IMPLEMENTING SELF-MANAGEMENT WITHIN A GROUP COUNSELING CONTEXT:
EFFECTS ON ACADEMIC ENABLING BEHAVIORS

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CHAPTER I:

ABSTRACT

Academic enabling behaviors have been linked to academic achievement and are considered alterable targets for intervention. Self-management interventions, which teach students to observe and manage their behavior, have successfully improved academic enabling behaviors, such as academic engagement and study skills, among middle school students, and are theorized to produce long-lasting results. Because of the efficacy of self-management interventions, classwide and targeted adaptations have been developed to expand the intervention's reach. Despite promising evidence of effectiveness, group-level adaptations are resource-intensive and may compromise theoretical active components of the intervention. Adapting self-management within a group counseling context may resolve these concerns.
LITERATURE REVIEW

Academic Achievement and Academic Enabling Behaviors

Academic achievement is important not only in terms of immediate school performance but also because it has been associated with positive adult outcomes, such as employment, social and emotional health, and socioeconomic status (Brady, Evans, Berlin, Bunford, & Kern, 2012). Furthermore, academic achievement can counter early risk factors, such as parental substance use, to increase the likelihood of positive outcomes for students as adults (Haller, Handley, Chassin, & Bountress, 2010). In contrast, students with low academic achievement have a higher risk of dropping out of high school, developing emotional problems, using substances, and engaging in delinquent behavior (Brady et al., 2012).

Because of the importance of student academic achievement to promote positive adult outcomes, researchers have sought to identify and explain factors that promote academic success. Carroll and Maxwell (1979) introduced the first multivariate model of school learning that identified both individual behaviors (e.g., student ability to understand instruction, perseverance) and environmental factors (e.g., clarity of instruction, opportunity to learn, matching task to the student) that contribute to academic achievement. Walberg (1984) extended these variables in his Theory of Educational Productivity. He proposed that nine factors influence learning at three tiers (i.e., student, instruction, environment). At the student tier, prior achievement, development (e.g., age, maturation), and motivation (e.g., willingness to persevere on learning tasks) influence the level of student ability. At the instructional tier, the amount of time students spend in learning and quality of learning instruction contribute to learning effectiveness. Finally, at the environmental tier, the home environment, peer social group within school, peer social group outside of school, and use of out-of-school time influence the student's learning context.
These models suggested that both individual and environmental factors come together to explain a student's academic competence and to predict academic achievement. However, individual factors (e.g., motivation, metacognitive strategies) and school-level factors (e.g., instruction, class climate, curriculum) have been found to be more predictive of academic achievement than systems-level factors (e.g., state and district variables, peer group, home environment; Wang et al., 1990). The interaction between individual and school-level factors can be explained by academic enablers, which are "attitudes and behaviors that allow a student to participate in, and ultimately benefit from, academic instruction in the classroom" (DiPerna & Elliott, 2002, p. 294). DiPerna and Elliott (2000) proposed four areas of academic enablers: engagement, motivation, study skills, and social skills.

Engagement has been defined as participation in classroom instruction (DiPerna & Elliott, 2000). Student attention and "academic activity" (e.g., volunteering, initiating work) have been consistently found to be positively correlated with measures of academic performance (Hoge & Luce, 1979). Engagement can occur either actively, by taking notes, completing tasks, or answering questions, or passively, by listening to instruction or directions (Greenwood, Horton, & Utley, 2002). Levels of engagement have been found to be related to academic performance by mediating the relationship between instruction and achievement (DiPerna, 2006). Environmental factors such as the quality of instruction or classroom activities can influence a student's level of academic engagement. For example, having students answer instructional questions as a group rather than individually has been associated with increased academic engagement (Greenwood et al., 2002). Therefore, engagement is not a stable construct over time, but is influenced by both environmental and internal factors.
Motivation is the student's personal desire to learn and level of perseverance in learning, and is influenced by numerous constructs such as self-efficacy, intrinsic motivation, and goal orientation (DiPerna, 2006). Self-efficacy is the student's belief in his or her abilities to perform and meet goals within a certain domain (Linnenbrink & Pintrich, 2002). A cyclical relationship has been found between self-efficacy and academic achievement (DiPerna, 2006). Previous academic successes or failures can shape a student's self-efficacy, which can in turn influence behaviors (e.g., persistence, motivation) that affect the likelihood of future successes or failures. Intrinsic motivation is the willingness to engage in an activity solely for its own sake, and is usually the result of a personal interest (e.g., an enjoyment of reading). Both high self-efficacy and intrinsic motivation have been associated with higher levels of effort and persistence, and therefore higher academic achievement (DiPerna, 2006). Finally, the criteria students use to evaluate their performance can influence their motivation. Students can compare their academic performance to others (i.e., performance goals) or to their own previous performance (i.e., mastery goals). Students who set goals to improve their personal understanding of academic material have demonstrated increased levels of engagement, study skills, and academic achievement (Linnenbrink & Pintrich, 2002).

Study skills are cognitive and metacognitive processes that increase the effectiveness and efficiency of learning of new information. Examples of study skills are organizing materials and information, synthesizing information, and using cognitive strategies to facilitate memory (Gettinger & Seibert, 2002). Use of metacognitive strategies, such as planning, monitoring effectiveness of learning, self-regulation, and using learning strategies, has been found to be highly associated with academic achievement (Wang et al., 1990). In contrast, students with
disabilities demonstrate little planning of study behavior, utilize a restricted range of study skills, and neglect to monitor or evaluate their studying behaviors (Gettinger & Seibert, 2002).

Social skills are defined as learned behaviors that increase the likelihood that a person will receive positive responses from others and avoid negative responses (DiPerna, 2006). These behaviors could include helping, initiating and sustaining conversations, and requesting help from others. Associations have been found between social skills, teacher-student relationships, and academic achievement (DiPerna & Elliott, 2000; Hoge & Luce, 1979). Social skills are also required for many of the activities of learning in the classroom, such as asking for help, raising a hand to contribute appropriately to class discussion, and collaborating effectively with peers on group projects. Teachers may distribute learning opportunities to students based on their level of social skills, such as by providing more opportunities to respond to students to contribute often to class discussion by regularly calling on them (Greenwood et al., 2002). Therefore, strong interpersonal skills may increase the student's opportunity and likelihood of active engagement in the classroom instruction, and have been found to be related to direct observations of academic engagement and responding in the classroom (DiPerna, 2006).

Structural equation modeling has been used to explore the relationships among academic enabling factors as well as the relationship between academic enablers and academic achievement. DiPerna, Volpe, and Elliott (2002) used structural equation modeling to examine those factors that influence academic achievement in language arts for students in kindergarten through sixth grade. They found that the relationship between prior achievement and current achievement is mediated by the interactions among a number of academic enabling behaviors. Specifically, both prior achievement and social skills influence a student's level of motivation, which in turn influence study skills and engagement. Ultimately, study skills and engagement
influence current academic achievement. When examined independently, prior achievement and motivation demonstrated large and moderate effects on current academic achievement, respectively. Interestingly, there was a stronger relationship between study skills and current achievement for the older students in the study compared to the younger students. These results suggest academic achievement is influenced directly and indirectly by a number of factors, which are linked by complex relationships among each other. Additionally, the influence of these factors changes over time as students age and advance through the educational system.

**Interventions Targeting Academic Enablers**

Academic enabling factors have been identified as potentially valuable targets for assessment and intervention to improve academic performance for a number of reasons. First, research has shown that academic enabling factors contribute to academic achievement for all students, and are considered alterable and influenced by environmental factors (DiPerna, 2006). Furthermore, academic enabling behaviors can moderate the relationship between symptoms of learning disorders and academic achievement (Langberg et al., 2011). For example, symptoms associated with ADHD (e.g., hyperactivity, inattention, executive functioning deficits) can influence development and use of academic enablers, and students with ADHD demonstrate lower levels of academic enabling behaviors, such as engagement, motivation, and study skills (Volpe et al., 2006). Therefore, ADHD symptoms may have an indirect effect on academic achievement through their influence on academic enabling behaviors. Therefore, increasing academic enabling factors can theoretically reduce the negative impact of ADHD on academic achievement (Volpe et al., 2006). Lastly, preliminary research has suggested that the influence of some academic enabling behaviors (i.e., study skills) on academic performance increases as students age (DiPerna et al., 2002). Hence, much of the research on interventions to address
academic enabling behaviors has targeted secondary school students. DiPerna (2006) suggested that high quality instruction could be used to improve academic enabling behaviors. Students could be taught to develop and utilize academic enabling behaviors with high-quality, specific instruction, such as modeling, coaching, behavioral rehearsal, and reinforcement (DiPerna, 2006). The increase in academic enablers can, in turn, enhance the student's availability for learning academic skills.

Specific interventions have been developed to promote different academic enablers within the literature. Although interventions designed to target motivation, social skills, and study skills most often target individual-level variables, engagement has been targeted by altering both individual and environmental variables. Classroom variables that affect all students can be targeted, such as increasing opportunities to respond in order to promote classroom engagement (Greenwood et al., 2002). For example, increasing the number of open-ended questions asked by the classroom teacher has been shown to increase on-task behavior and reduce disruptive behavior (Sutherland, Alder, & Gunter, 2003). It is also possible, however, to target individual-level variables, such as in the case of self-monitoring interventions, in which students are regularly prompted to observe and record their attention during class (Briesch & Chafouleas, 2009). Behavioral reinforcement programs, such as token economies, have been used to increase motivation. For example, middle school students earned stars which could be exchanged for prizes for completing math worksheets in order to increase their motivation to complete math work (McGinnis, Friman, & Carlyon, 1999). Social skills training, including modeling social skills, practicing skills, providing feedback and reinforcement, and promoting generalization of social skills, has typically been used to improve students' social skills (Magee Quinn, Kavale, Mathur, Rutherford, & Forness, 1999). For example, the Social Skills
Improvement System targets students' performance and skill deficits in social skills by providing direct instruction, modeling, and role-play practice within small-group settings (Gresham & Elliott, 1993). Finally, study skills have been targeted through direct instruction in metacognitive learning strategies, note taking, use of textual study aids, and strategies to reduce test anxiety (Hattie, Biggs, & Purdie, 1996). For instance, interventions for reading comprehension have used modeling, practice, and feedback to teach students summarizing rules (e.g., superordination, deletion of redundant information) to find the main idea of a piece of writing (Solis et al., 2012).

**Summary and limitations.** Although most researchers recognize that cognitive ability has a significant influence on academic achievement, they acknowledge that other individual and environmental factors play a crucial and influential role (Wang et al., 1990). Therefore, the contemporary view of academic competence adopts ecological and constructivist approaches to explaining academic achievement. Academic competence describes the combination of factors at the student, school, and societal levels that influence student academic achievement (DiPerna & Elliott, 1999). The relationship between individual variables (e.g., age, developmental level) and environmental factors (e.g., classroom instruction) can be explained by academic enabling behaviors, such as engagement, social skills, motivation, and study skills (DiPerna & Elliott, 2000). Because of their influence on academic achievement, academic enabling behaviors have been targeted by several interventions, such as social skills training, behavioral reinforcement programs, and self-monitoring of on-task behavior. The bulk of these interventions have been developed for middle school students, as the influence of academic enabling behaviors on achievement increases as students advance in age.

Several limitations curb the implications that can be drawn from research on academic enabling factors and interventions designed to increase them. The bulk of research on academic
enabling factors is comprised of correlational findings, which describe how isolated factors influence academic achievement without identifying the causality of the relationships. Correlational research also does not explain if a latent third variable is primarily responsible (DiPerna & Elliott, 2002), or if more complex models and moderating variables are needed (Hoge & Luce, 1979). Furthermore, some researchers argue that the research on academic enabling factors is too narrow. For example, emotions have been found to affect motivation and self-regulation of learning strategies, and some authors argue that social and emotional influences should be considered academic enabling behaviors (Mega, Ronconi, & De Beni, 2013). More research also needs to be conducted to explain how the influence of academic enabling behaviors changes over time as students progress from the elementary to secondary grades (Keith, 2002). These concerns limit understanding of the concept of academic competence and its relationship to academic performance. Although research has established that academic enabling behaviors work together to influence academic achievement, the majority of interventions consist of individual-level instruction for isolated academic enabling behaviors. Therefore, it is possible that multi-faceted interventions targeting multiple behaviors may produce more change than isolated targets.

**Self-Management Interventions**

One promising intervention that could be used to address academic enabling behaviors is self-management. In their essence, self-management interventions teach students to become more aware and in control of their behavior. However, the topography of these interventions can vary greatly by context. The four components used most consistently are the selection and definition of the target behavior, observation of behavior, and recording of behavior (Briesch & Chafouleas, 2009). Students observe and record their behavior through unprompted recording
(e.g., student observes and records whenever he or she thinks of it), prompted time-sampling
(e.g., student rates behavior at the time of a beep every minute), or overall evaluation of the
quality of a behavior over a determined period of time (e.g., a yes/no checklist of behaviors at the
end of a class period). Additional components can be included as well, such as use of tokens or
rewards, determination of performance goals, evaluation of performance or accuracy, and
monitoring of performance over time (Briesch & Chafouleas, 2009).

Self-management interventions are considered to be more feasible for implementation
within the classroom than teacher-managed interventions, which have been more traditionally
used to address classroom behavior (Cole, 1992). Self-management interventions shift the
responsibility for the implementation of components of the program from the teacher to the
student. In teacher-managed interventions, teachers are responsible for determining the target
behavior, observing and recoding the target behavior, and administering rewards. Because
teachers are attending to multiple students in the classroom, they may miss behaviors that should
be tracked or reinforced (Gross & Wojnilower, 1984). In self-management interventions,
students are solely responsible for observing their own behavior, and thus they are less likely
than teachers to miss certain behaviors. Their feasibility is further enhanced because little
training is required to administer self-management interventions, and most materials are readily
available in classrooms (Ganz, 2008).

Beyond these logistical considerations, however, there are important philosophical
advantages to the use of self-management interventions. Because the teacher is solely
responsible for monitoring behavior and administering rewards in traditional teacher-managed
interventions, the teacher may become the discriminative stimulus, such that the student only
performs desired behavior when the teacher is present. Self-management interventions resolve
this concern, because students develop skills that they can bring with them into new contexts. Secondly, the focus of teacher-managed interventions is to manage students' immediate behavior without necessarily teaching students the skills to regulate their own behavior in the future (Gross & Wojnilower, 1984). In contrast, self-management interventions are thought to promote sustained behavioral change due to the cognitive processes that are believed to be involved in self-monitoring. Specifically, self-monitoring is believed to lead to behavioral change due to reactivity, or the theory that observing a behavior causes that behavior to change (Carr, Taylor, & Austin, 1995).

In one of the most widely-accepted explanations for reactivity, Kanfer (1970) theorized that self-monitoring promotes behavior change as a result of a combination of cognitive and behavioral processes. Kanfer's cognitive-mediational model (1970) is comprised of three phases: self-monitoring, self-evaluation, and self-reinforcement. In the first phase, the person is taught to become more aware of his or her behavior by monitoring the behavior over time, usually with a prompt to observe and record the frequency or intensity of the behavior. Self-monitoring increases the salience of the difference between the current and desired levels of behavior, resulting in an automatic self-evaluation phase in which the individual judges the discrepancy between the current and desired behaviors. The individual then administers consequences to himself or herself as a result of this self-evaluation. In the self-reinforcement phase, the individual administers positive reinforcement when the current behavior meets or exceeds desired criteria (e.g., positive self-statements; "I did great!") and punishment when the behavior falls below desired criteria (e.g., reducing time for an enjoyable activity). This three-phase cognitive and behavioral process of self-monitoring, self-evaluation, and self-reinforcement of behavior not only leads to immediate behavior change, but is also believed to become
internalized such that the behavior change is sustained over time. Therefore, self-management interventions have been viewed as likely to produce long-lasting behavior change and generalizable skills (Cole, 1992).

Given both the logistical and philosophical benefits of self-management, these interventions have been used frequently over the past half century. Because they are so adaptable to classroom contexts and individual student needs, they have been used within both general education settings (e.g., Briesch & Daniels, 2013) and self-contained classrooms (e.g., Smith, Young, West, & Morgan, 1988) to target a range of behaviors, from homework completion (e.g., Meyer & Kelley, 2007) to appropriate interactions with peers (Strain, Kohler, Storey, & Danko, 1994). Although a wide range of successful applications have been noted from preschool to high school (Briesch & Chafouleas, 2009), self-management interventions have shown particular promise in targeting academic enabling behaviors.

**Self-Management Interventions for Academic Enabling Behaviors**

Theoretically, the use of self-management interventions to improve academic enabling behaviors is appropriate for a number of reasons. First, through self-monitoring, goal-setting, and reinforcement components, self-management interventions teach students skills to modify their own behavior. These skills can be applied to improving behaviors associated with academic performance, such as taking notes or checking their work for errors. Additionally, students can use these skills to change behaviors that may interfere with academic enabling behaviors. For example, self-management interventions have been effective in addressing off-task behaviors (e.g., Briesch & Chafouleas, 2009), which inhibit the student's ability to be attentive to instruction and engaged in learning. Ultimately, self-management of attention and behavior has been identified by research as important to academic achievement (Brigman & Webb, 2007).
Secondly, self-management interventions specifically address some of the academic enabling processes, such as goal-setting, motivation, and self-efficacy. Self-management interventions teach students to set mastery goals by evaluating their performance compared to their previous performance. Mastery goals have been associated with increased levels of engagement and study skills (Linnenbrink & Pintrich, 2002). Furthermore, setting mastery goals and administering rewards for meeting those goals can increase personal investment and motivation to engage in academic tasks. By setting achievable goals and self-rewarding for meeting goals in self-management interventions, students who have traditionally faced academic failures can experience academic successes, which can build their belief in their abilities to perform well academically. Therefore, self-management interventions inherently address goal-setting, motivation, and self-efficacy, which in turn are associated with higher levels of effort and persistence in academic tasks (DiPerna, 2006). These skills are especially important to develop as students prepare to transition to college, employment, and/or independent living.

Finally, as noted previously, many of the interventions targeting academic enablers have focused on use with middle school students, a population which may benefit most from self-management interventions due to both philosophical and logistical reasons. Academic enabling behaviors have been shown to have more of an influence on academic achievement for middle school students than for elementary students (DiPerna et al., 2002). This increased influence could be due to the changing nature of academic demands. As students progress from the elementary to the secondary grade levels, the nature of academic work requires increasing independence and decreasing support. Long-term assignments, homework, and comprehensive exams increase in frequency as structured support from teachers decreases. Therefore, academic enabling behaviors require more planning, goal-setting, and monitoring of progress. Self-
management skills become necessary to break down large tasks, manage time for long-term assignments, and complete homework on a regular basis. Additionally, from a logistical perspective, an intervention that travels with the student may be more feasible for implementation than a teacher-mediated intervention when multiple teachers are involved. Implementation integrity is always a concern in school settings; however, this concern becomes intensified when consistency of implementation must be assured across multiple individuals and settings, such as at the middle school level.

Several studies have examined the use of self-management intervention strategies for individual academic enabling behaviors. Although the most common target of intervention has been academic engagement (Briesch & Chafouleas, 2009), self-management interventions have also been used to target both study skills and more global classroom preparatory behaviors.

**Academic engagement.** The majority of self-management interventions have been used to target academic engagement, specifically on- or off-task behavior (Briesch & Chafouleas, 2009). These studies usually involve teaching students to observe and record whether or not they were paying attention in class when prompted by an auditory or tactile cue using momentary time-sampling. For example, a student may be required to monitor their attention when they hear a beep occurring every minute during class, and rate their attention at the moment of the beep using either a yes/no checklist or a Likert-type scale. In some studies, students have received rewards for matching their ratings to the teacher (e.g., stickers, snacks) and/or for meeting goals for being on-task (e.g., on-task 80% of the class period; Smith et al., 1988). In a few instances, students graphed their daily percentage of on-task behavior in order to monitor their progress over time (e.g., Briesch & Daniels, 2013; Crawley, Lynch, & Vannest, 2006). Most studies
targeting academic engagement have demonstrated an immediate effect of self-monitoring in improving attention and on-task behavior during class (Briesch & Briesch, submitted).

One potential complication in implementing self-management within a middle school setting is ensuring the generalizability of the intervention across multiple settings. Across two studies (Smith et al., 1988; Wood, Murdock, & Cronin, 2002), researchers taught middle school students how to rate their own on-task behavior (e.g., paying attention, following directions; Wood et al., 2002) and adherence to classroom rules in one setting and collected data to determine whether behavioral gains generalized across settings (i.e. classroom periods). Although observations across both studies suggested that the intervention was effective in improving students’ on-task behavior in the target classes, results were mixed with regard to the generalization of effects. Although Smith and colleagues (1988) found that gains did not generalize from the resource room to general education setting, Wood and colleagues (2002) found that students’ behavior improved in non-targeted settings and that these improvements maintained over time. However, this generalization to new settings was not observed until Wood and colleagues (2002) implemented the intervention in three other classes. Because Smith and colleagues (1998) only implemented the intervention in one class setting, they may have been less likely to observe generalization effects.

Briesch and Daniels (2013) sought to simplify the complexity and resources of self-management interventions within the middle school setting by reducing the implementation burden on individual classroom teachers. Three 7th grade students with high levels of disruptive and inattentive behaviors were taught to self-monitor their on-task behavior using either a yes/no checklist or 6-point Likert-type scale at a random interval schedule of approximately five minutes signaled by a vibration on a MotivAider. Students met with a researcher for five minutes
each day to calculate percentage of time on-task, set and evaluate daily performance goals, critique behaviors that supported or hindered their ability to reach their goals, and receive points for reaching goals that could be redeemed for prizes. Results suggested that academic engagement increased as a result of the intervention and maintained over time; however, generalization across settings was not assessed.

**Study skills.** Self-management components have also been imbedded within interventions targeting learning and study skills, including organization, planning, and time management. For example, the Homework, Organization, and Planning Skills (HOPS; Langberg, Epstein, Becker, GirioHerrera, & Vaughn, 2012) intervention package includes a self-management component developed to increase homework completion and physical organization skills among middle school students with ADHD. Individually delivered in sixteen 20-minute sessions conducted by a school mental health practitioner, the HOPS intervention teaches students skills and strategies related to school materials organization, homework recording and management, and planning/time management. In each session, the implementer rates the students' performance of these skills using a yes/no checklist. Self-management is then incorporated to promote maintenance of skills. In the last session, students develop a plan to self-monitor their organization and planning behaviors going forward using the yes/no checklist. A randomized controlled study of the HOPS intervention versus a wait-list control group was conducted in five school districts (Langberg et al., 2012). Results suggested that students in the HOPS group demonstrated significant increases in organization and planning skills, reduction in parent-rated homework problems, and increases in grade point averages from baseline compared to students in the wait-list group. Although the independent effect of self-management was not
assessed, results were maintained at 3-month follow up, suggesting that self-monitoring was helpful in promoting maintenance effects.

Self-management has also been used to target homework completion outside of the school day. Meyer and Kelley (2007) taught middle-school students with ADHD and homework difficulties to monitor their homework behaviors. Students used an individualized yes/no checklist once per day to evaluate whether they completed homework, turned in homework, checked work, brought appropriate materials, and used study strategies. Parents provided prompts to students to do homework and complete their self-monitoring forms, and administered rewards when the students' self-monitoring forms indicated that 80% of behaviors were completed each day. Compared to a wait-list control group, students in the self-monitoring condition demonstrated improvements in terms of their percentage of completed homework, demonstration of parent-rated homework behaviors, and teacher-rated classroom preparedness.

**Classroom preparatory behaviors.** Several studies have examined the use of self-management strategies for targeting classroom preparatory behaviors. Rather than isolating individual academic enablers, these studies targeted a combination of behaviors to promote academic success in the classroom.

In one of the first studies, Shapiro, DuPaul, and Bradley-Klug (1998) utilized self-management procedures with two middle school students with ADHD and learning disabilities to improve academic (e.g., work completion) or behavioral (e.g., following instructions, staying on task) target behaviors. Teachers selected target behaviors that were relevant to each student within the target academic class. Student A's target behaviors included having all materials needed for the lesson, attending to the task, not talking to peers, using appropriate language, and raising hand to be called upon. Student B's target behaviors included being prepared for class,
completing homework, following instructions the first time, staying on task, and completing classroom assignments. Students and their teachers rated the student's performance of each target behavior on a 0 to 5 Likert scale once every 15 minutes for the one 45-minute class period per day for Student A, and during two classes per day for Student B. Students and teachers met to review their ratings at the end of the period, and students received points based on accuracy and performance goals that could be redeemed for rewards decided on jointly by the student and teacher. These meetings occurred daily at the end of each rating period during the first phase of the study, and were gradually faded through the second phase of the study. The students' engagement in target behaviors increased as a result of the intervention, as evidenced by both independent observation and teacher ratings. Some concerns noted in the study were the intensity of teacher's time to support the intervention, and the possibility that students and teachers may argue over ratings.

Snyder and Bambara (1997) used a similar model to examine the use of self-management in promoting classroom preparedness behaviors with three middle school male students with learning disabilities. Teachers selected and defined classroom behaviors important to their classroom settings, specifically: arriving on time for class, being ready to begin class, having materials for class (i.e., pen/pencil, textbook, paper), and handing in homework complete and on time. Teachers and students completed a daily checklist of the student's performance of these behaviors. In daily 15 to 20 minute meetings with his or her teacher, each student set goals, reviewed progress, and evaluated performance related to his or her goals. Students also reflected on their evaluation, by identifying strategies used to meet their goals or brainstorming ideas for successfully meeting the goals next time. Students first initiated the intervention in a resource room classroom, and then extended the intervention to a mainstream inclusion class. Results
suggested that the intervention was successful in increasing consistent classroom preparedness behaviors, as evidenced by daily teacher checklists. Again, however, the time commitment required for teachers to conduct daily meetings was noted to be high (i.e., 15-20 minutes per student), therefore limiting the feasibility of the intervention when used with multiple students.

Across two studies, Gureasko-Moore and colleagues expanded on Snyder and Bambara's (1997) model of using self-management interventions to target classroom preparedness behaviors. Gureasko-Moore, DuPaul, and White (2006) examined the effectiveness of self-management of classroom preparedness behaviors with three middle school male students with ADHD. Students completed a daily yes/no checklist to evaluate their performance of various classroom preparation behaviors used by Snyder and Bambara (1997) in one target class. As opposed to the previously described studies in which the students met with their classroom teachers to discuss ratings, students in Gureasko-Moore et al. (2006) met with experimenters individually on a daily basis during the students' homeroom period to set weekly performance goals, perform informal accuracy checks of self-monitoring data with teacher reports, and evaluate progress towards goals. Students self-evaluated their daily performance by writing down what they did to accomplish their goals, and what they could do in the future to be more successful. After students performed all classroom preparation behaviors for 4 of 5 consecutive days in the monitoring phase, meetings with the experimenter were gradually reduced to every other day during the fading phase and to once per week during the maintenance phase. During all phases, the students continued to monitor their classroom preparation behaviors daily, set weekly performance goals, and evaluate their performance. Results suggested that self-management was successful in increasing the students' daily teacher-rated performance of classroom preparation behaviors, and intervention effects were maintained as components were faded.
Gureasko-Moore, DuPaul, and White (2007) extended the use of self-management to include both classroom preparedness and homework completion skills with six male middle-school students with ADHD. Four classroom preparation behaviors that teachers reported to be critical to classroom success (i.e., being seated when bell rang, eye contact with teacher when instruction began, had a writing utensil on desk, had instructional materials open when the lesson began) were targeted for one academic class. Additionally, seven homework behaviors (i.e., wrote down homework assignment, wrote down required materials for assignment, brought homework assignment home, brought required materials home, completed homework assignment, brought assignment to class, turned in assignment when requested) were targeted. Students completed a daily yes/no checklist of these behaviors, calculated the number of behaviors they had performed, critiqued their performance by identifying behaviors that helped and hindered their ability to perform the target behaviors, and rated their satisfaction with their effort on a Likert-type scale of 0 (i.e., total dissatisfaction) to 5 (i.e., total satisfaction). Students met individually with the school psychologist on a daily basis to monitor implementation of the intervention, critique student performance, and establish weekly performance goals. The frequency of these meetings was reduced using the same fading procedure as Gureasko-Moore, DuPaul, and White (2006). Ratings of these behaviors by parents and teachers demonstrated an improvement in classroom preparatory and homework behaviors as a result of the intervention, and these changes were sustained as intervention components were gradually removed.

**Summary and limitations.** As evidenced by this group of studies, self-management interventions have been effective when used to target a variety of academic enabling behaviors. Most studies have targeted isolated academic enabling behaviors, such as academic engagement and study skills, whereas a subset of studies have examined a constellation of academic enabling
behaviors, such as classroom preparation behaviors. These academic enabling behaviors were identified from teacher judgments of behaviors critical to academic success in their classroom context (e.g., Snyder & Bambara, 1997). Self-management interventions targeting academic engagement have largely been investigated with elementary and secondary students, and have required students to self-monitor their attention using prompted time-sampling during academic activities. In contrast, the aforementioned self-management interventions for study skills and classroom preparatory behaviors have been primarily utilized with middle school students and have required students to evaluate their performance of target behaviors over a predetermined period of time using yes/no checklists. These checklists usually included use of strategies (e.g., attending during class; Shapiro et al., 1998) and outcomes (e.g., homework completed; Gureasko-Moore et al., 2007). The time period for evaluation ranges from one class period (e.g., Gureasko-Moore et al., 2007) to up to one week (e.g., Langberg et al., 2012), therefore requiring students to consolidate and evaluate behavior over increasingly longer time periods. These self-management interventions for academic enabling behaviors also typically involve regular, individual meetings with an intervention implementer, goal setting, and performance evaluation. Results of these studies illustrate immediate improvements in demonstration of target behaviors, as rated by teachers and parents. Although maintenance evidence is limited, intervention effects have been sustained as intervention components are removed (Gureasko-Moore et al., 2006) and for up to one month after the completion of the intervention (Meyer & Kelley, 2007).

Despite initial encouraging results, this line of research investigating self-management interventions for academic enabling behaviors is limited in a number of ways. First, the selection of target academic enabling behaviors is narrow or subjective in many studies. Most of the research has isolated certain academic enabling behaviors to target, such as study skills or
academic engagement. Because research has demonstrated that academic enabling behaviors work together to facilitate academic success (DiPerna, 2006), interventions targeting a constellation of academic enabling behaviors may be more likely to produce robust change. In the few studies that have targeted multifaceted academic enabling behaviors, target behaviors were selected based on teacher perception of behaviors that were important to academic success their classroom (e.g., Gureasko-Moore et al., 2006). Although these targets have value in terms of social validity within the specific classroom context, research to support their relationship with academic achievement does not yet exist. Research has identified specific academic enabling behaviors that are associated with academic performance within the contemporary classroom environment and academic demands (e.g., DiPerna, 2006), and are applicable to students across settings.

Secondly, the link between improving classroom behavior and academic performance has yet to be established. Although these studies demonstrate that self-management interventions improve classroom behavior, few studies have investigated the impact on academic performance. Only Langberg et al. (2012) evaluated the effectiveness of the intervention on improving grade point averages. However, the implications of this study are limited because self-management was utilized as one component of a larger package.

Third, few studies have investigated whether behavior change resulting from self-management interventions generalizes to new settings in which the intervention is absent. Self-management theory suggests that students learn and internalize self-awareness and self-regulatory skills which increase the likelihood that behavior change will generalize to new settings. However, research investigating generalization effects is largely absent, and generalization was not examined in any of the aforementioned studies targeting classroom
preparatory behaviors. Research that has investigated generalization has found that behavior change often does not generalize to new settings. For example, although the self-management intervention in Smith and colleagues (1988) was successful in improving engagement in the resource room setting in which the intervention was implemented, intervention effects were not observed to generalize to the general education class in the absence of intervention.

The few studies that have illustrated generalized behavior change have only observed change in new settings after the intervention had been implemented for a substantial part of the student's day. For example, in Wood, Murdock, and Cronin (2002), researchers tracked the on-task behavior of four middle school students in six academic classes and introduced the intervention into three classes using a multiple baseline design. They found that only after the intervention had been implemented into three class settings were improvements in on-task behavior observed in classes in which the intervention was absent. Therefore, despite the theoretical implications of self-management interventions being likely to generalize to new settings, research suggests that generalization of behavior change does not occur without substantial intervention. The feasibility of this level of intervention intensity may not be able to be supported for secondary students, who are likely to move across multiple class settings within the school day.

Lastly, the implementation of self-management in these studies was time-intensive. Even in the simplest studies using self-monitoring to target on-task behavior, teachers were responsible for training, providing prompts, accuracy checks, and preparing materials. When studies targeted multifaceted academic enabling behaviors, the burden remained on the teachers to identify and define target behaviors, prepare self-monitoring materials, conduct ratings daily or multiple times per day, and meet with the students to compare ratings for accuracy, evaluate
performance, and select and administer reinforcement. Furthermore, in those studies in which extensive feedback was provided (Gureasko-Moore et al., 2006; 2007), this debriefing was conducted by an external researcher or support staff rather than the classroom teacher. Although implementation may have been feasible with the small number of students involved in many of these studies with the support of researchers, it would be difficult for teachers to find the time to schedule daily individual meetings with multiple students in one class and to potentially juggle multiple individualized interventions. The combination of these factors may restrict their potential use due to the resource limitations of most school settings.

**Extending the Reach of Interventions: Self-Management as a Group-Level Intervention**

Preliminary studies suggest that self-management interventions conducted at the individual level are effective for improving academic enabling behaviors. However, given the number of students who struggle with issues related to engagement, motivation, social skills, and study skills, this suggests promise for use of self-management as a targeted, group-level intervention. For example, students with ADHD tend to demonstrate lower levels of academic enabling behaviors than other groups of students, due to the symptoms associated with this disorder (Volpe et al., 2006). The rates of ADHD among students (i.e. 8%; Kessler et al., 2012) suggest that a significant number of students are at increased risk for struggling with academic enabling behaviors. Additionally, theory suggests that academic enabling behaviors lead to increased academic success for all students (DiPerna, 2006). Therefore, the adaption of self-management to improve the academic enabling behaviors of groups of students may provide more efficient intervention to students with disabilities, and prevent increasing academic struggles for students at risk.

**Self-Management as a Classwide Intervention**
Although the majority of self-management studies have focused on intervention at the individual level, some researchers have examined adaptations of self-management interventions to extend the reach of these interventions. Given the benefits of increased self-management for all students, these studies administered the intervention to entire classrooms of students. Adapting self-management to from an individualized intervention to a classwide intervention increases access by allowing for the intervention to reach the greatest number of students. In order to enhance the feasibility of self-management as a classwide intervention, several of these studies utilized group contingencies.

Mitchem, Young, West, and Benyo (2001) combined self-management intervention and peer-tutoring components to develop a classwide intervention to improve classroom behavior, Classwide Peer-Assisted Self-Management Intervention (CWPASM). Three middle school classes self-monitored adherence to classroom rules and performance of two social skill targets (i.e., following directions, appropriately obtaining teacher attention) using a 4-point scale (i.e., Honors, Satisfactory, Needs Improvement, Unsatisfactory) during one class period per day. At cued 10-minute intervals, each student observed and rated his or her performance and the performance of a peer partner, and students received points for their performance of behaviors and for matching their partner's ratings. Partnerships were randomly distributed into two teams within the class, and teams pooled their points together with their team to compete with the other classroom team. The team with more points would receive a prize. Results suggested that the intervention was effective in improving the class's mean level of on-task behavior compared to baseline levels and compared to mean on-task levels of a matched control class.

Hoff and Ervin (2013) incorporated group-level monitoring and group contingency in a class-wide self-management intervention. They utilized a self-monitoring intervention in four
second grade classrooms of approximately 22 students each to reduce disruptive behavior. At the end of one target period per day, students rated the adherence to classroom rules on a scale of 1 (i.e., violated more than one classroom rule) to 5 (i.e., adhered to all classroom rules) for themselves and for the class as a whole. Students then voted on an overall class rating, and the teacher compared her rating to the class rating. Students earned points for their adherence to rules and bonus points for matching the teacher's rating, which were recorded on a graph at the front of the classroom and could be redeemed for a class-wide prize. A multiple-baseline, single-case design across classrooms demonstrated that the intervention was effective in reducing mean disruptive behavior for the class as a whole, as well as for individual at-risk target students in each class.

Similarly, Chafouleas, Sanetti, Jaffery, and Fallon (2012) examined a combination of self-management and group contingency with three eighth grade classes in a suburban middle school. At the end of the period, each student rated himself or herself on three target behaviors (i.e., preparedness, engagement, homework completion) using an 11-point scale from 0 (i.e., not at all) to 10 (i.e., totally). Students earned points individually for performance of target behaviors and for matching with their teacher's ratings. Students were randomly divided into six teams of 3 to 5 students each, and pooled points together for a team average, which were graphed each day and monitored over time. Teams also set a weekly group goal, and each student who reached the group goal received a prize. Each student earned additional prizes if he or she reached the group goal for two or three consecutive weeks. Results suggested slight to moderate improvement in mean on-task behavior across classes, which the authors attributed to high baseline levels of target behaviors in one of the classes, as well as the fact that self-monitoring was initiated during
baseline, so levels of on-task behavior in the absence of all treatment components could not be established.

Briesch, Hemphill and Daniels (2013) attempted to further increase feasibility of implementing a self-management intervention class-wide. Researchers reduced the materials required by using hand signals for self-monitoring rather than pen and paper forms and simplified the complexity of implementation by using a dependent group contingency. Two seventh grade classrooms were taught to self-monitor their adherence to five classroom behavioral expectations selected by teachers to promote academic engagement (i.e., sit up straight, lean forward, ask questions, nod your head, track the speaker) in one target class per day. At variable intervals between ten and fifteen minutes signaled by a tone, students self-monitored and rated their behavior by giving a thumbs up (i.e., indicating that they met all expectations), a thumbs down (i.e., indicating they did not meet any expectations), or a sideways thumb (i.e., indicating they met some but not all expectations). The teacher also rated the behavior of a randomly-selected subset of students, and the entire class received a point if those students’ ratings matched that of the teacher. The teacher announced the accuracy percentage at the end of each class period, and the class received a prize if they reached a weekly goal of 80% matching accuracy. Systematic classroom observations suggested an immediate and sustained increase in overall student academic engagement as a result of the intervention, despite high baseline levels of engagement.

**Summary and limitations.** Self-management interventions have been adapted for use at the classroom level to increase student access and to reduce the need for more intensive interventions for students at-risk. Because all students received the same universal intervention, these studies targeted behaviors that were relevant to all students, such as classroom behavioral
expectations or on-task behavior. The majority of these interventions taught students to self-monitor a behavior at the individual level, and some studies included goal setting, evaluation, or feedback from peers or an adult. Overall, studies demonstrated an immediate increase in engagement as a result of the interventions, with some studies also demonstrating sustained improvements in engagement (e.g., Briesch et al., 2013).

Although these studies attempted to simplify self-management intervention to adapt it for feasible classwide implementation, difficulties with feasibility remain evident. Most of the studies were implemented by the classroom teacher, and required substantial coordination and preparation to implement. With the exception of Briesch et al. (2013), all studies required teachers to prepare self-monitoring materials for students on a daily basis. Most of the studies also required teachers to provide training to students, select group rewards, rate student behavior (e.g., Hoff & Ervin, 2013), calculate daily accuracy percentages (e.g., Briesch et al., 2013), and monitor progress towards goals in order to distribute rewards (e.g., Chafouleas et al., 2012). In Mitchem et al. (2002), teachers also assigned peer pairs and randomized pairs to teams on a daily basis. Despite efforts to improve feasibility, classwide implementation of self-management interventions continues to require considerable preparation and classroom time to implement.

Most importantly, attempts to promote feasibility and accessibility have required that behavioral feedback discussions to be eliminated from most universal classwide interventions. In classwide implementation of self-management, provision of individualized feedback to a class of students would not likely be feasible. However, Kanfer (1970) theorized that self-monitoring of behavior is only one part of a three-step process. In order to produce behavior change, students must evaluate the discrepancy between their current and desired state of behavior, and reinforce themselves based on their performance. These processes are usually supported in individual
feedback meetings with adults, in which individualized performance or accuracy goals are set, the student progress towards those goals is evaluated, behavioral feedback is provided, and the student receives rewards for reaching goals (e.g., Briesch & Daniels, 2013). Although typical of individual self-management interventions, these components are more difficult to implement at the group level. Because these components are often absent in classwide examinations of self-management, it is unclear the extent to which internal processes of self-evaluation and self-reinforcement are actually being activated. Therefore, students may not be internalizing the self-regulation skills to manage their behavior in the future.

This group of studies has expanded the options for using self-management with multiple students. However, all examples involved universal intervention, wherein all students in the classroom monitored the same behaviors and received the same intervention. In these studies, modifications were not made for students who would benefit from some additional support or individualization. In fact, few studies have examined the application of self-management interventions for students who would benefit from additional, targeted support but do not require intensive, individualized supports. The result is that self-management has been established for use at the universal and intensive tertiary levels of support, with less investigation of its adaptation for students requiring targeted services.

Self-Management as a Targeted Intervention

One option for expanding the reach of self-management interventions to students at the targeted level while maintaining active treatment components may be to incorporate self-management within a group counseling context. Groups are part of the natural daily routine in schools, and therefore comfortable and familiar to students (Shechtman, 2002). Student groups in schools are often used a means of prevention or targeted intervention. The most common types
of group counseling in schools are guidance/educational groups and counseling groups (Shechtman, 2002). Often intended for primary prevention, guidance/educational groups are usually conducted within the classroom setting by teachers or specialists, rather than mental health professionals. These groups are associated with increased peer relationships, classroom behavior, and school performance, but are not as effective in improving self-esteem and social-emotional difficulties as counseling groups (Shechtman, 2002). Counseling groups are used with children with particular developmental, social, or emotional difficulties who require specialized interventions. These groups are usually conducted in small groups by mental health professionals outside of the classroom context, and are more likely to improve self-esteem and overall well-being than educational groups (Shechtman, 2002). As a result, school-based group counseling has been applied to various intervention targets within schools (e.g., social skills, bullying).

Group counseling is another means of increasing intervention access to students by allowing greater numbers of students to feasibly participate in the intervention. The context reduces the time needed to implement the intervention, as school-based groups are usually convened once per week, and can be conducted during a free period or after school. Because they are implemented by a school-based mental health professional, the intervention demands on the classroom teacher are also reduced. Furthermore, students have increased access to specialized therapeutic interventions embedded in the group counseling sessions.

The group counseling context increases student access to intervention without compromising active components of the intervention, specifically individualized behavioral feedback. Within the group context, students monitor target behaviors specific to their needs, set individualized goals, and receive individual feedback from peers and adults. These activities support the theoretical mechanisms of behavior change in self-management. Specifically, Kanfer
(1970) theorized that self-evaluation and self-reinforcement were key components to the self-monitoring feedback loop in order to produce behavior change. By sharing self-monitoring results and goals with peers in a group context, students may become more aware of the discrepancy between their current and desired level of performance. Subsequent conversations with peers and adults may provide more robust feedback about the student's performance and goals. Feedback from others about the student's performance (e.g., social praise for reaching goals) may also model self-reinforcement for the student. Therefore, the group counseling context may serve to activate the internal processes of self-evaluation and self-reinforcement.

Moreover, the group context provides unique benefits that may enhance the effectiveness of feedback. The group counseling context offers a number of components that could enhance the effectiveness of self-management interventions for students at the targeted level. First, because the group is comprised of students with similar difficulties, the group normalizes difficulties with academic enabling behaviors (Barrett, 1998). Furthermore, the group context provides a forum for personal disclosure and social support. In a study of student groups, Shechtman (2002) found that students have a desire for personal disclosure, emotional experiencing, and social support, and students often disclose emotionally-charged experiences in treatment, react positively to feedback, and seek to develop social skills to build interpersonal relationships. Additionally, the group counseling context allows for social problem-solving and peer coaching, which have been effective components in other group interventions (Brigman & Webb, 2007). Students work together to identify a problem, generate solutions, and track results. Students can learn from each other, either by sharing effective strategies or through social modeling as examples of successful and unsuccessful strategy use (Brigman & Webb, 2007). Finally, the group can provide peer support and motivation. By sharing their progress with others
and receiving positive reinforcement from peers, students' motivation to reach their goals may increase.

A small number of studies that have combined self-management with group counseling were identified. The powerful effects of student groups can be illustrated in research demonstrating that student-led discussions about study habits show similar improvements in study skills and grades as formalized treatment approaches. Harris and Trujillo (1975) applied a self-management training to improve study skills with middle school students. In the Self-Management group, 36 students participated in a 12-week "course" to improve study habits. Students self-monitored their study habits, such as study time, subject studied, place student studied, and efficiency of studying every day. Group meetings focused on study skills training, such as rationale for studying, note-taking skills, test-taking skills, and memory strategies. Students were also taught behavior modification techniques, such as the Premack principle, use of punishment and reinforcement, and principles of stimulus control. In the Group Discussion group, 41 students participated in weekly small group discussions about study problems, led by the students themselves, which aimed to increase motivation and personal investment. Results found that grades improved from baseline for students in the two intervention groups, and that post-intervention grades were significantly higher for students in the intervention groups than students in the control group. Furthermore, post-intervention grades did not differ among students in the self-management and group discussion groups. Both intervention groups improved in their self-report of their study behaviors, although greater improvement in study behaviors (e.g., having a regular time and place to study) were observed in the Self-Management group than the Group Discussion group.
One well-researched group counseling program to improve academic achievement among middle school students is the Student Success Skills program (SSS; Brigman & Webb, 2007). The SSS program consists of five weekly 45-minute large-group instructional sessions targeting five areas associated with academic achievement: goal setting and progress monitoring, building peer support, cognition and memory skills, managing anxiety, and building optimism. For students requiring additional support, eight weekly small-group sessions are included to build skills and increase social problem-solving and peer coaching. Students learn anxiety-management strategies, such as visualization of "safe place" and deep breathing. Once per week, students self-monitor healthy habits (e.g., nutrition, fun, exercise, social support, rest, energy, mood) and their use of academic skills (e.g., memory strategies, turning in work on time, identifying main concepts) by indicating if each is or is not "in a good range." Students set weekly goals to improve their skills in these areas. In the small group, positive self-talk and collaborative problem-solving are modeled and practiced. Pre- and post-intervention reading and math scores on state mandated testing significantly improved for students involved in the SSS program compared to a control group (Brigman & Webb, 2007). An evaluation of the evidence base for the SSS program by the National Panel for Evidence-Based School Counseling found that the program achieved a standard of "strong evidence" for measurement, implementation fidelity and ecological validity, and "promising evidence" for comparison groups, statistical analysis of outcome variables, and replication (Carey, Dimmitt, Hatch, Lapan, & Whiston, 2008). Evaluators suggested that future research of the program examine outcome measures of target skills (e.g., social skills, self-management skills) in addition to academic achievement test scores, compare effectiveness to placebo control groups, and gather follow-up data to explore maintenance effects (Carey et al., 2008).
Lemberger and Clemens (2012) examined the effectiveness of the SSS program on increasing academic enabling factors, such as metacognitive skills, executive functioning, and social connectedness. Researchers implemented the eight small-group counseling sessions of the SSS program with 52 4th and 5th grade African American students across four urban middle school settings. Student groups were implemented by graduate students in counseling, and consisted of four to five students each. Students were introduced to SSS strategies, engaged in social problem-solving, and followed a peer-coaching model. Results suggested that students who participated in the SSS program not only demonstrated greater increases in self-reported use of metacognitive skills and teacher-rated executive functioning skills, but also a stronger self-reported connection to the school community compared to a control group (Lemberger & Clemens, 2012).

**Summary and limitations.** Integration of self-management interventions with a group counseling context may service to increase feasibility and student access, conserve theoretical mechanisms of behavior change through individualized behavioral feedback, and enhance the potential effectiveness of feedback through peer modeling, problem-solving, and social reinforcement. Studies that have examined the combination of self-management and group counseling have found that student-led discussion groups are similarly effective in improving grades as self-management student groups, although students in self-management groups are more likely to increase academic enabling behaviors (Harris & Trujillo, 1975). Furthermore, the SSS program, which involves the self-management of study and health behaviors and offers peer problem-solving peer coaching within group counseling sessions, has shown strong promise in improving academic enabling factors (e.g., social connectedness; Lemberger & Clemens, 2012) and academic achievement (Brigman & Webb, 2007).
Despite initial promising results, more research needs to be conducted in this area to improve self-management counseling groups to address students' academic enabling behaviors. For example, the SSS Program is a promising multi-faceted intervention to improve academic enabling behaviors, but its wide scope limits its potential effectiveness. Although important, healthy habits, such as nutrition and exercise, may have a more distal relationship with academic achievement than academic enabling behaviors and may respond better to alternative interventions. Students self-monitor their behaviors once per week by roughly gauging if they demonstrated these behaviors "at a good level," and do not formally record or evaluate their weekly goals. Self-monitoring research often uses shorter self-evaluation periods for recording, usually within a daily basis, and provides specific training in operational definitions of behavior and evaluating goals (e.g., Briesch & Briesch, submitted). A program targeted towards academic behaviors with more frequent and operationalized self-monitoring and goal setting components may be warranted.

Conclusions and Implications for Research and Practice

Academic enabling behaviors, including engagement, motivation, study skills, and social skills, have been implicated as behaviors important to increase accessibility of the academic curriculum and therefore to promote academic achievement. Some groups of students, such as those with learning disabilities or ADHD, have demonstrated decreased performance of academic enabling behaviors, inspiring researchers to develop interventions to promote these behaviors in students. Numerous interventions have been developed to target specific sets of academic enabling behaviors, such as social skills training or homework interventions. However, because theoretical models of academic enabling behaviors describe these factors as working
together to promote academic achievement, interventions that target multifaceted academic enabling behaviors are warranted.

Self-management is one intervention that has been used to target academic enabling behaviors. Self-management interventions teach students to become more aware of and in control of their behavior, and behavior change is theorized to stem from an internal process of self-monitoring of behavior, self-evaluation, and self-reinforcement. These interventions have typically been implemented at the individual level, using a yes/no checklist for self-monitoring, and targeting classroom rules or academic behaviors teachers reported as important to success in their classroom context. Although they have social validity, classroom-specific behavioral targets may have less applicability or generalizability for students than academic enabling behaviors, which have been theorized to be associated with academic achievement for all students across contexts.

Self-management has been well-developed for use at the universal and individual levels. Although academic enabling behaviors are associated with increased academic achievement for all students, some groups of students are particularly at-risk. For example, students with ADHD demonstrate weak study skills, low social skills, and executive functioning deficits that impact their ability to use academic enabling behaviors consistently. The high rates of these at-risk groups and the limited resources available in most school districts do not allow for individualized interventions to be developed for all students who would benefit. Additionally, classwide adaptations of self-management interventions still require substantial resources to implement, and often compromise the provision of individual behavioral feedback, which is theoretically important to activating internal self-management skills to sustain behavioral change. Therefore, there is a need to reduce the complexity and resources of self-management interventions and
increase their access while still maintaining key intervention components in order to service this group of at-risk students.

One potential way in which to reduce complexity and increase access is to implement self-management within a group counseling context. Group counseling is often used in schools as a method of increasing access to intervention for at-risk students, and has typically been implemented by school-based mental health professionals compared to classroom teachers. Research in school-based group counseling has emphasized the need to link group counseling to academic achievement (Brigman & Webb, 2007), and targeting academic enabling behaviors would allow for that link to be established. Furthermore, group counseling would provide a number of components that may enhance the effectiveness of the intervention, such as social support and peer problem-solving. The context may also serve to increase motivation and active internal feedback loops for self-monitoring. Therefore, the use of self-management within a group counseling context to target academic enabling behaviors may increase feasibility and access, provide additional therapeutic components, and promote academic achievement for at-risk student groups.
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CHAPTER II

ABSTRACT

Classwide adaptations of self-management interventions have been explored as targeted interventions for academic enabling behaviors. However, a trade-off exists between increasing intervention feasibility for groups of students and maintaining theoretical intervention components. This study examines the use of self-management within a 14-session group counseling context to increase the academic enabling behaviors of three middle school students as rated by their teachers. Results of a multiple baseline design across students revealed that academic enabling behaviors increased for two of the three students. Usability results suggested that students found the intervention to be generally acceptable, understandable, and feasible.
SELF-MANAGEMENT WITHIN A GROUP COUNSELING CONTEXT

The adoption of tiered service delivery models (e.g., response to intervention; Gresham, 2005) in schools has increased the push for the development of interventions to address behavioral problems at varying levels of intensity to be used with students of different levels of need. To date, much of the research has been directed toward the identification of effective interventions for students at the extreme (i.e. most basic and most intensive) levels of need. For example, social and emotional learning (SEL) programs have been developed as universal interventions implemented with all students in grades kindergarten through middle school to target foundational skills in self-regulation, emotional identification, and peer relationships (Payton et al., 2008). SEL programs have been found to improve students' social-emotional skills, attitudes towards self and others, positive social behavior, and academic performance, and to reduce conduct problems and emotional distress (Payton et al., 2008). Meanwhile, at the tertiary level, functional behavioral assessments determine the function of the student's problematic behavior by evaluating the behavior and environmental response across many school contexts. FBAs have been used to develop individualized, intensive behavioral intervention plans for problematic behavior at the Tier 3 level (Debnam, Pas, & Bradshaw, 2012). However, less research has examined interventions appropriate for Tier 2 levels of support (Stormont & Reinke, 2013). Although an estimated 10-15% of students will be in need of targeted Tier 2 interventions, relatively few evidence-based interventions have been developed to meet the needs of these students (Stormont & Reinke, 2013).

Although there exists a need for effective Tier 2 interventions across all grade levels, identifying appropriate options becomes even more challenging when students enter middle school. First, middle school students typically take classes with many different teachers and
travel between classes. Therefore, traditional teacher-managed interventions to address problematic behavior (e.g., group-based contingency programs) are difficult to implement and maintain because of the training, time, and investment demands on multiple teachers who work with the student. Thus, an intervention that travels with the student is more likely to be implemented with integrity and involves less demand on resources. Second, the nature of middle school academic work requires increasing independence and decreasing support. Long-term assignments and homework both increase in frequency and decrease in structured support from teachers. Therefore, it is imperative for middle school students to develop independent management of their academic behavior to meet academic demands, such as managing time for long-term assignments and completing homework on a regular basis. These skills become increasingly more vital as students prepare to transition to high school, college, employment, and/or independent living.

One promising intervention strategy for use with middle school students at the Tier 2 level is self-management. Self-management interventions have been used to promote appropriate classroom behavior through increasing students' awareness and regulation of their behavior. Because self-management interventions transfer the implementation responsibility from the staff to the student, they have been viewed as more feasible for use across multiple classroom settings than teacher-mediated interventions (Cole & Bambara, 1992), and more likely to sustain student behavioral self-regulation skills in the future (Kanfer, 1970). Self-management interventions have typically been implemented at the Tier 3 level, individualized to address a student's specific problem behaviors, and found effective in improving a range of behaviors including on-task and disruptive behaviors (Briesch & Chafouleas, 2009). At a minimum, self-management interventions require that students observe and record their target behavior over time. Across
elementary and secondary populations, students typically have been taught to observe and record their behavior using prompted time sampling procedures, such as when prompted by an audible tone or a vibration on a MotivAider at varying intervals of a few minutes (e.g., Briesch & Daniels, 2013). At the secondary level, however, yes/no checklists have also been used for students to rate their behavior more globally, such as by having students complete a checklist of classroom preparatory behaviors (e.g., prepared for class, completed homework; Gureasko-Moore et al., 2006). In some cases, students have set regular performance or accuracy goals, compared their performance to their goals, and received rewards (e.g., points, prizes) for reaching their goals (e.g., Meyer & Kelley, 2007). These components are commonly implemented in daily, individual meetings between the student and an adult (e.g., teacher or school mental health professional), in which the adult reviews ratings and provides behavioral feedback. Evaluation and behavioral feedback components are more likely to be used with secondary students, possibly because of their increased cognitive ability to reflect on and evaluate their behavior (Briesch & Briesch, in press).

Because of the efficacy of self-management interventions when used at the individual level, research has begun to explore their implementation with larger groups of students in order to increase student access to behavioral supports. Most commonly, self-management interventions have been adapted for classwide use and have targeted academic enabling behaviors, such as academic engagement, adherence to classroom rules, or study strategies, because these behaviors increase the likelihood of accessing academic instruction and improving academic performance for all students (Diperna, 2006). For example, in a study by Chafouleas, Sanetti, Jaffery, and Fallon (2012), students in three middle school classes rated themselves at the end of each class on preparedness, engagement, and homework completion, and then
competed in teams to earn rewards for meeting performance goals and matching teacher ratings and graphed their performance over time. Results suggested slight to moderate success in increasing student academic engagement. Substantial time was needed to provide individual accuracy checks with each of the students in the classroom, however, thereby limiting the intervention's feasibility. Briesch, Hemphill, and Daniels (2013) attempted to improve classwide intervention feasibility by utilizing hand signals rather than traditional paper and pencil forms for middle school students to self-monitor their adherence to classroom rules (e.g., sit up, ask questions) and omitting the provision of individualized feedback. Because accuracy checks were only made for a small subset of students at one time, the intervention required minimal teacher time for implementation. Results suggested that the intervention was effective in improving on-task behavior.

These studies illustrate the trade-off between the feasibility of using self-management with groups of students and the quality of the feedback provided to students. In order to implement self-management with a class of students in a way that does not require extensive instructional time, the teacher is not able to feasibly provide regular, individualized feedback sessions with each student in which individual goals are determined and evaluated, and behavioral feedback is provided. However, this feedback may support the theoretical underpinnings of behavior change within self-management interventions. In his cognitive-mediational model of reactivity, Kanfer (1970) posited that self-monitoring interventions are effective in promoting behavior change due to a three-stage internal process. In the first stage, the individual self-monitors his behavior, which increases the salience of the current level of behavior. The increased salience of the behavior automatically triggers a second stage of self-evaluation, in which the individual compares the current level of performance with the desired
level of performance of behavior. The individual then administers self-reinforcement depending on the result of this evaluation (e.g., delivering positive self-statements for meeting a goal, restricting rewards for not meeting a goal). Individual goals, reflective evaluations, and behavioral feedback within discussions with an adult may serve to support these internal processes for students to promote behavioral change. Without full engagement in the three stage internal processes, behavior change in the classroom may be limited, and students may not internalize self-management skills to regulate their behavior independently in the future.

Incorporating self-management within a group counseling context may serve to both increase access and feasibility of the intervention, while ensuring that students receive the degree of behavioral feedback needed to support mechanisms of behavior change. Counseling groups are commonly used in schools for at-risk student groups (Shechtman, 2002). Because they are typically implemented on a weekly basis by school mental health personnel, the burden of the intervention is removed from classroom teachers, and the time commitment can be reduced from daily to weekly check-ins. More students are able to participate in the intervention, and the intervention can be implemented in multiple classrooms without the involvement of multiple teachers. Furthermore, students have increased access to specialized services from mental health personnel within the group counseling context. The self-evaluation and self-reinforcement processes of Kanfer's (1970) model can be structured through sharing self-monitoring data, performance goals, and strategies with a group of peers, and enhanced through peer reinforcement (e.g., positive social recognition for reaching goal). The group discussions and multiple perspectives allow for robust behavioral feedback, as well as social problem-solving and peer coaching (Brigman & Webb, 2007). Students also have the opportunity to learn from peer models about successful and unsuccessful strategy use. Therefore, the group counseling
context also offers some unique components that could facilitate the effectiveness of the intervention. Self-management within a group counseling context would fit the requirements of a Tier 2 intervention, by feasibly increasing access to larger number of students while providing targeted, individualized support and feedback.

Although few studies have implemented self-management interventions within group counseling contexts, results to date have been promising. For example, Harris and Trujillo (1975) examined the difference in effectiveness of a self-management course and a group discussion to improve study behaviors in middle school students. Students in the self-management group self-monitored their study habits and learned about study and memory strategies, whereas students in the group discussion group participated in weekly student-led discussions about study problems. In line with previous research, the academic behaviors (e.g., homework strategies) of students in the self-management group improved more than those of the students in the discussion only group. However, these researchers also found that students' academic achievement improved as a result of group discussions compared to students in the control group, suggesting intervention effects of student-led group discussions about study skills. In evaluating their Student Success Skills (SSS) program, Brigman and Webb (2007) expanded on this idea and found that self-monitoring within a group counseling context was effective in improving the academic achievement of middle school students. In weekly small groups, students self-monitored their study behaviors and healthy habits (e.g., sleep, exercise), set weekly goals for performance, and engaged in social problem-solving with peers. Subsequent examinations of the SSS program have also found it to be effective in improving school connectedness, executive functioning skills, and metacognitive study strategies (Lemberger & Clemens, 2012). These studies are
promising for the combined use of self-management and group counseling dynamics in promoting behavior change.

The purpose of this study is therefore to examine the effectiveness of a self-management intervention in promoting academic enabling behaviors and academic performance within a group counseling setting with middle school students. The specific research questions, exploratory questions, and hypotheses are listed below:

Research Question #1: Is a self-management intervention delivered within a group counseling context effective in improving academic enabling behaviors in the students' target classes?

Hypothesis #1: It was hypothesized that the self-management intervention would improve academic enabling behaviors in the students' target classes, as demonstrated by an increase in the mean score on a modified version of the Academic Competence Evaluation Scales (ACES; DiPerna & Elliott, 1999; 2000). Based on Kanfer's model of reactivity (1970), increasing the students' self-awareness of their behavior and developing criteria for performance should induce behavior change to meet the established criteria. Previous research has found self-management to be effective in improving academic enabling behaviors, such as academic engagement (e.g., Smith, Young, West, & Morgan, 1988) and classroom preparatory behaviors (e.g., Gureasko-Moore, DuPaul, & White, 2006) when implemented at the individual level. Furthermore, preliminary studies of self-management within group counseling settings, such as the SSS program (Brigman & Webb, 2007), have been found effective in promoting academic achievement and executive functioning (Lemberger & Clemens, 2012). Therefore, a self-management intervention delivered within a group context should be effective for behavior change.
Research Question #2: Will intervention effects be maintained up to four weeks after the intervention has been withdrawn?

Hypothesis #2: It was hypothesized that intervention effects (i.e., improvement in academic enabling behaviors and performance) would be maintained up to four weeks after the intervention has been withdrawn. Self-management theory asserts that students build self-awareness and self-regulatory skills that increase the likelihood of sustained behavior change over time (Kanfer, 1970). Additionally, previous research has found that improvements in on-task behavior were sustained for one month (Legge, DeBar, & Alber-Morgan, 2010) to three months (Briesch & Daniels, 2013) after the intervention was withdrawn. Therefore, by changing underlying cognitive processes, the self-management intervention in this study should produce sustained behavioral change.

Exploratory Question #3: Is a self-management intervention delivered within a group counseling context considered feasible and acceptable to students?

Hypothesis #3: It was hypothesized that the self-management intervention in this study would be considered feasible and acceptable by students, as evidenced by high scores on the Children’s Usage Rating Profile (Briesch & Chafouleas, 2009a). Previous studies have found high acceptability of self-management interventions among students. In an examination of the acceptability of a self-management intervention to improve the classroom preparatory behaviors of middle school students, Gureasko-Moore and colleagues (2006) found that students liked using the intervention, found it to be fair, and believed it helped them to do better in school. Similarly, Briesch and Daniels (2013) also found that middle school students reported that the self-management intervention aimed to improve their on-task behavior was understandable, feasible, and enjoyable.
Exploratory Question #4: Are the direct behavior ratings used to monitor students' progress considered feasible and acceptable to teachers?

Hypothesis #4: It was hypothesized that the Direct Behavior Ratings would be considered feasible and acceptable by teachers, as evidenced by high scores on the Usage Rating Profile - Assessment (URP-A; Chafouleas, Miller, Briesch, Neugebauer, & Riley-Tillman, 2012). Because of the minimal time and resource requirements, Direct Behavior Ratings have been suggested to be a feasible means of collecting reliable data to inform decision-making (Christ, Nelson, Van Norman, Chafouleas, & Riley-Tillman, 2014).

**Method**

**Participants, Setting, and Recruitment**

Fourteen middle school students within a public school in the northeastern United States participated in the self-management group intervention. The school psychologist and middle school teachers nominated potential students who they identified as presenting with difficulties with academic enabling behaviors, such as completing homework, being on-task during class, or finishing work on time. Students who demonstrated significant cognitive, social-emotional, or behavioral difficulties that may limit the student's ability to engage in the group counseling context were excluded from the study. Additionally, students who were receiving other support services targeting academic enabling behaviors were excluded. The study investigator and school psychologist contacted the parents of potential participants to inform them about the purpose and procedures of the group intervention, answer any questions, and provide them with the informed consent form. Students began the study after informed consent was received from parents. Students also signed assent before participating in the study.
Of the 14 total students participating in the intervention, three target students were selected for daily progress monitoring. These three target students were selected because they (a) demonstrated the lowest baseline levels of academic enabling behaviors in their target classes in their respective groups (see Procedures for discussion of grouping) and (b) did not have scheduling conflicts that prohibited them from participating in the intervention. Ryan, a 12-year-old Caucasian male in the 7th grade, participated in Group 1. Tim, a 12-year-old Asian male in the 6th grade, participated in Group 2. John, a 14-year-old African American male in the 8th grade, participated in Group 3. Although the majority of students were not receiving special education services at the time of the study, Ryan was receiving services under the Other Health Impaired category and had a diagnosis of Attention Deficit Hyperactivity Disorder (ADHD).

**Measures**

**Teacher-Completed Direct Behavior Rating - Multi-Item Scale (i.e., DBR-MIS)**.

Items from the Teacher Form of the Academic Competence Evaluation Scales (ACES; DiPerna & Elliott, 1999; 2000) were selected for use within the teacher-completed DBR-MIS. The ACES is a 73-item teacher-rated measure of the skills, attitudes, and behaviors that are associated with academic competence for students in kindergarten through 12th grade. The ACES measures two constructs: Academic Skills and Academic Enablers. Because of this study's focus on academic enabling behaviors, only items from the Academic Enablers scale of the ACES were used. The Academic Enablers scale consists of four subscales: Interpersonal Skills, Engagement, Motivation, and Study Skills. The Engagement subscale measures behaviors that facilitate attention and active participation in learning. The Motivation subscale measures the student's level of personal investment and perseverance in academic learning. The Study Skills subscale measures study behaviors that facilitate new learning. The Interpersonal Skills subscale was
excluded, as improvements in these behaviors are likely to require more specific interventions beyond the scope of this study (e.g., social skills training). Teachers rated items on a five-point scale, on which 1 indicates never and 5 indicates almost always. Teachers also rate their perception of the importance of each behavior as not important, important, or critical. Item ratings are totaled to generate a sum score, and higher sum scores are associated with higher academic competence. Psychometric research on the ACES has demonstrated high internal consistency, test-retest stability, and inter-rater reliability, and has shown construct validity with both teacher-rated and standardized measures of academic achievement (DiPerna & Elliott, 1999; 2000).

Before beginning baseline, teachers completed the Engagement, Motivation, and Study Skills subscales of the ACES for each student participating in the intervention (see Appendix A). One target academic class was chosen for each student based on the class that had the lowest ACES scores. Science class was chosen for Ryan, social studies for Tim, and English and Language Arts (ELA) for John.

In order to allow teachers to complete ratings on a daily basis to measure progress over the course of the study, items were selected from the ACES to comprise a modified, brief Direct Behavior Rating - Multi-Item Scale (DBR-MIS; i.e., teacher rating form) for each target student (see Appendix B). DBR-MIS is used to monitor student progress and make decisions regarding school-based interventions, and has been used as an outcome measure in previous research (e.g., Dart et al., 2014; Hunter, Chenier, & Gresham, 2014). Four behaviors were selected from the ACES for each student based on the following decision rules: (a) the teacher rated the behavior as highly problematic for the student (i.e., rating of 3 or lower), (b) the teacher rated the behavior as important or critical in the classroom context, and (c) the behavior could be rated on a daily
basis. Response options for these items were adapted to reflect daily completion of items and to capture variability in behavior over time. Teachers rated each behavior on a 5-point Likert scale, with 1 indicating Not at All or None, 3 indicating Somewhat or Partially, and 5 indicating All the Time or Completely. Each form yielded an average score between 1 to 5, with higher scores indicating higher levels of academic enabling behaviors. Forms that included less than 3 completed items were excluded from analyses because the mean score could not be calculated.

Teachers completed the DBR-MIS following each student's target class during all phases of the study. Teachers participated in a 15-minute individual training session with the researcher before beginning ratings. In this session, the researcher defined each item, gave operational definitions of each of the response options, and provided opportunities for the teacher to practice using the rating form. The training was complete when the teacher reported feeling comfortable using the DBR-MIS, and completely matched the researcher's ratings using examples.

Once per week, the primary investigator and a research assistant conducted inter-observer agreement (IOA) with ratings on the DBR-MIS. The researcher discretely observed the student in class, and completed the same DBR-MIS as the teacher. IOA was collected for 18% (n = 7) of baseline sessions, 19% (n = 11) of intervention sessions, and 27% (n = 3) of follow-up sessions. Number of agreements was divided by the total number of agreements and disagreements in order to obtain a measure of IOA. An agreement was considered to be within 1-point of the teacher's rating. IOA was an average of 84% (range = 50% to 91%) for baseline sessions, 78% for intervention sessions (range = 60% to 100%), and 64% for follow-up sessions.

**Student-Completed DBR-MIS.** Students used the student-completed DBR-MIS (see Appendix C) to rate their behavior in their target classes on a daily basis during the intervention phase. The student-completed DBR-MIS were identical to teacher-completed DBR-MIS, in that
students rated the same four behaviors as their teachers and used identical response options. In order to increase student involvement and personal investment in the intervention, students also monitored one additional behavior they selected from the list of behaviors identified by their teachers. As a result, students self-monitored a total of five behaviors on the student-completed DBR-MIS.

**Children's Usage Rating Profile (CURP).** An adapted version of the Children's Usage Rating Profile (CURP; Briesch & Chafouleas, 2009a) was used to measure the students’ perceptions of the usability of the interventions (Appendix E). The CURP consists of three subscales: Personal Desirability, which measures whether the student liked the intervention and the student's personal willingness to participate in it; Feasibility, which measures the student's perception of the effort required for intervention implementation; and Understanding, which measures how well the student understood the importance of the intervention and the steps to implementation. A pilot study found the CURP to have adequate internal consistency (Range = .75-.92; Briesch & Chafouleas, 2009a). Given that the CURP was designed to assess usability prior to actual implementation (e.g., *I would be excited to try this method*), the tense of each item was changed to reflect actual usage, specifically to the present tense for administration early in the intervention (e.g., *I am excited to try this method*) and to the past tense for administration after the intervention (e.g., *I was excited to try this method*). Although the majority of items were retained from the CURP, two items were omitted because they were not applicable to actual usage (e.g., *I would like to learn how to use this method myself, I wish that I could try this method*). Students completed the CURP in the second intervention session (i.e., during the Group Counseling phase) and again at the end of the intervention in order to evaluate changes in intervention acceptability that may arise as a result of engaging in the intervention.
Usage Rating Profile - Assessment (URP-A). The Usage Rating Profile - Assessment (URP-A; Chafouleas et al., 2012) was used to measure the teachers' perceptions of the usability of the teacher-completed DBR-MIS as a means of progress monitoring. The URP-A consists of six subscales. The Understanding, Feasibility, and Acceptability subscales measure the extent to which the rater believes he or she understands how to conduct the assessment, possesses the knowledge and resources to conduct the assessment feasibly, and believes the assessment to be a match for the problem behavior and with the rater's personal values. The three remaining subscales measure the rater's perception of the usability of the assessment within various systems contexts. The Home-School Collaboration subscale measures the extent to which home-school collaboration would be necessary to complete the assessment. The System Climate and System Support subscales measure the extent to which the rater perceives the assessment to fit within the school's policies and values, and the extent to which external support (e.g., consultation services) would be required to complete the assessment. The URP-A was adapted from the Usage Rating Profile - Intervention Revised (URP-IR), which has been supported by exploratory and confirmatory factor analyses and has been found to have acceptable internal consistency reliability (Range = .67-.95; Briesch, Chafouleas, Neugebauer, & Riley-Tillman, 2013). One item from the URP-IR (i.e., item 16) was removed from the URP-A based on the results of a confirmatory factor analysis. Three middle school teachers completed the URP-A at the end of the study.

Design and Procedure

Students were assigned to one of three student groups based on clinical judgment of group dynamics, and effort was made to group grade levels together. Group 1 consisted of three students in the 7th and 8th grades, Group 2 consisted of seven students in the 6th and 7th grades,
and Group 3 consisted of four students in the 7th and 8th grades. The student with the lowest baseline level of performance in each group was selected to serve as the target student in this study.

A multiple baseline design across target students was used to evaluate the effects of the intervention compared to baseline. Once a predictable pattern of responding for Ryan was noted, Group 1 began the intervention, and students assigned to Groups 2 and 3 remained in baseline. The subsequent groups entered intervention in a staggered order, such that Group 2 entered intervention after (a) a minimum of three intervention data points were collected for the target student in Group 1 and (b) visual inspection of the data demonstrated an intervention effect for the target student in Group 1. Similarly, Group 3 entered the intervention when at least three data points were collected and stable post-intervention responding was demonstrated for the target student in Group 2. A minimum of three groups of students was utilized in order to meet design criteria for single-case design (Kratochwill et al., 2010).

**Baseline.** During baseline, the teachers rated each of the target students' academic enabling behaviors on a daily basis in their target classes using the teacher-completed DBR-MIS. These ratings were collected weekly by the group leaders or study investigator. Students engaged in typical classroom activities until their group was ready to begin.

**Intervention.** Groups were either implemented by the school psychologist (Group 1) or three school psychology interns (Groups 2 and 3). Due to scheduling restrictions, Group 2 was co-led by two interns on alternating days. The group leaders participated in a two-hour training session with the study investigator to learn self-management theory, the procedures of the study, and the implementation of the self-management group. The study investigator also provided the group leaders with ongoing support and consultation throughout the course of the study. Each
group consisted of fourteen group sessions. Sessions were 40 minutes long and were held bi-weekly during a specials period (e.g., chorus), as was the preference of the school. Table 1 outlines the key components in each session, which are briefly described next.

**Group counseling intervention.** Within the first two introductory sessions, the group counseling intervention was implemented without self-management components. In these sessions, students learned about executive functioning, academic enabling behaviors, and self-management.

**Group counseling with self-management intervention.** In the third session, the self-management components were implemented. Students participated in self-monitoring training, which was based on training procedures used in previous studies (e.g., Briesch & Daniels, 2013; Young, West, Smith, & Morgan, 1991). The group leader defined each academic enabling behavior, described the response options, and provided examples. Students practiced using the self-monitoring procedure to rate their own behavior and the behavior of other students using the student-completed DBR-MIS within case examples. Students practiced until they reported that they understood the procedure and matched the group leader’s ratings with 100% accuracy for three case examples. Students were then asked to begin self-monitoring their academic enabling behaviors once at the end of their target class every day. It was the student’s responsibility to complete self-monitoring procedures, and thus no prompting to complete procedures was provided outside of the group context. To ensure that students were self-monitoring at the appropriate time, students were instructed to ask the teacher of their target class to initial the student’s completed self-monitoring sheet at the end of the period in a discrete manner.

At subsequent sessions, students graphed their self-monitoring ratings, set performance goals, evaluated their performance, and earned points towards group rewards for meeting goals.
Group leaders also reviewed definitions of behavior as necessary in order to support the students' self-monitoring accuracy. Students entered their self-monitoring ratings into a PowerPoint graph in order to track their ratings over time, and worked with the group to set a performance goal based on the data. Group leaders facilitated discussion to ensure that goals were specific, measurable, achievable, and time-limited in order to promote likelihood of student success (Locke & Latham, 1990). Each student evaluated whether or not he reached the performance goal he set for that session. When the goal was met, students earned a point towards a group reward, and social praise from the group. If the student did not meet his goal, he did not receive a point, and the group leader helped the student adjust the goal or engaged the group in problem-solving or skill building. Through the problem-solving process, students identified things they did to help accomplish their goals, things they did not do to achieve their goals, and what they could do in the future to increase the likelihood that they will achieve their goals (e.g., Gureasko-Moore et al., 2006; Snyder & Bambara, 1997). Students also earned points for completing intervention components accurately. The number of points the group earned was graphed on a chart and posted. The group determined the number of points needed to obtain the group prize (e.g., 15 group points will earn a movie party), such that it was anticipated that students would earn the first reward mid-way through the intervention and the second reward at the end of the intervention. At the final session, students reflected on their progress over the course of the group, and discussed strategies for maintaining behavior change.

**Follow-up.** Teachers in the target students' target classes continued to rate the target students' academic enabling behaviors using the teacher-completed DBR-MIS for up to four weeks following the end of the intervention. Follow-up data for Ryan were not available because a new teacher took over his class, and for John because of the school's 8th grade trip. The
number of days available for follow-up for students in Groups 2 and 3 were limited by the end of the school year. During the follow-up phase, students did not self-monitor their behavior, and all other intervention elements were absent.

**Treatment integrity.** Procedural checklists and permanent products have been traditionally used to evaluate the extent to which self-management interventions have been implemented as designed. These checklists evaluate the treatment adherence by evaluating the extent to which intervention components were delivered. Contemporary definitions of treatment integrity have expanded to include the process as well as the content of the intervention (Power, Blom-Hoffman, Clarke, Riley-Tillman, & Kelleher, 2005). Multivariate conceptualizations of treatment integrity include an evaluation of the quality of delivery, such as the preparedness and enthusiasm of the interventionist, and participant responsiveness, or the degree to which participants are engaged in the intervention.

Treatment integrity was evaluated by measuring adherence to the intervention, quality of delivery, and participant responsiveness. A similar procedural checklist to those utilized in previous self-management studies (e.g., Gureasko-Moore et al., 2006) was used to evaluate the extent to which group leaders implemented the intervention as designed. Procedural checklists contained the elements of that week's group session, a self-report measure of the leader's levels of enthusiasm and preparedness on a scale of 1 to 5, and the leader's rating of each student's level of engagement in the session on a scale of 1 to 5 (see Appendix D). The group leader immediately completed the procedural checklist after each meeting, and a percentage of the components that were implemented was calculated. Treatment integrity forms were completed for 100% sessions, and the average level of treatment integrity was 97%. For group leaders, the average level of preparedness was 4.55 and the average level of enthusiasm was 4.69. The target
students' average levels of engagement were 3.62 (SD = 0.67), 3.29 (SD = 1.07), and 4.00 (SD = 0.77) for Ryan, Tim, and John, respectively.

In addition, nine sessions (i.e., 21%) were audiotaped and coded by an independent observer, one of two graduate students in psychology, to provide an external measure of treatment integrity. For intervention components, an agreement was defined when both coders indicated the component was implemented or not implemented. For Likert-type scale ratings of the leader's preparedness and enthusiasm, an agreement was considered to be within 1-point of the leader's rating. Number of agreements was divided by the total number of agreements and disagreements in order to obtain a measure of IOA. The inter-rater agreement was 88% for treatment components, and 100% for preparedness and enthusiasm ratings.

Data Analyses

Visual analysis was used in order to assess whether the intervention improved students’ academic enabling behaviors in target classes and whether these changes maintained over time. Effect size coefficients were calculated to evaluate the size of the difference in mean level of academic enabling behaviors between baseline and the Group Counseling with Self-Management Intervention phase. Effect sizes were calculated using Busk and Serlin’s no assumptions approach, such that the mean of the baseline phase was subtracted from the mean of the intervention phase, and divided by the standard deviation of the baseline phase (Busk & Serlin, 1992). Although definitive guidelines do not exist for interpreting single-case effect sizes, a recent meta-analysis of the self-management literature utilized the Busk and Serlin's no assumptions approach to evaluate effect size across single-case design studies, as it continues to be the most commonly used metric for continuous variables (Briesch & Briesch, in press). Additionally, the percentage of all non-overlapping datapoints (PAND) was calculated to
evaluate the effect of the intervention from baseline on academic enabling behaviors. PAND calculates the percentage of non-overlapping data points between phase changes. PAND has been suggested as an alternative to the more traditional Percentage of Non-overlapping Data (PND) because it considers all data points equally and remediates some of the weaknesses of PND (e.g., reliance on single baseline datapoints; Parker, Hagan-Burke, & Vannest, 2007). PAND can also be translated to a Pearson’s Phi coefficient, allowing for interpretation as an effect size. A Phi coefficient less than .30 is considered negligible, .30 to .49 is small, .50 to .69 is moderate, and .70 or above is strong (Cohen, 1988).

In addition, the feasibility and acceptability of the self-management intervention to students and the teacher-completed DBR-MIS to teachers were assessed using the CURP and URP-A respectively. The subscales of the CURP and URP-A were examined using descriptive statistics, and the CURP results were compared between administrations early in the intervention and after the intervention.

Results

Academic Enabling Behaviors

Items from the teacher-completed DBR-MIS were used to evaluate the level of academic enabling behaviors performed by the three target students in their target classes over the course of the study. For two of the three students, average level of academic enabling behaviors increased from the baseline to intervention. For one student, the average level of academic enabling behaviors decreased from baseline levels. Results specific to each student are discussed next, and presented in Table 2 and Figure 1.

Ryan. During baseline, Ryan demonstrated a moderate level of academic enabling behaviors with some variability ($M = 3.17; SD = 0.63$). Following the implementation of the
Group Counseling Intervention, Ryan's level of academic enabling behaviors decreased and was characterized by a steep decreasing trend during this phase ($M = 2.00; SD = 0.66$). An immediate increase in Ryan's academic enabling behaviors was noted after implementation of the Group Counseling with Self-Management Intervention, and his level of academic enabling behaviors increased during this phase with a slight increasing trend ($M = 3.79; SD = 0.40$) and an effect size of 1.00. The PAND between the baseline and Group Counseling with Self-Management conditions was 75% with a Phi coefficient of 0.18. Follow-up data for Ryan were not available.

**Tim.** During baseline, Tim demonstrated a moderate level of academic enabling behaviors with some variability and a flat trend ($M = 3.30; SD = 0.55$). Following implementation of the Group Counseling Intervention, Tim's level of academic enabling behaviors increased slightly with an increasing trend ($M = 3.50; SD = 0.35$). Tim's level of academic enabling behaviors in the Group Counseling with Self-Management Intervention condition decreased to below baseline levels ($M = 3.19; SD = 0.51$), resulting in a negative effect size of -0.20. PAND between the baseline and Group Counseling with Self-Management Intervention conditions was 45%, with a Phi coefficient of -0.17. Finally, in follow-up, Tim maintained levels of academic enabling behaviors similar to baseline ($M = 3.27; SD = 0.23$). Overall, a flat trend of Tim's behaviors was observed throughout the study.

**John.** During baseline, John demonstrated moderate levels of academic enabling behaviors, with a relatively flat trend and some variability ($M = 2.99; SD = 0.61$). Data for the first 14 days of intervention were not available due to the teacher's absence; however, John's level of academic enabling behaviors during the Group Counseling with Self-Management Intervention phase increased ($M = 3.75; SD = 0.57$) with a positive effect size of 1.25. An increasing trend was observed over the intervention condition, with decreasing variability based
on visual inspection. PAND between the baseline and Group Counseling with Self-Management Intervention conditions was 78%, with a Phi of 0.54. Follow-up data for John were not available.

**Intervention Usability**

The CURP was used to evaluate the students' perception of the usability of the self-management intervention both early in the intervention (i.e., during Group Counseling phase) and after completion of the intervention. Overall, results of the CURP suggested that students found the self-management intervention to be usable (Table 3). Early in the intervention, students’ responses indicated that they enjoyed the intervention, as indicated by high scores on the Personal Desirability subscale; easily understood the purpose of and implementation steps of the intervention, as reflected by high scores on the Understanding subscale; and found participation in the intervention to be feasible and realistic, as indicated by low scores on the Feasibility subscale. All three students reported that they totally or somewhat agreed with the statements *I like this group and I am able to do every step of this method*, and totally or somewhat disagreed with the statements *This is too much work for me and This takes too long to do*. Although Ryan's usability scores remained relatively unchanged, Tim's ratings reflected increased perceptions of feasibility and understanding after participating in the intervention. Post-intervention CURP data were not able to be obtained for John due to the end of the school year.

**Assessment Usability**

The URP-A was used to assess the extent to which the teachers found the items from the teacher-completed DBR-MIS to be usable as a means of daily progress monitoring. URP-A results suggest that teachers generally found the measure be understandable, feasible, acceptable, and in accordance with the system's climate, without requiring significant home-school
collaboration or system support (see Table 4). Teachers reported that they believed the items
corresponded with their personal practices and school systems’ beliefs and culture, and were
suitable to measure the behaviors of interest, as indicated by high scores on the Acceptability and
System Climate subscales. All teachers indicated that they slightly agreed or agreed that *The
assessment was a fair way to evaluate the child’s behavior problem* and *The assessment
procedures easily fit in with my current methods*; and agreed with the statements *My
administrator was supportive of my use of this assessment*. Furthermore, teachers reported that
they understood how to complete the items and found them to be feasible within their daily
practices, as evidenced by high scores on the Understanding and Feasibility subscales. All
teachers indicated that they agreed that they *Understood how to use this assessment*, and that
*Material resources needed for this assessment were reasonable*. Lastly, teachers indicated that
they believed they would be able to carry out the items without requiring significant home-
school collaboration or support from their school system, as indicated by low scores on the
Home-School and Systems Support subscales. All teachers disagreed or slightly disagreed that
*Regular home-school communication was needed to implement these assessment procedures* and
that they would need *additional professional development or resources in order to implement
this assessment*.

On the majority of subscales, ratings were consistent across teachers; however, more
variability among teachers was noted on the Acceptability and Feasibility subscales, on which
Teacher 3 reported noticeably lower ratings. Average ratings on the Acceptability subscale
ranged from 3.78 from Teacher 3 to 5.11 for Teacher 2, and average ratings on the Feasibility
subscale ranged from 3.83 from Teacher 3 to 5.00 from Teacher 2. For example, on the
Acceptability subscale, Teachers 1 and 2 agreed that they *implemented this assessment with a
good deal of enthusiasm, whereas Teacher 3 slightly disagreed. On the Feasibility subscale, Teachers 1 and 2 slightly agreed or agreed that they were able to allocate my time to implement this assessment, whereas Teacher 3 disagreed. Despite overall strong ratings of usability, individual variation among teachers was evident regarding the acceptability and feasibility of the assessment.

**Discussion**

The purpose of this study was to examine the effectiveness of utilizing self-management within a group counseling intervention to improve and sustain academic enabling behaviors. Fourteen students participated in a 14-session self-management group in which they (a) selected academic enabling behaviors to improve, (b) self-monitored and graphed their performance of these behaviors, (c) set performance goals, and (d) received group-based rewards for reaching their goals. Three target students were monitored for intervention response within one target academic period, and their teachers completed brief, daily ratings of the students' academic enabling behaviors. Visual analysis suggested that academic enabling behaviors moderately increased for two of the three target students, and decreased for one student. Usability results indicated that students found the intervention to be generally understandable, feasible, and desirable. Additionally, usability ratings indicated that teachers found the progress monitoring ratings to be feasible, understandable, and complementary to their personal and system’s values; however, some individual variation was noted among teachers in regard to acceptability and feasibility. The results of this study add to the emerging evidence suggesting that self-management strategies can be successfully embedded into group counseling interventions (e.g., Harris & Trujillo, 1975), by demonstrating that they are not only effective in improving behavior, but also found to be acceptable, understandable, and enjoyable for students.
Furthermore, this study extends the literature by adhering to evidence-based practices in delivering self-management interventions. Previous group-based investigations of self-management have loosely implemented self-management components within a larger intervention packages. For example, the Student Success Skills Program (SSS; Brigman & Webb 2007) integrates self-management components within a group counseling intervention focused on collaborative problem-solving and peer coaching. In the SSS Program, students self-monitor their behaviors once per week by roughly gauging if they demonstrated behaviors "at a good level," but did not formally record or evaluate their weekly goals. In contrast, self-management interventions administered with individual students often use shorter self-evaluation periods for recording (i.e., usually at least once daily), and provide specific training in operational definitions of behavior and evaluating goals (e.g., Briesch & Briesch, in press). The current study designed the self-management components to be more consistent with evidence-based practice (Maggin, Briesch, & Chafouleas, 2013), requiring students to self-monitor their behaviors on a daily basis, record specific performance goals, and regularly compare their performance to their goals. Therefore, this study demonstrates that evidence-based implementation of self-management can be incorporated within a group counseling context, while maintaining effectiveness and acceptability.

Effect sizes found for the responding students in this study (i.e., 1.00 for Ryan; 1.25 for John) suggested that average level of academic enabling behaviors as rated by teachers increased by a full standard deviation or more compared to baseline levels, a difference that is likely to reflect clinically significant improvements in the classroom. Interestingly, however, these effect sizes are smaller than previous evaluations of self-management interventions administered at the individual and group levels. The effect sizes in this study were less than half the average effect
size of individually-administered self-management interventions overall (i.e., 3.14) and of individually-administered self-management interventions specifically targeting classroom rules/expectations (i.e., 2.94; Briesch & Briesch, in press). Although smaller than those of self-management interventions used at the individual level, the effect sizes of self-management interventions implemented at the targeted and classwide levels also exceed the findings of this study. Large effect sizes were found in students’ perceptions of their use of metacognitive study strategies and teachers’ perceptions of the students' executive functioning skills after participating in the SSS Program (i.e., $\eta^2_p = 0.19$ and 0.17, respectively; Lemberger & Clemens, 2012). Class-wide administration of self-management interventions have demonstrated large effect sizes, ranging from 1.85 (range = 1.77 to 1.93; Briesch et al., 2013) to 2.38 (range = 1.14 to 3.42; Chafouleas et al., 2012).

A number of factors may explain the smaller effect sizes seen in this study. First, the self-management intervention in this study was less intensive than self-management interventions typically administered at the individual level. Specifically, students in this study received feedback less often (i.e., twice per week) and within a group of their peers, compared students in individually-administered self-management interventions who typically received daily, individualized feedback. The reduced frequency and individualization of this intervention may have led to lesser effects compared to individually-administered self-management interventions. At the targeted and class-wide levels, effect sizes are calculated based on direct observational measures of students' academic engagement (e.g., Chafouleas et al., 2012), or teachers’ perceptions of students' executive functioning skills (i.e., Lemberger & Clemens, 2012). It is possible that effect sizes may show a different pattern using the different metric and behavioral variable explored in this study, specifically teacher ratings of academic enabling behaviors.
Lastly, the population of the intervention may have impacted the effect sizes evident in this study. Specifically, the average effect size found in students with ADHD (i.e., 2.70) has been found to be significantly lower than those of students with other disabilities or delays (Briesch & Briesch, in press). The inherent executive functioning impairments characteristic of ADHD could explain the reduced effectiveness in this population.

The effect sizes in this study, ranging from -0.20 to 1.25, also reveal great variability in students' responses to the intervention. A number of factors could have attributed to the individual differences in response. First, the students with the lowest baseline ratings of academic enabling behaviors in each group were selected for progress monitoring. Although it should be noted that these students engaged in some academic enabling behaviors during baseline, it is possible that this criterion resulted in identification of the students with the most intensive needs, who may be more likely to require individualized interventions or additional intervention components in order to significantly improve their behaviors. Students with moderate baseline levels may have been more responsive to the group-level of intervention in this study.

Group characteristics may have attributed to the differential effects of the intervention among students. Specifically, Ryan's and John's groups (i.e., Groups 1 and 3) were led by one consistent implementer, whereas Tim's group (i.e., Group 2) was co-led by school psychology interns on alternating days. It is possible that although intervention integrity was high and equivocal among groups, intervention delivery by a consistent implementer may have improved the quality of the intervention being delivered. Additionally, variation in the size of the groups may have meant that the two responders, Ryan and John, were exposed to a greater dose of the intervention than the non-responder, Tim. The larger size of Tim's group may have limited his
access to theoretical mechanisms of the intervention. Tim's group, consisting of seven students, was almost double the size of Ryan's and John's groups, which consisted of three and four students, respectively, and were similar in size to other group-based interventions with self-management (e.g., Lemberger & Clemens, 2012). The large size of Tim's group may have limited the amount of time allotted for each student to present his or her self-monitoring ratings, reflect on goals, and receive feedback from the group. This feedback loop is one of the theoretical mechanisms of behavior change of self-management interventions, because it provides vital information to guiding changes in future behavior (Kanfer, 1970). Because of the large group size, Tim's limited access to feedback may have reduced his dosage of the critical components of the intervention and therefore reduced the intervention effect.

In addition to their exposure to the intervention, the students' level of engagement in the intervention may also have influenced the differences in response. Whereas Ryan's and John's usability ratings of the intervention were comparable at baseline, Tim's ratings of the personal desirability, feasibility, and understanding of the intervention were noticeably lower. Although his usability ratings increased to similar levels to Ryan's ratings after the intervention, Tim's usability ratings at baseline suggest that he found the intervention less favorable from the start than the other two target students, and therefore may have been less motivated to engage throughout the intervention. In fact, group leaders' ratings of student engagement in the intervention over time revealed differences in average levels of engagement between the responders and non-responders of the intervention. John, who had the highest engagement ratings ($M = 4.00; SD = 0.77$), also demonstrated the greatest response to the intervention ($ES = 1.25$). Ryan was slightly less engaged in the intervention ($M = 3.62; SD = 0.67$), and demonstrated less of a response ($ES = 1.00$). In contrast, Tim had the lowest ($M = 3.29$) and most
variable ($SD = 1.07$) engagement ratings, which ranged from 1 (i.e., not at all engaged) to 5 (i.e., completely engaged) across the course of the intervention. Notably, when reflecting on his progress in the last session, Tim reported that he did not expect great improvement in his behaviors because he "did not try very hard" during the intervention. Furthermore, it is possible that Tim's low engagement could have negatively affected the engagement and enthusiasm of other group members, reducing the quality of the intervention process as a whole. Thus, in addition to the level of exposure of critical intervention elements, the extent to which the student was actively engaged and therefore able to access the intervention components could also be responsible for impacting behavior change. Furthermore, students' initial perceptions of usability of the intervention may predict their level of engagement and participation throughout the intervention, as well as negatively impact group dynamics.

Arguably, the student's level of engagement may play a more significant role in affecting intervention effectiveness for self-management interventions compared to teacher-managed interventions, due to the fact that the student is the primary interventionist and responsible for many of the intervention components. Therefore, it is possible that student-selected target behaviors may have improved to a greater extent than teacher-selected target behaviors, simply because of the student's motivation to improve them. Because teachers only tracked teacher-selected target behaviors in this study, the differential effects of the intervention on student-selected versus teacher-selected target behaviors could not be evaluated. In fact, little research has explored this issue, and only a small percentage of studies have actually involved students in the selection of target behaviors (Briesch & Chafouleas, 2009). Because student investment is particularly important for self-management interventions, future research could investigate
whether more improvement is evident among behaviors chosen by the student, compared to those chosen for the student by the teacher.

**Limitations and Directions for Future Research**

Limitations of this study should be acknowledged. First, complications common of applied research in schools, such as teacher turnover, absences, and the end of the school year, limited the amount of data that were able to be collected. Specifically, due to teacher turnover in Ryan's classroom and the end of the school year for John, follow-up data were only available for Tim, thereby excluding any means of determining if behavior change was sustained over time after the intervention was withdrawn. Furthermore, no generalization data were collected to evaluate the extent to which skills generalized to new classrooms or settings. Unfortunately, John's teacher was also absent immediately following the implementation of the intervention, thereby limiting the evidence of an additional replication of intervention effect. Other events besides the intervention may therefore have occurred around the time that the intervention began, which may have impacted John's level of academic enabling behaviors. Lastly, because of scheduling constraints, Group 2 was co-led by two interns on alternating days, which may have affected the quality of implementation and therefore influenced outcomes beyond the effects of intervention components. Future replications of this study can ameliorate these limitations by gathering more complete data and maintaining consistent interventionists.

Another concern within the study was the low interobserver reliability of the academic enabling behavior ratings. Reliability between the independent observer's and teacher's ratings in a subset of target classes ranged from 64% to 84%, even when an agreement was defined to be within a 1-point confidence interval. Furthermore, reliability decreased over time, such that average reliability was 84% in baseline, 78% in intervention, and 64% in follow-up. In some
ways, the limited interobserver reliability is not unexpected. An independent observer who is entirely focused on observing the behavior of one or two students is likely to produce a different rating compared to a teacher who is simultaneously providing instruction, working with individual students, and managing classroom behavior. In fact, only moderate relationships have been found between DBRs and other means of direct observation (Christ et al., 2014; Riley-Tillman, Chafouleas, Sassu, Chanese, & Glazer, 2008). When ratings are found to be inconsistent, one could argue that teacher's ratings carry more clinically significance than ratings provided by an independent observer, because they reflect a degree of behavior change that is discernible by teachers within the classroom ecology. Because teachers are commonly responsible for student referrals for behavior problems, their perceptions and judgments of student behavior may be more meaningful for evaluating student intervention response than independent evaluations of behavior. In fact, Chafouleas, Riley-Tillman, and McDougal (2002) proposed that change in teacher perception may in itself create improvements for the student, stating "If a perception of change is enough to create a positive student environment, then maybe accuracy is not as important. For example, if the student was referred for a relatively minor behavioral problem, perhaps a positive teacher perception of the student would be enough to create a successful classroom climate for that student" (p. 164).

Nevertheless, the fact that the reliability of teachers' ratings decreased over time is notable, as evidenced by the drops in reliability from baseline to intervention to follow-up. Rater fatigue may have been responsible for this drop in reliability, as teachers were required to rate students on four items on a daily basis for up to 70 days. More research is needed to evaluate the clinical significance of independent observer ratings, to develop feasible, accurate means of data
collection on student behavior, and to reduce rater fatigue for repeated ratings over extended periods of time.

The balance between feasibility and accuracy of progress monitoring methods is especially important for informing Tier 2 interventions, due to the requirements for data-based decision-making for the secondary level of supports. First, because students should have quick entry into Tier 2 interventions, data collection systems must be easy to learn and complete so that teachers can immediately begin monitoring student progress. Second, because 5-15% of the student population is likely to be involved in a Tier 2 intervention at any one time (Crone, Hawken, & Horner, 2010), data collection methods must be feasible for teachers to gather data on multiple students at once. Third, data collection methods must yield valid and reliable data in order to make decisions about the student's response to intervention and to determine the necessary level of support. In this study, items were individualized for each target student. In considering the school-wide application of these measures to support a Tier 2 program, training teachers on individual items for each student would limit the speed at which students could enter the intervention, and may also reduce the reliability of ratings as teachers manage multiple students with individualized behaviors. One evidence-based Tier 2 intervention to improve student behavior, Check-In Check-Out (CICO; Crone et al., 2010), has balanced feasibility and accuracy by using universal items for each student in the intervention, often connected to school-wide expectations. Because each student in the intervention is rated on the same set of behaviors, teachers can be easily trained and can quickly begin data collection on new students as they enter the intervention. Additionally, consistently rating the same items may increase reliability, and the confidence in making sound decisions about student support based on these data. Future replications of this study could explore whether using a set of universal items for all students
participating in the intervention may improve interobserver reliability and ease of intervention entry.

**Implications for Practice**

This study provides initial support for practitioners to utilize self-management within group counseling to target academic enabling behaviors. Furthermore, results and limitations of this study can be used to inform the successful development and implementation of similar self-management groups within schools. When designing groups, it is important to carefully consider group size, student perception of usability and engagement, and implementer characteristics. In this study, larger effect sizes were found for the students in groups with four or fewer participants. It was theorized that this smaller size allowed for enough time for each student to receive feedback, a key component to the theoretical mechanisms driving behavior change (Kanfer, 1970), and could maintain engagement for all students. Furthermore, students’ perceptions of usability of the intervention and engagement in the intervention may explain the responders from the non-responders in this study. The greatest behavior change was evident among students who demonstrated strong perceptions of the intervention’s usability at the beginning of the intervention, and were more engaged in the intervention sessions, as rated by group leaders. Lastly, qualities of the interventionist can impact student behavior beyond the effects of the intervention. In this study, students whose groups had a consistent group leader demonstrated greater response than the student whose group was co-led by two interventionists.

This study also sheds light on some considerations in identifying data collection methods for progress monitoring of group interventions. The challenge at the heart of progress monitoring is balancing feasibility and accuracy of data collection. Direct observation has historically been considered the "gold standard" of data collection on behavioral variables (Riley-Tillman et al.,
2008), and often incorporates an independent observer visiting the classroom using a method of systematic direct observation. Important limitations, such as the extensive time and resources required and high potential for reactivity, limit the clinical utility of this method in schools. Therefore, other data collection options, such as adaptations of direct behavior rating multi-item scales, are commonly used in schools to monitor behavior, evaluate interventions, and make data-based decisions regarding students' services (e.g., Hunter et al., 2014). One of the strengths of these progress monitoring tools, such as the one used in this study, is the high usability. Teachers in this study reported that they found the progress monitoring tool to be generally very feasible to use within their daily routine and understandable to complete. However, the ease of use may have been possible by sacrificing some of the accuracy of the tool. Research continues to explore the accuracy and validity of direct behavior ratings, and critical features that increase the accuracy of this tool (Riley-Tillman, Christ, Chafouleas, Boice-Mallach, & Briesch, 2011). In the meantime, data collection tools should be selected and developed to balance accuracy and feasibility, especially if data are to be collected on a large number of students. Because perceptions of feasibility and acceptability of brief measures can vary among teachers, gathering initial usability ratings from teachers is important while developing data collection methods. Efforts to reduce rater fatigue should be implemented, especially if teachers are expected to rate behavior over extended periods of time.
References


<table>
<thead>
<tr>
<th>Condition</th>
<th>Session</th>
<th>Key Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Counseling</td>
<td>1</td>
<td>Introduction to executive functioning and academic enabling behaviors. Students also participated in group-building activity.</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Introduction to self-management. Students learned their target class and academic enabling behaviors, generated ideas for group rewards, and completed CURP.</td>
</tr>
<tr>
<td>Group Counseling</td>
<td>3</td>
<td>Self-monitoring training. Students practiced using Student Rating Form with case examples until reaching 100% accuracy with leader.</td>
</tr>
<tr>
<td>with Self-</td>
<td>4</td>
<td>Graphing of self-monitoring data, setting performance goals, addressing implementation difficulties.</td>
</tr>
<tr>
<td>Management</td>
<td>5-13</td>
<td>Graphing self-monitoring data, evaluating performance toward goals, setting performance goals, and receiving points towards group rewards for meeting their goals.</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>Maintenance and generalization. Students reflected on progress, discussed strategies for maintaining behavior change, and completed the CURP.</td>
</tr>
</tbody>
</table>
Table 2

*Means, Standard Deviations, and Effect Sizes*

<table>
<thead>
<tr>
<th>Student</th>
<th>Baseline $M (SD)$</th>
<th>Group Counseling $M (SD)$</th>
<th>Group Counseling with SM $M (SD)$</th>
<th>Follow-Up $M (SD)$</th>
<th>Effect Sizes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cohen's $d$</td>
</tr>
<tr>
<td>Ryan</td>
<td>3.17 (0.63)</td>
<td>2.00 (0.66)</td>
<td>3.79 (0.40)</td>
<td>--</td>
<td>1.00</td>
</tr>
<tr>
<td>Tim</td>
<td>3.30 (0.55)</td>
<td>3.50 (0.35)</td>
<td>3.19 (0.51)</td>
<td>3.27 (0.23)</td>
<td>-0.20</td>
</tr>
<tr>
<td>John</td>
<td>2.99 (0.61)</td>
<td>--</td>
<td>3.75 (0.57)</td>
<td>--</td>
<td>1.25</td>
</tr>
</tbody>
</table>
Table 3

*CURP Results by Student and Time*

<table>
<thead>
<tr>
<th>Student</th>
<th>Personal Desirability</th>
<th>Feasibility</th>
<th>Understanding</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Early Intervention $M$ (SD)</td>
<td>Post-Intervention $M$ (SD)</td>
<td>Early Intervention $M$ (SD)</td>
</tr>
<tr>
<td>Ryan</td>
<td>3.80 (0.45)</td>
<td>3.00 (0.58)</td>
<td>1.67 (0.52)</td>
</tr>
<tr>
<td>Tim</td>
<td>2.71 (0.95)</td>
<td>3.00 (0.58)</td>
<td>2.13 (0.35)</td>
</tr>
<tr>
<td>John</td>
<td>3.43 (0.53)</td>
<td>--</td>
<td>1.88 (0.35)</td>
</tr>
</tbody>
</table>
Table 4

**URP Results by Teacher**

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Acceptability $M$ (SD)</th>
<th>Understanding $M$ (SD)</th>
<th>Home-School Collaboration $M$ (SD)</th>
<th>Feasibility $M$ (SD)</th>
<th>System Climate $M$ (SD)</th>
<th>System Support $M$ (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher 1</td>
<td>4.44 (0.53)</td>
<td>5.00 (0)</td>
<td>2.33 (0.58)</td>
<td>4.67 (0.52)</td>
<td>4.25 (0.96)</td>
<td>2.00 (0)</td>
</tr>
<tr>
<td>Teacher 2</td>
<td>5.11 (0.33)</td>
<td>5.00 (0)</td>
<td>2.00 (0)</td>
<td>5.00 (0)</td>
<td>5.00 (0)</td>
<td>2.67 (1.15)</td>
</tr>
<tr>
<td>Teacher 3</td>
<td>3.78 (0.44)</td>
<td>4.67 (0.58)</td>
<td>2.67 (0.58)</td>
<td>3.83 (1.17)</td>
<td>4.25 (0.50)</td>
<td>2.67 (0.58)</td>
</tr>
</tbody>
</table>
Figure 1.

Average daily teacher ratings.

Baseline  
Group Counseling  
Follow-Up  

Group Counseling w/ SM

Ryan

Tim

John

Day

Teacher Average Rating Score

Teacher Average Rating Score

Teacher Average Rating Score

Day
Appendix A

ACES Subscales

Dear Teacher:

We are beginning a student group to increase academic behaviors in the classroom. We need your feedback on what you think the student needs to work on in your class, and what is important to you! We will target the behaviors you think the student needs to work on and are the most important to your classroom. Your feedback is important to fostering meaningful behavior change for the students to succeed in your class. Thank you so much for your time and help!

For each student, please rate the **frequency** and **importance** of the following behaviors in your class:

**Frequency:** How often does the student exhibit this behavior in your classroom?
1 = Never  2 = Seldom  3 = Sometimes  4 = Often  5 = Almost Always

**Importance:** How important is this behavior to succeeding in your classroom?
1 = Not important  2 = Important  3 = Critical

Your Name: ____________________  Class Taught: ________________

<table>
<thead>
<tr>
<th>Item</th>
<th>Student 1 Frequency</th>
<th>Student 2 Frequency</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speaks in class when called upon</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asks questions about tests or projects</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Participates in class discussions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volunteers to answer questions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assumes leadership in group situations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volunteers to read aloud</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initiates conversations appropriately</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asks questions when confused</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is motivated to learn</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prefers challenging tasks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Produces high-quality work</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Critically evaluates own work</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attempts to improve on previous performance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Makes the most of learning experiences</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persists when task is difficult</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Looks for ways to academically challenge self</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assumes responsibility for learning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Behavior</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is goal-oriented</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stays on task</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completes homework</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrects own work</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finishes class work on time</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepares for tests</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepares for class</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turns in homework on time</td>
<td></td>
<td></td>
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<tr>
<td>Takes care of materials (e.g., books, desk)</td>
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<tr>
<td>Pays attention in class</td>
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<tr>
<td>Completes assignments according to directions</td>
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<tr>
<td>Takes notes in class</td>
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<tr>
<td>Reviews materials</td>
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</tbody>
</table>
Appendix B

Teacher-Completed DBR-MIS

Dear Teacher:

Thank you for your participation in this project! Your feedback is essential to determining if the intervention is effective and if the student is making progress. We selected the behaviors you rated as most problematic for the student and most important to your classroom. If you could take a minute to rate the student's engagement in these behaviors in your class each day, it would be greatly appreciated by both us and the students!

A = Absent  N/A = No opportunity to perform/observe

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>None/Minimally</td>
<td>A little</td>
<td>Somewhat</td>
<td>Mostly</td>
<td>Consistently</td>
</tr>
</tbody>
</table>

Date:
Finishes class work on time.
Pays attention in class.
Takes notes.
Stays on task.

Date:
Finishes class work on time.
Pays attention in class.
Takes notes.
Stays on task.

Date:
Finishes class work on time.
Pays attention in class.
Takes notes.
Stays on task.

Date:
Finishes class work on time.
Pays attention in class.
Takes notes.
Stays on task.

Date:
Finishes class work on time.
Pays attention in class.
Takes notes.
Stays on task.
Appendix C

Student-Completed DBR-MIS

How were my behaviors in ELA class today?

<table>
<thead>
<tr>
<th>Date: _____ / _________ / _______</th>
<th>1 = None/Minimally</th>
<th>2 = A little</th>
<th>3 = Somewhat</th>
<th>4 = Mostly</th>
<th>5 = Consistently</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Did I stay on-task?</td>
<td></td>
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<tr>
<td>2. Did I finish my class work on time?</td>
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<tr>
<td>3. Did I pay attention in class?</td>
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<td></td>
</tr>
<tr>
<td>4. Did I take notes in class?</td>
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<tr>
<td>5. Did I produce high quality work?</td>
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</tbody>
</table>

TEACHER INITIAL: ________
Appendix D

Group Leader Treatment Integrity Checklists

Session #1

Date: _______________  Length of session: _______________

Please circle Y or N if the component was implemented.

1. Group leader met with students **YES / NO**
2. Group leader introduced executive functioning:
   a. Identify and define executive functioning **YES / NO**
   b. Identify and describe deficits in executive functioning **YES / NO**
   c. Explain how deficits might impact class behavior and academic performance **YES / NO**
   d. Facilitate discussion of examples **YES / NO**
3. Group leader introduced classroom preparatory behaviors:
   a. Identified and defined classroom preparatory behaviors **YES / NO**
   b. Explained the association between classroom behaviors and academic performance **YES / NO**
4. Set group rules or behavioral expectations **YES / NO**
5. Group leader engaged students in group-building activity **YES / NO**

Number of steps completed_____/9
% of Steps Completed = ___________%

Quality of delivery:

6. How prepared did you feel to implement this session?
   1  2  3  4  5
   Not at all prepared Somewhat prepared Very prepared

7. How enthusiastic were you in implementing this session?
   1  2  3  4  5
   Not at all enthusiastic Somewhat enthusiastic Very enthusiastic

Participant responsiveness:

8. How engaged did each student seem in the session (e.g., participating in discussion, active listening, prepared for session)?
   1  2  3  4  5
   Not at all engaged Somewhat engaged Very engaged

Student 1: _______________ Rating: _______ □ Check if student was absent
Student 2: _______________ Rating: _______ □ Check if student was absent
Student 3: _______________ Rating: _______ □ Check if student was absent
Student 4: _______________ Rating: _______ □ Check if student was absent
Session #2

Date: ___________ Length of session: ______________

1. Group leader met with students YES / NO
2. Group leader introduced self-management:
   a. Increased responsibility in middle school YES / NO
   b. Review consequences of not self-regulating behavior YES / NO
   c. Demonstrated empathy YES / NO
   d. Provided accepting therapeutic environment YES / NO
3. Introduced the self-management group procedures, including:
   a. Identifying behaviors to work on YES / NO
   b. Monitoring our behavior in one target class YES / NO
   c. Tracking our process weekly YES / NO
   d. Setting goals for ourselves YES / NO
   e. Reinforcing ourselves for meeting our goals YES / NO
   f. Problem-solving with and encouraging each other YES / NO
4. Students generate group rewards YES / NO
5. Students completed the CURP YES / NO

Number of steps completed_____/13
% of Steps Completed = ____________%

Quality of delivery:
6. How prepared did you feel to implement this session?
   1 2 3 4 5
   Not at all prepared Somewhat prepared Very prepared

7. How enthusiastic were you in implementing this session?
   1 2 3 4 5
   Not at all enthusiastic Somewhat enthusiastic Very enthusiastic

Participant responsiveness:
8. How engaged did each student seem in the session (e.g., participating in discussion, active listening, prepared for session)?
   1 2 3 4 5
   Not at all engaged Somewhat engaged Very engaged

Student 1: ___________ Rating: _______ □ Check if student was absent
Student 2: ___________ Rating: _______ □ Check if student was absent
Student 3: ___________ Rating: _______ □ Check if student was absent
Student 4: ___________ Rating: _______ □ Check if student was absent

Student 5: ___________ Rating: _______ □ Check if student was absent
Student 6: ___________ Rating: _______ □ Check if student was absent
Session #3

Date: _______________  Length of session: _______________

1. Group leader met with students YES / NO
2. Group leader introduced Self-Monitoring Form:
   a. Define each behavior on the form YES / NO
   b. Describe each response option for each item YES / NO
   c. Provide examples and non-examples YES / NO
   d. Explain that teacher must initial the form after it is complete YES / NO
3. Group leader facilitated practice and training in self-monitoring form:
   a. Provided multiple case examples for rating practice YES / NO
   b. Each student reported that they felt comfortable using the form YES / NO
   c. Each student's ratings matched the group leader's ratings with 100% accuracy for three case examples YES / NO
   d. Group leader instructed students to use the Self-Monitoring Form every day for their target class for a week YES / NO

Number of steps completed_____/9
% of Steps Completed = _______________

Quality of delivery:
6. How prepared did you feel to implement this session?
   1  2  3  4  5
   Not at all prepared  Somewhat prepared  Very prepared

7. How enthusiastic were you in implementing this session?
   1  2  3  4  5
   Not at all enthusiastic  Somewhat enthusiastic  Very enthusiastic

Participant responsiveness:
8. How engaged did each student seem in the session (e.g., participating in discussion, active listening, prepared for session)?
   1  2  3  4  5
   Not at all engaged  Somewhat engaged  Very engaged

Student 1: _______________  Rating: _________  □ Check if student was absent
Student 2: _______________  Rating: _________  □ Check if student was absent
Student 3: _______________  Rating: _________  □ Check if student was absent
Student 4: _______________  Rating: _________  □ Check if student was absent
Student 5: _______________  Rating: _________  □ Check if student was absent
Student 6: _______________  Rating: _________  □ Check if student was absent
Session #4

Date: _______________  Length of session: _______________

1. Group leader met with students YES / NO
2. Group leader addressed implementation difficulties YES / NO
3. Group leader had each student enter their data into a PowerPoint graph YES / NO
4. If ratings were inaccurate, group leader provided additional training to student and/or teacher YES / NO
5. Group leader instructed each student to set SMART goal YES / NO
6. Group leader instructed students to continue self-monitoring in their target class YES / NO

Number of steps completed_____/6
% of Steps Completed = ______________ %

Quality of delivery:
6. How prepared did you feel to implement this session?
1 2 3 4 5
Not at all prepared Somewhat prepared Very prepared

7. How enthusiastic were you in implementing this session?
1 2 3 4 5
Not at all enthusiastic Somewhat enthusiastic Very enthusiastic

Participant responsiveness:
8. How engaged did each student seem in the session (e.g., participating in discussion, active listening, prepared for session)?
1 2 3 4 5
Not at all engaged Somewhat engaged Very engaged

Student 1: _______________ Rating: ________ □ Check if student was absent
Student 2: _______________ Rating: ________ □ Check if student was absent
Student 3: _______________ Rating: ________ □ Check if student was absent
Student 4: _______________ Rating: ________ □ Check if student was absent
Student 5: _______________ Rating: ________ □ Check if student was absent

Session #5-13

Date: _______________  Session #: ______  Length of session: _______________

1. Group leader met with students YES / NO
2. Group leader addressed implementation difficulties YES / NO
3. Students entered their data into a PowerPoint graph YES / NO
4. If ratings were inaccurate, group leader provided additional training to student and/or teacher YES / NO
5. Group leader facilitated each student's evaluation of whether goal was met YES / NO
6. Students who met their goals received and graphed points YES / NO
7. Students engaged in problem-solving processes YES / NO
8. Group leader instructed each student to set SMART goal for the next week YES / NO

Number of steps completed _____ / 8
% of Steps Completed = ______________ %

Quality of delivery:
6. How **prepared** did you feel to implement this session?
   1  2  3  4  5
Not at all prepared Somewhat prepared Very prepared

7. How **enthusiastic** were you in implementing this session?
   1  2  3  4  5
Not at all enthusiastic Somewhat enthusiastic Very enthusiastic

Participant responsiveness:
8. How **engaged** did each student seem in the session (e.g., participating in discussion, active listening, prepared for session)?
   1  2  3  4  5
Not at all engaged Somewhat engaged Very engaged

Student 1: _______________ Rating: _________ □ Check if student was absent
Student 2: _______________ Rating: _________ □ Check if student was absent
Student 3: _______________ Rating: _________ □ Check if student was absent
Student 4: _______________ Rating: _________ □ Check if student was absent
Student 5: _______________ Rating: _________ □ Check if student was absent

Session #14 (Final Session)

Date: ____________ Session #: _______ Length of session: _____________

1. Group leader met with students YES / NO
2. Students entered their data into a PowerPoint graph YES / NO
3. Group leader facilitated each student's evaluation of whether goal was met YES / NO
4. Students who met their goals earned and graphed points YES / NO
5. Students engaged in problem-solving processes YES / NO
6. Students reflected on their progress over the year YES / NO
7. Group leader discussed ways to maintain behavior change YES / NO
8. Group participated in a wrap-up activity YES / NO
9. Students completed CURP YES / NO
Number of steps completed _____/9
% of Steps Completed = ________________%

Quality of delivery:
6. How prepared did you feel to implement this session?
1 2 3 4 5
Not at all prepared Somewhat prepared Very prepared

7. How enthusiastic were you in implementing this session?
1 2 3 4 5
Not at all enthusiastic Somewhat enthusiastic Very enthusiastic

Participant responsiveness:
8. How engaged did each student seem in the session (e.g., participating in discussion, active listening, prepared for session)?
1 2 3 4 5
Not at all engaged Somewhat engaged Very engaged

Student 1: ___________________ Rating: _________ □ Check if student was absent
Student 2: ___________________ Rating: _________ □ Check if student was absent
Student 3: ___________________ Rating: _________ □ Check if student was absent
Student 4: ___________________ Rating: _________ □ Check if student was absent
Student 5: ___________________ Rating: _________ □ Check if student was absent
### Appendix E

#### USAGE RATING PROFILE – ASSESSMENT

Directions: Consider your use of the assessment you completed, and then answer the following statements. Please circle the number that best reflects your agreement with the statement using the scale provided below.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Slightly Disagree</th>
<th>Slightly Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. This assessment was an effective choice for understanding a variety of problems.</td>
<td></td>
<td>1 2 3 4 5 6</td>
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<tr>
<td>2. I needed additional resources to carry out this assessment.</td>
<td></td>
<td>1 2 3 4 5 6</td>
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<tr>
<td>3. I was able to allocate my time to implement this assessment.</td>
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<td>1 2 3 4 5 6</td>
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<tr>
<td>4. I understood how to use this assessment.</td>
<td></td>
<td>1 2 3 4 5 6</td>
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<tr>
<td>5. A positive home-school relationship was needed to use this assessment.</td>
<td></td>
<td>1 2 3 4 5 6</td>
<td></td>
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<tr>
<td>6. I was knowledgeable about the assessment procedures.</td>
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<td>1 2 3 4 5 6</td>
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<tr>
<td>7. The assessment was a fair way to evaluate the child’s behavior problem.</td>
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<td>1 2 3 4 5 6</td>
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<tr>
<td>8. The total time required to implement the assessment procedures was manageable.</td>
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<td>1 2 3 4 5 6</td>
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<tr>
<td>9. I was not interested in implementing this assessment.</td>
<td></td>
<td>1 2 3 4 5 6</td>
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<tr>
<td>10. My administrator was supportive of my use of this assessment.</td>
<td></td>
<td>1 2 3 4 5 6</td>
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<tr>
<td>11. I had positive attitudes about implementing this assessment.</td>
<td></td>
<td>1 2 3 4 5 6</td>
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<tr>
<td>12. This was a good way to assess the child’s behavior problem.</td>
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<td>1 2 3 4 5 6</td>
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<tr>
<td>13. Preparation of materials needed for this assessment was minimal.</td>
<td></td>
<td>1 2 3 4 5 6</td>
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<tr>
<td>14. Use of this assessment was consistent with the mission of my school.</td>
<td></td>
<td>1 2 3 4 5 6</td>
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<td></td>
<td>Statement</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
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<tr>
<td>15</td>
<td>Parental collaboration was required in order to use this assessment.</td>
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<tr>
<td>16</td>
<td>Material resources needed for this assessment were reasonable.</td>
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<tr>
<td>17</td>
<td>I implemented this assessment with a good deal of enthusiasm.</td>
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<tr>
<td>18</td>
<td>This assessment was too complex to carry out accurately.</td>
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<tr>
<td>19</td>
<td>These assessment procedures were consistent with the way things are done in my system.</td>
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<tr>
<td>20</td>
<td>Use of this assessment was not disruptive to students.</td>
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<tr>
<td>21</td>
<td>I was committed to carrying out this assessment.</td>
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<tr>
<td>22</td>
<td>The assessment procedures easily fit in with my current practices.</td>
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<tr>
<td>23</td>
<td>I needed consultative support to implement this assessment.</td>
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<tr>
<td>24</td>
<td>I understood the procedures of this assessment.</td>
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<tr>
<td>25</td>
<td>My work environment was conducive to implementation of an assessment like this one.</td>
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<tr>
<td>26</td>
<td>The amount of time required for record keeping was reasonable.</td>
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<tr>
<td>27</td>
<td>Regular home-school communication was needed to implement these assessment procedures.</td>
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<tr>
<td>28</td>
<td>I required additional professional development in order to implement this assessment.</td>
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</tr>
</tbody>
</table>
URP-A Scoring Guide

Factor I: ACCEPTABILITY
Items - 1, 7, 9*, 11, 12, 17, 20, 21, 22

Factor II: UNDERSTANDING
Items – 4, 6, 24

Factor III: HOME SCHOOL COLLABORATION
Items – 5, 15, 27

Factor IV: FEASIBILITY
Items – 3, 8, 13, 16, 18*, 26

Factor V: SYSTEM CLIMATE
Items – 10, 14, 19, 25

Factor VI: SYSTEM SUPPORT
Items – 2, 23, 28

* REVERSE CODE THESE ITEMS WHEN SCORING

Note: Use care when interpreting individual factors and in combination. For example, a LOW score for system support reflects greater ability to independently implement the intervention. Thus, if aggregating across all factors to find an overall mean indicative of more favorable responses, consider reverse coding all items in this factor.

Citation for the URP-A:

Suggested citation for the associated publication:

Note. The URP-A was adapted from the Usage Rating Profile – Intervention Revised (URP-IR). Based on CFA analyses, item 16 from the URP-IR was removed from the URP-A.

Citation for the URP-IR:
### Appendix F

**Children’s Usage Rating Profile-Intervention**

<table>
<thead>
<tr>
<th></th>
<th>I totally disagree</th>
<th>I kind of disagree</th>
<th>I kind of agree</th>
<th>I totally agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. This is too much work for the student.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. I understand why the adult picked this method to help the student.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. I could see myself using this method.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. This is a good way to help the student.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. It is clear what the student needs to do.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6. I would not want to try this method myself.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7. This would take too long to do.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8. If my friend was having trouble, I would tell him/her to try this.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9. I would be able to do every step of this method.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10. The student was asked to use this method too often.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11. Using this method would give the student less free time.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12. I would like to learn how to use this method myself.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13. There are too many steps to remember.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<td></td>
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<td>---</td>
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<td>---</td>
</tr>
<tr>
<td>14.</td>
<td>Using this method would get in the way of doing other things.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>15.</td>
<td>This method would focus too much attention on the student.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>16.</td>
<td>I would be excited to try this method.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>17.</td>
<td>This method would make it hard for the other students to work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>18.</td>
<td>I would volunteer to use this method myself.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>19.</td>
<td>It is clear what the adult needs to do.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>20.</td>
<td>I would be able to use this method correctly.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>21.</td>
<td>I like this method.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>22.</td>
<td>I understand why the problem needs to be fixed.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>23.</td>
<td>I wish that I could try this method.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>