventions

Intervention type	Specific steps

PTR Behavior Intervention Plan

Directions:

1. Write the hypothesis developed in Chapter 4 on the top of the Behavioral Intervention Plan.
2. List the Prevent intervention strategy in the *Prevent interventions* column.
3. Write a step-by-step plan for implementation of the Prevent intervention.
   a. When writing the step-by-step plan, think about each step the intervention agent should perform while implementing the plan. Be as specific as possible.
   b. It also might be helpful to write exactly what the teacher is to say (or provide examples).
   c. List where materials should be kept, when materials should be given to the student, and the number of materials to be given, for example.
   d. List each step the student is to perform.
4. Indicate any comments that might be helpful in implementation or resources needed in the Comments box.
5. Repeat steps 2–4 for all remaining intervention strategies.

Student _____ **School** _____

Hypothesis

PREVENT interventions	TEACH interventions	REINFORCE interventions	Comments

PTR Training Checklist

Directions for developing the form:

1. Select an intervention and write it next to the appropriate component.
2. As a team, use the specific, step-by-step Behavior Intervention Plan to identify the steps to be performed. Write one step in each box.
3. Repeat steps 1 and 2 for the remaining interventions.

Directions for completing the form:

1. Conduct training during a time when students are not present.
2. As a team, discuss the steps of implementation.
3. Next, use direct instruction methods to practice each step (i.e., role play, modeling, feedback).
4. Circle *Yes* if the intervention agent (i.e., person implementing the plan) correctly implements step(s).
5. Circle *No* if the intervention agent does not correctly implement step(s).
6. Calculate the percent score.
7. If the percent score is less than 100%, the team should discuss if further training is needed or develop a plan to ensure the weak steps are addressed during technical assistance.

Student _____

Intervention agent _____

Date of training _____

Task Analysis of Intervention	Did the implementer complete the step?
PREVENT Component	
1.	☐ Yes ☐ No
2.	☐ Yes ☐ No
3.	☐ Yes ☐ No
4.	☐ Yes ☐ No
5.	☐ Yes ☐ No
6.	☐ Yes ☐ No
TEACH Component	
1.	☐ Yes ☐ No
2.	☐ Yes ☐ No
3.	☐ Yes ☐ No
4.	☐ Yes ☐ No
5.	☐ Yes ☐ No
6.	☐ Yes ☐ No
REINFORCE Component	
1.	☐ Yes ☐ No
2.	☐ Yes ☐ No
3.	☐ Yes ☐ No
4.	☐ Yes ☐ No
5.	☐ Yes ☐ No
6.	☐ Yes ☐ No
TOTAL (# Yes / # Total)	
Percent Score	

PTR Fidelity of Implementation

Directions for developing the form:

1. Select an intervention and write it in the *Intervention strategy* box.
2. As a team, use the specific, step-by-step Behavior Intervention Plan to identify the minimal steps needing to be performed for the intervention to exist. Write the step(s) in the *Adherence* box.
3. As a team, use the specific, step-by-step Behavior Intervention Plan to identify the additional steps needing to be performed for the intervention to have the greatest effect. Write the step(s) in the *Quality* box.
4. Repeat steps 1–3 for the remaining interventions.

Directions for completing the form:

1. Observe during a time when the Behavior Intervention Plan is being implemented *and* problem behavior is likely to occur.
2. Select Yes if the intervention agent (i.e., person implementing the plan) correctly implements step(s).
3. Select No if the intervention agent does not correctly implement step(s).
4. Select Not appliable if, at the end of the observation, the intervention agent did not have the opportunity to implement step(s) because the event did not occur (e.g., student did not use replacement behavior, choice strategy applies to reading and observation occurred during math).
5. Calculate intervention strategy, total adherence, total quality, and total fidelity scores by adding up the respective Yes scores and dividing by the respective Yes plus No scores.

Student _____ **Intervention agent** _____

Recorder _____ **Date** _____

Intervention strategy	**Adherence— At a minimum, is it being implemented?**	**Quality— How well is it being implemented?**	**Intervention strategy score** (add Ys then divide by Ys + Ns)
	Not appliable	Not appliable	
	Not appliable	Not appliable	
	Not appliable	Not appliable	
	Not appliable	Not appliable	
	Not appliable	Not appliable	
	Total adherence score (add Ys then divide by Ys + Ns)	**Total quality score** (add Ys then divide by Ys + Ns)	**Total fidelity score** (add total scores)

PTR Self-Evaluation: Social Validity

Directions: Please score each item by circling the number that best indicates how you feel about the PTR intervention(s).

1. Given this student's behavior problems, how acceptable do you find the PTR behavior plan?

1	2	3	4	5
Not at all acceptable		Neutral		Very acceptable

2. How willing are you to carry out this behavior plan?

1	2	3	4	5
Not at all willing		Neutral		Very willing

3. To what extent do you think there might be disadvantages in following this behavior plan?

1	2	3	4	5
None likely		Neutral		Many likely

4. How much time will be needed each day for you to carry out this behavior plan?

1	2	3	4	5
Little time will be needed		Neutral		Much time will be needed

5. How confident are you that the behavior plan will be effective for this student?

1	2	3	4	5
Not at all confident		Neutral		Very confident

6. How likely is this behavior plan to make permanent improvements in this student's behavior?

1	2	3	4	5
Unlikely		Neutral		Very likely

7. How disruptive will it be to carry out this behavior plan?

1	2	3	4	5
Not at all disruptive		Neutral		Very disruptive

8. How much do you like the procedures used in the proposed behavior plan?

1	2	3	4	5
Do not like them at all		Neutral		Like them very much

Appendix (continued)

9. How willing will other staff members be to help carry out this behavior plan?

1	2	3	4	5
Not at all willing		Neutral		Very willing

10. To what extent are undesirable side effects likely to result from this behavior plan?

1	2	3	4	5
No side effects likely		Neutral		Many side effects likely

11. How much discomfort is this student likely to experience during this behavior plan?

1	2	3	4	5
No discomfort at all		Neutral		Very much discomfort

12. How willing would you be to change your routines to carry out this behavior plan?

1	2	3	4	5
Not at all willing		Neutral		Very willing

13. How well will carrying out this behavior plan fit into the existing routine?

1	2	3	4	5
Not at all well		Neutral		Very well

14. How effective will the intervention be in teaching your student appropriate behavior?

1	2	3	4	5
Not at all effective		Neutral		Very effective

15. How well does the goal of the intervention fit with the team's goals to improve the student's behavior?

1	2	3	4	5
Not at all		Neutral		Very much

Addendum to Social Validity: Do you have any additional comments to make about the intervention and its effect on the student and/or the class? For example, are other students now making additional social invites to the student, or does the student seem to do better in other routines not targeted for the intervention?

APPENDIX D:

RESULTS

1.) Student Short and Long Term Goals (P-T-R Goal-Setting Form)

2.) P-T-R FBA Summary Table

3.) Social Validity Summary Table

PTR Goal-Setting Form

Directions:

1. Identify one broad goal in each category.
2. Under each broad goal, identify the behavior(s) to be decreased and the prosocial behavior(s) to be increased to achieve the broad goal.
3. Clearly define or operationalize the goals so that each goal is
   a. Observable (seen or heard)
   b. Measurable (counted or timed)
   c. Significant (impact on student's life)

Goals for: GARY
(student's name)

	Behavioral	**Social**	**Academic**
Broad goals	Gary will follow redirection from Teacher in an appropriate manner.	Gary will demonstrate appropriate behaviors interacting with peers when transitioning from activities.	Gary will increase his on task engagement during academic activity.
Short-term goals decrease	Gary will decrease his eye rolling, arguing, and walking away when being redirected.	Gary will reduce the number of times he engages another student negatively during instruction and/or transitioning from one activity/lesson to another.	Gary will decrease his amount of time out of seat, inattention, and hair twirling during academic activity.
Short-term goals increase	Gary will increase appropriate response when given redirection.	Gary will appropriately get a drink, sharpen pencil, and return to desk quickly by respecting peers who are working.	Gary will increase the amount of time in his seat, with eyes focused on me and/or work , materials during academic assignments.

PTR Goal-Setting Form

Directions:

1. Identify one broad goal in each category.
2. Under each broad goal, identify the behavior(s) to be decreased and the prosocial behavior(s) to be increased to achieve the broad goal.
3. Clearly define or operationalize the goals so that each goal is
   a. Observable (seen or heard)
   b. Measurable (counted or timed)
   c. Significant (impact on student's life)

Goals for: HANK
(student's name)

	Behavioral	**Social**	**Academic**
Broad goals	Hank will not disrupt the class.	Hank will not distract his peers which may alienate them from him (this is not currently a problem).	Hank will pay attention and not make noises so he can focus on instruction and work. (AET)
Short-term goals decrease	Hank will decrease audible vocalizations that disrupt (ex: blurting inappropriate comments, making noises).	Hank will decrease the number of times he blurts or talks during class time which may distract his peers.	Hank will decrease off-task behaviors such as noise making and blurting during teaching/learning time so he is listening to instruction. (AET)
Short-term goals increase	Hank will increase on-task behavior during class time.	Hank will increase on task behavior so he is not alienated from his peers	Hank will increase the time on-task without making noises during instruction and work time so he can improve understanding in subject areas. (AET)

PTR Goal-Setting Form

Directions:

1. Identify one broad goal in each category.
2. Under each broad goal, identify the behavior(s) to be decreased and the prosocial behavior(s) to be increased to achieve the broad goal.
3. Clearly define or operationalize the goals so that each goal is
   a. Observable (seen or heard)
   b. Measurable (counted or timed)
   c. Significant (impact on student's life)

Goals for: CHARLIE
(student's name)

	Behavioral	**Social**	**Academic**
Broad goals	Charlie will sit in seat without being disruptive in large group settings.	Charlie will demonstrate age-appropriate skills to maintain friends.	Charlie will increase task engaged time during academic activities.
Short-term goals decrease	Charlie will decrease off-task behaviors and audible vocalizations that disrupt (ex: moving around, blurting inappropriate comments, making noises)	Charlie will not bother peers as much (ex: wrecking their school work).	Charlie will decrease audible vocalizations that disruptive classroom instruction/peers and moving around.
Short-term goals increase	Charlie will increase academic engaged time and keep his body in control.	Charlie will increase positive interaction with peers.	Charlie will stay on-task and stay focused during academic activities. Increase AET.

PTR Functional Behavior Assessment Summary Table

Directions:

1. Gather all Prevent-Teach-Reinforce (PTR) Functional Behavior Assessments (FBAs) completed for one problem behavior (see Appendix 4.1).
2. List the problem behavior on the FBA Summary Table.
3. Starting with one completed FBA, list events in the respective Prevent, Teach, and Reinforce columns, beginning to identify and group information in patterns.
4. Do the same for events marked for the prosocial behavior.
5. Continue grouping information into the current patterns (or new ones as needed) as the remaining completed FBAs are summarized.
6. As a team, identify the data in the Prevent section that are most likely to result in problem behavior *or* that are most likely to result in problem behavior that is most disruptive to the classroom. List the agreed-upon events in the *When* box of the possible hypothesis.
7. As a team, discuss any discrepancies in the teaching and reinforcement data to ensure an accurate function of problem behavior is identified. List the agreed-upon events in the *as a result* box of the possible hypothesis.
8. As a team, identify the broad category of behavior or the specific replacement behavior the student needs to be taught. List the agreed-upon behavior in the *replacement behavior* box of possible hypotheses.

Student Charlie **School** _____ **Date** _____

Behavior	PREVENT data	TEACH data	REINFORCE data
Disruptive (talking, noises, fidget)	Large group setting - activities that require listening to teachers	Escape from undesired task (ex: tasks he finds boring)	Warning (1-2-3 magic) Take 5 at 3 Sit out during free play
On-Task (focused, AET)	When he has something he can manipulate himself or that he's interested in	Attention... Direct & Explicit	Earning cards back Verbal Praise Sticker for Good Behav.

Possible hypotheses

	When	Then	As a result
Problem behavior	When required to stay on-task during large group activities	He will become off-task by moving around, talking, noisy	He gets to escape a task he finds undesirable or boring. He typically gets a verbal reprimand.
Replacement behavior	When required to stay on-task during large group activities	He will: eyes on teacher, lips are quiet, ears are listening, hands are still, fit are quiet/still	He will stay academically engaged and get to keep his "green-card" (1-2-3 magic)

PTR Functional Behavior Assessment Summary Table

Directions:

1. Gather all Prevent-Teach-Reinforce (PTR) Functional Behavior Assessments (FBAs) completed for one problem behavior (see Appendix 4.1).
2. List the problem behavior on the FBA Summary Table.
3. Starting with one completed FBA, list events in the respective Prevent, Teach, and Reinforce columns, beginning to identify and group information in patterns.
4. Do the same for events marked for the prosocial behavior.
5. Continue grouping information into the current patterns (or new ones as needed) as the remaining completed FBAs are summarized.
6. As a team, identify the data in the Prevent section that are most likely to result in problem behavior *or* that are most likely to result in problem behavior that is most disruptive to the classroom. List the agreed-upon events in the *When* box of the possible hypothesis.
7. As a team, discuss any discrepancies in the teaching and reinforcement data to ensure an accurate function of problem behavior is identified. List the agreed-upon events in the *as a result* box of the possible hypothesis.
8. As a team, identify the broad category of behavior or the specific replacement behavior the student needs to be taught. List the agreed-upon behavior in the *replacement behavior* box of possible hypotheses.

Student Gary **School** _____ **Date** _____

Behavior	PREVENT data	TEACH data	REINFORCE data
Disruptive (arguing, out of seat, blurt)	Math - Free Time - Independent Work Time - Peer Work	**Escape/Avoidance**	TO in hallway, loss of recess, verb. reprimand
Prosocial & On-Task	One-on-one situations (sometimes)	Positive Attention	Playing a game - verbal praise

Possible hypotheses

	When	Then	As a result
Problem behavior	When Gary is re-directed and/or reprimanded	He will roll his eyes, argue, or walk away	He's allowed to take a short break from task
Replacement behavior	When Gary is re-directed and/or reprimanded	He will respond appropriately and respectfully	He doesn't disrupt the classroom and will be allowed to take a short break from task.

PTR Functional Behavior Assessment Summary Table

Directions:

1. Gather all Prevent-Teach-Reinforce (PTR) Functional Behavior Assessments (FBAs) completed for one problem behavior (see Appendix 4.1).
2. List the problem behavior on the FBA Summary Table.
3. Starting with one completed FBA, list events in the respective Prevent, Teach, and Reinforce columns, beginning to identify and group information in patterns.
4. Do the same for events marked for the prosocial behavior.
5. Continue grouping information into the current patterns (or new ones as needed) as the remaining completed FBAs are summarized.
6. As a team, identify the data in the Prevent section that are most likely to result in problem behavior *or* that are most likely to result in problem behavior that is most disruptive to the classroom. List the agreed-upon events in the *When* box of the possible hypothesis.
7. As a team, discuss any discrepancies in the teaching and reinforcement data to ensure an accurate function of problem behavior is identified. List the agreed-upon events in the *as a result* box of the possible hypothesis.
8. As a team, identify the broad category of behavior or the specific replacement behavior the student needs to be taught. List the agreed-upon behavior in the *replacement behavior* box of possible hypotheses.

Student Hank _____ **School** _____ **Date** _____

Behavior	PREVENT data	TEACH data	REINFORCE data
Disruptive Behavior (audible voc)	Task too difficult - math - lang arts - unstructured activities - girls he likes	Positive & Negative Attention	Sent to time out (room or hallway), verb reprimand, contact mom
Academic Engaged Time	Small group work when he gets to pick his group	Peer Attention	Extra recess/free time, computer games

Possible hypotheses

	When	Then	As a result
Problem behavior	When Hank is in group activities (small or large)	He will make audible vocalizations that disrupt the classroom	He is re-directed and/or receives a verb reprimand & obtains attention from peers/adults
Replacement behavior	When Hank is in group activities (small or large)	He will stay focused and engaged with instruction/task at hand	He will not get re-directed, receive verbal reprimands, and will obtain attention from peers/adults for engaging in an appropriate manner

Social Validity Summary Table

	Charlie's Teacher	Gary's Teacher	Hank's Teacher
Acceptability	4	4	4
Willingness	4	4	4
Disadvantages*	2	2	2
Time*	1	1	2
Confidence	4	3	3
Permanence	3	2	3
Disruptive*	1	1	2
Likeability	4	4	4
Feasibility among other teachers	3	4	4
Side Effects*	2	4	2
Student Discomfort*	1	4	2
Change Routine	4	4	4
Fit into Existing Routing	4	4	4
Effectiveness	4	2	4
Goal Matching	4	4	4

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