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Improving the Social Behavior of High School Students with Behavioral Challenges Through Self-Management Technology

Kathryn Dooley
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Kathryn Dooley
University of Connecticut, 2017

Abstract

Students with Emotional and Behavioral Disorders (EBD) struggle with social behaviors (Bradley, Henderson, & Monfore, 2004) such as distractibility and impulsivity (Wagner et al., 2004). Self-management strategies have been used effectively to increase on-task behavior and decrease off-task or inappropriate behavior of students with EBD (Briesch & Chafouleas, 2009a). Additionally, self-management applications for the Apple iPad have led to improvements in the social behavior of students with challenging behavior (Bruhn, Vogelgesang, Fernando., & Lugo, 2016; Bruhn, Vogelgesang, Schabilion, Waller, & Fernando, 2015b; Vogelgesang, Bruhn, Coghill-Behrends, Kern, & Thoughton, 2016). However, a gap in the literature in the use of self-management applications for High School students with EBD exists.

The results of this single subject withdrawal study demonstrated a functional relation between the introduction of a self-management application SCORE-IT (Bruhn, Goin, & Hasselbring, 2015a) for the Apple iPad with self-reinforcement for students with EBD on their on-task behavior. Two male high school students, one freshman and one senior, participated in the study. Study results and effect size calculations support a strong functional relation for one student. Although descriptive data indicate promising outcomes for the other student, he was unable to complete participation in the study.
Improving the Social Behavior of High School Students with Behavioral Challenges Through Self-Management Technology

Kathryn Dooley

B.S., University of Saint Joseph, 2003
M.A., University of Saint Joseph, 2005

A Dissertation
Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy at the University of Connecticut

2017
APPROVAL PAGE

Doctor of Philosophy Dissertation

Improving the Social Behavior of High School Students with Behavioral Challenges Through
Self-Management Technology

Presented by
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University of Connecticut
2017

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To my fellow doctoral students, Laura Kern, Jennifer Kowitt, Lola Gordon, Janet VanLone, and Sarah Wilkinson thank you for your encouragement, support, and levity. Laura Kern, thank you for listening and always offering feedback no matter the time of day or topic.

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Chapter I

Introduction and Review of the Literature

Context of the Problem

Emotional Disturbance (ED) is defined by the Individuals with Disabilities Education Act, 20 U.S.C. § 1400 (2004):

(i) Emotional disturbance means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child's educational performance: (A) An inability to learn that cannot be explained by intellectual, sensory, or health factors. (B) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers. (C) Inappropriate types of behavior or feelings under normal circumstances. (D) A general pervasive mood of unhappiness or depression. (E) A tendency to develop physical symptoms or fears associated with personal or school problems (the Individuals with Disabilities Education Act of 2004).

Of all students identified under the Individuals with Disabilities Education Improvement Act of 2004 (IDEA), about 8% are labeled as ED. The majority of students with ED are male (80% of elementary and middle school students and 76% of secondary students) and disproportionately African American (Bradley, Henderson, & Monfore, 2004). Students with ED are more likely to be educated in more restrictive settings (e.g., special education and residential facilities) than their peers with other disabilities (Bradley et al. 2004). Although ED is the official disability category under IDEA, researchers, and practitioners often use a broader term of Emotional and/or Behavioral Disorder (EBD) to include students with significant and chronic behavioral challenges, including those who meet criteria for the ED category. Walker
(2015) estimates that 20% of all students (elementary through high school) experience problems with social behavior, emotion, or both.

When compared to their peers with disabilities, students with EBD face considerable academic and social behavior challenges: they are more likely to experience academic failure and exhibit challenges with social skills (Bradley et al., 2004). Students with EBD experience significant and pervasive academic challenges, as indicated by the performance gaps between students with EBD and their peers across all academic areas (Nelson, Benner, Lane, & Smith, 2004) and placements/settings (Reid, Gonzalez, Nordness, Trout, & Epstein, 2004). For example, students with EBD perform well below their typically developing peers in reading comprehension and mathematics calculation in general education school settings (Wagner et al., 2006). Researchers have found the reading performance of students with EBD stagnates as they progress through elementary school to high school (Nelson et al., 2004). For example, although elementary students with EBD initially perform at higher levels in reading than their peers with Learning Disabilities (LD), over time, the reading performance of students with LD surpassed their peers with EBD (Anderson, Kutash, & Duchnowski, 2001).

Students with EBD struggle with social behavior and academics (Bradley et al., 2004) in all academic settings (Nelson et al., 2004). Furthermore, students with EBD are confronted with issues of distractibility and impulsivity (Wagner et al., 2006) and, when compared to their peers with other disabilities, they have higher rates of absenteeism and disciplinary contact (Lane, Cater, Pierson, & Glaseser, 2006). Given these experiences, it is not surprising that students with EBD often experience poor outcomes after their K-12 academic careers (Wagner et al., 2006). Historically, the rate of high school completion for students with EBD is the lowest of all students with disabilities, averaging about 56%, whereas the graduation rate of all students with
disabilities is 72% (U. S. Department of Education, Institute of Education Sciences, 2005). This number is concerning given that students who leave high school with a diploma are more likely to obtain employment than students who drop out (U.S. Department of Labor, Bureau of Labor Statistics, 2015). In addition to issues maintaining employment, students with EBD have lower rates of enrollment in post-secondary school (Wagner & Newman, 2012). Also concerning is that students with EBD are likely to encounter issues with the criminal justice system (Wagner & Newman, 2012). According to data from the Special Educational Elementary Longitudinal Study and the National Longitudinal Study of young adults with EBD (out of high school 8 or less years), 60.5% had been arrested (approximately 33% while attending high school) and 44.2% had been on parole or probation (Wagner & Newman, 2012). Thus, it is critical to support the social behavior of students with EBD. In this chapter, I (a) describe behavioral interventions for students with EBD and highlight self-management, (b) present a conceptual framework supporting self-management, and (c) discuss results of a systematic literature review on self-management interventions for students with EBD.

Behavior Interventions for Students with EBD: Focus on Self-Management

Despite the challenges facing students with EBD, there have been important advances in behavioral assessment, universal screening, and teacher appraisal (i.e., teacher nomination as part of behavioral screening; Walker, 2015). Research has shown effective universal practices for all students in School Wide Positive Behavior Supports (SW-PBS; Lewis, Hudson, Richter, & Johnson, 2004), classroom management (Kamps, Kravits, Stolze, & Swaggart, 1999), social skills training (Kamps et al., 1999; Lewis et al., 2004), peer tutoring (Kamps et al. 1999), reinforcement (Kamps et al., 1999, Lewis et al., 2004), and self-management (Lewis et al., 2004) also result in increases in appropriate behavior of students with EBD. Other effective practices
in improving the social behavior and academic performance of students with EBD include instructionally embedded practices (Lewis et al., 2004) and multi-component academic and social behavior interventions (Kamps et al., 1999).

Given the importance of academic outcomes, researchers have also examined the effects of behavioral strategies on the academic performance of students with EBD. Specific behavioral interventions, such as task sequencing (Knowles, Meng, & Machalicek, 2015) and function-based interventions (Hawkins & Axelrod, 2008), have been targeted at improving behaviors associated with academic achievement such as on-task behavior (Hawkins & Axelrod, 2008; Knowles et al., 2015) and accuracy in academic performance (Knowles et al., 2015). Other behavioral interventions include the use of a Functional Behavior Assessment (FBA) to examine task avoidant behaviors and corresponding behavior interventions (Hawkins & Axelrod, 2008) and the use of structural analysis to determine academic components that contribute to problem behavior and corresponding academic antecedent adjustments (Hagan-Burke, Gilmour, Gerow, & Crowder, 2015).

Among the studied behavioral interventions, self-management is considered an effective intervention for students with EBD. In a review of self-management interventions targeted at academic outcomes for students with EBD, researchers found large effect sizes (mean of 1.80). About half of the studies targeted mathematics skills and were set in restrictive placements (self-contained classrooms or special day schools; Mooney, Ryan, Uhing, Reid, & Epstien, 2005).

Another review of self-management interventions included self-management targeted at increasing student appropriate behavior between 1988-2008 (Bradley, Henderson, & Monfore, 2004). In general, researchers found self-management strategies were an effective method for increasing student appropriate behavior across a wide variety of settings (from the general
education classroom to outplacement). However, their review included students with and without disabilities and was not focused on students with EBD (Briesch & Chafouleas, 2009a). Despite the findings, there were considerable gaps in research of adolescent students with EBD (grades 6 through 12) of the 30 self-management studies reviewed by only three included high school students with EBD (Briesch & Chafouleas, 2009a). There is a need for interventions to address the unique needs of adolescents with EBD as they are transitioning into their post-secondary careers, school, or both.

**Conceptual Framework**

This dissertation study builds off previous research of self-management as a promising intervention that has been associated with increases in appropriate behavior of students with and without EBD (Briesch & Chafouleas, 2009a). The multiple intervention components of self-management are grounded in behaviorism. To start, in behavioral theory, all behavior creates observable and measurable change(s) in one’s own environment (Cooper, Heron, & Heward, 2007; Skinner, 1953; Vargas, 2013). When analyzing behavior, researchers must select and operationally define a behavior that is verifiable through observation and measurement, is predictable (demonstrates a pattern over time), and parsimonious (Alberto & Troutman, 2009).

Skinner (1953) applied behaviorism to describe the mechanisms behind what he referred to as “self-control” or what is referred to in modern day behaviorism as self-management (Cooper et al., 2007). To self-manage one’s own behavior, an individual intentionally engages in observable and measurable action to change a target behavior. Skinner stated that an individual could change their behavior (i.e., increase or decrease the likelihood of a behavior) using the same methods they would when attempting to change the behavior of another person by identifying the antecedents and consequences of their behavior and using this information to
adjust their environment. Skinner illustrated this point through the following scenario of controlling motivating operations prior to a dinner engagement: if one wanted to decrease the amount of food consumed during a dinner engagement, they might eat before dinner to satiate oneself, making overeating aversive, thus reducing the amount of consumed food. In other words, self-management procedures are additional observable behaviors engaged in to effect change in one’s own behavior. An individual may self-manipulate antecedents, self-monitor behavior, self-evaluate behavior, self-instruct, self-deliver consequences, or some combination of these strategies (self-management behaviors) to increase desired or decrease undesired behaviors (target behaviors).

The mechanisms behind the effectiveness of self-management are debated within the field of Applied Behavioral Analysis (Cooper et al., 2007). Cooper et al., (2007) detailed the possible mechanisms behind behavior changes resulting from self-management. The use of self-monitoring strategies (collecting data on the occurrence and non-occurrence of a target behavior) and self-evaluation strategies (comparing performance to predetermined criteria to determine if it meets or exceeds the predetermined criteria) allows the individual to implement contingencies to reinforce or punish their own target behavior. More specifically, self-management may include reinforcing private verbal statements about desired behavior (i.e., “I successfully ran for 30-minutes every day this week”) increasing the likelihood one will engage in the desired behavior in the future (self-delivered positive reinforcement). Additionally, an individual engaging in self-management behaviors may find not engaging in the desired behavior aversive (i.e., the skipped run becomes aversive, possibly due to aversive private verbal statements; i.e., “I was lazy and didn’t run today.”); therefore, self-management may result in negative reinforcement (i.e., removes the averseness of punishing verbal statements) that increases the desired behavior
Self-management interventions are often multi-component (e.g., different self-management components or other intervention components), making it difficult to tease out what part of the intervention is effecting the behavior change (Cooper et al., 2007). In short, self-management consists of observable and measurable behaviors directly targeted at increasing a specific target behavior or strategy (Cooper et al., 2007; Skinner, 1953).

Individual self-management components occur within the three-term contingency: antecedent (before the behavior is likely to occur), behavior (while the behavior is occurring), and consequence (after the behavior occurred; Cooper et al., 2007). See Table 1 for definitions of individual self-management components within the three-term contingency. Definitions for self-management components came from operational definitions presented in previous research on self-management and behavioral texts (Briesch and Chafouleas, 2009a; Cooper et al., 2007; Mooney et al., 2005).

Antecedent self-management strategies occur before a target behavior and make the future occurrence of a target behavior more or less likely to occur. For example, when a student engages in verbal self-instruction before a desired behavior, they prompt themselves to engage in a target behavior and increase the likelihood they will recall the target behavior (Cooper et al., 2007). Goal-setting establishes pre-determined criteria for reinforcement, and guides future self-evaluation of a behavior. Specifically, goal setting is used by an individual to determine if they have or have not met specified criteria for reinforcement (e.g., self-delivered reinforcement or otherwise; Cooper et al., 2007; Mooney et al., 2005).

Self-management strategies can also occur while an individual is engaged in a target behavior. Behavior self-management strategies increase the likelihood a target behavior will
occur, increase, or decrease during a specified time and place. While engaging in a desired behavior, verbal self-instruction facilitates an individual’s recall of steps, increases the likelihood they will engage in all steps of a behavior or strategy, or both (Cooper et al., 2007). Self-monitoring increases the likelihood a person will engage in a behavior at a desirable rate or quantities (Briesch & Chafouleas, 2009a; Cooper et al., 2007; Mooney et al., 2005).

Lastly, consequence strategies delivered after the target behavior occurs will make future occurrences of engaging in a target behavior more (self-reinforcement) or less (self-punishment) likely. For example, earned self-reinforcement based on a predetermined goal (i.e., a goal can be set by the individual or someone else) for engaging a target behavior will increase the future probability of that behavior (Briesch & Chafouleas, 2009a; Cooper et al., 2007). Self-evaluation also increases the likelihood an individual will engage in a future behavior by facilitating self-reinforcement (i.e., the individual evaluates their behavior to determine if they met the criteria for reinforcement) or by the individual generating reinforcing verbal statements during self-evaluation for meeting pre-determine goals (Briesch & Chafouleas, 2009a; Cooper et al., 2007; Mooney, et al., 2005).

Table 1

*Self-management Intervention Components Within The Three-Term Contingency*

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>Behavior</th>
<th>Consequence</th>
</tr>
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<tbody>
<tr>
<td><strong>Goal-setting.</strong> Establishing specific performance criteria (Cooper et al., 2007), or goal setting, takes place prior to the initiation of the self-management system.</td>
<td><strong>Self-monitoring.</strong> Self-monitoring is initiated through the self-observation of a target behavior, followed by the individual specifically recording the occurrence or</td>
<td><strong>Self-evaluation.</strong> Self-evaluation is used alone or in conjunction with self-monitoring, goal setting, or both (Cooper et al., 2007).</td>
</tr>
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</tr>
</tbody>
</table>
Teachers can facilitate goal setting or students can independently self-select goals (Briesch & Chafouleas, 2009a). The establishment of the specific performance criteria allows the student to determine when reinforcement is available or not available (Cooper et al., 2007).

**Self-instruction.** Self-instruction is a statement(s) made by an individual in reference to their own behavior (Mooney, et al., 2005), and functions to increase the likelihood of a desired behavior (Cooper et al., 2007). As an antecedent self-management strategy, it occurs prior to the onset of a target behavior in reference to the target behavior or self-management strategy (Cooper et al., 2007).

**Self-reinforcement.** A self-management plan can also include self-reinforcement. Self-reinforcement is the self-delivery of reinforcement or denial of reinforcement (Briesch & Chafouleas, 2009a; Cooper et al., 2007), contingent on predetermined criteria (Briesch & Chafouleas, 2009a).

| Teachers can facilitate goal setting or students can independently self-select goals (Briesch & Chafouleas, 2009a). The establishment of the specific performance criteria allows the student to determine when reinforcement is available or not available (Cooper et al., 2007). | nonoccurrence of the behavior (Briesch & Chafouleas, 2009a; Cooper et al., 2007; Mooney et al., 2005). | an individual compares their own performance to nonoccurrence of the behavior (Briesch & Chafouleas, 2009a; Cooper et al., 2007; Mooney et al., 2005). | The nonoccurrence of the behavior (Briesch & Chafouleas, 2009a; Cooper et al., 2007; Mooney et al., 2005). |
Self-management strategy; (Cooper et al., 2007).

In short, there are multiple methods and components of self-management applied within the three-term contingency. Self-management can also be used in conjunction with other interventions applied by outside persons such as teachers and school professionals. For example, a teacher could develop an intervention for a student, develop a self-management protocol, and supervise, in combination with behavior change mechanisms such as direct instruction and practice in social skills. As students become more proficient in self-management, they can implement self-management procedures without teacher assistance; a student could develop and implement a self-management plan independently (Cooper et al., 2007).

It is also essential to consider if included self-management components have the potential to increase desired behaviors or decrease undesired behavior before, during, and after the behavior. Table 2 describes consideration for the selection of individual self-management components.

Table 2

| Considerations for the Implementation of Individual Self-Management Components within a Three-Term Contingency |
|---|---|---|
| Antecedent | Behavior | Consequence |
### Self-Management of Social Behavior

<table>
<thead>
<tr>
<th>Self-management before the student engages in the target behavior.</th>
<th>Self-management while the student engages in the target behavior.</th>
<th>Self-management after the student engages in the target behavior.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goal-setting:</strong> does the behavior allow for the student to self-selected goal(s)?</td>
<td><strong>Self-instruction:</strong> will verbal statements regarding the target behavior, selected strategies, or both facilitate student recall of expected behaviors, procedures, or both (social, academic, or self-management) while the student engages in the target behavior?</td>
<td><strong>Self-evaluation:</strong> does the behavior allow for a comparison of a set goal (either self-selected or teacher selected) to the student’s previous performance, or another person’s performance?</td>
</tr>
<tr>
<td><strong>Self-instruction:</strong> will a prompt for the target behavior, selected strategies (e.g., self-management), or both increase the probably the student will engage in or improve outcomes in the target behavior, selected strategies, or both?</td>
<td><strong>Self-monitoring:</strong> does the behavior allow for the student to observe and document the occurrence of the behavior while engaging in classroom and activities efficiently and will documenting the occurrence of the behavior likely result in improvements in the target behavior?</td>
<td>Self-reinforcement: can the student provide efficient reinforcement based on a goal or accuracy of self-monitoring? Is self-reinforcement more effective than alternative methods of reinforcement? If the target behavior is a social behavior, can self-reinforcement match the function of the student’s behavior?</td>
</tr>
</tbody>
</table>

* Considerations are based on operational definitions of self-management components from Briesch and Chafouleas, 2009a; Cooper at el., 2007; and Mooney et al., 2005

### A Literature Review of Self-Management Interventions for Students with EBD

Students with EBD experience dire outcomes: they struggle to earn high school diplomas (U. S. Department of Education, Institute of Education Sciences, 2005), maintain employment (U.S. Department of Labor, Bureau of Labor Statistics, 2015), and have higher rates of involvement in the criminal justice systems (Wagner & Newman, 2012). Fortunately, self-management interventions have successfully been used to improve the social behavior (Briesch & Chafouleas, 2009a) and academic performance (Mooney et al., 2005) of students with or at risk for EBD. Additionally, self-management meets the What Works Clearinghouse standards...
for an Evidence-Based Practice (EBP) for students with challenging classroom behaviors (Maggin, Briesch, and Chafouleas, 2013).

I conducted a systematic literature review to examine self-management of social behavior for the social behavior of students with or at risk for EBD. The purpose of the literature review was to determine the nature of empirical research in self-management interventions for students with EBD and effective self-management practices.

Method

To identify articles that met specific inclusionary criteria, I (a) identified specific search terms, (b) systematically searched multiple electronic data-bases (ERIC, Academic Search Premier, PsyINFO, Professional Development Collection, Psychology and Behavior Sciences Collection, PsycARTICLES), (c) screened abstracts for key inclusionary criteria (empirical, participants school aged within a school setting, students with or at risk for EBD, independent variable of self-management, and dependent variable behavior), (d) partially screened articles to determine if articles met the inclusionary criteria (randomized control trial, single subject research design, or quasi-experimental design), (e) fully coded articles that passed screening for key article elements, (f) conducted an ancestral search of fully coded articles’ reference lists, and (g) repeated steps c-e for articles identified through the ancestral search.

Description of Samples and Settings

Grade level. All articles in this full review included only school-aged children in grades K-12; that is, students in elementary school as defined by grades K-4 (24%; Gulchak, 2008; Kamps et al., 2011; Lane et al., 2009; Rhode, Morgan, & Young, 1983), middle school as defined by grades 5-8 (53%; Kelly & Shogren, 2014; Kern, Dunlap, Childs, & Clarke, 1994b; Lam, Cole, Shapiro, & Bambara, 1994; Lloyd, Bateman, Landrum, & Hallahan, 1989; Ninness,
Fuerst, Rutherford, & Glenn, 1991; Ninness, Fuerst, & Rutherford, 1995; Salend, Reeder, Katz, & Russell, 1992; Smith, Young, West, Morgan, & Rhode, 1988; Smith & Sugai, 2000), and high school as defined by grades 9-12 (18%; Kelly & Shogren, 2014; McQuillan, DuPaul, Shapiro, & Cole, 1996; Smith, Young, Nelson, & West, 1992). Three studies did not provide student grade or school level; however, I categorized them into grade level based on age (10 through 11 years old; 11 through 13 years old; and 13 though 14 years old) and placed in the Middle School Category (Lam et al., 1994; Lloyd et al., 1989; Salend et al., 1992). The sum of the percentages of all grade level do not equal 100% due to studies with student populations in multiple grade levels. All student participants were either identified with EBD (94%; Gulchak, 2008; Kelly & Shogren, 2014; Kern et al., 1994a; Kern et al., 1994b; Lam et al., 1994; Lane et al., 2009; Lloyd et al., 1989; McQuillan et al., 1996; Ninness et al., 1991; Ninness et al., 1995; Rhode et al., 1983; Salend et al., 1992; Smith & Sugai, 2000; Smith et al., 1988; Smith et al., 1992; Wilkinson, 2005) or at risk for EBD (6%; Kamps et al., 2011). The sum of the percentages of students with EBD and at risk for EBD do not equal 100% due to studies with student populations with EBD and at risk for EBD. In some instances, the sample included either (a) students with EBD who had additional comorbid diagnoses or (b) other students within the sample diagnosed with disabilities other than EBD. Additional disabilities (either a comorbid diagnoses or students with other disabilities within the sample) were also represented in the study samples.

**Setting.** All studies took place in an educational setting. However, the specific educational settings ranged from the general education classroom within a public school (18%; Kamps et al., 2011; Lane et al., 2009; Wilkinson, 2005) to a combination of resource room, self-contained classroom, and general education classroom (35%; Kelly & Shogren, 2014; Lloyd et al., 2009; Salend et al., 1992; Smith & Sugai, 2000; Smith et al., 1992; Smith et al., 1988) to a
self-contained special education classroom within a public school (30%; Gulchak, 2008; Kern et al., 1994b; Ninness et al., 1991; Ninness et al., 1995) to special education/day schools (public or private; 18%; Kern et al., 1994a; Lam et al., 1994; McQuillan et al., 1996). In addition, for a portion of studies, individual participants received services in different instructional settings (general education setting, self-contained and general education setting, self-contained setting; 6%; Rhodes et al., 1983).

Results of Effective Self-Management Strategies

Seventeen articles met the inclusionary criteria and were fully reviewed. Effective self-management components were selected based on the intervention target of the self-management strategy and study outcomes (increases in desired social behavior, decreases in undesired social behavior). Studies synthesized as effective interventions for self-management of behavior or academics included operational definitions of dependent variables for student social behavior and obtained desired outcomes such as increases in student on-task behavior/engagement or appropriate behavior, or decreases in off-task/inappropriate/disruptive behavior, or both.

All studies contained effective self-management interventions in social behavior (see Table 3: Gulchak, 2008; Kamps et al., 2011; Kelly & Shogren, 2014; Kern et al., 1994a; Kern et al., 1994b; Lam et al., 1994; Lane et al., 2009; Lloyd et al., 1989; McQuillan et al., 1996; Ninness et al., 1991; Ninness et al., 1995; Rhode et al., 1983; Salend et al., 1992; Smith & Sugai, 2000; Smith et al., 1992; Smith et al., 1988; Wilkinson, 2005). Effective self-management strategies included self-monitoring (Kamps et al., 2011; Lane et al., 2009; Kern et al., 1994; Kern et al., 1994; Lam et al., 1994; Lloyd et al., 1989; Wilkinson, 2005) to document the occurrence or non-occurrence of a behavior, and self-evaluation to compare performance to predetermined criteria (McQuillan at al., 1996; Ninness et al., 1995; Rhode et al., 1983; Salend et
Most of the studies included some form of self-recording. The most common methods of self-recording were ratings scales (Kelly & Shogren, 2014; McQuillan et al., 1996; Ninness et al., 1991; Ninness et al., 1995; Rhode et al., 1983; Salend et al., 1992; Smith et al., 1988; Smith et al., 1992) and checklists (Kelly & Shogren, 2014; McQuillan et al., 1996; Ninness et al., 1991; Ninness et al., 1995; Rhode et al., 1983; Salend et al., 1992; Smith et al., 1988; Smith et al., 1992). Other less frequently used self-recording methods were graphing (Gulchak, 2008; Kelly & Shogren, 2014), and recording the number of completed responses (Lam et al., 1994).

In a smaller portion of studies (35%), other components of self-management such as: self-reinforcement (Kelly & Shogren, 2014; Smith & Sugai, 2000; Wilkinson, 2005), goal setting (Kelly & Shogren, 2014; Smith et al., 1992; Wilkinson, 2005), self-instruction (Kelly & Shogren, 2014; Smith et al., 1992; Wilkinson, 2005), and recruitment of reinforcement (Smith & Sugai, 2000) were included.

The majority (71%) of self-management interventions also included behavioral intervention components such as token economies and reinforcement to increase desired social behaviors and ensure accuracy of self-recording procedures (Lane et al., 2009; McQuillan et al., 1996; Ninness et al., 1991; Ninness et al., 1995; Rhode et al., 1983; Salend et al., 1992; Smith et al., 1988; Smith et al., 1992), social skills instruction to teach desired behavior(s) and facilitate accurate self-recording (Lam et al., 1994; Lloyd et al., 1989; McQuillan et al., 1996; Ninness et al., 1991; Ninness et al., 1995; Rhode et al., 1983; Salend et al., 1992; Smith et al., 1988), or both (Kamps et al., 2011; McQuillan et al., 1996; Ninness et al., 1991; Ninness et al., 1995; Rhode et al., 1983; Salend et al., 1992; Smith et al., 1988).
Table 3

**Effective Interventions for Behavior Change**

<table>
<thead>
<tr>
<th>Intervention Component</th>
<th>Supporting Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Effective Self-Management Components</strong></td>
<td></td>
</tr>
<tr>
<td>Self-Monitoring</td>
<td>Kamps et al., 2011; Lane et al., 2009; Kern et al., 1994a; Kern et al., 1994b; Lam et al., 1994; Lloyd et al., 1989; Wilkinson, 2005</td>
</tr>
<tr>
<td>Self-Evaluation</td>
<td>McQuillan et al., 1996; Ninness et al., 1995; Rhode et al., 1983; Salend et al., 1992; Smith et al., 1992; Smith et al., 1988</td>
</tr>
<tr>
<td>Self-Monitoring and Self-Evaluation</td>
<td>Gulchak, 2008; Kelly &amp; Shogren, 2014; Ninness et al., 1991; Smith &amp; Sugai, 2000</td>
</tr>
<tr>
<td><strong>Self-Recording Procedure</strong></td>
<td></td>
</tr>
<tr>
<td>Rating Scales</td>
<td>Kelly &amp; Shogren, 2014; McQuillan et al., 1996; Ninness et al., 1991; Ninness et al., 1995; Rhode et al., 1983; Salend et al., 1992; Smith et al., 1988; Smith et al., 1992</td>
</tr>
<tr>
<td>Checklist</td>
<td>Kern et al., 1994a; Kern et al., 1994b; Lam et al., 1994, Lane et al., 2009; Lloyd et al., 1989; Smith &amp; Sugai, 2000; Wilkinson, 2005</td>
</tr>
<tr>
<td><strong>Behavioral Intervention Components</strong></td>
<td></td>
</tr>
<tr>
<td>Token Economy</td>
<td>Lane et al., 2009; Smith et al., 1992</td>
</tr>
<tr>
<td>Social Skills Instruction</td>
<td>Lam et al., 1994; Lloyd et al., 1989</td>
</tr>
<tr>
<td>Token Economy and Social Skills Instruction</td>
<td>Kamps et al., 2011; McQuillan et al., 1996; Ninness et al., 1991; Ninness et al., 1995; Rhode et al., 1983; Salend et al., 1992; Smith et al., 1988</td>
</tr>
</tbody>
</table>
Of the studies, only 3 (18%) included high school students within the population of students, all the studies included self-management of social behavior (Kelly & Shogren, 2014; McQuillan et al., 1996; Smith et al., 1992). Three of the studies included effective interventions for a defined social behavior (Kelly & Shogren, 2014; McQuillan et al., 1996; Smith et al., 1992). Of the high school studies synthesized for effective interventions, two studies included goal setting (Kelly & Shogren, 2014; Smith et al., 1992), all studies included self-monitoring with self-evaluation (Kelly & Shogren, 2014; McQuillan et al., 1996; Smith et al., 1992), and one study included self-reinforcement (Kelly & Shogren, 2014). Two studies included measures of on-task behavior (Kelly & Shogren, 2014; McQuillan et al., 1996), and two studies included measures of off-task behavior (Kelly & Shogren, 2014; Smith et al., 1992).

**Discussion of Literature Review Results**

Overall, reviewed studies indicated that self-management is effective in increasing on-task behaviors and decreasing off-task behaviors of students with EBD. Within this review, self-management interventions were often combined with other social behavior interventions. Most these self-management interventions were coupled with social behavior interventions, such as social skills lessons and token economies. The most replicated self-management system was a study conducted by Rhode et al. (1983). They implemented and faded a token economy within self-evaluation system. In this study, teachers and students evaluated social behavior, academic performance, or both using a zero to five rating scale. Students could retain points depending on the accuracy of their ratings. They also earned additional points for exact matches of teacher student rating. This self-management system, utilizing self-evaluation coupled with teacher evaluation to assess student accuracy in self-evaluation, was replicated in seven other studies.
within this review (Ninnes et al. 1991; Ninnes et al. 1995; Smith et al. 1988; Smith et al. 1992; McQuillan et al. 1996; Salend et al., 1992).

Most self-management interventions that incorporated token economies also included social skills instruction. Some studies used direct instruction of social skills to teach students classroom rules (Rhode et al., 1983; Smith et al., 1988). Other studies incorporated social skills instruction to ensure students could discriminate between appropriate and inappropriate classroom behavior, which addressed the skills students needed to fill out their self-evaluation of classroom rule following behavior (McQuillan et al., 1996).

Like the review conducted by Briesch and Chafouleas’s (2009a), there were a lack of studies conducted with students in high school. Three of the effective interventions included high school students with EBD. Overall, there is a paucity of research of self-management interventions with high school students with EBD.

In sum, multicomponent intervention with self-management and behavioral procedures such as (a) delivering explicit instruction of social skills and self-management procedures; (b) training and asking students to self-monitor and self-evaluate their use of targeted social skills, academic skills, or both; and (c) using a token economy (or other recognition system) to acknowledge students for engaging in expected behavior(s), to acknowledge or shape accuracy of self-monitoring, or both were effective in increase desired social behavior. The use of self-management strategies can potentially increase on-task behaviors and decrease off-task behaviors of students with EBD.

**Potential Targets for Self-Management of Social Behavior**

In studies of student off-task behavior, researchers demonstrated the negative cyclical effects of student off-task behavior: Student off-task behavior occasions negative student teacher
interactions, which in turn lead to increasing off-task student behavior (Carr, Taylor, & Robinson, 1991; Scott, Alter, & Hrn, 2011). In contrast, student on-task behavior is linked to improved academic outcomes (Wood, Murdock, & Cronin, 2002). As students with EBD are likely to struggle with distractibility (Wagner et al., 2006), on-task behavior is an important target for self-management for adolescent students with EBD. Self-management interventions have been implemented successfully when targeted at the social behavior (Briesch & Chafouleas, 2009a) of students with or at risk for EBD.

**On-task Behavior.** Studies of self-management interventions targeted at on-task academic behavior (Carr & Punzo, 1993), academic engagement (Bruhn & Watt, 2012), and on-task behavior (Kern et al., 1994a; Wood et al., 2002) of students with behavior challenges (Bruhn & Watt, 2012; Wood et al., 2002) and EBD (Carr & Punzo, 1993; Kern et al., 1994a) have not only shown increases in student on-task behavior, they have resulted in improved academic outcomes (Carr & Punzo, 1993; Kern et al., 1994a; Wood et al., 2002) and academic engagement (Bruhn & Watt, 2012). Wood et al., (2002) implemented a self-management intervention for adolescents (12 to 14 years old) who were expelled from public school as result of their behavior. Students’ self-monitoring specific academic on-task behaviors (e.g. participation and working on assigned tasks) led to overall improvement in student grades and academic behavior (Wood et al, 2002). Other researchers have found self-management interventions of academic on-task behavior of middle school students (Carr & Punzo, 1993) and on-task behavior of elementary school students (Kern et al., 1994a) with EBD led to increases in on-task academic behavior (e.g., productivity and accuracy; Carr & Punzo, 1993; attention to academic tasks; Kern et al., 1994a) and improved academic outcomes (Carr & Punzo, 1993; Kern et al., 1994a). The use of self-management targeted at increases in student on-task
behavior (social and academic) have led to improved academic outcomes (Carr & Punzo, 1993; Kern et al., 1994a; Wood et al., 2002).

**An Efficient and Portable Approach to Self-Management**

As demonstrated in the literature review, self-management is a potentially effective and efficient way to support the social behavior of students with EBD; however, most reviewed studies took place in elementary or middle school settings. Because students with EBD experience significant challenges such as distractibility (Wagner et al., 2006) in high school settings, it is critical to consider how instruction in self-management and students use of self-management may be able to provide students in high school settings strategies to increase their chances of success in school.

There are three main areas that must be considered when implementing self-management in high schools. First, high school settings differ from elementary school settings in that students rotate classrooms, instructors, and schedules daily either through a block schedule or traditional schedule (Bottge, Gugerty, Serlin, & Kyoung-Suk, 2003). Additionally, students’ schedules often change throughout the year depending on their individual course work (Bottge et al., 2003). It is important to take high school settings into account when developing interventions that are portable (i.e., they can be carried to multiple settings with multiple instructors) and efficient enough that multiple teachers can implement them effectively. Second, as experts in his or her content area, teachers are expected maintain primary focus on instruction in specific content area information and specialized skills (e.g., a science teacher focuses scientific method in students’ laboratory write-ups) and therefore spend less time working with students on other skills (Deshler, Palincsar, Biancarosa, & Nair, 2007). A portable and efficient intervention allows content area teachers to focus on delivery of instruction and students acquisition of content
knowledge. Lastly, students in high school are nearing the end of their K through twelve academic careers and moving into their post-secondary careers. When developing interventions for high school students it is important to consider interventions that are transferable into post-secondary settings. It is important to develop an efficient and portable approach to self-management for adolescents given the difference in settings, content instruction, and transition into post-secondary careers.

One promising approach is the use of technology for self-management, such as application for tablets, cellular phones, and other portable devices. The use of self-management applications for adults has become more common place, as adults use self-management applications to self-monitor and manage chronic health conditions such as diabetes (Demidowich, Lu, & Tamler, 2012), medication (Bailey, Belter, Pandit, Carpenter, Carlos, & Wolf, 2014), and weight loss (Pagoto Schneider, Jojic, DeBiasse, Mann, & Wolf, 2013).

There is an emerging body of evidence to support the use of technology applications to aide in self-management for students in K through twelve with challenging behavior. Wills and Mason (2014), found a functional relation between the use of I-Connect, a PC self-management application, and increases in the on-task behavior of two high school students with challenging behavior. Additionally, the SCORE-IT (Bruhn, Goin, & Hasselbring, 2015a) application for Apple iPads has led to positive outcomes in social behavior for students. The SCORE-IT application includes self-monitoring (i.e., self-observation of a target behavior, followed by the individual specifically recording the occurrence or nonoccurrence of the behavior; Briesch & Chafouleas, 2009a; Cooper et al., 2007; Mooney et al., 2005) of social behavior and self-evaluation of performance. The SCORE-IT application has been successfully implemented for the self-management of social behavior (e.g., academic engagement and disruptive behavior) of
elementary students with challenging behavior (Vogelgesang, Bruhn, Coghill-Behrends, Kern, & Thoughton, 2016) and middle school students with challenging behavior (Bruhn, Vogelgesang, Fernando., & Lugo, 2016; Bruhn, Vogelgesang, Schabilion, Waller, & Fernando, 2015b); however, it has not been studied with high school students.

Summary and Purpose of the Proposed Study

This chapter describes the difficulties in school of students with EBD and reviews a promising approach (self-management) to increase appropriate behavior of students with EBD. Despite the growing body of research supporting the use of self-management for students with EBD, there continues to be a dearth of research on the use of self-management for high school students with EBD. It is essential to develop an intervention for high school students that is effective at increasing appropriate behavior to address issues of impulsivity and distractibility (Wagner et al., 2006) and disciplinary contact (Lane et al., 2006) that students experience throughout their academic career. Additionally, interventions need to be efficient for teachers who are tasked with addressing student behavior, academic skills (e.g., reading, writing, and study skills), and content area learning (e.g., math, science, English, and social studies).

Efficiency is essential for high school students with limited time left before completing high school. Lastly, given the issues students with EBD experience in post-secondary education, employment, and involvement in the criminal justice system, interventions must be generalizable outside of school. The purpose of this study is to begin to address the gap in the literature on using self-management to support students with EBD in high school settings.

Research Question

This proposed study seeks to determine the effect of a portable self-management strategies targeted at the social behavior of high school students with EBD. Specifically, this
study will address the following research question: what are the effect of an efficient and portable self-management intervention (SCORE IT: Bruhn et al., 2015a) on the on-task behavior of two high school students with EBD

Chapter II

Method

This purpose of this dissertation study was to determine the effect of an efficient and portable self-management intervention (SCORE IT: Bruhn et al., 2015a) on the on-task behavior of two high school students with EBD. To conduct the intervention, I provided a direct social skills lesson in on-task behavior, including examples and non-examples of each students’ classroom behavior, and direct instruction in the use of the multiple self-management strategies. Students were asked to use the self-management strategy during their English class. The intervention included direct instruction of on-task behavior and self-management and a multicomponent self-management strategy targeted at increasing students on-task behavior. I used a single subject withdrawal (ABAB) design to determine if a relationship existed between the intervention and students’ on-task behavior (Kazdin, 2011). In this chapter, I describe the study (a) setting, (b) participants (recruitment and participant description), (c) design, (d) independent variables, (e) dependent variables, (f) data collection, (g) social validity measures, (h) procedures, and (i) data-analysis.

Setting

The study took place in a private special education outplacement school for students in grades 6 through 12 with EBD or Other Health Impairment labels. The location of the school is in a small urban area of New England. Students are referred to the school by surrounding Local Education Agencies (LEA) for social, emotional, and behavioral problems. Additionally, the
school is implementing School-Wide Positive Behavioral Interventions and Supports (SW-PBIS). The school-wide expectations include responsibility, safety, and respect. This school was selected based on two criteria: (1) it served high school students, and (2) students were receiving special education services resulting for behavioral challenges.

Participants

I recruited teachers three weeks after administrators provided approval for the study. I selected teachers based on their content area (English), and I asked teachers to nominate students who demonstrated common characteristics and risk factors of students’ EBD in attention based on classroom behavior (Wagner et al., 2006). Specifically, teachers identified students who exhibited low levels of on-task behavior during Language Arts/English instruction. Once I obtained parental consent and student assent, observers conducted three direct observations of students’ on-task behavior during Language Arts/English classes to determine if they were on-task equal to or less than 65% of the observations. The criterion for on-task behavior was selected based on Hirn and Scott’s (2014) study of high school students. The rate of classroom engagement and off-task behavior for students with challenging behavior was 65% and 27% of observations, respectively.

Recruitment process. I obtained approval from the University of Connecticut’s Institutional Review Board (UCONN-IRB) to conduct this study prior getting (a) a letter of permission from school administrators and (b) consent from teacher and student/parent consent to participate in the study. I contacted schools and directly received a school permission letter from the school administrator, submitted the letter to UCONN-IRB for final approval to conduct research. After all necessary UCONN-IRB approvals were obtained, I met with the English teachers in the high school. During this meeting, I reviewed talking points describing the
rational, purpose, and study procedures. Teachers were given the option to sign consent, think about participation, or opt out. Both teacher opted to sign the consent form. Once teachers consented to participate in the study, they contacted parents of potential students using a list of talking points I developed. Teachers asked parents if I could contact them about the study. If they agreed, I contacted them via a parent selected method of communication. For parents that agreed to allow me to contact them, I reviewed the predetermined talking points describing the rational, purpose, and student procedures. Once parents provided consent, I met with individual students at their school to obtain their consent/assent to participate.

**Participant Descriptions**

During the baseline phase of the intervention, data-collectors and I conducted observations to determine if students met the pre-determine criteria of on-task behavior equal to or less than 65% of the observations. Both nominated students met this criterion.

**Student 1.** Student 1 was a 15-year old ninth grader. He was in a self-contained classroom with three peers. Student 1 transitioned to classes with different content area teachers with the same three peers and one support staff. His teacher reported he struggled to initiate tasks and stay on task and needed frequent reminders and reinforcement to maintain on-task behavior. All observations took place during Student 1’s English course. English was the first subject of the day and occurred directly after homeroom. Throughout all sessions, Student 1 primarily engaged in two academic activities within two settings. The first academic activity included reading from a modified play script with designated student parts, answering comprehension questions about the script, and independent seat work. Student 1 engaged in this activity with his regular classroom teachers as well as his substitute classroom teacher. For the second activity, Student 1 was asked to select a topic from a list of topics, use the internet to find
information about the topic, and write a persuasive paper supporting a position on the selected topic. The second activity took place in the classroom during the pre-writing phase of the assignment and in the computer lab (across the hall from his classroom) during the resources location tasks and drafting activities. The computer lab was supervised by a support staff member who routinely worked with students in this setting. Students from other classrooms also completed independent writing activities during the observation sessions. Tables in the computer lab were arranged in a u-shape facing the wall. Student 1 completed each activity within the computer lab independently. Student 1’s class resumed the first activity once the class completed the writing assignment.

**Student 2.** Student 2 was an 18-year old twelfth grader. He was in a “mainstreamed” classroom. “Mainstreamed” classes were more like typical general education classrooms in that students transitioned each period (i.e., they attended different classes with different teachers and peers and no support staff). Student 2’s teacher reported he needed frequent reminders to stay on-task. All observations took place during the second period of the day in Student 2’s English class with two other students. Throughout the sessions, Student 2 daily activities were similarly structured. At the start of each class/session, Student 2 and his class members completed a grammar warm-up (i.e., locating and fixing grammatical errors in a paragraph and discussing selections as a class). Once the warm-up was completed Student 2 was provided with independent seat work. Independent seat work included vocabulary activities, such as creating flash cards with definitions and visual representations, completing vocabulary worksheets, and vocabulary quizzes. All activities took place in two settings, Student 2’s classroom and the school isolation (“time out”) room. Within Student 2’s typical classroom, his desk faced the front of the classroom and was offset from his peers who sat in next to each other. The isolation
room was a small room with a desk and chair for one student, and a desk and chair for one staff member. The isolation room was supervised by one staff member and school work was provided by Student 2’s English teacher. There were limited interactions between the staff member and Student 2. Student 2’s English teacher entered the room at the start of class to provide and explain the assigned tasks.

**Study Design**

In this study, I implemented a single subject withdrawal (ABAB) research design. Single subject research is often used within the fields of education and psychology as it requires a small number of participants, which is useful in working with low incidence populations (Kazdin, 2011). Additionally, single subject research designs have strong internal validity with high levels of experimental control because they require repeated measurement of the dependent variable over time (Kazdin, 2011). Among single case designs, a withdrawal design is seen as a particularly rigorous design with high internal validity because of the stringent experimental control needed for participants’ behavior to return to intervention/baseline levels when interventions are implemented and removed (Kazdin, 2011).

**Independent Variables**

**Self-Management of On-Task Behavior.** The independent variable was a self-management package that included brief (30-min) training and daily self-management of on-task behavior. I delivered direct instruction through a social skills lesson using the lesson template from Simonsen et al., (2012). The lesson included a clear operational definition of on-task behavior; examples and non-examples of the target behavior; and instructional activities following the model, lead, test format (See Appendix C for social skills lesson). After baseline direct observations of students’ on-task behavior were completed, a range of specific examples
from study participants’ on-task behaviors and off-task behaviors were embedded into lesson examples and non-examples. Explicit instruction in self-monitoring, self-evaluation, and self-reinforcement were also embedded into the social skills lesson. Through examples and non-examples of the behavior, students practiced collecting data of on-task behavior. They received direct instruction on the self-management SCORE IT app (Bruhn, Goin, & Hasselbring, 2015a). Each lesson lasted 30-minutes.

Students self-managed their on-task behavior through the SCORE IT iPad app (Bruhn et al., 2015a; see Appendix D for SCORE IT example). The SCORE IT app allows for students to self-monitor their own behavior using a rating scale to rate the level of their behavior. To use the app, students used an iPad during the periods they are asked to self-monitor their on-task behavior. The students opened the app, selected their role (i.e. student) and name. Once the students selected their name and start, the app began the self-monitoring session. The app prompted the student to rate their on-task behavior on a 0 to 4 scale (0 = never, 1 = a little, 2 = sometimes, 3 = a lot, 4 = always) every 4 minutes. After students completed the 20-minute self-management session(s), they viewed a graph of their ratings, progress on the previous five self-management sessions, and a daily goal line. They used their daily goal line to self-evaluate their performance (i.e., the used the daily goal line to determine if they met or exceeded the daily goal). Due to regular school interruptions, activities, or transportation issues some sessions lasted less than 20-minutes; however, all sessions were equal to or over 15-minutes with at least three self-recording opportunities.

Once students completed use of the SCORE IT app, they did or did not deliver self-reinforcement based on their daily performance (i.e., they self-evaluated their performance in reference to the daily goal line and delivered self-reinforcement based on self-evaluation of
performance in regard to a preset set goal). I adjusted the *SCORE IT* app goal line weekly, to reflect improvements of 5% or greater based on students’ previous performance. Students viewed the goal line generated by the *SCORE IT* app; if their score meet or exceeded the goal line, they selected reinforcement from a basket or box of tangible items such as, writing utensils, gum, and guitar picks.

Training Students to Accurately Self-Monitor. Students were observed during all self-monitoring interventions and student accuracy was evaluated the first 3 days of each self-management intervention. A data collector and I collected data on students’ on-task behavior (on-task = 1, 2, or 3 in student self-ratings and off-task = 0 in student self-rating). At the completion of the session, the data-collector or I compared direct observation data at equivalent 4-minute intervals to student data; all student data was in at least 85% agreement of each other.

Dependent Variable

The primary dependent variable included the percent of intervals students were engaged in on-task student behavior (see Table 4).

Data Collection

Data collectors and I collected daily data (see Appendix B for the direct observation tool) on students’ on-task behavior at the same time during the English course periods. Data collectors and I used momentary-time sampling procedures during a 15 to 20-minute segment of a class. Data collectors and I documented if students were on-task at the end of each minute. Momentary time sampling is a fitting method of data collection when a behavior frequently occurs, is continuous, or both (Cooper et al., 2007). Additionally, momentary time sampling allows for the data collector to engage in multiple behaviors, such as typical classroom activities,
while data collecting. This form of data collection provided an approximation of the amount of
time they engaged in the behavior (Alberto & Troutman, 2009).

On-task behavior was converted into percent of intervals to account for any variations in
time due to unforeseen circumstances, such as late arrivals or students leaving the classroom.

Two data-collectors and I used a direct observation tool to track students on-task
behavior and use of the self-management intervention (see appendix B). Data-collectors
included two Ph.D. students and myself. The two data-collectors collected inter-observer
agreement (IOA) observation during the study. I trained each data-collector during participant
recruitment. Training included (a) review of the operational definition of on-task behavior (see
table 4), (b) review of data-collection tool, and (c) two direct observations using videos of
classroom instruction with 90% IOA.

Data-collectors and I collected daily data on study participants on-task behavior the same
time each day. Each data-collection session lasted about 20-mins (some variation occurred
resulting from late arrivals or students being called out of the classroom). An interval iPhone
timer app was set to beep at each minute to conduct momentary time-sampling of on-task
behavior. Data-collectors wore a headphone in one ear to keep track of each interval. Data-
collectors shared headphones to ensure they kept the same time during IOA observations.

IOA was collected and calculated across 25% of observations for student 1 and 31% of
observations for student 2 (see Table 5). IOA was calculated by interval agreement. The
percentage of agreement was calculated by dividing the number of intervals of agreement by the
total number of observed intervals multiplied by 100%. Overall IOA for on-task behavior of
Student 1 was 99% and of Student 2 was 95% (see Table 5).

Table 4
**Operational Definition of On-task Behavior**

<table>
<thead>
<tr>
<th>Examples of On-task Behavior</th>
<th>Non-Examples of On-task Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Looking at teacher during instruction and when (s)he is talking</td>
<td>• Off-task comments and conversations</td>
</tr>
<tr>
<td>• Completing assigned task(s)/demands</td>
<td>• Focusing attention on activity that is not assigned (e.g., texting cellphone and iPod)</td>
</tr>
<tr>
<td>• Answering teacher directed questions</td>
<td>• Walking around classroom without teacher/staff permission</td>
</tr>
<tr>
<td>• Verbally participating in class discussion</td>
<td>• Using materials for other than their intended purposes</td>
</tr>
</tbody>
</table>

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Table 5

**Inter-Observable Agreement for On-task Behavior**

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Baseline A</th>
<th>Intervention B</th>
<th>Baseline C</th>
<th>Intervention D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student 1</td>
<td>100%</td>
<td>95%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Student 2</td>
<td>N/A</td>
<td>95%</td>
<td>100%</td>
<td>100%</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>85%</td>
<td></td>
</tr>
</tbody>
</table>

**Social Validity Measure**

**Social Validity.** The *Usage Rating Profile – Intervention Revised* (see Appendix D) was given to teachers at the completion of the intervention to determine the feasibility and acceptability of the overall intervention from the perspective of the classroom teachers (Chafouleas, Briesch, Neugebauer, & Riley-Tillman, 2011). Additionally, the *Children’s Usage Rating Profile* (see Appendix D) was administered to participating students upon completion of the study to determine the feasibility and acceptability of the intervention from the student participants’ perspective (Briesch & Chafouleas, 2009b).

**Procedures**

To conduct this study, I implemented a single subject withdrawal design. The following procedure and study phases will be described in the subsequent section: (a) baseline A₁, (b) intervention B₁, (c) baseline A₂, (d) intervention B₂, and (e) collection of social validity data.
Baseline (phase A₁). Three sessions of screening were collected for students to determine if they met the inclusionary criteria for the study. For students who met the screening criteria, data collectors and I continued to collect daily direct observations of their behavior. During the baseline period (A₁), each student participated in business as usual (i.e., her or his regular classroom instruction and routines). Each student remained in the baseline phase until a stable pattern of responding was documented (i.e., at least three consecutive data points with minimal variability or counter-therapeutic trend).

Student 1’s initial baseline data points indicated he was performing above the inclusionary criteria. However, his teacher was scheduled to take leave for approximately 4 weeks, so I obtained consent from the substitute teacher. Once I obtained consent from the substitute teacher, data collectors and I collected baseline data on Student 1’s on-task behavior, at which point his on-task behavior met the inclusionary criteria for the study. The substitute teacher was present for all phases of the study (i.e., A₁, B₁, A₂, B₂).

Self-management intervention (B₁). The decision to implement the initial self-management intervention was be based on stable data in phase A₁ (i.e., data that demonstrate a steady pattern through low variability and a consistent level or trend) for at least 3 days (Kazdin, 2011). Once each student demonstrated stable data for at least 3 days, they entered self-management of on-task behavior (B₁). On the first day of phase B₁, prior to the first day of data-collection in B₁, students were trained to self-monitor, self-evaluate, and self-reinforce. At the start of the next observation period, I left the iPad with an open cover on-top of the students’ desks. To self-manage their on-task behavior, Students 1 and 2 followed the procedures within the SCORE IT app during their English classes. Both students initiated self-management of on-task behavior by following the procedures to set up the SCORE IT app. At the completion of the
self-management of on-task behavior session, the students viewed the graph of their on-task behavior. At the end of the session, I silently selected the student graph from the “Teacher” menu on the SCORE IT app, left the basket of reinforcers on the students’ desk, waited for the student to self-reinforce or not self-reinforce, collected materials, and left the classroom.

**Baseline (phase A2).** Once a stable pattern of responding was documented (i.e., at least three consecutive data points with minimal variability or therapeutic trend) for Phase B, each student returned to a baseline phase. At this point, the iPad and basket of reinforcers was removed and the students engaged in business as usual.

**Self-Management Intervention (phase B2).** Once a stable pattern of responding was documented (i.e., at least three consecutive data points with minimal variability or counter-therapeutic trend) for Phase A2, the students entered the next intervention phase (Intervention B2) the next day of school. At this point, the intervention was reinstated; the students followed the same intervention procedures outline in the SCORE IT app intervention procedure protocol and in self-management intervention phase B.

**Follow-up.** A follow-up was not implemented because of Student 1’s teacher returning, and the end of the school year for Student 2.

In sum, Student 1 participated in intervention for 4-weeks during the duration of the substitute teacher’s tenure in his classroom. Student 2 participated in the intervention for a total of 5-weeks. See Figure 1 for an outline of study procedures and phases.
Study Procedures and Phases

Recruitment
- Teachers
- Teachers Recruit Parents
- Investigator Recruits Parents
- Investigator Recruits Students

Baseline A₁: Student and teacher engage in typical classroom routines and instruction.
Data-Collection: 20-min observation of student on-task behavior.

Intervention B₁: Direct Instruction in on-task behavior and self-management, student asked to use self-management intervention.
Data-Collection: 20-min observation of student on-task behavior.

Baseline A₂: Student and teacher engage in typical classroom routines and instruction.
Data-Collection: 20-min observation of student on-task behavior.

Intervention B₂: Student asked to use self-management intervention
Data-Collection: 20-min observation of student on-task behavior.

Data Analysis

Researchers utilize visual analysis to determine the presence of a functional relation in single subject research designs (Kazdin, 2011). I conducted visual inspection of the data-
patterns. Data collectors and I measured rates of student on-task behavior throughout the study. Additionally, I analyzed overall changes and patterns of each participant’s data from baseline to intervention phases to determine if there was an average increase or decrease of level. I also examined immediate changes across phases to determine if the introduction of the self-management intervention resulted in an immediate increase in data. I examined changes in trend/slope to determine if there was an increasing or decreasing trend in data. Additionally, I included descriptive statistics for mean rates of on-task behavior to provide further information about the intervention effects.

To supplement visual analysis, I calculated Tau-U for on-task behavior to determine the overall effect size of the intervention, as reporting effect size is recommended by What Works Clearinghouse (Kratochwill et al., 2010). The Tau-U combines trends within phases and non-overlapping data between phase, such as baseline and intervention to detect change between phases. Mean and non-overlapping data points do not take trend into account and miss an important and necessary component of visual analysis, taking patterns in data trends to predict future occurrences of behavior in baseline and intervention phases. The Tau-U include four indices which take trend and overlapping data into account. The first indices, non-overlapping data between baseline and intervention phases, looks at non-overlapping data and change in trend between phases (intervention and baseline). The second indices, non-overlapping data and intervention trend (Phase B), demonstrates improvement in data from baseline to intervention taking the trend of data for intervention into account. The third indices, non-overlapping between baseline (Phase A) and intervention (Phase B) while controlling for any baseline trends (Phase A), makes for a more conservative estimate of effect. Lastly, the fourth indices include,
all non-overlapping data and while controlling for intervention (Phase B) trends, also makes for a more conservative estimate of effect (Parker, Vannest, Davis, & Sauber, 2011).
Chapter III

Results

The purpose of this dissertation was to determine the effects of self-management of social behavior of high school students on the social behavior of high school students. Two high school students in grades 9 and 12 participated in the study. Participants were observed during 20-minute segments of their English class across Baseline A₁ Phase, Intervention B₁ Phase, Baseline A₂ Phase, and Intervention B₂ Phase. To conduct these observations, data-collectors tracked students on-task behavior in 1-minute intervals using momentary time-sampling. At the end of each intervention data-collection session (during phases B₁ and B₂), data-collectors noted if students used the self-management strategy (fully, partially, or not at all), and if they correctly self-reinforced.

I conducted visual analysis to determine the presence of a functional relation between the use of self-management for on-task behavior and an increase in students on-task behavior. Visual inspection of all dependent variables occurred to achieve prediction, replication, and verification, using level, trend, and variability (Kazdin, 2011). Percent of intervals of students’ on-task behavior was measured daily. Specifically, I looked for changes and patterns of each participant’s data from each baseline phase to each intervention phases to determine if there was an average increase or decrease of level or trend. I also looked at common study phases (baseline A₁ and A₂, and Intervention B₁ and B₂) to determine similarities. I examined immediate changes in on-task behavior across baseline and intervention to determine if the introduction of the self-management intervention resulted in an immediate increase or decrease in data. I also calculated the Tau-U to detect changes in on-task behavior between phases. Lastly, I collected social validity data from teachers and students to determine the feasibility and acceptability of
the intervention. The remainder of this chapter presents the results of the research question, *what are the effects of a self-management strategy of on-task behavior on the on-task of high school students with EBD* for student 1 and student 2 as well as the social validity for teachers and students.

**Effects of a self-management strategy of on-task on the on-task behavior of high school students with EBD**

**Student 1.** Figure 2 presents graphs. For each session, the percentage of intervals of student on-task behavior is recorded. The specific observation dates are listed on the x-axis and the percentage on-task is on the y-axis. One missed observations for Student 1 (i.e., an earned a school activity) is indicated by dashed line connecting data-points.

**Figure 2**

Student 1 Percentage of Intervals On Task
Note. Regular indicates student’s regular classroom teacher present; dashed data path during the final intervention phase indicate student earned activity/missed class, square data point indicate sessions conducted in the computer lab.

Table 6 Means, Range, and Standard Deviation Per Phase

<table>
<thead>
<tr>
<th>Phase</th>
<th>Mean</th>
<th>Range</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline Regular Classroom Teacher</td>
<td>72.5</td>
<td>65-85</td>
<td>8.66</td>
</tr>
<tr>
<td>Baseline A₁</td>
<td>41.25</td>
<td>15-60</td>
<td>22.5</td>
</tr>
<tr>
<td>Intervention B₁</td>
<td>92.5</td>
<td>75-100</td>
<td>11.90</td>
</tr>
<tr>
<td>Baseline A₂</td>
<td>48.13</td>
<td>25-62.5</td>
<td>17.25</td>
</tr>
<tr>
<td>Intervention B₂</td>
<td>89.75</td>
<td>80-100</td>
<td>8.96</td>
</tr>
</tbody>
</table>

Table 7 Effect Size Calculations

<table>
<thead>
<tr>
<th>Tau</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>0.3062</td>
</tr>
<tr>
<td>3.266</td>
</tr>
<tr>
<td>0.0011</td>
</tr>
<tr>
<td>0.5591&lt;&gt;1</td>
</tr>
<tr>
<td>0.4963&lt;&gt;1</td>
</tr>
<tr>
<td>0.3999&lt;&gt;1</td>
</tr>
</tbody>
</table>

**Baseline Regular Classroom Teacher.** During the initial baseline, Student 1’s regular teacher provided daily instruction. During this time, Student 1 demonstrated somewhat variable data, his mean levels of on-task behavior hovered 7.5% above the cut off for off-task behavior to participate in the study (m = 72.5, range = 65-70, SD = 8.6; see Table 6). Student 1’s teacher suggested that we reestablish baseline after he went on leave when a substitute teacher (i.e., a current paraprofessional at the school) would take over instruction and daily activities.

**Baseline A₁.** For Baseline A₁, the substitute teacher was responsible for delivering daily instruction and Student 1 engaged in business as usual. Baseline A₁ data-collection started with the first day of the change in teachers. Student 1 demonstrated mean levels of intervals with on-task behavior 41.25% (SD = 22.5) of intervals of on-task behavior, meeting the inclusionary criteria (equal to or less than 65% of intervals of on-task behavior) thus meeting the inclusionary criteria of this study. Additionally, visual analysis of Student 1’s data demonstrated highly
variable on-task behavior ranging from 15% to 60% of intervals of on-task behavior (see Table 6) with an overall decreasing trend (TAU = -0.17; See Table 7). I did not adjust for the baseline trend, as the trend was decreasing and well under the suggested baseline trend of 0.10 (Vannest & Nincy, 2015) to calculate the Tau-U effect size.

**Intervention B1.** I delivered one 30-minute session of direct instruction in on-task behavior and use of the self-management intervention the Friday before the start of the intervention. For the duration of Intervention B (starting the following Monday), I left the iPad on his desk at the start of class, collected the iPad after 20 min (or at the end of class), and presented a bag of items for self-reinforcement. After completion of the self-management session, the student viewed his daily graph and goal line, self-evaluated, and delivered self-reinforcement (if earned). Aside from the first day of the intervention phase (e.g., the student did not enter his self-monitoring data the first interval), Student 1 correctly and accurately followed all self-management procedures (e.g., self-monitoring, self-evaluation, and self-reinforcement). Student 1’s classroom activities took place in his typical classroom (with the substitute teacher) and the computer lab with a staff member who is typically assigned to computer lab supervision.

Student 1 demonstrated an immediate increase in level with mean levels of intervals of on-task behavior of 92.5% (SD = 11.90) and an increases in data following the predicted path of data of an effective intervention. Additionally, Student 1 demonstrated less variability of data ranging from 75% to 100% of intervals of on-task behavior.

Although there is one overlapping data-point, Student 1 demonstrated an increased mean level of on-task behavior from Baseline with his Regular Classroom Teacher (m = 72.5) to Intervention B (m = 92.5).
Baseline $A_2$. For Baseline $A_2$, the intervention was removed and Student 1 engaged in business as usual. Student 1’s classroom activities took place in his regular classroom as well as the computer lab with a staff member typically assigned to computer lab supervision.

Student 1 demonstrated an immediate decrease in level with mean levels of intervals of on-task behavior of 48.13 ($SD = 17.25$) and a decreasing trend (TAU = -0.67). Visual analysis indicates, moderate variability during Baseline $A_2$ ranging from 25% to 62.5% of intervals of on-task behavior (see Table 6). Visual analysis indicates no overlapping data and an immediate decrease in on-task behavior from Intervention $B_1$ to Baseline $A_2$. Baseline $A_2$ data level, trend, and variability are like that of Baseline $A_1$, verifying that intervals of on-task behavior for Student 1 demonstrate stable patterns without the use of the intervention while his substitute teacher was responsible for all classroom activities.

Intervention $B_2$. For Intervention $B_2$, the intervention was reinstated and the student followed the same intervention procedures described above. Student 1 correctly followed all self-management procedures (e.g., self-monitoring, self-evaluation, and self-reinforcement) for three out of the four days of intervention. On the last day of intervention, the students self-monitoring data was 88% and his goal was 90% he incorrectly self-reinforced at the end of the session. Student 1, missed one day of class to attend an earned SW-PBIS activity, as indicated by the dashed line in Figure 2.

Student 1 demonstrated an immediate increase in level with mean levels of intervals of on-task behavior of 89.75% ($SD = 8.96$) and an increasing trend following the predicted path of data of an effective intervention. Additionally, Student 1 demonstrated decreases in variability of data ranging from 80% to 100% of intervals of on-task behavior. When compared to
 Intervention B, student data demonstrates replication of the intervention effect in level, trend, and variability.

Although there is one overlapping data-point, Student 1 demonstrated an increased mean level of on-task behavior from Baseline with his Regular Classroom Teacher (m = 72.5) to Intervention D (m = 89.75).

**Overall Effects of a Self-Management Strategy on the On-Task Behavior Student 1.** Based on visual analysis of level, trend, and variability, Student 1’s data satisfied baseline logic to demonstrate a functional relation (Cooper et al., 2007); data demonstrated prediction, verification, and replication of effect. In addition to visual analysis, the overall effect size for Student 1 was calculated using Tau-U. The effective size for Student 1 is equal to 1 (p = 0.001; see Table 7) indicating the increase in Student 1’s on-task behavior during the implementation of the self-management intervention was very large (Vannest & Ninci, 2015).

**Student 2.** Figure 3 presents graphs for Student 2. Throughout the intervention, Student 2 did not maintain regular school attendance: he missed 5 days of school and attended 1 school earned activity (i.e., an excused absence from class).
Figure 3

Student 2 Percentage of Intervals of Time on Task

Note. Dashed lines indicate student earned activity/missed class; square data point indicates sessions conducted in the isolation room.

Table 8 Means, Range, and Standard Deviation Per Phase

<table>
<thead>
<tr>
<th>Phase</th>
<th>Mean</th>
<th>Range</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline A</td>
<td>51.78</td>
<td>42-62.5</td>
<td>8.45</td>
</tr>
<tr>
<td>Intervention B</td>
<td>93.75</td>
<td>85-100</td>
<td>7.5</td>
</tr>
<tr>
<td>Baseline C</td>
<td>53.33</td>
<td>45-65</td>
<td>10.41</td>
</tr>
<tr>
<td>Intervention D</td>
<td>95</td>
<td>90-100</td>
<td>7.07</td>
</tr>
</tbody>
</table>

**Baseline A.** For Baseline A, Student 2 engaged in business as usual. During Baseline A1, Student 2 missed 1-day of school as indicated by the dashed line. Student 2 demonstrated mean levels of 51.78% of intervals of on-task behavior ($SD = 8.45$), and met the inclusionary criteria (equal to or less than 65% of intervals of on-task behavior) for this study. Additionally, visual analysis of Student 2’s data demonstrated low variability of on-task behavior ranging from 42% to 62.5% of intervals of on-task behavior (see Table 8) with an overall decreasing trend.
**Intervention B₁.** I delivered one 30-minute session of direct instruction in on-task behavior and use of the self-management intervention, the Monday before the start of the intervention. For the duration of Intervention B₁, I left the iPad on his desk, collected the iPad, and presented a bag of items for self-reinforcement. After completion of the self-management session, the student viewed his daily graph and goal line, self-evaluated and delivered self-reinforcement. Student 2 correctly followed all self-management procedures (e.g., self-monitoring, self-evaluation, and self-reinforcement) for all observations. Student 2 missed 2 days of school during the Intervention B₁ phase.

Student 2 demonstrated a large immediate increase in level with mean levels of intervals of on-task behavior of 93.75% ($SD = 7.5$). Student 2’s data ranged from 85% to 100% of intervals of on-task behavior.

**Baseline A₂.** For Baseline A₂, the intervention was removed and Student 2 engaged in business as usual. Student 2 attended his regularly scheduled class for the first two observations. For the last observation, he was in an isolation room with a desk and chair, and one staff member. He was provided his English assignment to complete independently. Student 2 missed 2 days of school during the Baseline A₂ phase.

Student 2 demonstrated an immediate decrease in level with mean intervals of on-task behavior of 53.33% ($SD = 10.41$). Visual analysis indicates, less variability ranging from 25% to 62.5% of intervals of on-task behavior (see Table 8). Visual analysis also indicates no overlapping data from Intervention B₁ to Baseline A₂. Baseline A₂ data level, trend, and variability are like Baseline A₁.

**Intervention B₂.** For Intervention B₂, the intervention was reinstated and the student followed the same intervention procedures described above. Student 2 correctly followed all
self-management procedures (e.g., self-monitoring, self-evaluation, and self-reinforcement) for each day of the intervention. The first day of Intervention B2 took place in the same setting as the previous observation day with the same staff member. The second day of Intervention B2 took place in Student 2’s regular classroom. Student 2 missed 1 day of school during Intervention B2 and did not return to school after the last observation.

Student 2 demonstrated an immediate increase in on-task for the two days of observation. However, Student 2 did not return to school after his last observation. As a result, there are not enough data-points to conduct visual analysis of data.

**Overall Effects of a Self-Management Strategy on the On-Task Behavior Student 2.**

Although Student 2’s data were promising, conclusions on the overall effects of the self-management strategy on his on-task behavior cannot be drawn. There is not enough data to conduct visual analysis of the last phase to achieve replication of effect.

**Social Validity**

I gave the *Usage Rating Profile – Intervention Revised* (URP-IR; Chafouleas et al., 2011) and the *Children’s Usage Rating Profile* (CURP; Briesch & Chafouleas, 2009b) to both classroom teachers and Student 1, respectively, at the completion of the intervention to determine the feasibility and acceptability of the overall intervention. Student 2 did not complete the CURP, as he did not return to school after the last day of data-collection.

The URP-IR survey includes 29 questions on a scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). The feasibility and acceptability of the overall intervention is comprised of six factors, acceptability, understanding, home school collaboration, feasibility, system climate, and system support.
The CURP survey includes 21 questions on a scale ranging from 1 (totally disagree) to 4 (totally agree). The feasibility and acceptability of the overall intervention is comprised of three factors: personal desirability, feasibility, and understanding.

**Teacher Results.** The teacher average rating for items in acceptability were 5 (agree) and 6 (strongly agree), indicating both teachers considered the intervention was acceptable. The average rating for understanding was 4.3 (slightly agree) and 5.3 (agree). The specific details of the intervention and the iPad app was not explicitly taught to teachers nor were they asked to implement the intervention. Each teacher’s average ratings for home school varied (i.e., average rating of 5 and 2.3). The higher rating indicates one teacher thinks home school collaboration (i.e., positive relationship, communication, and collaboration) is required to implement the intervention. In contrast, the lower rating indicates one teacher did not think home school collaboration was required to implement the intervention. The teacher who had lower ratings noted agreed (with a rating of 5) that a positive home-school relationship is needed to implement the intervention and included a side-note to obtain parental permission to implement the intervention. For feasibility, both teachers rated the interventions positively (5 agree and 6 strongly agree) indicating they would be able to implement the intervention in their school in terms of time, preparation, and resources. For system climate, both teachers rated (5 agree and 6 strongly agree) the intervention as a good fit for their school climate (e.g., school mission, administrators support, etc.). Lastly, each teacher varied in how they rated system support (i.e., the need for additional resources, consultation, or professional development). One teacher ratings averaged 4.6 indicating he would need further support to implement the intervention. In contrast, the other teacher ’s lower ratings averaged to 2.7 indicating although she would need further resources, she would not need consultation or professional development to implement the
intervention. When taken together, each rated the intervention positively in terms of feasibility and acceptability for their classrooms. For teachers rating, see Table 9.

**Student Results.** Only Student 1 completed the intervention and the CURP. Student 2 did not return to school and was not available to take the survey. Student 1’s average score in personal desirability was 2.3 (*I kind of disagree*). His response to two questions (*I could see myself using this method again* rated 1 and *I would not want to try this method again* rated 4) indicated he would not use this method in the future. However, his ratings (3 *I kind of agree*) were positive when answering the following questions; *this is a good way to help students*, *I would volunteer to use this method again*, and *I liked this method*. Although he would not want to use this method again, his ratings for personal desirability were positive.

Student 1’s average rating for feasibility was 2.7. Overall, Student 1 provided positive ratings for work and steps required to use the intervention. However, he indicated the intervention took too long and he had to use it too often. He did not answer the following question, *using this method got in the way of doing other things*; it is unclear if he thought the intervention interfered with classroom activities.

Lastly, Student 1’s average rating for understanding was 3.6, indicating he understood why he was asked to use the intervention and the intervention procedures. He did not answer the following question, *I understand why my teacher picked this method to help me*.

Overall, Student 1 understood the intervention components and found it feasible, he did not find it desirable. For Student 1’s ratings see Table 10.

Table 9

*Social Validity Ratings by Teacher*

<table>
<thead>
<tr>
<th>Factor</th>
<th>Survey Question</th>
<th>Ratings</th>
<th>Ave. Factor Score</th>
<th>Ratings</th>
<th>Ave. Factor Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Teacher 1</td>
<td>Teacher 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>-----------</td>
<td>-----------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acceptability</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>This intervention is an effective choice for addressing a variety of problems.</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The intervention is a fair way to handle the child’s behavior problem.</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would not be interested in implementing this intervention.</td>
<td>2*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would have positive attitudes about implementing this intervention.</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>This intervention is a good way to handle the child’s behavior problem.</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implementation of this intervention is well matched to what is expected in my job.</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>This intervention would not be disruptive to other students.</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would be committed to carrying out this intervention.</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The intervention procedures easily fit in with my current practices.</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Understanding</strong></td>
<td>4.33</td>
<td>5.33</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I understand how to use this intervention.</td>
<td>4</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am knowledgeable about the intervention procedures.</td>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I understand the procedures of this intervention.</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Feasibility</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would be able to allocate my time to implement this intervention.</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The total time required to implement the intervention procedures would be manageable.</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preparation of materials needed for this intervention would be minimal.</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material resources needed for this intervention are reasonable.</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>This intervention is too complex to carry out accurately.</td>
<td>2*</td>
<td>1*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The amount of time required for record keeping would be reasonable.</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>System Climate</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My administrator would be supportive of my use of this intervention.</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of this intervention would be consistent with the mission of my school.</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implementation of this intervention is well matched to what is expected in my job.</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>These intervention procedures are consistent with the way things are done in my system.</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
My work environment is conducive to implementation of an intervention like this one.

I would need additional resources to carry out this intervention.
I would need consultative support to implement this intervention.
I would require additional professional development in order to implement this intervention.

A positive home-school relationship is needed to implement this intervention.
Parental collaboration is required in order to use this intervention.
Regular home-school communication is needed to implement intervention procedures.

* Reverse score item

Table 10

Social Validity Rating by Student

<table>
<thead>
<tr>
<th>Factor</th>
<th>Survey Question</th>
<th>Ratings</th>
<th>Ave. Factor Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Desirability</td>
<td>I could see myself using this method again.</td>
<td>1</td>
<td>2.29</td>
</tr>
<tr>
<td></td>
<td>This is a good way to help students.</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I would not want to try this method again.</td>
<td>*4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>If my friend was having trouble, I would tell him/her to try this.</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I was excited to try this method.</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I would volunteer to use this method again.</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I liked this method.</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Feasibility</td>
<td>This was too much work for me.</td>
<td>1</td>
<td>2.71</td>
</tr>
<tr>
<td></td>
<td>This took too long to do.</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I felt like I had to use this method too often.</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Using this method gave me less free time.</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>There are too many steps to remember.</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>
### Understanding

<table>
<thead>
<tr>
<th>Statement</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using this method got in the way of doing other things.</td>
<td>Missing</td>
</tr>
<tr>
<td>This method focused too much attention on me.</td>
<td>2</td>
</tr>
<tr>
<td>This method made it hard for the other students to work.</td>
<td>4</td>
</tr>
<tr>
<td>I understand why my teacher picked this method to help me.</td>
<td>Missing</td>
</tr>
<tr>
<td>It is clear what I had to do.</td>
<td>4</td>
</tr>
<tr>
<td>I was able to do every step of this method.</td>
<td>4</td>
</tr>
<tr>
<td>I understand why the problem needed to be fixed.</td>
<td>3</td>
</tr>
<tr>
<td>It is clear what the adult needed to do.</td>
<td>3</td>
</tr>
<tr>
<td>I was able to use this method correctly.</td>
<td>4</td>
</tr>
</tbody>
</table>

*Reverse score item*
Chapter IV

Discussion

Although there have been advances in the field of EBD, such as improved behavioral assessment, universal screening, and teacher appraisal (Walker, 2015), as well as improved universal practices within SW-PBIS (Lewis et al., 2004), classroom management (Kamps et al., 1999), and behavioral interventions to improve academic performance (Hawkins & Axelrod, 2008; Knowles et al., 2015), students with EBD continue to face barriers in social behavior (Bradley et al., 2004) and academic performance (Nelson et al., 2004).

Therefore, by the time students with EBD enter high school, it becomes essential teachers and students have access to effective and efficient. One such intervention is self-management. Self-management interventions have been shown to have promising effects on the social behavior (Briesch & Chafouleas, 2009a) and academic performance (Mooney et al., 2005) of students with EBD. Self-management includes observable and measurable actions taken by an individual before, during, or after they engage in a target behavior. Self-management behaviors function to increase or decrease the likelihood of the occurrence of the target behavior. Individuals change their own behavior in the same way they change the behavior of another person (Skinner, 1953). Instruction and use of self-management for high school students with EBD may provide students with the skills necessary to change their own behavior.

Discussion of Study Results

This study provides promising evidence to support the use of technology (app) based self-management for students with EBD. Additionally, this study expands research of effective practices for high school students with EBD. Visual analysis suggests a functional relation between self-management and increased on-task behavior for Student 1, with experimental
control achieved through prediction, verification, and replication of effect. The effect size for Student 1 was also large, indicating the use of self-management for on-task behavior resulted in large increases in the on-task behavior of Student 1. Although results suggested an association between self-management and on-task behavior for Student 2, there were insufficient data to demonstrate a functional relation.

**Student On-task Behavior.** This study further supports the use of the *SCORE IT* app. (Bruhn et al., 2016; Bruhn et al., 2015b; Vogelgesang et al., 2016) and extends the research to high school students with EBD.

**Student 1.** For Student 1, visual analysis and effect size calculation (Tau = 1) indicate there is a strong functional relation between the use of self-management for increasing on-task behavior. For Student 1, visual analysis indicated when the self-management intervention was implemented, there was an immediate and large increase in his rates of on-task behavior with no overlapping data points between Baseline (A1 and A2) and Intervention phases (B1 and B2). The mean levels of on-task behavior of Baseline A1 (m = 41.25) and Baseline A2 (m = 48.13) phases were similar and demonstrated a clear return to baseline. Additionally, the mean levels of on-task behavior of Intervention B1 (m = 92.5) and Intervention B2 (m = 89.75) phases were similar, demonstrating a clear replication of intervention effect. Prediction, verification, and replication were achieved with three clear demonstrations of effect over three different points in time (Horner et al., 2005). Additionally, the effects of the intervention on Student 1’s on-task behavior further supports the use self-management applications for the improvement of on-task behavior of high school students with challenging behavior (Wills & Mason, 2014).

Although conclusions cannot be drawn about Student 1’s on-task behavior during the baseline with his regular classroom teacher, descriptive statistics indicate his mean on-task levels
(m = 72.5) were lower than Intervention B1 and Intervention B2. Of the data during the Baseline with his regular classroom teacher, one data-point of 85 overlapped with data from Intervention B1 and Intervention B2.

The increase in on-task behavior during the use of the self-management strategy remained steady in the classroom as well as the computer lab. During all phases of the study (A1, B1 A2, and B2), Student 1 engaged in two major classroom assignments, working on a play (e.g., orally reading set scripts from a play with other peers, completing short answer questions) and working independently on a persuasive essay. While working on the essay, Student 1 worked independently to research the topic and type the essay in the computer lab with a different staff member supervising. In both settings, Student 1’s performance did not vary within each phase. He was able to use the self-management strategy in both settings.

**Student 2.** A functional relation cannot be established for Student 2 because he did not return to school after the last intervention session. Therefore, there are not enough data-points in Intervention A2 to determine if a pattern is present to achieve replication of effect. However, descriptive data can be discussed as well as visual analysis of the first three study phases. Visual analysis indicates an immediate and large behavior change from the A1 (m = 51.78) to B2 (m=93.75). The mean levels of on-task behavior for baseline phases A1 and A2 were similar as well as the mean levels of intervention phases B1 and B2.

Like Student 1, Student 2 used the self-management strategy in two different settings, in his regularly scheduled classroom with his peers and in the in-school suspension room without peers and supervised by one staff member. Student 2 worked in the in-school suspension room during the last day of B2 and the first day of Intervention A2. Both data points were like data
within each phase and similar phases. Student 2 correctly used the self-management strategy while in a new setting.

**Social Validity.** Overall, both teachers agreed or highly agreed the intervention was feasible and acceptable. In other words, both teachers agreed or highly agreed, given their own workplace demands and resources, the intervention could be implemented and is an acceptable intervention for the them, the student, and school. The largest variations in teachers’ scores was within systems support and home-school collaboration. Teacher 1’s rating indicated more training and support would be required for him to implement the intervention whereas Teacher 2 indicated limited support to implement the intervention was needed. Lastly, the teachers varied on home-school collaboration. Teacher 1 agreed overall home-school collaboration is necessary to implement the intervention, whereas Teacher 2 agreed parental permission was necessary, however, more collaboration was not needed. Both teachers’ overall favorable ratings are consistent with previous research findings of middle school teachers’ positive ratings of the **SCORE IT** app (Bruhn et al., 2015b; Bruhn & Watt, 2012) and ease of implementation (Bruhn et al., 2015b).

Student 1 agreed that he understood the intervention in terms of its use and procedures. In feasibility, his overall ratings fell between “I kind of disagree” and “I kind of agree;” he felt the intervention took up a lot of time, but he could use it without too much effort. Lastly, Student 1 rated personal desirability as “I kind of disagree” indicating if given the opportunity to use this method in the future he would not use it again. These findings are mixed in terms of acceptability, which is somewhat consistent with previous research. Bruhn et al. (2012) found that one middle school student had highly positive ratings overall, whereas the other provided moderate ratings in terms of the ease of which she could participate in the intervention.
Limitations

The limitations of this study should be considered when interpreting the results, findings, and implications. Specific study limitations will be discussed in the section below.

Setting and Participants. Generalization of study results should be done with caution as this study was conducted in a specific setting with two participants under a limited amount of time, and only one student had sufficient data to document a functional relation. Specifically, the setting of the intervention took place in an alternative school for students with EBD. One should be cautious when attempting to generalize the study results to students with EBD in other school settings, for example, general education setting within a public high school or an alternative special education school not implementing SW-PBIS. Specifically, the school setting had a small teacher to student ratio (with a limit of eight students per class). Student 1’s English class had a 2:4 teacher to student ratio and Student 2’s class had a 1:3 teacher to student ratio. Additionally, as part of the SW-PBIS universal systems, the school implemented a school-wide level system with earned tickets for positive behavior and point cards. The self-management intervention was implemented as a Tier 2 intervention within the school’s pre-existing SW-PBIS framework. Lastly, the Student 1’s typical instruction was done with a substitute teacher rather than his typical classroom instructor.

Independent Variables. Although this intervention was designed to be an efficient use of teachers’ time, the implementation of the intervention is a limitation of the intervention. I implemented components of the intervention; instruction in on-task behavior and the self-management, leaving and collecting the iPad, and filling and storing the bag for self-reinforcement. It is possible the study results would have differed if the classroom teachers implemented the intervention.
Another limitation to the independent variable was Student 1’s somewhat low ratings of intervention acceptability. It would be helpful to have more specific information about the implementation of the intervention or the SCORE IT app that influenced his ratings for acceptability.

**Dependent Variable.** To demonstrate a functional relation in a single subject withdrawal design, it is necessary for the dependent variable (participant’s behavior) to return to baseline levels when the intervention is removed. However, maintenance of intervention effects is an important consideration and often a desired outcome for student behavior. Due to time constraints, I did not collect maintenance data in this study to determine if students would self-select the use of the self-management strategy.

Other research studies have shown the use of self-management of on-task behavior have resulted in increases in on-task behavior and led to academic improvements for students with EBD (Carr & Punzo, 1993; Kern et al., 1994a; Wood et al., 2002). However, I did not collect data on specific academic outcomes, such as grades, in this study.

**Data Collection and Analysis.** Within data-collection and analysis procedures, there are three potential limitations to this study. First, momentary time sampling procedures were used to get an estimate of the percent of intervals each student demonstrated on-task behavior. Momentary time sampling procedures can underestimate a behavior (Kazdin, 2011). For example, if a student is on-task for the first 55-seconds of a 1-minute interval, then engages in off-task behavior for the last 5-seconds the interval, they whole interval would be recorded as off-task and underestimate the student’s on-task behavior.

Next, all observations took place in the students’ classrooms. It is possible students’ observer reactivity was present, and students’ behavior resulted from the presence of observers in
the classroom (Kazdin, 2011). However, high levels of internal validity with strong experimental control indicate students’ behavior change resulted from the intervention rather than observer reactivity.

Lastly, I was the primary data-collector and implementer for the study. When the researcher is the primary data collector, there can be an increased risk of observer bias (Kazdin, 2011). However, inter-observer agreement (IOA) data was collected and calculated for both students. IOA ranged from 25% of all observations within each phase and across the study for Student 1 and 30% of all observations across the study and at least 25% of observations within the first three phases for Student 2. Lesson fidelity data was not collected because of constraints in time and resources. Clear scripts of the lesson are available (Appendix C).

Implications

Although there are limitations with the study, the overall results of the study are promising. Student 1’s data demonstrated a strong and clear functional relation between the self-management intervention and increases in on-task behavior. Although a functional relation was not established for Student 2 because of time constraints, his data was promising in that he demonstrated increases in on-task behavior with the use of the self-management intervention.

Implications for Practice. This study has potential implications for practices. First, the study provides additional evidence for the use of the SCORE IT app. (Bruhn et al., 2016; Bruhn et al., 2015b; Vogelgesang et al., 2016) and the use of technology applications for self-management (Wills & Mason, 2014) for students struggling with challenging behavior.

Results of the study demonstrate instruction in on-task behavior and self-management, the use of a self-management app for self-monitoring and self-evaluation, and self-reinforcement for on-task behavior may lead to increases in the on-task behavior for high school students with
EBD. Therefore, practitioners may consider self-management, including technology-based approaches, to support increases in on-task behavior of high school students with off-task behavior.

**Implications for Research.** This study adds to the current literature on practices for students with EBD. First, the study supports findings from previous research of the use of technology based self-management interventions for students with challenging behavior (Bruhn et al., 2016; Bruhn et al., 2015b; Vogelgesang et al., 2016; Wills & Mason, 2014). Additionally, this study expands research of the *SCORE IT* app beyond elementary and middle school to a student in high school (Bruhn et al., 2016; Bruhn et al., 2015b; Vogelgesang et al., 2016). The following is a list of recommendations for researchers based on this study:

a) Expand research of self-management of on-task behavior to larger number of high school students with EBD.

b) Expand research of self-management of on-task behavior to include longer baseline and implementation phases, and examine maintenance and generalization.

**Conclusions**

In summary, students with EBD face challenges in social behavior (Bradley et al., 2004) and academic performance (Nelson et al., 2004). Students with EBD experience dismal long-term outcomes in employment (U. S. Department of Education, Institute of Education Sciences, 2005) and enrollment in post-secondary education. Students with EBD also have high rates of involvement in the criminal justice system (Wagner & Newman, 2012). With the barriers students with EBD face in and outside of school, it is important to develop effective and efficient interventions for social behavior. Self-management interventions have had promising effects on the social behavior (Briesch & Chafouleas, 2009a) and academic performance (Mooney et al.,
2005) of students with EBD; however, they have not been extensively adapted or studied in high school settings.

This study expands past research of self-management and technology based self-management to include high school students with EBD. The study results indicate a functional relation between the implementation of social behavioral lessons in on-task behavior and the use of self-management with the use of the SCORE IT app with self-reinforcement and immediate and large increases in student on-task behavior for one student, and promising effects for a second student with less data. Additionally, teacher participants in the study rated the acceptability and favorability of the intervention positively, indicating they would use this intervention in the future.

Implications of this study for practitioners include the use of multicomponent self-management interventions for high school students with challenging behavior. Researchers should continue to expand research of self-management for high school students with EBD in diverse settings to achieve improved outcomes in and outside of high school.
List of Appendices

Appendix A: Participant Consent and Parent/Guardian Notification Forms

Appendix B: Direct Observation Data Collection Tool

Appendix C: Student Lessons and Power Point

Appendix D: SCORE IT app. Example

Appendix E: Social Validity Questionnaire
Participant Consent and Parent/Guardian Notification Forms

Teacher Consent Form

Consent Form for Participation in a Research Study

Principal Investigator: Brandi Simonsen, Ph.D.
Student Researcher: Kathryn Dooley, M.A.
Study Title: Self-Management to Improve Behavior Skills of Adolescents with Behavioral Challenges

Introduction

You are invited to participate in a research study to examine the effects of self-management targeted for reading of High School with behavioral challenges.

Why is this study being done?

This purpose of this study is to learn more about the best ways to improve the social behavior of students with behavioral challenges. So far, research has taught us that self-management can be in improving students’ social behavior. However, there is limited research with high school students.

What are the study procedures? What will I be asked to do?

If you agree to participate, observers will come into your classroom and take data on your students’ on-task behavior English class for 6 to 8 weeks. Observers will include, trained graduate and undergraduate students from UConn and the Student Researcher. Observers will observe student participants for 20 minutes each.

You will be asked to help with the recruitment process by identifying eight to ten students who struggle with on-task behavior with low levels of on-task behavior during Language Arts/English instruction. Initial selection of students will be based on current levels of on-task behavior.

Once you nominate students, you will be asked to call students’ legal guardians to (1) give them a brief overview of the study, and (2) ask if it would be okay for the Student Investigator to contact them with more information and to ask them about their child’s participation in the study. You will be provided with an information sheet of key talking points to guide the conversation with students’ legal guardians. Once students are nominated and consent provided, observers
and the Student Investigator will collect more information on students’ on-task behavior. Final selection of student participants will be based on students’ current rates of on-task behavior.

There are multiple parts to this study. First, we will meet with students individually to provide a brief training in a specific self-management strategy (self-management of on-task behavior).

After that meeting, students will be asked to use the self-management strategy to increase on-task behavior. During this process, observers will continue to take data on students’ on-task behavior and reading for 3 days or more.

Next, students will be asked to stop using the self-management strategy. During this process, observers will continue to take data on students’ on-task behavior and reading for 3 days or more.

After that, students will be asked to use the self-management strategy to increase on-task behavior. During this process, observers will continue to take data on students’ on-task behavior and reading for 3 days or more.

Lastly, students will be given the option to continue or discontinue any or all pieces of the self-management strategy. During this process, observers will continue to take data on students’ on-task behavior and reading for 3 days or more.

**What other options are there?**

You always have the option not to participate.

**What are the risks or inconveniences of the study?**

Although the risks associated with participation in this study are minimal, you will be asked to help recruit students to participate in the study and to allow observers in your classroom and work with you students. As a result, you may experience low levels of anxiety. However, you, students, students’ legal guardians can choose not to participate in the study at any time without penalty.

**What are the benefits of the study?**

First, we hope improve the on-task behavior and reading of your students. Second, we believe the results of this study will contribute to the literature on effective practices for students struggling with social behavior and reading.

**Will I receive payment for participation? Are there costs to participate?**

There are no costs and you will not be paid to be in this study.
How will my personal information be protected?

The following procedures will be used to protect the confidentiality of students’ data. The researchers will keep all raw data (rates of on-task behavior) locked in a secure location and limited to primary data collectors and investigators. All data (rates of on-task behavior) will be labeled with a code. Students will be assigned Random numbers or codes on all documents. A list of students and corresponding codes will be stored in a separate location and accessible only to the Primary Investigator and Student Investigator. Hard copy raw data and iPads not in use will be stored inside a locked box inside a locked office within your school. Hard copy raw data will be transported to a locked file cabinet in the Department of Educational Psychology at the University of Connecticut. Electronic data will be maintained in a password-protected computer on a secure server, and data with any subject information will be accessed only by the PIs. Raw data and electronic data will be stored in secured locations (i.e., locked file cabinet and password protected computer) for 3 years. Data stripped of identifiers will be stored for 5 years, as data are being analyzed and published.

We will do our best to protect the confidentiality of the information we gather from you but we cannot guarantee 100% confidentiality. Your confidentiality will be maintained to the degree permitted by the technology used. Specifically, no guarantees can be made regarding the interception of data sent via the Internet by any third parties.

If, during the course of this research study, a UConn employee suspects that a minor (under the age of 18) has been abused, neglected, or placed at imminent risk of serious harm, it will be reported directly to the Department of Children and Families (DCF) or a law enforcement agency.

You should also know that the UConn Institutional Review Board (IRB) and Research Compliance Services may inspect study records as part of its auditing program, but these reviews will only focus on the researchers and not on your responses or involvement. The IRB is a group of people who review research studies to protect the rights and welfare of research participants.

Can I stop being in the study and what are my rights?

You do not have to be in this study if you do not want to. If you agree to be in the study, but later change your mind, you may drop out at any time. There are no penalties or consequences of any kind if you decide that you do not want to participate.

Whom do I contact if I have questions about the study?

Take as long as you like before you make a decision. We will be happy to answer any question you have about this study. If you have further questions about this project or if you have a research-related problem, you may contact the principal investigator, Brandi Simonsen at 860-486-2763 or the Student Investigator Kathryn Dooley at 860-214-0425 or kathryn.dooley@uconn.edu. If you have any questions concerning your rights as a research subject, you may contact the University of Connecticut Institutional Review Board (IRB) at 860-486-8802.
Consent Form for Participation in a Research Study

Principal Investigator: Brandi Simonsen, Ph.D.
Student Researcher: Kathryn Dooley, M.A.
Study Title: Self-Management to Improve Reading and Behavior Skills of Adolescents with Behavioral Challenges

Documentation of Consent:
I have read this form and decided that I will participate in the project described above. Its general purposes, the particulars of involvement and possible risks and inconveniences have been explained to my satisfaction. I understand that I can withdraw at any time. My signature also indicates that I have received a copy of this consent form.

____________________  ______________________  ____________
Signature:  Print Name:  Date:

____________________  ______________________  ____________
Signature of Person Obtaining Consent  Print Name:  Date:

Student Consent Form

Consent Form for Participation in a Research Study
**Principal Investigator:** Brandi Simonsen, Ph.D.  
**Student Researcher:** Kathryn Dooley, M.A.  
**Study Title:** Self-Management to Behavior Skills of Adolescents with Behavioral Challenges

**Introduction**

You are invited to participate in a research study to examine the effects of self-management targeted for social behavior of High School with behavioral challenges.

Individuals self-manage their own behavior when they use strategies to increase or decrease something they do or to help them do something new. For example, if you want to remember your lunch, you might write a reminder note, or if you want to start running for exercise, you might set a goal to run 15-minutes a day. These are all ways people self-manage behavior.

**Why is this study being done?**

This purpose of this study is to learn more about the best ways to improve the social behavior of students with behavioral challenges. So far, research has taught us that students can learn strategies to improve their social behavior with less support from their teachers. However, there is limited research with high school students.

**What are the study procedures? What will I be asked to do?**

If you agree to participate, observers will come into your classroom and take data on your on-task behavior (when you are completing your assigned tasks and following directions) during your English class for 6 to 8 weeks. Observers will include, trained graduate and undergraduate students from UConn and the Student Investigator. Observers will observe you during 20 minutes of your English/Language Arts.

Selection for participation in this study will be based on your current rates of on-task behavior (how much time you spend completing your work and following directions). If you're your rates of on-task behavior are too high to benefit from the study, we will notify you and no further action will be required.

There are multiple parts to this study. First, we will meet with you individually to provide a brief training in a specific self-management strategy (self-management of on-task behavior).
After that meeting, you will be asked to use the self-management strategy to increase your on-task behavior. During this process, observers will continue to take data on your on-task behavior and reading for 5 or more days.

Next, we will ask you to stop using the self-management strategy. During this process, observers will continue to take data on your on-task behavior and reading for 3 or more days.

Next, we will ask you to use the self-management strategy to increase your on-task behavior. During this process, observers will continue to take data on your on-task behavior and reading for 5 or more days.

Lastly, you will be given the option to continue or discontinue any or all pieces of the self-management strategy. During this process, observers will continue to take data on your on-task behavior and reading for 3 or more days.

In total, you will also engage in self-management of on-task behavior for 20 minutes a day. However, self-management of on-task behavior does not require removal from the classroom.

**What other options are there?**

You always have the option not to participate.

**What are the risks or inconveniences of the study?**

Although the risks associated with participation in this study are minimal, you may also experience low levels of anxiety (worry) as a result of participation in this study. However, you may choose not to participate in the study at any time without penalty or getting in trouble.

Your data will only be used for research purposes and not shared with others.

**What are the benefits of the study?**

First, we hope that you will increase your on-task behavior. Second, we believe the results of this study will contribute to the literature and knowledge on what practices work for students struggling with social behavior.

**Will I receive payment for participation? Are there costs to participate?**

There are no costs and you will not be paid to be in this study.

**How will my personal information be protected?**

The following procedures will be used to protect the confidentiality (privacy) of your data (information about your behavior and reading). The researchers will keep all raw data (rates of on-task behavior) locked in a secure location and limited to primary data collectors and
investigators. All data (rates of on-task behavior) will be labeled with a code. Students will be assigned Random numbers or codes on all documents. A list of students and corresponding (matching) codes will be stored in a separate location and accessible only to the Primary Investigator and Student Investigator. Hard copy raw data and iPads not in use will be stored inside a locked box inside a locked office within your school. Hard copy raw data will be transported (moved) to a locked file cabinet in the Department of Educational Psychology at the University of Connecticut. Electronic data will be maintained (kept) in a password-protected computer on a secure server, and data with any subject information will be accessed only by the PIs. Raw data and electronic data will be stored in secured locations (i.e., locked file cabinet and password protected computer) for 3 years. Data stripped of identifiers will be stored indefinitely, as data are being analyzed and published.

We will do our best to protect the confidentiality (privacy) of the information we gather from you but we cannot guarantee 100% confidentiality. Your confidentiality will be maintained to the degree permitted by the technology used. Specifically, no guarantees can be made regarding the interception (for example, if someone hacks into files on the intervention) of data sent via the Internet by any third parties.

If, during the course of this research study, a UConn employee suspects that a minor (someone under the age of 18) has been abused, neglected, or placed at imminent (immediate) risk of serious harm, it will be reported directly to the Department of Children and Families (DCF) or a law enforcement agency.

You should also know that the UConn Institutional Review Board (IRB) and Research Compliance Services may inspect (look at) study records as part of its auditing (a review) program, but these reviews will only focus on the researchers and not on your responses or involvement. The IRB is a group of people who review research studies to protect the rights and welfare of research participants.

**Can I stop being in the study and what are my rights?**

You do not have to be in this study if you do not want to. If you agree to be in the study, but later change your mind, you may drop out at any time. There are no penalties or consequences of any kind, in other words you will not get into trouble if you decide that you do not want to participate.

**Whom do I contact if I have questions about the study?**

Take as long as you like before you make a decision. We will be happy to answer any question you have about this study. If you have further questions about this project or if you have a research-related problem, you may contact the principal investigator, Brandi Simonsen at 860-486-2763 or the student researcher Kathryn Dooley at 860-214-0425. If you have any questions concerning your rights as a research subject, you may contact the University of Connecticut Institutional Review Board (IRB) at 860-486-8802.
Consent Form for Participation in a Research Study

Principal Investigator: Brandi Simonsen, Ph.D.
Student Researcher: Kathryn Dooley, M.A.
Study Title: Self-Management to Improve Behavior Skills of Adolescents with Behavioral Challenges

Documentation of Consent:
I have read this form and decided that I will participate in the project described above. Its general purposes, the particulars of involvement and possible risks and inconveniences have been explained to my satisfaction. I understand that I can withdraw at any time. My signature also indicates that I have received a copy of this consent form.

Signature: ___________________________ Print Name: ___________________________ Date: ___________________________

Signature of Person Obtaining Consent: ___________________________ Print Name: ___________________________ Date: ___________________________

Parental Permission Form

Parental Permission Form for Participation in a Research Study
**Principal Investigator:** Brandi Simonsen, Ph.D.  
**Student Researcher:** Kathryn Dooley, M.A.  
**Study Title:** Self-Management to Improve Behavior Skills of Adolescents with Behavioral Challenges

**Introduction**

Your child is invited to participate in a research study to examine the effects of self-management targeted for social behavior of High School students with behavioral challenges.

**Why is this study being done?**

This purpose of this study is to learn more about the best ways to improve the social behavior of students with behavioral challenges. So far, research has taught us that self-management can be effective in improving students’ social behavior or reading. However, there is limited research with high school students.

**What are the study procedures? What will my child be asked to do?**

If you give permission for your child to take part in this study, observers will come into his/her classroom and take data on his/her on-task behavior during his/her English/Language Arts class for 6 to 8 weeks. Observers will include trained graduate and undergraduate students from UConn and the Student Investigator. Observers will observe him/her during 20 minutes of his/her English/Language Arts class.

If the Student Investigator obtains consent from you, she will meet with your child to review the study (purpose, procedures, and consent process). At this time, your child may choose or choose not to participate in the study.

Once consent is provided, observers and the Student Investigator will collect more information on his/her on-task behavior. Final selection for all student participants will be based on students’ current rates of on-task behavior. If his/her rates of on-task behavior are too high to benefit from the study, we will notify you and your child and no further action will be required.

There are multiple parts to the study intervention. First, we will meet with him/her individually to provide a brief training in a specific self-management strategy (self-management of on-task behavior).

After that meeting, he/she will be asked to use the self-management strategy to increase his/her on-task. During this process, observers will continue to take data on his/her on-task behavior and reading for 3 days or more.

Next, he/she will be asked to stop using the self-management strategy and engage in business as usual during their English/Language Arts Course. During this process, observers will continue to take data on his/her on-task behavior and reading for 3 days or more.
After, he/she will be asked to use the self-management strategy to increase his/her on-task. During this process, observers will continue to take data on his/her on-task behavior and reading for 3 days or more.

Lastly, he/she will be given the option to continue or discontinue any or all pieces of the self-management strategy. During this process, observers will continue to take data on his/her on-task behavior and reading for 3 days or more.

In total, he/she will also engage in self-management of on-task behavior for 20 minutes a day. However, self-management of on-task behavior does not require his/her removal from the classroom.

**What other options are there?**

You always have the option for your child not to participate.

**What are the risks or inconveniences of the study?**

Although the risks associated with participation in this study are minimal, may also experience low levels of anxiety as a result of participation in this study. However, he/she may choose not to participate in the study at any time without penalty. You may also choose to for your child not to participate in the study at any time without penalty.

Any and all data will only be used for research purposes and not shared with others.

**What are the benefits of the study?**

First, we hope that he/she will increase his/her on-task behavior. Second, we believe the results of this study will contribute to the literature on effective practices for students struggling with social behavior.

**Will my child receive payment for participation? Are there costs to participate?**

There are no costs and he/she will not be paid to be in this study.

**How will my child’s information be protected?**

The following procedures will be used to protect the confidentiality of his/her data. The researchers will keep all raw data (rates of on-task behavior) locked in a secure location and limited to primary data collectors and investigators. All data (rates of on-task behavior) will be labeled with a code. Students will be assigned Random numbers or codes on all documents. A list of students and corresponding codes will be stored in a separate location and accessible only to the Primary Investigator and Student Investigator. Hard copy raw data and iPads not in use will be stored inside a locked box inside a locked office within his/her school. Hard copy raw
data will be transported to a locked file cabinet in the Department of Educational Psychology at the University of Connecticut. Electronic data will be maintained in a password-protected computer on a secure server, and data with any subject information will be accessed only by the PIs. Raw data and electronic data will be stored in secured locations (i.e., locked file cabinet and password protected computer) for 3 years. Data stripped of identifiers will be stored indefinitely, as data are being analyzed and published.

We will do our best to protect the confidentiality of the information we gather from your child but we cannot guarantee 100% confidentiality. Your child’s confidentiality will be maintained to the degree permitted by the technology used. Specifically, no guarantees can be made regarding the interception of data sent via the Internet by any third parties.

If, during the course of this research study, a UConn employee suspects that a minor (under the age of 18) has been abused, neglected, or placed at imminent risk of serious harm, it will be reported directly to the Department of Children and Families (DCF) or a law enforcement agency.

You should also know that the UConn Institutional Review Board (IRB) and Research Compliance Services may inspect study records as part of its auditing program, but these reviews will only focus on the researchers and not on your child’s responses or involvement. The IRB is a group of people who review research studies to protect the rights and welfare of research participants.

Can my child stop being in the study and what are my and my child’s rights?

Your child does not have to be in this study if you do not want him/her to participate. If you give permission for your child to be in the study, but later change your mind, you may withdraw your child at any time. There are no penalties or consequences of any kind if you decide that you do not want your child to participate.

Your child may be withdrawn from the study at any time due to significant behavioral challenges (e.g., physical assault or significant destruction of property).

Whom do I contact if I have questions about the study?

Take as long as you like before you make a decision. We will be happy to answer any question you have about this study. If you have further questions about this project or if you have a research-related problem, you may contact the principal investigator, Brandi Simonsen at 860-486-2763 or the Student Investigator Kathryn Dooley at 860-214-0425 or kathryn.dooley@uconn.edu. If you have any questions concerning your rights as a research subject, you may contact the University of Connecticut Institutional Review Board (IRB) at 860-486-8802.
Parental Permission Form for Participation in a Research Study

Return Slip

**Principal Investigator:** Brandi Simonsen, Ph.D.  
**Student Researcher:** Kathryn Dooley, M.A.  
**Study Title:** Self-Management to Improve Behavior Skills of Adolescents with Behavioral Challenges

**Documentation of Permission:**
I have read this form and decided that I will give permission for my child to participate in the study described above. Its general purposes, the particulars of my child’s involvement and possible risks and inconveniences have been explained to my satisfaction. I understand that I can withdraw my child at any time. My signature also indicates that I have received a copy of this parental permission form. Please return this form to the child’s teacher.

________________________________________  ___________________________  ____________
Child Signature:  Print Name:  Date:

________________________________________  ___________________________  ____________
Parent/Guardian Signature:  Print Name:  Date:

Relationship to Child (e.g. mother, father, guardian): ________________________________

________________________________________  ___________________________  ____________
Signature of Person  Print Name:  Date:
Obtaining Consent
Appendix B Direct Observation Data Collection Tool

**Students On-Task Behavior Direct Observation Tool**

<table>
<thead>
<tr>
<th>Min</th>
<th>Behavior</th>
<th>Min</th>
<th>Behavior</th>
<th>Min</th>
<th>Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>□ RR</td>
<td>11</td>
<td>□ RR</td>
<td>21</td>
<td>□ on-task</td>
</tr>
<tr>
<td>2</td>
<td>□ RR</td>
<td>12</td>
<td>□ RR</td>
<td>22</td>
<td>□ on-task</td>
</tr>
<tr>
<td>3</td>
<td>□ RR</td>
<td>13</td>
<td>□ RR</td>
<td>23</td>
<td>□ on-task</td>
</tr>
<tr>
<td>4</td>
<td>□ RR</td>
<td>14</td>
<td>□ RR</td>
<td>24</td>
<td>□ on-task</td>
</tr>
<tr>
<td>5</td>
<td>□ RR</td>
<td>15</td>
<td>□ RR</td>
<td>25</td>
<td>□ on-task</td>
</tr>
<tr>
<td>6</td>
<td>□ RR</td>
<td>16</td>
<td>□ on-task</td>
<td>26</td>
<td>□ on-task</td>
</tr>
<tr>
<td>7</td>
<td>□ RR</td>
<td>17</td>
<td>□ on-task</td>
<td>27</td>
<td>□ on-task</td>
</tr>
<tr>
<td>8</td>
<td>□ RR</td>
<td>18</td>
<td>□ on-task</td>
<td>28</td>
<td>□ on-task</td>
</tr>
<tr>
<td>9</td>
<td>□ RR</td>
<td>19</td>
<td>□ on-task</td>
<td>29</td>
<td>□ on-task</td>
</tr>
<tr>
<td>10</td>
<td>□ RR</td>
<td>20</td>
<td>□ on-task</td>
<td>30</td>
<td>□ on-task</td>
</tr>
</tbody>
</table>

**Adherence to Intervention (Self-monitoring) Condition**

*Please check the box corresponding to the extent to which the student adhered to the strategy specified in the self-monitoring condition.*

- □ Not at all  □ Incorrect Strategy
- □ Partially  □ Fully
- □ The student correctly self-reinforced
- □ The student made their goal and did not reinforce
- □ The student did not make their goal and reinforced

**Comment:**

**Accuracy of Self-Monitoring**

*Please record data from the self-monitoring device for the period of time you observed*

<table>
<thead>
<tr>
<th>Students Data</th>
<th>Your Data</th>
<th>Agreement (smaller/larger)</th>
</tr>
</thead>
<tbody>
<tr>
<td># Intervals on-task/# Intervals observed</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix C Student Lesson Power Points

Student 1 Examples
How to Guide: Self-Management of On-task Behavior

What is On-task Behavior
- Looking at teacher during instruction and when (s)he is talking
- Completing assigned task(s)/demands
- Answering teacher directed questions
- Verbally participating in class discussion

What Isn’t On-task Behavior
- Off-task comments and conversations
- Focusing attention on activity that is not assigned (e.g. texting cellphone and ipod)
- Walking around classroom without teacher/staff permission
- Using materials for other than their intended purposes

Positive Examples
- We are going to watch a video of a 9th grade English Course. This video shows students who demonstrating on-task behavior. When you watch I want you to think about how you know the students are on-task
  - Positive Examples of On-task Behavior in a Classroom

Positive Example
- On-task body language: I want you to look at the video while it is paused, the students in this video are demonstrating on-task behavior you can tell because they are facing the teacher with their bodies, with their legs under the desk, and their arms are on-top of the desks

Positive Example
- Class participation: Notice when the teacher says “I want you to read the words I don’t say, grade I’m not gonna say grade you’re gonna say grade” the students follow his directions and read the missing words aloud. You can tell these students are on-task because they are participating and following the teachers directions.
### Positive Example
- Completing Assigned Task: During the video, the teacher says, “flip the page please, after he says this all the students flip their pages over. In this example, students are on-task because they followed the teacher’s directions.

### Negative Examples
- We are going to watch a video of a middle school classroom as played by their teachers. This video shows students who are demonstrating off-task behavior. When you watch I want you to think about how you know the students are off-task.
  - Negative Examples of On-task Behavior in a Classroom

### Negative Example
- Off-task use of Materials: At the start of the video, there is a clear example of off-task use of materials. As soon as one of the students walked into the classroom, he picked up a globe threw it in the air, and twirled it on his finger.

### Negative Example
- Off-task out of Seat: Many of the students were walking around the classroom without teacher permission. You can hear the teacher attempt to start the lesson by saying “I’d like to start today by sharing…” on the left hand side of the video you can see a student sitting on-top of her desk.

### Negative Example
- Attention to Unassigned Activities: There was also a student who drummed on their desk as the teacher was speaking. This is an example of a student focusing their attention to an activity that was not assigned.

### Negative Example
- Off-topic Conversations/Comments: “During the video, a student asked the teacher if she could get her Santa Hat. In another example, a student asked the peer an off-topic question, “how’s that book?” and the other student respond “oh its really good” these are both examples of students engaged in off-topic conversations.”
Let's Practice

- We are going to rewatch the video. I want you to jot down three examples of on-task behavior that I did not mention.
  - Examples of On-task Behavior

- Let's talk about what we saw, please give me three examples of on-task behavior. Why were these examples of on-task behavior?

Is this an Example of On-task behavior

- "Iovan walks into his math class, sits down, pulls out his textbook and calculator, and completes the "do now" problem."

  - Thumbs up or thumbs down?

Is this an Example of On-task behavior

- "During science lab, Yolanda’s teacher asks the class, "What is the first step in the scientific method?" Yolanda raises her hand, her teacher calls on her, and she responds with "Ask a question". Thumbs up on-task or thumbs down off-task."

  - Thumbs up or thumbs down?

Is this an Example of On-task behavior

- "During social studies Owen hears his cellphone go off. He quickly gets it out of his backpack, reads his text messages, and responds to his friends. Thumbs up on-task or thumbs down off-task."

  - Thumbs up or thumbs down?
Is this an Example of On-task behavior

• “During science lab, Izzy puts on 5 pairs of safety goggles and dances around, her friends think she looks funny, and start uncontrollably laughing. Thumbs up on-task or thumbs down off-task.”
  • Thumbs up or thumbs down?

Is this an Example of On-task behavior

• “During art class Maria sits next to her friend, while the teacher is giving directions, she asks her friend about a video game. Thumbs up on-task or thumbs down off-task.”
  • Thumbs up or thumbs down?

Is this an Example of On-task behavior

• “During social studies, Diego’s teacher asked them to turn to their neighbor and share their opinion on the upcoming presidential elections. Diego turns to Alex and says, “Who would you vote for?” Thumbs up on-task or thumbs down off task.”
  • Thumbs up or thumbs down?

Is this an Example of On-task behavior

• “During algebra, Fayth gets up without staff permission and walks to the other side of the classroom to look out the window. Thumbs up on-task or thumbs down off-task.”
  • Thumbs up or thumbs down?

Is this an Example of On-task behavior

• “During English class, Jadyn’s teacher asks the class to write a response to the novel they are reading. Jadyn is having trouble getting started so he raises his hand to ask the teacher for help. Thumbs up on-task or thumbs down off-task.”
  • Thumbs up or thumbs down?

Is this an Example of On-task behavior

• “Damian’s social studies teacher is showing a clip of a documentary for class. His teacher asks him to turn off the lights. Damian walks out of his seat, turns the lights off, and quietly returns to his seat. Thumbs up on-task or thumbs down off-task.”
  • Thumbs up or thumbs down?
Self-Monitoring On-task Behavior

• What? You will be tracking your on-task behavior.
• Why? This will help you see how much progress you have made and celebrate your achievements.
• How? You will use the SCORE IT app to track your on-task behavior.

The App

• Touch Start

The App

• The timer will start and indicate which 5-minute interval you are working on

The App

• Touch your Name

The App

• Touch your score
• Touch done
The App

- Review the Score Board

Review of Steps

1. Touch Start
   a. The timer will start
2. After 4-minutes the timer will go off
3. Touch Student
4. Touch your name/code name
5. Touch your score
6. Touch done
7. Review the score board
8. Touch next and follow the same steps for 20-minutes

Practice

- Let’s practice
  – Positive Examples of On-task Behavior in a Classroom
- We are going to select a student from the video and monitor her or his on-task behavior

Self-Reinforcement

- At the end of the session view your graph
- If your daily score hits the redline or passes it
  – Select an item from the basket.

- Practice
  – On 4/18 did this person meet their goal? Could they select an item from the basket?
  – What about 7/15?
  – What about 7/22?
  – What about 8/16?
Student 2 Examples
Is this an Example of On-task behavior
• "Juan walks into his math class, sits down, pulls out his textbook and calculator, and completes the "do now" problem.
• Thumbs up or thumbs down?

Is this an Example of On-task behavior
• "In the middle of English class Morgan puts her head on her hands and looks out the window. Thumbs up on-task or thumbs down off-task."
• Thumbs up or thumbs down?

Is this an Example of On-task behavior
• "During science lab, Yolanda's teacher asks the class, "What is the first step in the scientific method?" Yolanda raises her hand, her teacher calls on her, and she responds with "Ask a question". Thumbs up on-task or thumbs down off-task."
• Thumbs up or thumbs down?

Is this an Example of On-task behavior
• "During social studies Owen takes out his cellphone and to check his text messages, play a game, or scroll through music. Thumbs up on-task or thumbs down off-task."
• Thumbs up or thumbs down?

Is this an Example of On-task behavior
• "During science, Izzy is asked to pull out a worksheet (which she sees immediately) instead of putting it on her desk, she thumbs around the other pages in the folder and pretends she can't find it. Thumbs up on-task or thumbs down off-task."
• Thumbs up or thumbs down?

Is this an Example of On-task behavior
• "During art class Maria sits next to her friend, while the teacher is giving directions, she asks her friend about a video game. Thumbs up on-task or thumbs down off-task."
• Thumbs up or thumbs down?
Is this an Example of On-task behavior

• "During social studies, Diego's teacher asked them to turn to their neighbor and share their opinion on the upcoming presidential elections. Diego turns to Alex and says, "Why would you vote for?" Thumbs up on-task or thumbs down off-task?"

• Thumbs up or thumbs down?

Is this an Example of On-task behavior

• "During algebra, Faythe gets up without staff permission and walks to the other side of the classroom to look out the window. Thumbs up on-task or thumbs down off-task?"

• Thumbs up or thumbs down?

Is this an Example of On-task behavior

• "During English class, Jadyn's teacher asks the class to write a response to the novel they are reading. Jadyn is having trouble getting started so he raises his hand to ask the teacher for help. Thumbs up on-task or thumbs down off-task?"

• Thumbs up or thumbs down?

Is this an Example of On-task behavior

• "Damian's social studies teacher is showing a clip of a documentary for class. His teacher asks him to turn off the lights. Damian walks out of his seat, turns the lights off, and quietly returns to his seat. Thumbs up on-task or thumbs down off-task?"

• Thumbs up or thumbs down?
Appendix D *SCORE IT* app Example

6/14/17
The App
- Touch Next
- Start over again, who are you?

Self-Reinforcement
Appendix D Social Validity Questionnaires
**URP Intervention Profile**

Directions: Consider the described intervention. When answering the following statements, circle the number that best reflects your agreement with the statement, using the scale provided below:

<table>
<thead>
<tr>
<th>Item</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 intervention is an effective choice for addressing a variety of problems.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>2. I would need additional resources to carry out this intervention.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>3. I would be able to allocate my time to implement this intervention.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>4. I understand how to use this intervention.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>5. A positive home-school relationship is needed to implement this intervention.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>6. I am knowledgeable about the intervention procedures.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>7. The intervention is a fair way to handle the child’s behavior problem.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>8. The total time required to implement the intervention procedures would be manageable.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>9. I would not be interested in implementing this intervention.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>10. My administrator would be supportive of my use of this intervention.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>11. I would have positive attitudes about implementing this intervention.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>12. This intervention is a good way to handle the child’s behavior problem.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>13. Preparation of materials needed for this intervention would be minimal.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Slightly Disagree</td>
<td>Slightly Agree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>---</td>
<td>------------------</td>
<td>---------</td>
<td>-------------------</td>
<td>---------------</td>
<td>-------</td>
<td>---------------</td>
</tr>
<tr>
<td>14. Use of this intervention would be consistent with the mission of my school.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Parental collaboration is required in order to use this intervention.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Implementation of this intervention is well matched to what is expected in my job.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Material resources needed for this intervention are reasonable.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. I would implement this intervention with a good deal of enthusiasm.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. This intervention is too complex to carry out accurately.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. These intervention procedures are consistent with the way things are done in my system.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. This intervention would not be disruptive to other students.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. I would be committed to carrying out this intervention.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. The intervention procedures easily fit in with my current practices.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. I would need consultative support to implement this intervention.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. I understand the procedures of this intervention.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. My work environment is conducive to implementation of an intervention like this one.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27. The amount of time required for record keeping would be reasonable.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28. Regular home-school communication is needed to implement intervention procedures.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29. I would require additional professional development in order to implement this intervention.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**CURP® Actual**

Directions: Think about the method that your teacher or other adult used with you. After reading each sentence, circle the number that matches your belief about it. For example, if the sentence was “I like chocolate ice cream,” you might circle “4” for “totally agree.”

<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 was too much work for me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. I understand why my teacher picked this method to help me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. I could see myself using this method again.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. This is a good way to help students.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. It is clear what I had 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 again.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7. This took 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 was 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. I felt like I had to use this method too often.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>I totally disagree</td>
<td>I kind of disagree</td>
<td>I kind of agree</td>
<td>I totally agree</td>
</tr>
<tr>
<td>---</td>
<td>-------------------</td>
<td>-------------------</td>
<td>----------------</td>
<td>----------------</td>
</tr>
<tr>
<td>11. Using this method gave me less free time.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12. There are too many steps to remember.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13. Using this method got in the way of doing other things.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14. I understand why the problem needed to be fixed.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15. This method focused too much attention on me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>16. I was excited to try this method.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>17. This method made it hard for the other students to work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>18. I would volunteer to use this method again.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>19. It is clear what the adult needed to do.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>20. I was able to use this method correctly.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>21. I liked this method.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>


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