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Evaluation of the Class Pass Intervention (CPI): An Application to Improve Classroom Behavior in Children with Disabilities

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Evaluation of the Class Pass Intervention (CPI): An Application to Improve Classroom Behavior in Children with Disabilities

by

Taylor Narozanick

A thesis defense submitted in partial fulfillment of the requirements for the degree of Master of Arts Applied Behavior Analysis Department of Child and Family Studies College of Behavioral and Community Science University of South Florida

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Keywords: Class Pass Intervention, disruptive behavior, Tier II intervention, behavior analysis

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Dedication

I dedicate this manuscript to my parents, Carol and John Narojanick, for teaching me the true value of hard work while remembering to laugh at the difficult times because life is too short and everything works out as it is supposed to. To my best friend and boyfriend who have been the best cheerleaders throughout this program, Corinn and Tad, I wouldn’t have enjoyed these past couple of years as much without you. To the great friends that I have made at USF, Erin, Kiersty, Lori, Mike, my Project ABA people, and everyone in my cohort, you have motivated me more than I thought possible and created so many great memories.

I can’t thank you all enough, however I hope you see that my efforts would not have gone as far without all of the unconditional support you have provided me.
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Abstract

The Class Pass Intervention (CPI) is designed to be implemented within school-wide PBIS to decrease disruptive behavior and teach an appropriate replacement behavior for students needing Tier 2 intervention. The purpose of the present study was to extend the literature on the CPI by further evaluating the impact of the first component of the CPI on disruptive behavior and academic engagement of elementary school children with disabilities engaging in mild to moderate disruptive behavior. Three students and their respective teachers participated in the study. A multiple baseline across participants design with an embedded reversal was used to demonstrate the impact of the CPI on student behavior during a targeted problematic routine. The results indicated that the CPI was effective in decreasing disruptive behavior and increasing academic engagement for all participating students. Results were maintained for one participant while fading the magnitude of the intervention. Students and teachers rated CPI as effective and acceptable.
Introduction

In the classroom setting, disruptive behavior negatively affects the individual engaging in the behavior, interferes with the learning of others, and detracts from the instruction provided by the teachers (Walker, Ramsey, & Gresham, 2004; Westling, 2010). Disruptive behavior, such as call outs, talking to a peer without permission, out of seat, making inappropriate noises, and playing with irrelevant objects, has been defined in the literature as behaviors that are distracting to others or impede ongoing activities in the classroom (Cook et al., 2014). Teachers often report that disruptive behavior is a major concern (Pisacreta, Tincani, Connell, & Axelrod, 2011). In fact, behavioral problems have been consistently reported to be the greatest obstacle in delivering an effective education (Emerson et al., 2001). However, teachers over-rely on aversive consequences in the form of reprimands following disruptive behavior and often provide praise and other positive consequences for appropriate behavior unpredictably and infrequently (Van Acker & Grant, 1996). More proactive and preventative strategies should be implemented to address disciplinary issues (Sugai & Horner, 2002), but teachers may not have the training to effectively address those behaviors labeled as disruptive (Van Acker & Grant, 1996). Multi-tiered System of Support, specifically, Positive Behavioral Interventions and Supports (PBIS), addresses the need for proactive strategies. PBIS is currently being implemented in over 23,000 schools (“Positive Behavioral Interventions & Support, 2017), showing that it has been growing in popularity in the United States to manage student behavior and improve academic performance (Lewis & Sugai, 1999).
PBIS is an educational framework that employs evidence-based practices to decrease problem behavior and increase appropriate behavior within three tiers of support; each tier differing in the amount of support and individualization provided (Horner et al., 2009; Lewis & Sugai, 1999). PBIS integrates applied behavior analysis and a systems perspective while putting social validity and practicality at the forefront (Sugai et al., 2000). The level of support each student requires is determined by analyzing outcome data, such as office discipline referrals, detention, in- and out-of-school suspensions, attendance, and test scores (Anderson & Kincaid, 2005). At all levels of support, data are collected to guide decision-making. Data are collected more frequently as supports become more individualized (Horner, Sugai, & Anderson, 2010).

Behavior problems may be prevented with universal interventions (Tier I). If behavior problems arise and persist, students may need supplementary (Tier II) support or even tailored (Tier III) support (Sugai, Sprague, Horner, & Walker, 2000).

Tier II supports, also known as targeted supports or secondary prevention, within PBIS are provided to individuals who require more focused assessment and intervention strategies than Tier I alone offers. This secondary level of supports is designed for quick behavior change with minimal cost (March & Horner, 2002; Sugai & Horner, 2002). Tier II interventions prevent at-risk students from requiring intensive supports (March & Horner, 2002; Sugai & Horner, 2002). Approximately 10-15% of the student population may be in need of Tier II supports and do not require Tier III supports. Continuous availability, minimal teacher and staff response effort, voluntary student participation, and ongoing data collection used to make data-based decisions are important components of Tier II interventions (Lee, Sugai, & Horner, 1999). Additionally, implementation is consistent or similar across all students who receive the Tier II intervention (Horner et al., 2010). The Tier II interventions do not require that a functional behavior
assessment be completed (March & Horner, 2002). Sometimes, the interventions are provided in small-groups. The evidence base of Tier II behavior supports and interventions in the school setting, such as the Good Behavior Game, is growing (Embry, 2002). Multiple studies have shown positive outcomes of potential Tier II interventions (e.g., Barrish, Saunders, & Wolf, 1969; Campbell & Anderson, 2008; Fairbanks et al., 2007), yet meeting student needs with limited resources is challenging (Maggin, Zurheide, Pickett, & Baillie, 2015).

Given the difficulty of selecting and implementing behavioral interventions in the school setting, there is a need for Tier II interventions that are contextually fit with the school environment. Sugai et al. (2000) report that one of the greatest problems schools are faced with when attempting to prevent and reduce problem behavior is that they cannot create and sustain contextually fit interventions. Interventions, specifically Tier II interventions, should be tested in the school setting to provide teachers with effective interventions that require minimal teacher time and school resources and can be implemented with fidelity by teachers (Maggin et al., 2015). Research indicates that an intervention that is contextually fit to the implementation setting is typically implemented with high levels of fidelity (Albin, Lucyshyn, Horner, & Flannery, 1996).

Interventions must not only be effective in evoking behavior change; they must also be designed with the target environment and behavior change agents in mind (Albin et al., 1996). Social validity refers to the social significance of the behavior goals targeted, appropriateness of the interventions, and importance of the outcomes (Wolf, 1978). One of the most important factors for teachers to consider an intervention to be socially valid is the practicality of implementation and adhering to interventions (Miramontes et al., 2011). Social validity promotes intervention implementation with integrity and maintenance (Albin et al., 1996). The preferences
of implementers should be considered when selecting interventions (Gresham, 2004) and in the school environment specifically, interventions must be easy to implement, and require minimal teacher response effort, and minimal school resources. Tier II interventions are designed to require minimal school resources. One intervention that requires minimal resources is the Class Pass Intervention (CPI).

The CPI is used as a class-wide or secondary level intervention in PBIS to decrease escape-maintained disruptive behavior in the classroom (Cook et al., 2014). The CPI is similar to the Bedtime Pass Program (BPP), which was developed to decrease children’s bedtime concerns, such as leaving the room without permission and engaging in other problem behavior. Prior to bedtime, the child is provided with a predetermined number of passes to use to leave the bedroom, and gain access to attention from his or her parents or items such as a glass of water. The passes serve as a way for the child to access reinforcement in the form of escape from the bedroom when the child appropriately uses a pass. Once the passes are used, the child may no longer leave the room, serving as an extinction procedure. If the child does not use all of the passes, he or she may exchange them for a preferred item or activity. This encourages the child to remain in his or her bedroom. Friman et al. (1999) evaluated the BPP and demonstrated positive effects that maintained, leading to the development of the CPI, a similar intervention, to be used in the classroom.

Key features of the CPI include giving class passes to students who exhibit disruptive behavior to avoid or escape from difficult or non-preferred academic work, teaching the students how to appropriately request a break by using a class pass, providing negative reinforcement by honoring the request, and providing positive reinforcement for continued academic engagement (Collins et al., 2016; Cook et al., 2014). Students can choose to hold on to the passes in order to
exchange them for a highly desired activity, item, or special privilege, which will help them increase time engaging in academic work. The presentation of the physical Class Pass could serve as a visual to signal to students that a break is available. This visual may prompt students to use the functionally-equivalent replacement behavior of requesting a break instead of engaging in disruptive behavior to avoid a task (Conroy, Asmus, Sellers, & Ladwig, 2005; Haley, Heick, & Luiselli, 2010; O’Connor, Prieto, Hoffmann, DeQuinzio, & Taylor, 2011). Providing choices on when to use or hold onto the passes not only encourages students to continue to work on the task instead of taking a break, but it also serves as an antecedent manipulation that may decrease disruptive behavior (Cook et al., 2014). Choice can also serve as an abolishing operation for problem behavior (Carlson, Luiselli, Slyman, & Markowski, 2008) as making a choice provides access to reinforcement that might be obtained when engaging in problem behavior. Previous research showed that over time, the students chose to exchange the passes for reinforcers instead of using them to escape an activity, without an increase in problem behavior. Schmidt, Hanley, and Layer (2009) found that even when individuals provided with choice access reinforcement with the same quantity and quality as they would access without having a choice, individuals prefer choice. Students who use the Class Pass are provided with the choice of when to take a break (i.e., access negative reinforcement), which may be more effective than pre-scheduling breaks.

The CPI has been evaluated in the elementary school and high school settings with students without disabilities as a tier II intervention (Andreu & Blair, 2017; Collins et al., 2016; Cook et al., 2014). Academic engagement increased and disruptive behavior decreased once the CPI intervention was introduced in all three studies. The CPI was effectively faded, and results were maintained. Teachers and students deemed the intervention to be acceptable, indicating that
this intervention may be socially valid in complex environments such as the school. The study by Collins et al. added to the research base by showing that when the CPI was systematically faded, increases in academic engagement were better maintained than when the CPI was withdrawn. The authors suggested that it might be beneficial to consider individual differences in academic skills as individuals with lower academic skills may need a supplementary intervention to address the difficulty of tasks from which escape is highly reinforcing. This intervention has not been evaluated in individuals with developmental disabilities.

While there is more to explore with the CPI, Cook et al. (2014) and Collins et al. (2016) suggested that this intervention could address multiple potential functions of disruptive behavior, making it an option for a larger target population. It can address multiple functions by providing negative reinforcement in the form of escape from a task, positive reinforcement if the break includes accessing a tangible or activity, positive reinforcement if the student saves up his or her passes and exchanges them for backup reinforcers, or automatic reinforcement if the break includes sensory stimulation. Further, determining the function of problem behavior typically leads to better outcomes as it strengthens the effectiveness of interventions (Cook et al., 2012; Hawkins & Axelrod, 2008). Once the function of problem behavior is determined, contingencies can be manipulated to better structure the environment and increase the likelihood of replacement behavior (Hawkins & Axelrod, 2008). Although the CPI can be catered to students who are not responding to the universal class-wide interventions and may have the potential to be effective in addressing various potential functions of disruptive behavior, it is not clear whether adding the positive reinforcement component, in which the student can exchange passes for a backup reinforcer, to the intervention would be necessary to enhance the treatment outcomes. In addition, it is not clear whether the CPI could be used with various student
populations, including students with disabilities who display disruptive behavior and need additional behavior support.

Therefore, the purpose of the current study was to evaluate the impact of the CPI on disruptive behavior and academic engagement of students with disabilities who needed additional behavior support. This study attempted to extend the literature by further investigating the CPI with students with disabilities and examined the impact of one of the CPI components. Specifically, the study examined the extent to which the use of the CPI without the positive reinforcement component would impact targeted behavior. It was hypothesized that the CPI would decrease disruptive behavior and increase academic engagement sufficiently without allowing students to exchange their unused passes for a backup reinforcer.
Method

Setting

This study evaluated the use of the CPI in three elementary school classrooms serving students with disabilities, grades K through 5 at two public elementary schools in a suburban area of an urban city in Florida. These schools were chosen due to their need for additional Tier II supports. School personnel were familiar with PBIS and implemented school-wide Tier I supports daily.

Participants

Three students, ages 5-12 years old, and their corresponding three teachers were recruited to participate in this study. Selection criteria for the teachers included: (a) consent to receive training and implement the intervention, (b) the nomination of at least one student with a disability needing additional behavior support, and (c) be interested in implementing the intervention. Teachers who had experience implementing the CPI or a similar intervention were excluded from the study as this may affect the outcome. Selection criteria for student participants included: (a) have a diagnosed disability or developmental delay, (b) engage in disruptive behavior daily during at least 20% of an instructional period based on direct observation, (c) are between the ages of 5 and 12, and (d) have not been adequately progressing with typical Tier I or class-wide supports. Students who (a) have low cognitive functioning levels determined by the school district, (b) are absent too frequently, and (c) exhibit severe challenging behavior that may be harmful to themselves or others (i.e., self-injury and physical aggression) were excluded. Students were excluded if the Principal Investigator (PI) could not determine the function of the
disruptive behavior following teacher interviews and direct observations or if the student has participated in a similar intervention.

**Recruitment procedures.** Flyers were distributed to teachers briefly describing the study and students who would benefit from the intervention (Appendix A). Teachers were asked to contact the researcher if they had any interest in participating in the study and had students who may benefit from a Tier II intervention. Informed consent was obtained from the students by asking for their verbal assent and sending home consent forms for the parents to complete and return prior to any evaluation or data collection. Inclusion of each teacher and student was determined once consent was obtained beginning with a teacher interview with questions pertaining to the recommended student’s attendance, behavior, cognitive developmental level, and any interventions that were already in place. Once teachers and students were deemed eligible, the researcher met with each teacher to explain the study. The researcher interviewed the teachers briefly (approximately 10 min) to identify nominated students’ potential eligibility for participation. The interviews took place before school or after school depending on teacher preference. Following the interview and obtaining parental permission and student assent, the researcher conducted direct observations of the identified students during the potential targeted instructional periods using the partial-interval data sheet that was used throughout all phases of the study to determine the levels of their disruptive behavior and confirm eligibility.

A functional behavior assessment (FBA) was conducted to confirm the students’ eligibility. The researcher asked the teachers to complete the Functional Assessment Checklist for Teachers and Staff (FACTS; March et al., 2000) with potential student participants to identify antecedents, consequences, problematic classroom routines associated with high levels of disruptive behavior, and hypothesized functions. The FACTS included components regarding
student strengths, problem behaviors, problematic routines, common antecedents, and common consequences with a summary statement to help teachers identify potential function(s). It took approximately 10 min to complete. The researcher directly observed students using the Functional Assessment Observation Form (FAOF; O’Neill et al., 1997 Appendix B), a short form, to corroborate FBA information obtained from the FACTS and to determine the function(s) of their disruptive behavior. Following the completion of the FBA, the researcher chose one problematic routine identified by the teacher as an instructional period in which the participant(s) engage in high levels of disruptive behavior to use as the targeted instructional period to implement the CPI.

**Students.** Three students in three classrooms participated in the study. The students were all Caucasian males between the ages of 8 and 10 years old. English was their primary language. Stevie was a 10-year-old student in the 5th grade. He was diagnosed with a speech-language delay and was served in a general education classroom. He received additional support from an ESE specialist in the form of small-group instruction during most academic periods. Stevie was nominated to participate due to his high level of disruptive behavior and low academic engagement during English Language Arts (ELA). Following teacher interviews using the FACTS and observations using the FAOF, Stevie’s disruptive behavior was hypothesized to be maintained by escape. Previous interventions included: redirection, seat change, reprimands, and loss of privileges.

Kirk was an 8-year-old student in the 3rd grade. He was diagnosed with Autism Spectrum Disorder (ASD) and language-impairment. He was dual-served in a 3rd through 5th grade self-contained social-behavior-communication (SBC) program designed for students with ASD. Kirk was nominated to participate due to his high level of disruptive behavior and low
academic engagement during Mathematics. Following teacher interviews and observations, Kirk’s disruptive behavior was hypothesized to be maintained by escape and adult attention, however due to statewide testing preparation, the attention component was only informally addressed. It should also be noted that the teacher reported Kirk’s disruptive behavior and academic engagement is greatly affected by a lack of sleep, a prevalent setting event. This setting event was not observed in baseline, but was observed in the intervention phase, leading to some variability in the data. Previous interventions included: first/then statements, pre-scheduled “brain breaks” that included activities such as educational games on an iPad or manipulative activities following a certain amount of time into the academic period, providing one-on-one assistance, and prompting back to task.

Peter was a 9-year-old student in the 4th grade. He was diagnosed with ASD and Attention Deficit Hyperactivity Disorder. He was served in the same 3rd through 5th grade self-contained SBC program as Kirk; however, in a different classroom as the classes rotated for each subject. Peter was nominated to participate due to his high level of disruptive behavior during ELA. Following teacher interviews and observations, Peter’s disruptive behavior was hypothesized to be maintained by escape. Previous interventions included: discussions of expected behavior, change of seating arrangement, prompting back to task, and activity change (e.g., instead of working on worksheet, prompted to help friend who was behind).

**Teachers.** Three corresponding teachers participated. All teachers reported to be familiar with implementing behavior management interventions at all tier levels (i.e., 1, 2, and 3). The participating teachers were all female teachers. Mimi was a 5th grade teacher of Stevie. She was 42 years old, had 20 years of teaching experience, and completed multiple related degrees: B.A. in Elementary Education, M.S. in Curriculum and Instruction, and M.S. in Special Education.
Her classroom was comprised of 21 students, 10 of which were serviced by an Individualized Education Plan (IEP). She was teacher-of-the-year at her school during the study. Mimi typically used verbal reminders or redirections to assist students to get back on-task, provided visual schedules regarding the schedule of tasks, arranged student seats to prevent disruptive behavior, and reminded students of what they were working for (i.e., a water day at the school). Planned ignoring was sometimes utilized.

Rasheeda was a 3rd through 5th grade SBC program teacher of Kirk. Rasheeda was 41 years old. Her classroom was comprised of 14 students, all serviced by IEPs. Years of experience of degree information was not obtained. She was assisted by one instructional assistant (IA); however, the IA did not participate in the study. Rasheeda typically used visual schedules, verbal redirection, first/then statements, embedded “brain breaks,” and embedded choices regarding order of completion for tasks.

Tara was a 3rd through 5th grade SBC program teacher of Peter. Rasheeda and Tara dually served students in this self-contained unit. Tara was 27 years old, had 3 years of teaching experience, and completed a B.S. in Education with certifications in K-6 subject areas, K-12 ESE, and Autism Spectrum Disorders. She also had endorsements in Reading and English as a Second Language. Her classroom was comprised of 14 students, all serviced by IEPs. She was assisted by one IA as well; however, the IA did not participate in the study. Tara typically used visual schedules, arranged student seats to prevent disruptive behavior and other problem behavior, provided choices regarding task completion order, scheduled non-contingent “brain breaks,” provided further assistance, prompted appropriate behavior when precursor behavior was observed, and reminded students of consequences for problem behavior.
Measurement

**Direct observation of student behavior.** The primary dependent variables included disruptive behavior and academic engagement. The behavior definitions were revised following participant selection using information from direct observations and teacher interviews, and from the definitions used in previous studies: behaviors that are distracting to others or impede ongoing activities in the classroom, such as call outs, talking to a peer without permission, out of seat, making inappropriate noises, and playing with irrelevant objects (Cook et al., 2014). Disruptive behavior definitions were individualized as shown in Table 1. Academic engagement included attending to teacher or academic speaker, reading (scored as eyes on materials), writing, academic responding, assignment completion, following teacher direction, raising hand, or attending to materials for longer than 2 s. This definition was revised from the Thorne and Kamps (2008) study and used with each student.

Table 1. Operational Definitions of Disruptive Behavior for Each Participant

<table>
<thead>
<tr>
<th>Disruptive Behavior</th>
<th>All</th>
<th>Stevie</th>
<th>Kirk</th>
<th>Peter</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Behaviors that are distracting to others or impede ongoing activities in the classroom, such as call outs, talking to a peer without permission or about irrelevant topic, out of seat without permission or not going straight to needed material and back, throwing objects more than 3 ft (e.g., tossing paper balls or writing utensils to peers), making inappropriate noises (e.g., whining or making animal noises), rocking in chair (less than 4 chair legs on ground), and playing with irrelevant objects or academic materials inappropriately.</td>
<td>• Includes manipulating with fidgets or stress balls (e.g., spinning spinner fidgets or squeezing stress balls).</td>
<td>• Does not include standing within 3 ft of desk or sitting on a wiggle chair, fidgeting with materials (e.g., tapping pencil) unless heard from 15 ft away, and reading materials out loud.</td>
<td>• Does not include sitting on folded legs as long as all legs of the chair are on the floor, fidgeting with materials (e.g., tapping pencil) unless heard from 15 ft away, and reading materials out loud.</td>
</tr>
</tbody>
</table>
Researchers collected data using a 15 s-partial interval recording system. Data were scored as “+” if the behavior occurred during the interval or “-“ if the target behaviors did not occur during the interval (Appendix C). The total percentage of intervals in which each target behavior occurred during the session was calculated. Data collection took place approximately two times per week by the researcher and a research assistant and required a pencil, scoring sheets, and Redo Reminder application for Android smartphones to signal intervals within observations. The researcher trained a research assistant with videos that were available publicly on the Internet to practice scoring. The research assistant was a male graduate student in an Applied Behavior Analysis Master’s program. The research assistant scored at least a 90% interobserver agreement with the researcher prior to scoring for the study.

**Individualized Behavior Rating Scale Tool (IBRST).** To supplement direct observational data, teachers developed and used the IBRST (Iovannone, Greenbaum, Wang, Dunlap, & Kincaid, 2014; Appendix D), indirectly measuring target behaviors during a targeted instructional period. The IBRST is a feasible and reliable direct behavior rating scale comprised of a 5-point Likert-type scale designed for easy and efficient use by classroom teachers. The numbers included in the rating scale is called an anchor. The researcher helped teachers individualize the anchors for each participant. Teachers were asked what percentage of time disruptive behavior and academic engagement occurred during a target routine on a very bad day, a so-so day, and a very good day to set the anchors. This process started by having the teacher label the type of day (e.g., a so-so day) that the student had during the eligibility confirmation observation and discussing the percentage of targeted behavior observed. A very bad day for Stevie was characterized by at least 80% of the session with disruptive behavior and at most 20% of the session with academic engagement. A very good day was characterized by at
most 35% of the session with disruptive behavior and at least 60% of the session with academic engagement. The same IBRST anchors were chosen for Kirk. A very bad day for Peter was characterized by at least 60% of the session with disruptive behavior and at most 20% of the session with academic engagement. A very good day was characterized by at most 20% of the session with disruptive behavior and at least 60% of the session with academic engagement. Teachers used this data collection method across all phases of the study to record their perception of student disruptive behavior and academic engagement.

**Treatment integrity.** The researcher collected treatment integrity data during 100% of sessions across all intervention phases using a checklist with a task analysis of implementation steps, adapted from the Cook et al. (2014) study (Appendix E). The RA collected IOA treatment integrity data. Implementation steps included: (a) providing class passes; (b) prompting the student to use a class pass to access a break when either appropriate behavior or precursor behavior is observed; (c) allowing the student to go to a predetermined area engaging in the predetermined break activity; (d) ensuring the student returns to the academic activity once the predetermined break time elapses; (e) tallying the number of passes saved up by the student at the end of the instructional period; and (g) completing the IBRST following the instructional period. It should be noted that implementation step “f” was not scored as none of the participants required the addition of this component as the CPI implemented without this step was effective in changing targeted behavior sufficiently. Treatment integrity was calculated as a percentage of steps completed correctly. Scores on the treatment integrity checklist indicated that the intervention was implemented with high integrity across most observations. Mimi (Stevie’s teacher) implemented the intervention correctly on average of 96.2% of steps, ranging from 75%-100%. When intervention was reintroduced, Mimi implemented the intervention with 100%
fidelity across all observations. Rasheeda (Kirk’s teacher) and Tara (Peter’s teacher) implemented the intervention correctly on average of 96.7% of steps, ranging from 83.3%-100%, and 98.5% of steps, ranging from 83.3%-100%, respectively.

**Social validity.** The social validity of the CPI by teachers and students was assessed, utilizing the adapted Intervention Rating Profile (IRP-15; Martens, Witt, Elliot, & Darveaux, 1985) following the intervention phase. Seventeen items were assessed to determine the extent to which teachers found the intervention to be acceptable, effective, and efficient. Fifteen of the items used a 6-point Likert-type scale. Items were ranked from strongly disagree to strongly agree (Appendix F). Two items were open-ended questions, which asked what they liked best and what they did not like about using the CPI. This questionnaire was developed for use in schools. Student social validity was assessed using a similar questionnaire with seven items total, four rated on a 5-point scale ranging from strongly disagree to strongly agree, two open-ended questions, and a yes-no question. One of the 5-point scale questions arranged the rating scores in an opposite order to check if the students were simply circling an answer without reading the questions. The social validity surveys were adapted by the researcher using age appropriate language (Appendix G). Open-ended questions were used to gather additional feedback regarding the likes and dislikes of using the CPI.

**Interobserver agreement.** Interobserver agreement (IOA) was calculated for an average of 47.9% of all phases for student behaviors, ranging from 14.3% to 80% of sessions across participants and behaviors. To assess IOA, a research assistant independently and simultaneously collected data on the target behaviors and treatment integrity. IOA for student target behaviors was calculated by dividing the number of intervals with agreements by the total number of intervals with agreements and disagreements and multiplying by 100%. The research assistant
was informed that if IOA scores fell below 85%, a retraining would occur. IOA for treatment integrity was assessed for 55.6% of the intervention sessions and calculated by dividing the number of steps scored with agreements by the total number of steps with agreements and disagreements and multiplying by 100%. Table 2 displays the percentage of sessions in which IOA was collected for each participant, experimental condition, and dependent variable. Average IOA scores are displayed.

IOA for Stevie averaged 97.7% for disruptive behavior and 97.5% for academic engagement and was collected during 44.4% of sessions across all phases. IOA for Kirk averaged 94.4% for disruptive behavior and 97.3% for academic engagement and was collected during 47.1% of sessions across all phases. IOA for Peter averaged 99.2% for disruptive behavior and 99% for academic engagement and was collected during 57.9% of sessions across all phases. Implementation fidelity IOA was 100% across all phases and participants. Overall, IOA was very high.

Table 2. Interobserver Agreement

<table>
<thead>
<tr>
<th>Condition</th>
<th>Stevie</th>
<th></th>
<th>Kirk</th>
<th></th>
<th>Peter</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>D</td>
<td>AE</td>
<td>Imp</td>
<td>%</td>
<td>D</td>
</tr>
<tr>
<td>Baseline</td>
<td>37.5</td>
<td>97.3</td>
<td>94.5</td>
<td>NA</td>
<td>14.3*</td>
<td>90*</td>
</tr>
<tr>
<td>CPI</td>
<td>33.3</td>
<td>98</td>
<td>100</td>
<td>100</td>
<td>80</td>
<td>98.7</td>
</tr>
<tr>
<td>Reversal Baseline</td>
<td>66.7</td>
<td>96.2</td>
<td>95.4</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Reintroduce CPI</td>
<td>40</td>
<td>99.4</td>
<td>100</td>
<td>100</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Fading (2)</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Fading (1)</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Mean</td>
<td>44.4</td>
<td>97.7</td>
<td>97.5</td>
<td>100</td>
<td>47.1</td>
<td>94.4</td>
</tr>
</tbody>
</table>

Note. The percentage of IOA assessed for each participant, experimental condition, intervention component, dependent variable and average IOA scores are provided. % = the percentage of observed sessions for which a secondary observer recorded data; AE = Academic engagement; D = Disruptive behavior; CPI = Class Pass Intervention; Imp = Implementation fidelity; NA = Not applicable. The number in parenthesis indicates the number of passes provided. * Calculation based on only one data point.
Experimental Design and Procedures

**Experimental design.** A multiple baseline design across participants was utilized to evaluate the outcome produced by the first component of the CPI. All participants experienced: baseline (A) and class pass (B) phases. A reversal was embedded into Stevie’s evaluation. The number of passes provided to Peter was systematically faded. This single subject design is appropriate for this research in that it emphasizes the individual as the unit of analysis and for practical applications of intervention through replication. Decisions for changing phases were based on the stability of disruptive behavior data and teacher implementation fidelity. Each participant received the intervention when a pattern was established in baseline. Direct observations lasted on average 18 min, ranging from approximately 10-41 min based on the targeted activity, with the exception of two sessions lasting for only 7 min due to the participants unexpectedly being pulled out for testing or other educational services. Observations were typically conducted during the beginning of the academic time periods.

Teachers rated their student’s behavior using the IBRST at the end of the direct observation. Typically, the researcher handed the IBRST data collection sheet to the researcher at the conclusion of the observation. If the teachers had any questions regarding the anchors, the researcher would provide support in the form of restating the anchors. No additional support was provided. Per teacher’s request during baseline, the researcher would discuss how well their IBRST score corresponded with the direct observation partial-interval data.

**Baseline.** In the baseline phase, the participating students participated in whole-group lessons, small-group activities, independent tasks, lectures, or projects, depending on the scheduled curriculum activities. The teachers managed their classrooms as usual using class-wide behavior systems (e.g., instruction of classroom expectations, visual support). Any existing
behavior supports being implemented were still in place. Existing supports included verbal redirections, visual supports, and environmental arrangements (either used as an antecedent manipulation or consequence). The CPI was not implemented. Observers collected data on disruptive behavior and academic engagement. Data were collected approximately two days per week for a period of 2-3 weeks during the targeted problematic routine. English Language Arts (ELA) was targeted for Stevie and Peter and Mathematics was targeted for Kirk as these were the subjects when the most disruptive behavior occurred.

**Teacher training.** Teachers were provided with a 30-min training on the use of CPI prior to implementation. This training occurred before, during, or after school, depending on teacher preference. The researcher used Behavioral Skills Training, a training procedure that has evidence of its effectiveness in improving school staff implementation (Hogan, Knez, & Kahng, 2015) at a time and place chosen by the teacher. There were four components to this training: a brief overview and instructions on how to conduct the CPI, modeling how to implement the intervention, allowing for teacher role-plays of CPI implementation, and providing specific praise and corrective feedback (Appendix H). To ensure that the researcher provided training to teachers as planned, the researcher was scored on the fidelity of the training by a research assistant, with the exception of the researcher scoring herself during one training, using a task analysis (Appendix I) and scored 100% during all trainings. Teachers were provided with a treatment fidelity checklist that listed each step in the CPI for reference during the intervention phase (Appendix J). This checklist was the same as the integrity checklist the researcher used during intervention phases to assess their levels of correct implementation of intervention steps. Teachers were required to demonstrate all steps independently with 100% fidelity during one role-play scenario in order for the training to be considered complete.
**Student training.** Students received a training similar to the teacher training, lasting 10 min in duration. The training was provided either prior to the start of class time or during free time, depending on the student. The researcher and teacher provided instructions on how to use the class pass (e.g., holding the pass in the air) and four situations under which to use the passes (e.g., bored, tired, frustrated, and/or need help) The teacher and researcher modeled the expected use of the class passes and students were provided with an opportunity to role-play and received feedback regarding their performance. Students demonstrated use of the pass correctly during one role-play prior to terminating the training.

**Intervention.** All participating students received the same intervention component following baseline; however, Stevie experienced a reversal and Peter experienced fading of the number of class passes. During the target instructional period, locations with neutral or preferred activities for participants to escape to when using a pass were set up within the classroom. A timer was used to ensure that breaks were brief (5 min or less) and signaled the students to return to their academic task. Teachers either set timers on their smartphones, a visual timer, or iPad.

The number of passes provided to students were determined based on the length of the instructional period and needs of the students to ensure that they were not missing a significant amount of instructional time. The researcher helped the teachers determine the optimal number of passes to provide during baseline observations by measuring the average amount of time that elapsed between instances of disruptive behavior and recommended that they provide the number of passes that would allow the student to take a break prior to engaging in disruptive behavior. While considering the current levels of disruptive behavior, teachers and researchers must also consider contextual fit. While both factors were considered in this study, feasibility (in regards to the potential amount of missed instructional time) was prioritized over baseline data. Teachers
reported to be concerned that students would miss too much instructional time if determining the number of passes was solely based on baseline data. Therefore, baseline data was used to negotiate with the teachers regarding the magnitude of negative reinforcement provided (e.g., break time). Breaks were individualized and would consist of accessing different items, activities, and privileges depending on the function of behavior and each student’s preferences. However, it should be noted that all students escaped from the academic task when they used a pass. When Stevie used a Class Pass, he was allowed 2 min in a comfortable chair (i.e., rocker or moon chair) and accessed fidgets and a dry erase board with marker. These items were not used as rewards prior to this study and the teacher reported these items to be neutral. Stevie was provided with two passes during a 30-min ELA period. When Kirk used a Class Pass, he was allowed 5 min to access dinosaur manipulatives or building blocks at a desk set up at a side wall of the classroom. Kirk was provided with two passes during a 60-min math period. While the researcher and teacher hypothesized that Kirk might need more passes to evoke desired behavior change, break time was limited due to statewide testing preparation and district request. To informally incorporate the attention function, the teacher escorted Kirk to his station and discussed the activity. The teacher was also available to help with the break activity. When Peter used a Class Pass, he was allowed 5 min in a wiggle seat at a desk to free draw with a pencil and blank printer paper. Peter was originally provided with three passes during a 105-min ELA period; however, the number of passes provided were systematically faded in subsequent phases.

To ensure the students would immediately access the break, the materials accessed were controlled, and to prevent target students from disrupting classmates, teachers set up a designated area away from the main instruction area. The researcher recommended the use of a transition warning when the student had one minute remaining (e.g., “one more minute of drawing and
then you have to get back to work”) to prevent students from engaging in problem behavior once their break ended. This step was not included in the treatment fidelity checklist as this was recommended to be used at the teacher’s discretion if the student needed it to transition to the task successfully. Each teacher variably used a transition warning, however it was observed that teachers typically only used a transition warning at the beginning of the intervention phases and reported that the visual timer was sufficient once the transition warnings was informally faded. If the student had access to a tangible, the student was prompted to forfeit the tangible and reminded that they could use another pass to access it later (if he had another pass), but that the timer went off and it was time to get back to work.

In the Class Pass phase, each participating student received a predetermined number of passes prior to the start of the targeted routine in addition to any existing interventions used in baseline. Each student raised his or her pass and was provided with a break from the academic task consequently. If the student was observed engaging in precursor behavior, the teacher prompted the student to use a pass by asking if they would like to use a pass to take a break. Precursor behavior was defined individually and topographically during teacher interview. For Stevie, precursor behavior included putting his head on his desk or looking around the room for more than 5 s. For Kirk, precursor behavior included sighing, putting his head on his desk or arm, or shaking his head. For Peter, precursor behavior included putting his feet on his chair seat, looking around the room for more than 5 s, or tapping his pencil quietly (unable to hear from less than 15 ft. away). Students were not allowed to use their class pass when engaging in disruptive behavior. Teachers reminded students of what to do, using a first-then statement (e.g., “first you have to finish one more problem, then you can use a class pass”). The students gained access to the designated break area (inside the classroom) for 2-5 min, as predetermined. A timer was used
to signal when the students had to return to the academic task or activity. Students were required to wait at least 5 min before using another pass if more than one pass is given; however, they did not request to use another pass within this 5 min criterion.

If the teacher did not score 100% on a fidelity check, descriptive feedback, including praise and corrective feedback, was provided at the end of the session to remind the teachers of critical steps. If the teacher did not reach an 80% or higher on fidelity checks for three consecutive sessions in each phase, a booster training would have been provided, lasting approximately 10-15 min. The booster training consisted of a review of the CPI steps, providing feedback, modeling, and role-playing (if requested or deemed necessary by the researcher). Implementation fidelity only dropped below 80% during one session during this study with Mimi (teacher of Stevie), and with the provision of feedback, the teacher scored 100% during the next session.

**Fading.** Systematic fading of the number of passes provided was conducted with Peter as he responded to the intervention immediately and the teacher and researcher discussed that fewer passes would be as effective as using the initially-determined number of passes. This also facilitated intervention maintenance effects. The decision to decrease the number of passes by one pass per week was made when data were stable for at least three sessions. The teacher paired the fading procedure with a praise statement to increase the likelihood of student success (e.g., “you are doing so well at staying on-task that you don’t even need this many passes, so today I want to see how well you do with only X number of passes”). Phases were labeled using “Fading 1” and “Fading 2” to indicate how many passes were faded out (e.g., “Fading 2” indicates that two passes were faded out, meaning that only one pass was provided during this phase).
**Reversal.** Following the introduction of intervention, the researcher and teacher decided to reverse to baseline and reintroduce the intervention for Stevie to examine whether immediate results would replicate. The teacher (Mimi) was willing to withdraw the intervention and reintroduce the disruptive behavior. When the intervention was withdrawn, the teacher did not implement CPI or allow breaks (Stevie did not request breaks either) and continued to use existing behavior management strategies as in the baseline phase. Reintroduction of the intervention was contingent on stable data or data trending towards baseline levels.
Results

Disruptive Behavior and Academic Engagement

Figure 1 displays the percentage of intervals with disruptive behavior and academic engagement across three participants during targeted instructional periods. All three participants engaged in high levels of disruptive behavior and low levels of academic engagement during baseline. Following introduction of the class pass in which students could access breaks using a class pass, disruptive behavior immediately decreased in level and academic engagement immediately increased in level for all participants.

During baseline, Peter’s disruptive behavior occurred in 79.9% of intervals, on average (range, 63.9% to 87.5%). Academic engagement occurred in 32.1% of intervals, on average (range, 6.7%-47.9%). When the CPI was introduced, an immediate level change occurred for both behaviors. Disruptive behavior decreased to 7.5% of intervals, on average (range, 5%-13.8%). Academic engagement increased to 97.2% of intervals, on average (range, 95%-100%). There were no overlapping data points between baseline and intervention.

In the next phase, as targeted behavior was stable for at least three data points, Peter was provided with 2 class passes, instead of 3 class passes, systematically fading the number of passes provided by 1. Disruptive behavior (4.0%; range, 0%-8.9%) and academic engagement (97.4%; range, 93.8%-100%) maintained at the levels observed before fading. The next week, only 1 class pass was provided and targeted behavior continued to maintain progress. The levels of disruptive behavior (4.7%; range, 2.5%-6.7%) and academic engagement (98.1%; range, 96.7%-100%) remained stable.
Kirk engaged in disruptive behavior, on average, during 66.1% of intervals (range, 45.8%-88.2%) in baseline. Academic engagement occurred during 44.6% of intervals (range, 27.5%-58.8%). Once the CPI was introduced, disruptive behavior immediately decreased in level to 25.5% of intervals (range, 11.3%-37.5%). Academic engagement increased to 77.8% of intervals (range, 57%-98.4%). Overall, Kirk’s behavior was the most variable as his teacher reported that his behavior is affected greatly by lack of sleep. There were no overlapping data points for disruptive behavior between baseline and intervention; however, there were two overlapping data points for academic engagement.

In baseline, Stevie engaged in high levels of disruptive behavior (82.6%; range, 70.8%-100%) and low levels of academic engagement (25.6%; range, 0%-59.7%). When intervention was introduced, disruptive behavior immediately decreased to an average of 11.3% of intervals (range, 6.7%-25%), and academic engagement increased to an average of 95.3% of intervals (range, 83.3%-100%). When intervention was withdrawn, Stevie’s target behaviors reversed to baseline levels; disruptive behavior increased to 53.9%, and academic engagement decreased to 65.6%. Following the re-introduction of the class pass phase, disruptive behavior decreased further to an average of 8.4% of intervals (range, 3.2%-14.9%). Academic engagement increased further to an average of 98.5% of intervals (range, 95.8%-100%). There were no overlapping data between the baseline and intervention phases.

**IBRST**

Figure 2 displays IBRST data on disruptive behavior collected by teachers and the corresponding IBRST score following conversion from researcher direct observation data. As shown in the figure, all teachers completed the IBRST in every session across baseline and intervention phases, except Peter’s teacher, Tara, in the first two sessions. Teacher and
researcher rated behavior similarly, as evidenced by similar patterns shown between data paths. As shown in the figure, teachers rated disruptive behavior consistently higher across participants in baseline than in intervention. Once the CPI phase was introduced, teachers’ scores of student disruptive behavior decreased by approximately 2-3 points, on average. It should be noted that Rasheeda’s (Kirk’s teacher) ratings on disruptive behavior was higher and academic engagement was lower than baseline in 2 sessions. Figure 3 displays IBRST data on academic engagement collected by teachers and the corresponding IBRST score following conversion from researcher direct observation data. Teachers’ scores of student academic engagement increased by approximately 2-3 points, on average, once the CPI was introduced.
Figure 1. Percentage of intervals with disruptive behavior and academic engagement across conditions and participants.
Figure 2. IBRST scores on disruptive behavior across conditions and participants as scored by the research and teacher.
Figure 3. IBRST scores on academic engagement across conditions and participants as scored by the research and teacher.
Social Validity

Following the conclusion of the study, the researcher provided the student and teacher participants with social validity surveys and asked to answer the questions to evaluate how they rate the intervention. Students rated the CPI highly in that they liked using the Class Pass, it was easy to use, and they would like to continue using the CPI. Overall, students rated their experience with the CPI as 4.67 out of 5 possible points, on average. Students reported that the best part about using the Class Pass was that they could take a break and one student specified that it was because a break could be taken at any time. Students reported that they disliked having to catch up on work and having a timer as it signaled when the break was over. One student reported that they did not dislike any aspect of the CPI. The results of the teacher social validity surveys indicated that the CPI was highly acceptable, effective, an intervention they would suggest to other teachers, and that it would be appropriate for a variety of children and classrooms. Teachers also mentioned that this did not result in any negative side effects for children in their classroom. Teachers reported that it required the student to be accountable for their behavior, they liked the idea of students being able to save up passes within a target period, and the flexibility of the CPI (i.e., amount of break time and number of passes) to meet the needs of all individual students. Overall, teachers rated their experience with this intervention as 5.6 out of 6 possible points, on average. Tables 3 and 4 display the results of the social validity surveys completed by students and teachers.
Table 3. Student Social Validity Survey Results

<table>
<thead>
<tr>
<th>Question</th>
<th>Stevie</th>
<th>Kirk</th>
<th>Peter</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I liked using the Class Pass.</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>4.33</td>
</tr>
<tr>
<td>2. It was easy to use the Class Pass.</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>3.67</td>
</tr>
<tr>
<td>3. I want to keep using the Class Pass.</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>4.67</td>
</tr>
<tr>
<td>4. What rating would you give your experience with the Class Pass?</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>4.67</td>
</tr>
<tr>
<td>5. What did you like best about using the Class Pass?</td>
<td>Take a break</td>
<td>Take a break</td>
<td>Break Any Time</td>
<td>N/A</td>
</tr>
<tr>
<td>6. What did you not like about using the Class Pass?</td>
<td>Catch up with work</td>
<td>The timer</td>
<td>Nothing</td>
<td>N/A</td>
</tr>
<tr>
<td>7. Do you wish you could use the Class Pass in other classes?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Mean</td>
<td>3.75</td>
<td>4.25</td>
<td>5</td>
<td>4.33</td>
</tr>
</tbody>
</table>
Table 4. Teacher Social Validity Survey (Modified IRP-15) Results

<table>
<thead>
<tr>
<th></th>
<th>Teacher 1</th>
<th>Teacher 2</th>
<th>Teacher 3</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. This was an acceptable intervention for the problem behavior engaged in by the targeted students in my class.</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>2. Most teachers would find this intervention appropriate for behavior problems.</td>
<td>5</td>
<td>4</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>3. This intervention proved effective in changing the overall problem behavior and academic engagement for targeted students in my class.</td>
<td>6</td>
<td>4</td>
<td>6</td>
<td>5.33</td>
</tr>
<tr>
<td>4. I would suggest use of this intervention to other teachers.</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>5.67</td>
</tr>
<tr>
<td>5. The problem behavior was severe enough to warrant use of this intervention.</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td>5.67</td>
</tr>
<tr>
<td>6. Most teachers would find this intervention suitable for the behavior problems in their class.</td>
<td>5</td>
<td>4</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>7. I would be willing to use this intervention with other students.</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>8. This intervention did NOT result in negative side effects for children in my class.</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>9. This intervention would be appropriate for a variety of children and classrooms.</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>10. The intervention was consistent with those I have used in classroom settings.</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>5.33</td>
</tr>
<tr>
<td>11. This intervention was a fair way to handle the problem behavior in my classroom.</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>5.67</td>
</tr>
<tr>
<td>12. This intervention was reasonable for the behavior problems in my classroom.</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>5.67</td>
</tr>
<tr>
<td>13. I liked the procedures used in this intervention.</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>5.67</td>
</tr>
<tr>
<td>14. This intervention was a good way to handle the problem behaviors in my classroom.</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>5.67</td>
</tr>
<tr>
<td>15. Overall, this intervention was beneficial for the students in my classroom.</td>
<td>6</td>
<td>4</td>
<td>6</td>
<td>5.33</td>
</tr>
</tbody>
</table>

Mean | 5.73 | 5.07 | 6 | 5.6
Discussion

This study examined the extent to which the CPI impacted disruptive behavior and academic engagement in three elementary school students with disabilities. Further, this study evaluated if the use of only the first component of the CPI, negative reinforcement accessed by using the class pass, would be sufficient to produce desirable outcomes as previous studies only evaluated the components together. While the researcher planned on introducing the positive reinforcement (exchange) component if the students' target behaviors did not adequately improve, this was not necessary. The results indicate that the negative reinforcement component of the CPI alone decreased disruptive behavior and increased academic engagement for all participants. Additionally, one participant (Stevie) experienced an embedded reversal design. Disruptive behavior and academic engagement trended towards baseline levels and returned towards original treatment levels when the CPI was reintroduced. Furthermore, intervention outcomes maintained as the magnitude of the intervention (number of passes) decreased with one participant (Peter).

The current study adds to the literature on the CPI by assessing treatment outcomes with students with disabilities or developmental delays, two of whom were served in a self-contained classroom. Previous studies examined the effects of the CPI on escape-maintained disruptive behavior (Cook et al., 2014), attention-maintained disruptive behavior (Andreu & Blair, 2017), or behavior in which the function was not identified (Collins et al., 2016). Thus, breaks accessed by using a class pass were not function-based in the Collins et al. (2016) and Cook et al. (2014) studies, as they were designed to be in the present study. In the current study, all students’
disruptive behavior was maintained by escape, and breaks were designed to provide students with an opportunity to access escape appropriately using the Class Pass. Kirk’s disruptive behavior was secondarily maintained by attention, and the teacher was instructed to provide one-on-one attention in transition to the break area and when transitioning back to the task, rather than providing the attention during breaks. It is unclear whether this use of attention was responsible for variability in Kirk’s data. It may have been more beneficial to provide attention contingent on academic engagement as Kirk was observed to request help from the teacher and IA when engaged in academic activity.

Results of this study are consistent with previous studies. A functional relationship was established between the CPI and disruptive behavior, and between the CPI and academic engagement. Social validity was rated highly, as in previous studies. Rasheeda, Kirk’s teacher, was observed using the class passes with her entire self-contained classroom students, indicating that she approved of the intervention. Mimi reported that Stevie requested to use the class passes during mathematics, a non-target academic time period. She also reported that once CPI was introduced in mathematics, Stevie’s behavior improved across settings, lending support that this intervention could be effective across multiple settings or academic periods. Treatment integrity was high for all teacher participants with minimal support (e.g., some feedback was provided; teachers did not require a booster training to implement with fidelity), indicating that the CPI may be simple to use.

It should further be noted that instructional assistants were not trained in the CPI and, thus, they did not support the teachers in implementing the CPI. Yet, the teachers could implement the intervention with high treatment integrity. The teachers often requested feedback; however, this may not have been required for teachers to implement with fidelity. Feedback was only required
to increase the fidelity of Mimi’s implementation to acceptable levels following one observation. This supports that the CPI can be used as an effective Tier 2 intervention as it does not require much teacher time and effort to implement during instructional time periods.

The intervention may not have needed much teacher support or external coaching as only the first component was utilized. Lower response effort was required as teachers only had to set up the student’s break area, prompt and allow use of CPI, and collect IBRST data to monitor progress. This study showed that desired results could be obtained without training students on how to exchange passes, arranging for exchanges, obtaining powerful backup rewards to exchange passes for, and keep track of number of passes used. Higher social validity could have resulted from the lower response effort associated with desired outcomes (Foster & Mash, 1999). Thus, the CPI is a cost-effective Tier 2 intervention.

This study supports the hypothesis by Schmidt et al. (2009) in that individuals prefer to be provided with choices even if it doesn’t result in higher quantity or quality of reinforcement as students were able to choose when to take a break. Two of the participants, Kirk and Peter, had pre-scheduled “brain breaks” in which they were able to access similar activities during breaks in baseline; however, the CPI was more effective in decreasing disruptive behavior than access to pre-scheduled “brain breaks,” potentially because the provision of choice was embedded.

**Implications for Practice**

Throughout the process of determining exactly how, where, and what each participant’s break would look like, the researcher found it critical to provide items that were neutral or slightly preferred, but with which students had been observed successfully transitioning back to an academic task. This is one of the most crucial aspects in individualizing this intervention as this intervention is designed to be easy to use for the student and teacher. If students have
difficulty transitioning back to the academic task due to the activity provided during the break, the ease of use of this intervention is compromised as the teacher then must put in more effort prompting the student back to the task.

Unlike in Collins et al. (2016), the students in the current study mostly did not use all of their passes. Typically, only one pass was used. This may suggest that students did not need as many passes as determined by baseline levels of disruptive behavior (Andreu & Blair, 2017) or the option of using Class Passes to access reinforcement served as an antecedent manipulation, signaling that a break was available (Carlson et al., 2008). It is beneficial to help students comply with academic demands using antecedent manipulations without the use of external reinforcers (i.e., tangibles). However, some caution should be exercised. The provision of too many passes can result in a significant loss of instructional time. It is best to begin with more passes and fade the number of passes systematically than to start with too few and increase the number of passes to avoid potentially reinforcing disruptive behavior. The fading may also be more successful if the decrease in number of passes provided is paired with praise statements contingent on maintained behavior change, as in the present study.

One participant experienced the systematic fading of the number of passes provided. All other factors were consistent. Peter maintained behavioral progress as the number of passes provided faded from three to one. Although students may initially need a denser schedule of reinforcement when using the class passes, the results of Peter’s fading shows that teachers can thin the schedule of reinforcement systematically and maintain desired outcomes. Desired outcomes may maintain due to increased academic stamina or accessing natural contingencies more often, such as differential reinforcement for staying on-task instead of disrupting the class (Lane, Smither, Huseman, Guffey, & Fox, 2007).
Limitations

One limitation of the current study is the lower percentage of sessions observed with a second observer for two of the participants (Peter and Kirk) during baseline. However, IOA was assessed for over 50% of sessions in the next phases, and IOA was high, lending support that the data collected during baseline was most likely reliable.

Another limitation in terms of data collection is related to the IBRST development. All teachers reported some difficulty with estimating the percentage of time disruptive behavior and academic engagement occurs during “very bad” days versus “so-so” days and so forth when developing the anchors. While they all reported that a percentage of time measure would be easier to conceptualize than duration or frequency measures, teachers often based IBRST scores on previous performance (e.g., previous sessions) instead of the set anchors unless reminded. This became prevalent as most teachers verbally reported why they scored a certain rating following each session and sometimes reported similar statements to the following: “well he had a better day today than yesterday so I’m going to put a 2 instead of 3 for disruptive behavior” or “he was doing so well with the passes, but today he seemed sort of off, so I’m going to put academic engagement lower”.

Verbal reminders in the form of restating the anchors set were provided only when teachers expressed confusion or uncertainty. As the researcher had the teachers score using the IBRST only when the researcher was present to compare direct observational data to rating scale data, teachers might have had more difficulty rating student behavior compared to scoring based on the entire academic period. For example, if a student was engaging in disruptive behavior before the researcher arrived, teachers may have rated disruptive behavior as a 5 (“very bad” day)
instead of a 3 (“so-so” day). However, it should be noted that the teacher’s ratings corresponded well to the researcher ratings from the conversion of direct observational data. This may indicate that although teacher ratings may have seemed bias, IBRST ratings may be used in data-based decision-making, a crucial component in multi-tiered intervention models (Iovannone, 2014). Data-based decision-making is important to evaluate interventions in place, conduct action planning, and assist in the allocation of resources (e.g., school personnel support; Scott, Martinek, 2006).

A confounding variable was reported to affect Kirk’s behavior during Session 10 and Session 11 in intervention, leading to variability in Kirk’s data. His teacher reported that lack of sleep greatly affects Kirk’s behavior and that the setting event was evident when he arrived at school. However, it was not observed during baseline, and therefore not incorporated when choosing how many passes to provide. Sessions 10 and 11 were the only sessions in which the teacher reported the presence of the setting event; however, this setting event was only discussed during the teacher interviews and twice observed in the intervention phase. The researcher and teacher discussed providing more passes when this establishing operation for increased disruptive behavior was prevalent following Session 10. The researcher and teacher decided not to increase the number of passes to avoid potentially reinforcing the increase in disruptive behavior and decrease in academic engagement.

There was one observed difference in the implementation of the CPI by Kirk’s teacher, Rasheeda. In the teacher training and treatment fidelity checklist, teachers were instructed to prompt students to engage in the academic task prior to allowing students to use a pass when engaging in disruptive behavior. This was designed to avoid reinforcing disruptive behavior with escape. Mimi (Stevie’s teacher) and Tara (Peter’s teacher) would redirect students back to the
task prior to allowing escape with the use of a pass, however Rasheeda would specify how much more of the task Kirk had to complete prior to using a pass. Rasheeda was observed to prompt Kirk to use a pass when engaging in precursor behavior, however if Kirk was engaging in disruptive behavior and she prompted Kirk to complete a certain number of math problems, Kirk’s disruptive behavior increased in magnitude as the establishing operation, making a break more reinforcing, became more prevalent. To mitigate this difference, the teacher training and treatment fidelity checklist could be more specific.

**Future Research**

Future research should replicate this study to lend support for the CPI to become an evidence-based practice and used more widely in the classroom setting. More socially-valid Tier 2 interventions are needed to improve student behavior and prevent the use of limited resources within Tier 3 interventions (Bruhn, Lane, Hirsch, 2014). The current study and previous studies have only examined the CPI with elementary and high school students. It would be beneficial to evaluate the CPI with younger students, such as Kindergarteners or preschoolers, or middle school students. It would also be beneficial to evaluate the efficacy of this intervention with other types of disabilities (e.g., emotional behavioral disorders or mental health disorders).

This study examined the effect of one component; however, the CPI components were not compared. Future researchers should conduct a component analysis to examine the relative impact of each component to determine which are necessary to produce desired results. It should be noted that this study showed that the first component was effective alone. This lends support that if components can be removed and remain effective, the intervention will be even easier to implement, and therefore, potentially more socially valid (Foster & Mash, 1999).
Mimi reported that Stevie requested to use the class passes during mathematics class. Anecdotally, Stevie’s behavior improved during this class as well, suggesting that this intervention may be effective across multiple instructional periods. Therefore, another recommendation for future researchers would be using a multiple baseline design across settings or instructional periods to examine the generality of CPI in multiple academic periods.

Whereas fading to a lower number of passes was successful for one participant, fading should have been completed with all participants to determine whether behavioral improvements could maintain. It is unknown whether fading would be successful without praise as praise was provided when introducing the next phase of fading in this study. It is possible that pairing praise may only be effective when employing the first component of CPI (i.e., negative reinforcement component without exchange opportunity). Future research should examine whether praise would compete with the opportunity to access a backup reinforcer.

Future research should further examine the process of choosing the number of passes to provide. This study showed that the provision of a limited number of passes, despite the suggestion that the students would need more according to baseline data, still led to desired behavior change. Therefore, future research should focus on the determination of passes considering student preference or the presence of establishing operations instead of baseline data. It may be beneficial to vary the number of passes provided each day instead of providing the same number of passes without consideration of changes in the environment. If setting events were present or if more preferred activities were scheduled, teachers could increase or decrease the number of passes, respectively. This might have been advantageous in Kirk’s case when he experienced a lack of sleep and allow teachers to avoid reinforcing disruptive behavior by providing the increased number of passes prior to the start of the target academic period.
Despite these limitations, the results of this study indicate the CPI was highly effective in improving classroom behavior of elementary school students with disabilities. The current study was the first to examine the first component of the CPI exclusively.
References


Appendices
A Component Analysis of the Class Pass Intervention (CPI) in Decreasing Disruptive Behavior of Children with Disabilities

PARTICIPANTS NEEDED FOR A TIER II INTERVENTION RESEARCH STUDY!

Purpose:

The purpose of this study is to analyze the effects of two different components of the Class Pass Intervention, an intervention designed to be implemented within school-wide PBIS to decrease disruptive behavior and teach an appropriate replacement behavior for students needing Tier 2 intervention. In previous studies conducted by Cook et al. (2014) and Collins et al. (2016), disruptive behavior decreased and academic engagement increased in participants. Teachers reported that the intervention was efficient, effective, and acceptable in the school setting.

Student Eligibility Criteria:

- have a diagnosed disability
- engage in disruptive behavior daily during at least 20% of an instructional period
- between the ages of 5 and 12
- have not been adequately progressing with typical Tier I or class-wide supports.

If you have any questions or are interested in participating and have students that may benefit from this intervention, please contact:

Taylor Narozanick, B.A., BCaBA
Master’s Student in Applied Behavior Analysis at the University of South Florida
Cell: (XXX) XXX-XXXX
Email: narozanickt@mail.usf.edu
## Appendix B. FAOF

### Functional Assessment Observation Form

<table>
<thead>
<tr>
<th>Time</th>
<th>Behaviors</th>
<th>Predictors</th>
<th>Get/Obtain</th>
<th>Escape/Avoid</th>
<th>Actual Causes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Demand/Hop</td>
<td>Unflagged Task</td>
<td>Transfers</td>
<td>Attention</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dialog/Activity</td>
<td>Self/Resistance</td>
<td>Activity</td>
<td>Person</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other/Don't Know</td>
<td>Comments/Observations</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Totals**

**Events:** 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

**Dates:**
Appendix C. Interval Recording Sheet (Researcher Use)

Data Sheet

Date: ___/___/___ Start time: _______   End time: _______ Observer:_________________________
Class: _____________________      Academic Period: _________________

Clearly mark (+ or -) if the child was disruptive and/or academically engaged at any point during the 15-s interval.

<table>
<thead>
<tr>
<th></th>
<th>0:00</th>
<th>Dis.</th>
<th>Eng.</th>
<th>0:15</th>
<th>Dis.</th>
<th>Eng.</th>
<th>0:30</th>
<th>Dis.</th>
<th>Eng.</th>
<th>0:45</th>
<th>Dis.</th>
<th>Eng.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 min.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>2 min.</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td>16</td>
</tr>
<tr>
<td>3 min.</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td>16</td>
<td>17</td>
<td>18</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td>4 min.</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td>16</td>
<td>17</td>
<td>18</td>
<td>19</td>
<td>20</td>
<td>21</td>
<td>22</td>
<td>23</td>
<td>24</td>
</tr>
<tr>
<td>5 min.</td>
<td>17</td>
<td>18</td>
<td>19</td>
<td>20</td>
<td>21</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
<td>26</td>
<td>27</td>
<td>28</td>
</tr>
<tr>
<td>6 min.</td>
<td>21</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
<td>26</td>
<td>27</td>
<td>28</td>
<td>29</td>
<td>30</td>
<td>31</td>
<td>32</td>
</tr>
<tr>
<td>7 min.</td>
<td>29</td>
<td>30</td>
<td>31</td>
<td>32</td>
<td>33</td>
<td>34</td>
<td>35</td>
<td>36</td>
<td>37</td>
<td>38</td>
<td>39</td>
<td>40</td>
</tr>
<tr>
<td>8 min.</td>
<td>33</td>
<td>34</td>
<td>35</td>
<td>36</td>
<td>37</td>
<td>38</td>
<td>39</td>
<td>40</td>
<td>41</td>
<td>42</td>
<td>43</td>
<td>44</td>
</tr>
<tr>
<td>9 min.</td>
<td>41</td>
<td>42</td>
<td>43</td>
<td>44</td>
<td>45</td>
<td>46</td>
<td>47</td>
<td>48</td>
<td>49</td>
<td>50</td>
<td>51</td>
<td>52</td>
</tr>
<tr>
<td>10 min.</td>
<td>49</td>
<td>50</td>
<td>51</td>
<td>52</td>
<td>53</td>
<td>54</td>
<td>55</td>
<td>56</td>
<td>57</td>
<td>58</td>
<td>59</td>
<td>60</td>
</tr>
<tr>
<td>11 min.</td>
<td>57</td>
<td>58</td>
<td>59</td>
<td>60</td>
<td>61</td>
<td>62</td>
<td>63</td>
<td>64</td>
<td>65</td>
<td>66</td>
<td>67</td>
<td>68</td>
</tr>
<tr>
<td>12 min.</td>
<td>65</td>
<td>66</td>
<td>67</td>
<td>68</td>
<td>69</td>
<td>70</td>
<td>71</td>
<td>72</td>
<td>73</td>
<td>74</td>
<td>75</td>
<td>76</td>
</tr>
<tr>
<td>13 min.</td>
<td>73</td>
<td>74</td>
<td>75</td>
<td>76</td>
<td>77</td>
<td>78</td>
<td>79</td>
<td>80</td>
<td>81</td>
<td>82</td>
<td>83</td>
<td>84</td>
</tr>
<tr>
<td>14 min.</td>
<td>81</td>
<td>82</td>
<td>83</td>
<td>84</td>
<td>85</td>
<td>86</td>
<td>87</td>
<td>88</td>
<td>89</td>
<td>90</td>
<td>91</td>
<td>92</td>
</tr>
<tr>
<td>15 min.</td>
<td>89</td>
<td>90</td>
<td>91</td>
<td>92</td>
<td>93</td>
<td>94</td>
<td>95</td>
<td>96</td>
<td>97</td>
<td>98</td>
<td>99</td>
<td>100</td>
</tr>
<tr>
<td>16 min.</td>
<td>97</td>
<td>98</td>
<td>99</td>
<td>100</td>
<td>101</td>
<td>102</td>
<td>103</td>
<td>104</td>
<td>105</td>
<td>106</td>
<td>107</td>
<td>108</td>
</tr>
<tr>
<td>17 min.</td>
<td>105</td>
<td>106</td>
<td>107</td>
<td>108</td>
<td>109</td>
<td>110</td>
<td>111</td>
<td>112</td>
<td>113</td>
<td>114</td>
<td>115</td>
<td>116</td>
</tr>
<tr>
<td>18 min.</td>
<td>113</td>
<td>114</td>
<td>115</td>
<td>116</td>
<td>117</td>
<td>118</td>
<td>119</td>
<td>120</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Disruptive Behavior: # of int. = _____ (____%)  Engagement: # of int. = _____ (____%)

IOA: Disruptive Behavior: # of Agreements ____/ # of Intervals____=____% Academic Engagement: # of Agreements ____/ # of Intervals____=____%
Appendix D. Sample IBRST (Teacher Use)

From Iovannone, Greenbaum, Wang, Dunlap, & Kincaid (2013)

<table>
<thead>
<tr>
<th>Problem Behavior</th>
<th>Date</th>
<th>02/01/11</th>
<th>02/02/11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hitting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;10 times</td>
<td>5</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>7-9 times</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>5-7 times</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3-4 times</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2 or less</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Engagement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;60%</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>45-60%</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>30-44%</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>20-29%</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>&lt;20%</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Figure 1. Sample IBRST completed for a student with one problem behavior and one appropriate behavior.

Note. Hitting definition: Touching peers or adults with an open hand, fist, foot, or object. Record estimate of number of hitting events each day—5 = very bad day; 4 = typical bad day; 3 = so-so day; 2 = good day; 1 = very good day. Engagement definition: Record estimate of percentage of time engaged during independent work time—eyes on work materials or teacher, pencil moving or hand raised to ask question—1 = very bad day; 2 = typical bad day; 3 = so-so day; 4 = good day; 5 = very good day.
## Appendix E. Treatment Fidelity Checklist

<table>
<thead>
<tr>
<th>Step</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Student was given class passes</td>
<td>Yes/No</td>
</tr>
<tr>
<td>2. When student exhibited precursor behavior or is showing signs of</td>
<td>Yes/No</td>
</tr>
<tr>
<td>frustration, the teacher prompted the student to use a class pass</td>
<td></td>
</tr>
<tr>
<td>for the break prior to disruptive behavior engagement</td>
<td></td>
</tr>
<tr>
<td>3. If the student used a class pass, they went to the predetermined</td>
<td>Yes/No/N/A</td>
</tr>
<tr>
<td>place and engaged in a preferred activity</td>
<td></td>
</tr>
<tr>
<td>4. Student returns to academic activity after specified amount of</td>
<td>Yes/No/N/A</td>
</tr>
<tr>
<td>break time elapsed</td>
<td></td>
</tr>
<tr>
<td>5. Teacher tallied up the number of passes retained by the student</td>
<td>Yes/No</td>
</tr>
<tr>
<td>at the end of the instructional period</td>
<td></td>
</tr>
<tr>
<td>6. Teacher completed the IBRST following the instructional period</td>
<td>Yes/No</td>
</tr>
<tr>
<td><strong>Total Yes:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Percentage of Completed Steps:</strong></td>
<td></td>
</tr>
</tbody>
</table>
Appendix F. Adapted IRP-15

Adapted from the IRP-15 Copyright, 1982. Brian K. Martens & Joseph C. Witt

Please circle the number that best describes your agreement or disagreement with each statement using the scale below.

1 = Strongly disagree 2 = Disagree 3 = Slightly disagree 4 = Slightly agree 5 = Agree 6 = Strongly agree

1. This was an acceptable intervention for the problem behavior engaged in by targeted students in my class.
   1 2 3 4 5 6

2. Most teachers would find this intervention appropriate for behavior problems in addition to those described.
   1 2 3 4 5 6

3. This intervention proved effective in changing the overall problem behavior and academic engagement for targeted students in my class.
   1 2 3 4 5 6

4. I would suggest the use of this intervention to other teachers.
   1 2 3 4 5 6

5. The problem behavior was severe enough to warrant use of this intervention.
   1 2 3 4 5 6

6. Most teachers would find this intervention suitable for the behavior problems in their class.
   1 2 3 4 5 6

7. I would be willing to use this intervention in the classroom setting with other students.
   1 2 3 4 5 6

8. This intervention did not result in negative side effects for children in my class.
   1 2 3 4 5 6

9. This intervention would be appropriate for a variety of children and classrooms.
   1 2 3 4 5 6

10. This intervention was consistent with those I have used in classroom settings.
    1 2 3 4 5 6

11. This intervention was a fair way to handle the problem behavior in my classroom.
    1 2 3 4 5 6

12. This intervention was reasonable for the behavior problems in my classroom.
    1 2 3 4 5 6
13. I liked the procedures used in this intervention.  

14. This intervention was a good way to handle the problem behaviors in my classroom.  

15. Overall, this intervention was beneficial for the students in my classroom.  

16. What did you like best about this intervention?

17. What did you dislike, if anything, about this intervention?
Appendix G. Student Social Validity Questionnaire

1. I liked using the Class Pass.
   1 2 3 4 5
   Strongly disagree Disagree Neutral Agree Strongly agree

2. It was easy to use the Class Pass.
   1 2 3 4 5
   Strongly disagree Disagree Neutral Agree Strongly agree

3. I want to keep using the Class Pass.
   1 2 3 4 5
   Strongly disagree Disagree Neutral Agree Strongly agree

4. What rating would you give your experience with the Class Pass?
   5 4 3 2 1
   I loved using the Class Pass
   I liked using the Class Pass
   I didn’t care about using the Class Pass
   I did not like using the Class Pass
   I hate using the Class Pass

5. What did you like about using the Class Pass?

6. What did you not like about using the Class Pass?

7. Do you wish you could use the Class Pass in other classes?
   Yes    No
Appendix H. Teacher Training Script

Adapted from Cook et al., 2014

Greeting: Good morning/afternoon. Thank you for coming today. We are going to go over what the Class Pass Intervention is, the steps on how to implement it, I will show you how to use the CPI, and give you an opportunity to practice it, I’ll give you feedback, and then you will have an opportunity to ask questions. However, you may ask questions at any time.

The Class Pass Intervention (CPI) is a simple Tier II intervention within PBIS in which students are given a certain number of passes to use during an instructional period that they engage in disruptive behavior and do not work enough. It gives students opportunity to easily ask for a break, yet limits them to a certain number of breaks. During the break, they can get teacher attention, a break on the computer, a break in a sensory room, etc. Research has shown that this leads to less disruptive behavior and more academic engagement. It has not been used with children with developmental disabilities. Therefore, I’d like to test it out.

These are the steps to implement CPI: *pass out fidelity sheet

1. Meet with the student to teach them the CPI and how to appropriately request a break using the class pass

2. Identify a spot where the student can break and engage in a preferred activity for 3 – 7 minutes (this depends on the predetermined amount of time by researcher and teacher)

3. Determine the rewards and/or privileges that can be earned by saving the class passes (make it such that the more passes means the better the reward and/or privilege)

4. Give the student a predetermined amount of class passes (anywhere from 3 to 5)

5. When implementing the CPI, provide the following prompt to the student to use the class pass if you see him showing signs of frustration (before he engages in problem behavior)

   CPI Acceptable Prompt: “Would you like to use one of your passes to take a break?”

   Modified CPI Acceptable Prompt (attention): “Would you like to use one of your passes and finish your work with me?”

   Modified CPI Acceptable Prompt (tangible): “Would you like to use one of your passes and get _________?”

6. Give the student feedback about how he is doing through praise.

Now, I’m going to show you what this might look like. *model procedure*

Does anybody have any questions? Let’s take a few minutes and practice this. Pretend I am the student. *provide praise and corrective feedback, if any, and repeat role-play until completed correctly 3x*

Do you have any additional questions? Thank you so much for taking the time to meet with me and for wanting to try this procedure out in your classroom.
## Appendix I. Training Fidelity Checklist

<table>
<thead>
<tr>
<th>Step</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greeting</td>
<td></td>
</tr>
<tr>
<td>Overview</td>
<td></td>
</tr>
<tr>
<td>Pass out fidelity sheet</td>
<td></td>
</tr>
<tr>
<td>Discuss steps of implementation</td>
<td></td>
</tr>
<tr>
<td>Model of procedure</td>
<td></td>
</tr>
<tr>
<td>Provide teachers with opportunities to rehearse</td>
<td></td>
</tr>
<tr>
<td>Provide feedback, if applicable</td>
<td></td>
</tr>
<tr>
<td>Ask if there are questions</td>
<td></td>
</tr>
</tbody>
</table>

(# of “Yes” answer: _____/8 total steps) *100%

Score: _____%
Appendix J. Teacher Script

Adapted from Cook et al., 2014

The steps to implement CPI:

1. Meet with the student to teach them the CPI and how to appropriately request a break using the class pass

2. Identify a spot where the student can break and engage in a preferred activity for 3 – 7 minutes (this depends on the predetermined amount of time by researcher and teacher)

3. Determine the rewards and/or privileges that can be earned by saving the class passes (make it such that the more passes means the better the reward and/or privilege)

4. Give the student a predetermined amount of class passes (anywhere from 3 to 5)

5. When implementing the CPI, provide the following prompt to the student to use the class pass if you see him showing signs of frustration (before he engages in problem behavior)

CPI Acceptable Prompt: “Would you like to use one of your passes to take a break?”

Modified CPI Acceptable Prompt (attention): “Would you like to use one of your passes and finish your work with me?”

Modified CPI Acceptable Prompt (tangible): “Would you like to use one of your passes and get __________?”

6. Give the student feedback about how he is doing through praise.
Appendix K. USF IRB Approval

August 4, 2016

Taylor Narozanick
Psychology
Tampa, FL 33612

RE: Expedited Approval for Initial Review
IRB#: Pro00027081
Title: A Component Analysis of the Class Pass Intervention (CPI) in Decreasing Disruptive Behavior of Children with Disabilities

Study Approval Period: 8/4/2016 to 8/4/2017

Dear Ms. Narozanick:

On 8/4/2016, the Institutional Review Board (IRB) reviewed and APPROVED the above application and all documents contained within, including those outlined below.

Approved Item(s):
Protocol Document(s):
CPI Protocol Version#1 73016.docx

Consent/Assent Document(s)*:
Parental Permission.docx.pdf
Teacher Consent.docx.pdf
Student Assent Script.docx (not a stamped document)

*Please use only the official IRB stamped informed consent/assent document(s) found under the "Attachments" tab. Please note, these consent/assent document(s) are only valid during the approval period indicated at the top of the form(s).

It was the determination of the IRB that your study qualified for expedited review which includes activities that (1) present no more than minimal risk to human subjects, and (2) involve only procedures listed in one or more of the categories outlined below. The IRB may review research through the expedited review procedure authorized by 45CFR46.110. The research
proposed in this study is categorized under the following expedited review category:

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Study involves children and falls under 45 CFR 46.404: Research not involving more than minimal risk.

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB. Any changes to the approved research must be submitted to the IRB for review and approval via an amendment. Additionally, all unanticipated problems must be reported to the USF IRB within five (5) calendar days.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,

[Signature]

Kristen Salomon, Ph.D., Vice Chairperson
USF Institutional Review Board
Appendix L. Pasco County Schools IRB Approval

October 11, 2016

Ms. Taylor Narozanick, B.A., BCA BA
Department of Child and Family Studies
C/O Aleatha Neal
13301 Bruce B. Downs Blvd. MHC 2113A
Tampa, Florida

Dear Ms. Narozanick:

Attached you will find an approval for your research study in Pasco County Schools entitled, “A Component Analysis of the Class Pass Intervention (CPI) Decreasing Disruptive Behavior of Children with Disabilities.”

The purpose of this study is to investigate the CPI with students with disabilities, conducting a component analysis to examine the relative impact of each of the CPI components, and evaluating the maintenance and generalization of behavior change.

We are always interested in the outcome of research conducted in our school system. When your study is complete, please forward a brief summary of your findings to the Office for Accountability, Research, and Measurement.

Best of luck as you pursue the subject of your research.

Sincerely,

Peggy Jones, Director
Accountability, Research, and Measurement

Attachment