Utilizing Collaborative Reading Groups and Coaching as Social Skills Interventions for Students with Emotional/Behavioral Disabilities

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ABSTRACT

Erik Arthur Bentsen: Utilizing Collaborative Reading Groups and Coaching as Social Skills Interventions for Students with Emotional/Behavioral Disabilities (Under the direction of Karen Erickson)

To address the need for interventions that address social and behavioral needs for students at risk of Emotional/Behavioral Disabilities (E/BD) in a classroom context, this investigation evaluated the impact of coaching independent of and in combination with a reading comprehension instructional approach called Collaborative Reading Groups (CRGs). CRGs provide an evidence-based reading comprehension intervention that supports potential weaknesses in reading that are characteristic of students at risk of E/BD, requires the application of numerous positive social skills, and offers abundant models of pro-social behaviors. In order to address the challenges of previous social skills interventions and establish the functional generalization of desirable academic social skills, this study employed an alternating treatment single subject design over six phases. This design was used to address nine research questions regarding the effectiveness of the interventions in three separate categories: extinguishing disruptive behavior, promoting replacement behavior, and generalization. In order to determine significant change in the social behaviors, analysis of intra- and inter-phase data was conducted. In order to determine functional generalization of the social behaviors, analysis of data was compared against a control classroom. For all four students, the rates of their specific target behaviors immediately dropped once the coaching intervention started and these low rates of behavior were sustained throughout the phases of the intervention. In terms of replacement behaviors, each student responded differently but there was greater usage of the chosen
replacement behaviors when coaching was partnered with CRGs. The replacement behaviors never generalized to the control classroom for any of the students but there was a pattern of decreased usage of the target behaviors between the baseline and maintenance phases that was comparable to the classroom where the interventions were being conducted. Implications for the application to the reading skills for students at risk of E/BD as well as the quality of interactions between teachers and students during coaching were considered.
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<td>A-BC</td>
<td>Academic-Behavior Connection</td>
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<td>CRG</td>
<td>Collaborative Reading Group</td>
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<td>E/BD</td>
<td>Emotional/Behavioral Disability</td>
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<td>PND</td>
<td>Percentage of Non-overlapping Data</td>
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CHAPTER 1

Introduction

Students identified or considered at-risk for Emotional/Behavioral Disabilities (E/BD) face considerable difficulties throughout their school careers. They are neither identified nor receive special educational services early in their scholastic careers (Hester, Baltodano, Gable, Tonelson, & Hendrickson, 2003). They demonstrate a pattern of school failure, have an exceptionally high dropout rate, and have poor post-academic outcomes (Chan, Kato, Davenport, & Guven, 2003; Lane, Carter, Pierson, & Glaeser, 2006). While the challenges that students identified or considered at-risk for E/BD experience in their classrooms are complex, the treatment that they receive typically attends only to the disruptive behavior that they demonstrate and rarely does so in the contexts in which the behaviors need to improve. Without new approaches to intervention that address the social and behavioral needs of these students in the academic contexts where the behaviors interfere with school success, their unsuccessful scholastic careers will continue to have a negative impact across their life.

To address the need for interventions that address social and behavioral needs in context, this investigation is designed to evaluate the impact of coaching independent of and in combination with a reading comprehension instructional approach called Collaborative Reading Groups (CRGs). The instructional approach employs structured, small-groups; therefore, it provides an opportunity for students to apply social and behavioral skills that are critical to active and appropriate participation in a classroom while developing the reading comprehension skills all students must develop for school success.
Characteristics of Emotional/Behavioral Disabilities

For any intervention to meet the needs of students with or at-risk for E/BD, it is critical to first understand the disabling conditions that these students experience. In federal legislation, E/BD is operationally defined as “…a condition exhibiting:

(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 over a long period of time and to a marked degree that adversely affects a child's educational performance” (Individuals with Disabilities Education Act [IDEA], 2004; §300.8).

While this describes the characteristics of E/BD, it does little to illuminate how these problems manifest. Students identified or considered at-risk of E/BD are typically identified due to externalizing behavior, such as poor social skills, which interrupt instruction and disrupt the learning of the rest of the class. Unfortunately, interventions intended to address these interruptions and disruptions rarely result in generalized or maintained changes in the behaviors (Audet & Tankersley, 1999; Gresham, 2002; Lewis, Hudson, Richter, & Johnson, 2004; Maag, 2006), and the needs of these students become more complex and worsen to the point of chronic
need (Audet & Tankersley, 1999; Bos, Coleman, & Vaughn, 2002; Lane, 2004; Oakes, Mathur, & Lane, 2010).

**Social Skills Interventions for E/BD**

Research and teacher preparation focused on students with E/BD centers almost entirely on the students’ disruptive behaviors. This is understandable given that these “disruptive” behaviors impact the learning of all students and have deleterious effects on other factors related to academic achievement, such as teacher-student interactions (Chin, 2006; Edwards-Groves, 2001; Sutherland, Wehby, & Gunter, 2000). The critical need for evidence-based practices that address behavioral problems and social skills deficits also explains the unitary focus. However, social skill interventions often fail to result in sustained, meaningful change when they focus broadly on disruptive behaviors and do not address both the classroom setting and the individual student’s needs (Gresham, 2002). In fact, when critical skills are addressed in settings other then the classrooms where the deficits manifest, they fail to bring about positive and anticipated change (Audet & Tankersley, 1999; Fenty, Miller, & Lampi, 2008; Kavale & Forness, 1996; Gresham, 2002; Lewis et al., 2004; Maag, 2006).

The effectiveness of targeted social skills interventions in the literature is partially limited by the fact that they focus on behavior in isolation rather than in context (Gresham, 1998). The effectiveness of the interventions is also influenced by the fact that necessary social skills broaden and diversify as students progress through the grades. Students often go unidentified in the primary grades when the demands are minimal, but there is an increase in identification in upper elementary school as the demands intensify (Bos et al., 2002; Kauffman & Landrum, 2013; Lane et al., 2002; Oakes et al., 2010). By this time, in the absence of individualized
services, students have already demonstrated a persistent pattern of behavioral problems and school failure (Gresham, 2002; Kauffman & Landrum, 2006, 2013; Wehby, Lane, & Falk, 2005).

A delay in treatment is only one of the reasons that social skills interventions have an overwhelming tendency to fail. Many interventions fail because they do not address the needs specific to the individual student. Social skills deficits are generally classified as either acquisition or performance deficits. Each type requires a different coordinated treatment approach. Social skills acquisition deficits exist when a student has not developed the appropriate social skills; effective interventions for acquisition deficits must teach the necessary skills directly. On the other hand, performance deficits exist when a student has developed the appropriate skills but does not correctly or consistently use them. Effective interventions for performance deficits must center on using established skills (Gresham, 1998). Inattention to deficit type or incompatibility between intervention and deficit type limits the ability of an intervention to bring about desirable change (Gresham, 2002).

To ensure that social skills interventions are effective, it is critical that the intervention: (a) meets the student’s needs, specifically and individually; (b) is conducted in a setting where the student will be expected to demonstrate mastery of the skills; and (c) is appropriate to either acquisition or performance skills deficits. This means that interventions intended to address the social skills of students with E/BD must address those skills within the academic and classroom contexts where they are required and be flexible enough to accommodate the myriad needs these students present.

**Academic Interventions for E/BD**

There is scant research specifically addressing academic interventions for students with or at-risk for E/BD. Research overwhelmingly addresses the behavioral and social needs of
these students and has only recently begun to address academic needs (Lane, 2004). This de-emphasis on academics fails to address the comprehensive needs and academic responsibilities of students with or at-risk for E/BD. While it is certainly axiomatic that teachers of these students should be well trained in meeting their social and behavioral needs, this can’t happen to the exclusion of academics. Unfortunately, pre-service training for teachers of students with or at-risk for E/BD takes a hierarchical approach with behavioral and social skills interventions given dramatic prevalence over academic interventions. Following this approach, a best-case scenario is one in which behavioral and social skills improve, but students continue to fall further behind their peers as academic problems worsen in the absence of direct intervention (Lane, 2004).

The research that addresses the academic needs of students with or at-risk of E/BD suggests that the academic needs of these students are frequently determined through anecdotal information rather than formalized assessment or data collected in a systematic manner (Gresham, MacMillan, & Bocian, 1998). This occurs despite the fact that academic assessment and data collection approaches are well understood (Lane, 2004). This is just one of several limitations in the current research that has started to address reading, writing, and mathematics for students with or at-risk of E/BD. For example, the research overwhelmingly attends to the academic performance of the elementary school population and fails attend to the social validity of the study or outcomes (Lane, 2004). In essence, the journey of understanding the academic needs of these students is just beginning.

Beyond the obvious educational shortcomings that result from this limited research, inattention to academics also creates roadblocks for research in social skills interventions. For social skills interventions to be valid, considerate of the multifaceted needs of students with or
at-risk for E/BD, and directed toward functional generalization of any skills, they must be conducted in the environments where the skills are required (Gresham, 2002). Without attention to the academic needs of students with or at-risk for E/BD, social skills interventions are somewhat doomed to fail because students’ strengths and needs cannot accurately be individualized and generalization cannot be achieved (Gresham, 2002; Kavale, Mathur, & Mostert, 2004).

**Coaching**

For an intervention to be effective, then, it is important that it addresses both the social skills and academic needs of students with or at-risk of E/BD. Coaching is an approach that has the potential to meet this demand. Coaching is a non-invasive but targeted intervention that requires its participants to demonstrate acquired skills in a classroom context. Additionally, its simplicity makes it easy to implement without disrupting instruction or interfering with the other responsibilities of the teacher.

Coaching helps students acquire and apply basic classroom social skills. Gresham and Nagle (1980) outlined the essential elements of coaching. These include: (1) describing and presenting the need to a student, (2) modeling the desired behavior, (3) providing an opportunity for the student to perform the skill in the classroom, and (4) providing feedback on how well the skill was performed, including suggestions on when and how to perform the skills that were coached. Campbell (2003) elaborated on the process of describing and presenting the skill in a specific context. She suggested that coaching is more effective when delivered in the situation where the behavior is required. This provides the student with critical details about what a particular teacher or group of classmates expect to see and allows the student, with the guidance of the coach, to brainstorm the skills that they should use in specific situations. In addition, it
affords the student an opportunity to demonstrate that they have acquired the targeted social skill but may have not understood how to perform it. In this way, acquisition deficits can be directly addressed and performance deficits can be ameliorated.

With few exceptions, most of what is understood about the processes and effectiveness of coaching for the acquisition and performance of social skills is almost 30 years old. This is not to say that the information is obsolete. Instead, the attention to coaching has either been incorporated into larger social skills curriculums (Cartledge & Milburn, 1986; Combs & Slaby, 1978; Gresham, 1981) or has been utilized to address colleague-based teacher support (e.g., Onchwari & Keengwe, 2008; Shidler, 2009; Veenman, Denessen, Gerrits, & Kenter, 2001) or athletics. Regardless of their use, the elements of coaching are matched well with both acquisition and performance social skills deficits. Coaching could be utilized in academic contexts where students with or at-risk for E/BD need to experience change while supporting functional generalization (Gresham, 2002).

**Collaborative Reading Groups**

Collaborative reading groups (CRGs) provide a targeted intervention that is directly associated with the complex needs of students with or at-risk for E/BD. CRGs promote reading comprehension through first applying students’ individual background knowledge and experience and then using these to target critical comprehension skills as the students read for meaning (Kostewicz & Kubina, 2008; Lewis et al., 2004). More importantly, CRGs provide a context within which students are required to engage in positive social interactions as a part of learning. By design, CRGs directly and effectively address critical reading comprehension skills as well as the social skills necessary for positive and productive interactions with peers. As such,
CRGs can address the academic and behavioral needs of students with and at-risk for E/BD by providing reading comprehension instruction in a structured, peer-mediated context.

CRGs are peer-centered discussion groups of approximately five students. The prescribed small-group setting, which includes specified roles for the students to fulfill when reading and interacting, provides a context for social skills training through meaningful cooperation and collaboration. Through positive peer modeling of cooperation and collaboration, students’ challenging behavior can be addressed. Additionally, CRGs include targeted, evidence-based reading comprehension techniques, such as purposeful reading and conversation, which strengthen students’ comprehension skills making work less difficult over time. In this way, CRGs are uniquely aligned with the reciprocal academic and behavioral needs of students with or at risk of E/BD (Audet & Tankersley, 1999; Baker, Clark, Maier, & Viger, 2008; Kauffman & Landrum, 2013; Lane, 2004; Lee, Sugai, & Horner, 1999; Oakes et al., 2010; Scott, Nelson, & Liaupsin, 2001; Wehby et al., 2005; Williams & McGee, 1996).

CRGs have the potential to promote pro-social behaviors because they provide a context for teaching or supporting the use of pertinent social skills (Daniels, 2002a; Gresham, 2002) and promote positive peer-to-peer interaction by specifically addressing the social and behavioral norms of group participation (Audet & Tankersley, 1999). CRGs also break difficult work in to less-challenging and manageable parts. Reading comprehension requires a complex series of skills and that can be especially challenging for students with or at-risk of E/BD, and aversive behaviors often occur when work is too difficult for a student (Scott et al., 2001). CRGs make reading comprehension more manageable by clearly defining focused student roles and emphasizing conversation over independent application of skills. Therefore, CRGs have the potential to minimize aversive behaviors that result from difficult work. In general, breaking
down a complex task into more manageable subtasks has been shown to be an effective instructional tool for students with or at-risk for E/BD since it promotes active academic engagement by introducing non-aversive stimuli (Lee et al., 1999). In these ways, CRGs negate a common risk factor and directly address and potentially break the cycle of failure so often observed in students with or at-risk for E/BD.

CRGs rely heavily upon evidence-based cooperative learning strategies that promote behavioral progress (Johnson & Johnson, 1999). CRGs require that students have face-to-face interactions, actively process their own and the group’s achievements, and work together to promote positive interdependence and individual accountability. The process of establishing the group roles and having each member of the group make a unique contribution to the understanding of a text further underscores positive interdependence and individual accountability. In addition, the process of establishing and evaluating goals via group assessment provides students with the opportunity for group processing of achievement (Johnson & Johnson, 1999). In classrooms that included both special education and general education students, these practices promote more active inclusion by increasing positive peer interactions (Sutherland et al., 2000).

Research Question and Methodology

In order to address the roadblocks and shortcomings of previous social skills interventions and establish the functional generalization of desirable academic social skills, this intervention addressed students’ specific social skills deficits in their natural learning environments, in a manner that was sustainable by teachers. This study employed an alternating treatment single subject design to address research questions in three different areas:

Extinguishing disruptive behavior
Question One. Is coaching associated with a decrease in the frequency of targeted problem behaviors?

Question Two. Are CRGs associated with a decrease in the frequency of targeted problem behaviors?

Question Three. Is coaching combined with CRGs associated with a decrease in the frequency of targeted problem behaviors?

Promoting replacement behavior

Question Four. Is coaching associated with an increase in the frequency of desired academic social skills?

Question Five. Are CRGs associated with an increase in the frequency of desired academic social skills?

Question Six. Is coaching combined with CRGs associated with an increase in the frequency of desired academic social skills?

Generalization

Question Seven. Do students generalize social skills to a non-target academic setting when receiving coaching?

Question Eight. Do students generalize social skills to a non-target academic setting when participating in CRGs?

Question Nine. Do students generalize social skills to a non-target academic setting as associated with an increase in the frequency of coaching combined with CRGs?

Coaching is a social skills intervention that is designed to meet the needs of students with acquisition deficits (Gresham, 1981; Taylor, 2001) as well as the needs of most students with
social skills performance deficits that are significant enough to constitute a pattern that impacts their ability to learn or participate in a typical classroom (Gresham, 1981, 2002). CRGs provide an evidence-based reading comprehension intervention that requires the application of numerous positive social skills, offers abundant models of pro-social behaviors, and supports potential weaknesses in reading. The combination of coaching and CRGs address the deficits in the current research literature regarding students with or at-risk for E/BD. Therefore, each was studied independently and in combination as a means of reducing negative target behaviors and promoting positive, replacement behaviors.
CHAPTER 2

Review of the Literature

Students identified or considered at-risk for the label of Emotionally/Behaviorally Disabled (E/BD) have very poor post-academic outcomes (Baker et al., 2008; Chan et al., 2003; Lane, 2004; Lane et al., 2002; Lane et al., 2006; Rivera et al., 2006; Taylor, 2001). They are more likely than their peers without disabilities to live in poverty, receive lower wages, have higher unemployment, job-turnover, and incarceration rates (Forness & Kavale, 2001; Forness & Knitzer, 1992; Gresham, 2005; Kauffman & Landrum, 2006; Mostert & Crockett, 2000; Osher et al., 2007; Shepherd, 2010; Whelan, 1996; Wood, 2001). Special education standards and services provide a means of describing and delineating the challenges these students experience, but there is little evidence to suggest that much is being done to address the underlying problems; attention is given to the diagnosis while the prognosis seemingly gets little attention (Lane, 2004; Rivera, Al-Otaiba, & Koorland, 2006).

A negative prognosis is easily understood when considering the school performance of students with E/BD. Students with E/BD do not make the academic progress that their peers with and without disabilities make. As they progress from year to year, they develop more comorbid academic deficits than their peers with other high incidence disabilities (Lane, 2004), fail more classes (Lane, 2004; Lane, O’Shaughnessy, Lambros, & Beebe-Frankenberger, 2001), are served in more restrictive educational settings (Kauffman & Landrum, 2013; Rivera et al., 2006), and dropout at a significantly higher rate (Lane, 2004; Lane et al., 2001; Wehby et al., 2005; Williams & McGee, 1996).
While it might seem obvious that poor school performance is a precursor to poor post-schooling outcomes for any student, the connection only tells part of the story for students with E/BD. This relationship is complicated by the social skills difficulties that also impact school performance for students with E/BD. The interplay of social and academic problems that students with E/BD experience is complex (Lane, 2004; Oakes, Mathur, & Lane, 2010) and reciprocal (Wehby et al., 2005). Yet, efforts to ameliorate these complex problems have focused exclusively on the social deficits rather than academic needs, despite what is understood about the educational prognosis of students with E/BD (Lane, 2004; Rivera et al., 2006).

**Characteristics of E/BD**

To address the devastating needs of students with EB/D, Bower (1982) initially developed a definition of E/BD for students in the California school systems in the late 1950s and early 1960s. Bower set out to describe the global difficulties of a group of students who demonstrated no cognitive or learning disabilities but demonstrated behavioral problems in the classroom and school context. He developed an operational definition in which he described the behavioral problems that these students experienced as indicative of underlying emotional problems. Bower defined these students using the term Emotional Handicap as:

(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; and (e) a tendency to develop physical symptoms or fears associated with personal or school problems (Bower, 1982, pp. 115-116).
Bower’s definition was taken virtually verbatim in federal legislation in 1975 (PL 94-142, 1975) and has remained essentially unchanged ever since.

**Problems with the federal definition.** While the federal definition provided a foundation for E/BD to be understood by researchers and practitioners, it did not effectively resolve all the issues that it was designed to address. Professionals have problems differentiating E/BD from other extant disorders, which often results in issues of late identification (Kauffman & Landrum, 2013; Shepherd, 2010) and academic interventions that do not match their assessed and described needs (Kauffman & Landrum, 2013). Service for students with E/BD was and has remained ineffective. Even with what is understood about the benefits of effective instruction, service for students with E/BD still continues to emphasize behavioral remediation over academic instruction almost unilaterally (Lane, 2004).

The most glaring problem with the definition of E/BD is that a poor understanding of student needs has not been ameliorated. Redundancies and contradictions between its qualifiers made E/BD as difficult to understand in the education community as before it was codified (Forness & Knitzer, 1992; Kauffman & Landrum, 2013). The federal definition also includes limiting criteria of severity, duration, and impact on school performance for each of the qualifiers. For E/BD determination, all three limiting criteria need to be evident. These criteria often impede identification of students in the early elementary school years when problems are evident but not yet severe enough to initiate a special education referral. Forness and Kavale (2001) and Kauffman (1999) indicate that before behaviors intensify, primary and secondary prevention techniques should be implemented for students at risk for E/BD. Primary intervention methods include those that are universally applied to all students (such as data-based classroom management techniques and consistent classroom discipline) in order to keep
disorders from developing. Secondary prevention, on the other hand, is designed to address emerging problems before they become a symptomatic pattern. Unfortunately, the typical pattern is to allow problems to become pervasive, interconnected, and require tertiary prevention measures, such as intensive and often exclusionary interventions before a child is identified as E/BD and provided with special education services.

The incomplete nature of the federal definition also contributes to a misunderstanding of the strengths and needs of students with E/BD. This is especially true for general education teachers who are responsible for the earliest interventions and work directly with these students in inclusive classrooms (Forness & Knitzer, 1992; Kauffman & Landrum, 2006, 2013). The vagueness of the federal definition’s qualifiers allows for the behavioral and academic problems in question to continue unabated (Forness & Kavale, 2001; Kauffman, 1999). As these problems become more intense, the typical response is to provide educational and support services in a more restrictive setting for the purported benefit of the students in need and their peers. This setting not only isolates these students from their peers but also isolates them from the teachers who have mastery of the curriculum (Gresham, 2005). Additionally, this removal decreases social opportunities and promotes the educational problems characteristic of students with E/BD. While the importance of academic instruction as prevention and intervention for the success of any student is understood (Forness & Kavale, 2001; Kauffman & Landrum, 2013), the current system leads to an imbalance between academic and therapeutic services that often has disastrous, long-term results (Gresham, 2005; Kauffman & Landrum, 2006).

Delayed prevention and intervention is only one way that exclusion is evident as a persistent, historical problem with the current definition of E/BD. When teachers are reluctant or slow to consider E/BD as a disability, the pattern of indicators stigmatizes and subsequently
isolates the students (Forness & Kavale, 2001; Kauffman, 1999). Essentially, the results of a definitional lack of clarity have contributed to a pattern of exclusion and limited success in addressing student needs.

More problematic is the fact that students with or at risk for E/BD are typically not identified early and therefore do not receive individualized services until they have demonstrated a complex pattern of behavioral problems and school failure (Gresham, 2002; Kauffman & Landrum, 2006, 2013). This is particularly frustrating given that the academic difficulties, social skills deficits, and behavior problems that become impossible to disentangle are frequently evident early in a student’s life (Bos, Coleman, & Vaughn, 2002; Gresham, 2002; Williams & McGee, 1996). The longer these students remain unidentified, the more complex their problems become as difficulties build upon one another and students become more resistant to intervention (Bos et al., 2002; Lane et al., 2002; Oakes et al., 2010). By the time many of these students are identified, predominantly between third and fifth grades (Kauffman & Landrum, 2013; Wehby et al., 2005), their school experience already has been harrowing for them and their teachers.

**Characteristics of the E/BD Experience**

In order to address the multifaceted needs of students with E/BD in a comprehensive manner, many aspects of their academic careers need to be addressed. Unfortunately many teachers who are responsible for helping these students are not prepared to build their strengths or meet their needs appropriately (Cook, Landrum, Tankersley, & Kauffman, 2003). While these students would benefit from interventions that address both academic and social skills commensurate with their strengths and needs, they frequently receive behavioral interventions in separate settings that are not generalized or maintained (Gresham, 2002).
The difficulty in addressing both academic and social skills is that, while a reciprocal relationship between the two areas has been established, causal directionality has not. Social skills interventions fail to bring about generalized or maintained change for a student in the classroom (Audet & Tankersley, 1999; Gresham, 2002; Lewis et al., 2004; Maag, 2006), and academic interventions are few in number (Cook et al., 2003; Lane et al., 2001; Osher et al., 2007). Therefore, increased access to instruction is not realized. It is little wonder that de facto characteristics of students with E/BD include higher rates of school failure when compared with students in other disability groups (Lane, 2004; Lane et al., 2001).

To reverse this trend of school failure, the academic needs of student with E/BD must be addressed in concert with behavioral interventions (Kauffman & Landrum, 2013; Wehby et al., 2005). Unfortunately, teachers are not prepared to provide the academic instruction and balanced behavior intervention that students with E/BD require (Cullinan, 2007; Kauffman & Landrum, 2006, 2013; Lane et al., 2002). As a common example, the work that these unprepared teachers frequently assign their students with E/BD is either too easy or too challenging. Both of these lead to aversive behaviors (Lane, 2004; Lewis et al., 2004), but most frequently the aversive behaviors result in response to work that is too challenging. This is understandable, considering how little attention is paid to the academic needs of these students. These ineffective teaching practices serve to highlight not only the behavioral and academic needs of students with E/BD but also the additional challenges that are encountered by well-intentioned researchers and teachers, who focus on only one facet of their complex problems.

The primary example of this challenge is that most interventions for students with E/BD are directed toward their disruptive behavior, not their academic performance (Lane et al., 2001; Wills, Kamps, Abbott, Bannister, & Kauffman, 2010). In fact, until 2000, when federal
initiatives promoted evidence-based academic interventions, there were very few academic interventions directed toward students with E/BD (Kauffman & Landrum, 2013; Kostewicz & Kubina, 2008). A common explanation that is given for the imbalance between academic and behavioral interventions is that academic problems are simply the result of the interrupted instruction that occurred as a consequence of disruptive behaviors. The reasoning follows that if the disruptive behaviors were adequately addressed, then the academic problems would be resolved as the product of access to instruction. After all, the description of E/BD rules out intellectual factors when identifying academic problems (Kostewicz & Kubina, 2008; Lane et al., 2001; Wills et al., 2010).

**Pattern of Failure with Extant Social Skills Interventions**

Providing social skills intervention in separate environments is one key reason why social skills interventions neither generalize nor lead to improved academic outcomes. Furthermore, providing social skills intervention in separate settings is problematic for students with performance deficits because it does not allow them opportunities to utilize their abilities to assess a social situation and apply skills appropriately. In the absence of functional application, target behaviors are minimally or only temporarily modified and the long-term consequences remain unchanged. Gresham (2002) describes this as a problem of discrimination, wherein the student responds to the intervention in the intervention setting but does not generalize the skills to the classroom. Combining social skills interventions in the context of academic instruction provides a potential solution to this problem.

Social skills interventions also fail to sustain meaningful change when they are based on broad behaviors that are widely understood as being beneficial for successful social interaction but fail to be specific to both the classroom setting or the individual student’s needs. This is
problematic and counterintuitive, since effective intervention and, indeed, teaching is based on assessment of individual needs and abilities (Gresham, 2002). Teaching social skills in the context of an evidence-based academic intervention has the potential to focus and maximize the effectiveness of the intervention and desired behaviors in such a way that students are more successful in learning and applying the new behaviors within daily routines.

Finally, integrating academic and social skills interventions has the potential to address the fact that social skills interventions are frequently introduced as additional components to classrooms. This is problematic on a variety of levels. First, people outside of the typical teacher-students classroom dynamic conduct interventions and the intervention, even when it produces meaningful change, is cut short when the outside “interventionist” leaves. Essentially, any positive effects of the intervention leave with the person who conducted the intervention (Gresham, 2002). Furthermore, the introduction of the intervention and the person conducting the intervention infringes on valuable instruction time, leaving the teacher less likely to sustain the intervention or, at least, quickly abandon it when it competes for time with professional responsibilities, regardless of how successful it might have been (Horner et al., 2005). Incorporating social skills interventions into evidence-based academic interventions teachers already use eliminates this set of potential problems.

A Theoretical Model of Academic and Social Skills

This relationship between academic and social skills needs for students with E/BD, is illustrated and explained by the Academic-Behavior Connection (A-BC: Scott et al., 2001) model (see Figure 2.1). This model provides a framework that captures the challenges that a student with E/BD experiences in terms of both academic and social skills difficulties. It also identifies intervention targets that can address to preempt or break a cycle of failure.
Scott, Nelson, and Liaupsin (2001) developed this model in order to address patterns of school violence and a pattern of school failure that resulted in significant post-schooling difficulties. Their idea was to identify the elements that preceded and were causal for these events. They assert that school violence had to be addressed at all levels and not just as a result of the most extreme events. They determined that external responses were ineffective at curbing school violence and the precursors to school violence. On the other hand, they found that effective and direct instruction, providing students with the opportunity to participate consistently in the teaching and learning process, was very effective in preventing this violence. The problem was that the pattern of problematic behavior that could escalate to violence also brought about aversive relationships with teachers. This then resulted in less instructional time, due to disciplinary measures, and reduced expectations.

The model they developed to address school violence regarded academic difficulties and disruptive and aversive behavior as interrelated, cyclical, and the result of well understood antecedents. In the model, the cycle of interrelatedness between disruptive behavior and academic difficulty includes academic deficits that occur as a result of not receiving instruction.
as well as disabilities that may impede learning. Due to these deficits, the work that is assigned in a class is too difficult to complete successfully. This difficulty has a causal link to challenging behaviors that arise as a means of escaping a situation or context where the challenge is too great. The student is then removed from class in response to disruptive behaviors. This removal from class results in a student falling further behind academically and the cycle is perpetuated.

The model does not and would not indicate that any one of these cyclical elements initiates the cycle. Instead, it indicates that there are correlational and causal risk factors that could initiate the cycle. These factors should be addressed through integrated interventions in order to interrupt the cycle. That ability to address the risk factors and the elements of the A-BC cycle highlights the strength of combining interventions that address social skills in academic contexts. It provides a strong rationale for developing an intervention designed to preempt problematic behaviors by identifying risk factors closely associated with both academic failure and social skills deficits. Additionally, the model identifies a clear pattern of student responses to these risk factors that suggest pathways to interrupt or break the cycle. Considering that the behavioral and academic needs of students with E/BD and at risk for E/BD are interrelated, complex, and worsen with time, this model provides a means to address single, meaningful aspects of their school experience without ignoring the complex interrelationship among multiple aspects. When all aspects are addressed, an intervention has the potential to break this cycle and promote school and post-schooling success.

**Response to Intervention**

The A-BC model also serves to highlight the perspective that interventions should be considered and used to address the characteristics of students that are demonstrating the at-risk behaviors that lead to and perpetuate a cycle of failure. In this way, the model is in harmony
with Response to Intervention (RtI), which was developed as a means of intervening and
providing services to students early in the cycle before the at-risk behaviors escalate into an
identifiable disability (Vaughn & Bos, 2013). Through RtI, a student that demonstrates the at-
risk behaviors would be provided with secondary levels of academic, behavioral, and/or social
intervention to meet the standards of the classroom and school (Vaughn & Bos, 2013).

Prior to the advent of RtI, students at-risk for E/BD had to demonstrate a pattern of
failure in school that was significant enough to warrant identification of an educational disability
prior to receiving services. Furthermore, the RtI model recognized that there was a tremendous
amount of diversity within any one disability category and that, in order to meet these varied
needs, evidence-based interventions needed to address the disabling characteristics that
individual students demonstrated before the deficit pattern became chronic (Vaughn & Bos,
2013). As a result of RtI, there is now a mechanism to deliver interventions that were
historically reserved for students who had identified disabilities and an established pattern of
behavioral problems.

**Current Study.**

Collaborative Reading Groups (CRGs) are an example evidence-based interventions that
could be implemented to address the academic and social needs of students at-risk for E/B/D.
CRGs provide a means of addressing the multiple risk factors identified in the A-BC model and
offer a means of breaking the cycle of school failure at multiple points. In addition, CRGs
provide a means by which students with E/BD can practice the social skills they are learning in
an instructional context so that they can be functionally generalized and maintained.

According to Gresham (2002), in order for a social skill to be generalized and
maintained, functional generalization should be pursued. To do this, a social skills intervention
must first match the deficit in terms of either performance or acquisition. Then it must address
the problematic behavior and the context in which the problematic behavior occurs. Next the
intervention must identify the elements of the context that make the problem behavior an
effective and viable option for the student. Once the contextual and functional factors have been
identified, intervention should modify them in order to decrease the likelihood of the problematic
behaviors and increase use of targeted, positive social behaviors. If an intervention can follow
these steps, then the likelihood is greater that the social skills being promoted will be
functionally generalized for that environment. CRGs address each of the elements identified by
Gresham (2002) and provide an instructional context in which functional generalization of social
skills can be achieved.

In addition to the context that CRGs can provide for addressing social skills deficits, it is
important to recognize that teachers or other professionals must not make assumptions about the
nature of their social skills deficits. For these students, there is a likely interaction of both
acquisition and performance deficits (Gresham, 1998), and, therefore, an intervention must take a
two-pronged approach in order to be effective. While the literature has almost relegated it to an
antique practice, coaching seems to compliment the CRGs approach and supplies a means by
which acquisition deficits can be directly addressed. Students are engaged by the coaching
process and get prepared to demonstrate specific, beneficial, and desirable social skills in the
group-based, academic context of the CRGs, supporting both acquisition and performance
deficits.

**Collaborative Reading Groups.** CRGs are peer-centered discussion groups of
approximately five students who read and examine literature in a structured group interaction.
CRGs are very similar to and draw most of their characteristics from literature circles, as
described by Daniels (2002a). Literature circles were developed to address reading comprehension using the model of book clubs and reading groups to promote a deeper understanding of literature by examining and analyzing texts as a social group. The literature circle model recognizes the effective habits of good readers as individual members of these reading groups. It promotes these habits by directly teaching them to students in a small-group context. Basically, good readers become so because of conversations about texts that they choose, not because of independent activities and assignments (Daniels, 2002a).

While CRGs employ this conversation format to promote critical academic skills, they differ from literature circles in several critical ways that make them particularly well suited for use with students with E/BD. First, CRGs are intended to sustain a static structure that is used to initially establish groups. As O’Brien (2007) and O’Brien and Dieker (2008) explain, this emphasis on structure and more active involvement on the part of the teacher provides the additional structure needed for students with special needs.

Teacher involvement in small group activities provides an opportunity for positive modeling and promotes the positive interaction between teachers and students that students with special needs often do not receive at the same rate as their general education peers (Jordan & Stanovich, 2001) The procedures involved in CRGs makes them uniquely equipped to meet the social skill needs of students with E/BD. CRGs employ a small-group approach combined with members who share responsibility for task completion. The focus on behavioral norms of group participation is especially useful (Audet & Tankersley, 1999). Even if these groups did not address reading, they would effectively address the social skills needs of students with E/BD. Specifically, CRG’s procedures target the cycle of failure from the A-BC model (Scott et al.,
by providing the models of appropriate and pro-social behavior that would act to preempt challenging behaviors.

CRGs emphasize conversation over particular reading skills so all students can participate and break down complex tasks into smaller, more manageable roles. This suggests they provide an effective academic context within which to address the social and behavioral needs of students with E/BD. Breaking down a complex task into more manageable subtasks has been shown to be an effective instructional tool for students with E/BD since it promotes active engagement by introducing non-aversive stimuli (Lee et al., 1999). In these ways, CRGs negate a common risk factor, directly address, and potentially break the A-BC cycle of failure.

Finally, the participant roles in CRGs provide a context, which requires functional social skills. In CRGs, students are assigned roles that remain in place in order to insure that each student has the opportunity to participate actively in the collaborative and cooperative interaction. The roles, in this sense, act as a structure that ensures that every student has a clearly defined way to contribute to each group conversation (O’Brien, 2007; O’Brien & Dieker, 2008). In addition, elements of cooperative learning in the discussion of a text, goal setting, and group evaluation all provide means of promoting and enhancing academic social skills (Johnson & Johnson, 1999; Sutherland et al., 2000).

CRGs are designed to be adjustable to student needs according to ability as well as the curricular and social mandates of different grade levels. However, CRGs include some foundational elements that are necessary in order to be effective. For all ability and grade levels, it is crucial that CRGs meet on a regular, predictable schedule to establish students’ responsibilities to one another in each group. Teachers allow students to choose their own materials and should form groups around the choices that the students make, with different
groups focusing on different texts. Teachers act as facilitators in the group, not as a leader or source of information but to promote open discussion and dialogue between students. Each student actively participates in the group and uses notes and artwork to promote discussion of the text or topic with peers. When a text is complete, the students draw conclusions about their reading and demonstrate what they learned by sharing, as a group, with the rest of their class. Finally, both teachers and students share the responsibilities of assessing the process and the results. Above all, the teacher and the students have a shared stake in ensuring that the process is enjoyable. CRGs should be engaging and promote a love of reading since interest is as important as readiness when it comes to helping a student that struggles with reading (Daniels, 2002a, 2002b, 2002c; O’Brien, 2007; O’Brien & Dieker, 2008).

**CRG Procedures.** CRGs utilize evidence-based social skills interventions to address challenging behavior through exposure to and interaction with models of appropriate, pro-social behavior in a small-group setting (Baker et al., 2008; Gresham, 2002; Johnson & Johnson, 1999; Lee et al., 1999). The social skills interventions in CRGs rely on and enhance collaboration and cooperation. As Daniels (2002a) demonstrates, the structure of CRGs, “...represent authentic features of collaboration (p. 35)” In the completion of their roles and in participation with their group, students are encouraged to exercise self-direction. In sharing their perspectives and opinions with their group members, students demonstrate mutual interdependence and face-to-face interaction. Both have been shown to teach and enhance pro-social behaviors (Audet & Tankersley, 1999; Johnson & Johnson, 1999). In advancing their questions through CRGs, either in the completion of a role or not, students engage in active inquiry. Active inquiry is correlated with increased opportunities to respond and self-correct errors (Audet & Tankersley, 1999; Johnson & Johnson, 1999; Wills et al., 2010). These skills have a strong evidence base for
both instructional planning and social skills intervention for students with E/BD (Shepherd, 2010).

Daniels (2002a) provides some guideline for starting CRGs and training the students in their individual responsibilities. To effectively introduce the process, teachers should schedule approximately 20-30 minutes a day, for at least two weeks, to train student groups. CRGs are designed to be a regular part of instruction and, since they differ from traditional instruction, time should be dedicated to ensure that the students are knowledgeable in the new process and empowered to be active participants. For these training sessions, the teacher should use short stories and story passages as the means of teaching the process. During those first weeks of training, the students learn more about the CRG process than the texts being covered (Blum, Lipsett, & Yocom, 2002). Trainings should sequentially move from a period during which CRGs are explained to the students to a series of examples where the CRG model is demonstrated. This can be done through what Daniels (2002a) describes as the “fishbowl method” where the entire class circles and observes as a group of trained students engage in a CRG. Additionally, students have been responsive to watching video modeling of CRGs prior to attempting their group work and evaluating their ability to follow the model (O’Brien & Dieker, 2008). Subsequent training lessons should focus on allowing CRGs to practice with short stories, evaluate how well they are fulfilling their responsibilities, and make plans to refine their skills in future meetings.

Student responsibilities. Considering that CRGs are peer-directed groups, the students’ responsibilities are arguably the most important. Each student’s first responsibility is to choose texts to read based on what is most interesting to him or her. Students are then grouped based on their text selections. Once a group is formed, a student’s responsibility to the group is in the
completion of his or her role for the group’s discussion. While the number of roles varies considerably by both grade level and type of literature (fiction and nonfiction), Daniels (2002a) recommend five foundational roles for students to fill: Connector, Question Asker, Passage Picker, Artful Artist, and Word Wizard. The group’s “Connector” is responsible for connecting the reading for the day with experiences, events, other things that they have read in the past, etc. The “Question Asker” develops questions about meaning, misunderstandings that he or she may have, or things that they would hypothetically ask the author. The “Passage Picker” chooses a part of the reading that they read aloud and explain why they chose to share it. The “Artful Artist” creates an illustration for the reading and then allows the others in the group to determine what it is and why they chose it. Finally, the “Word Wizard” finds special words that stood out, were unknown, or were not understood in the context. It is important to note that there is no “lead” role in terms of who promotes conversation or who reports to the rest of the class once a piece of literature has been completed (Daniels, 2002a). This would be contradictory to the idea of CRGs where dialogue, interaction, and shared responsibility are the primary indicators of success.

Teacher responsibilities. In the creation and training of the groups, the students and teacher have independent and shared responsibilities. The teacher’s primary responsibility is to provide the students with choices of text and empower them to choose based on their interests. Teachers are responsible for organizing these small groups based on student interest as well as the strengths and needs of the individual students. This process insures that group membership changes with each new reading selection. This allows the teacher the ability to match students with difficulties with students who are good models and to try different combinations of students
over time. Finally, teachers act as a facilitator of open discussion about the texts in the groups (Daniels, 2002a).

As a facilitator, the teacher is also responsible for modeling and promoting the social skills of all students. In addition to organizing groups in order to provide positive peer models, the teacher provides guidance and support as students take greater responsibility for their own success. The teacher does not serve as the primary source of knowledge and information with the groups but rather as a temporary member that floats from group to group (Daniels, 2002a). While the teacher should not be perceived as a leader, the teacher should model effective face-to-face interactions, provide groups with feedback about their progress and achievement, and ask guided questions to promote reflective and goal-oriented individual and group assessment and evaluation. These practices are very important when promoting the social skills necessary for both participation in the group and success in school (Johnson & Johnson, 1999; Sutherland et al., 2000).

Daniels (2002a) also describes the practice of teachers facilitating mini-lessons at the beginning of group meetings for no longer than five minutes. These mini-lessons are typically procedural with the teacher providing feedback, pointers, and insights into how the groups are working. Occasionally, the lessons are literary with the teacher explicitly modeling discussions about literature, typically by describing something that he or she read. The mini-lessons work particularly well for CRGs in that they support the role of teacher-as-facilitator and not as a source of knowledge (O’Brien, 2007; O’Brien & Diekers, 2008).

Shared responsibilities. Some responsibilities for the effectiveness of CRGs are shared. Both the teacher and students are responsible for assessing the process through a dialogue during which the teacher gives the group feedback about their performance based on observations and
the students provide group-based self-evaluation. Daniels (2002a) provided an example of goal setting and evaluation incorporated into the process. The goal setting and evaluation provided the students with a tool to describe how they were doing on a day-to-day basis and then evaluate how they performed after completing a text. Much like the mini-lessons, these goals can be either procedural or literary.

The process of group assessment as a shared responsibility is an example of evidence-based social skills instruction. Teachers assess the group process via observation and provide the students with feedback about how they are performing. The students contribute to this assessment via self-monitoring and self-evaluation. The combination of feedback and self-evaluation are social skills strategies shown to be effective in inclusion classrooms (Fenty et al., 2008; Shepherd, 2010).

**CRGs address the needs of students with E/BD.** CRGs explicitly address the interconnected but separate needs that make students with E/BD unique. CRGs’ small-group structure and prescribed roles provide greater opportunity for students to respond and interact, which is a precursor to academic success and a means of reducing disruptive behavior (Baker, Clark, Maier, & Viger, 2008; Lee et al., 1999). As Johnson and Johnson (1999) suggest, students who work in cooperative learning groups, such as CRGs, improve both in terms of readiness and interest for the identified subject matter. Additionally, the process of modeling supports the development and performance of pro-social behaviors by directly addressing a risk factor from the A-BC model. Gresham (2002) describes the significance of modeling for both academic and social skills as an effective means of promoting skill acquisition.

CRGs promote social skills by directly addressing critical elements of functional generalization in a classroom context (Gresham, 2002). In order for functional generalization to
occur, especially before a student is identified as having a disability but once their pattern of challenging behaviors has become routine, the stimuli in the environment must be modified in terms of antecedents and the students’ disruptive behaviors must be identified and replaced with alternative pro-social behaviors (Gresham, 1998). CRGs provide this first by changing the typical learning environment, where student with E/BD have not often experienced much success, by introducing a small group setting. They also change the environment by shifting the instructional focus from the teacher, with whom these students frequently have aversive interactions, to their peers and themselves. The procedures necessary for CRG provide models of the appropriate behavior and participation reinforced through self-assessment. This process provides an advantage over interventions that have difficulty facilitating generalization due to the disconnect between intervention and the targeted setting/stimuli of the classroom or through the absence of pro-social models to counter the challenging behaviors.

It is important to understand that, in terms of social skills, students identified or at risk of E/BD are unique not only because of the interplay of challenges that they experience but also because of their age. Social skills assessments and subsequent interventions work only if they are appropriate to the student’s acquisition- or performance-based social skills deficits (Gresham, 2002). The developmental pattern suggests that most students with social skills deficits in middle school experience performance deficits (Gresham, 2002). Students at risk or identified as E/BD, on the other hand, are unique in that they commonly demonstrate both acquisition and performance deficits, simultaneously (Gresham, 1998).

CRGs can be effective in dealing with both categories of social skill deficits because they promote social skills for students with acquisition deficits and enhance skills for students with performance deficits. Specifically, CRGs provide for behavioral rehearsal and modeling, which
are the basis of effective interventions for students with social skills acquisition deficits (Gresham, 2002). Additionally, they enhance pro-social behaviors through the manipulation of the antecedents associated with the disruptive behaviors and promote context-centered functional generalization, which are effective at addressing performance deficits (Gresham, 2002). One example of manipulation of the antecedent in the context of reading comprehension instruction is in the breakdown of complex comprehension skills. Breaking down complex skills into manageable sub-skills enhances both interest in reading and comprehension performance (Gresham, 2002; Lee et al., 1999).

CRGs provide an important structure and clarity of purpose that would likely provide specific support to students with E/BD, who are likely to be unsuccessful in unstructured interactions with their peers (Gelzheiser, McLane, Meyers, & Pruzek, 1997). The prescribed student roles provide students with E/BD a structured means to interact with peers in a general classroom context. Since these students typically have difficulty establishing and maintaining relationships with peers (Kauffman & Landrum, 2013), this structure serves as a means of possibly establishing peer relationships and enhancing the skills necessary to develop interpersonal relationships, in general.

This is not to say that CRGs emphasize structure and abandon the original ideal of a free-flowing conversation about the text. The student roles are dynamic and while students maintain the same role within each group discussion, the roles shift between students as new groups are formed. This is where the teacher’s role as facilitator is critical. In efforts to promote desired pro-social behaviors, it is essential that teachers take an active role in the development of the groups. Students with special needs, including those with E/BD, require the modeling of desired behaviors in order to learn them and perform them correctly. Indeed, model fidelity rests
primarily on group involvement and participation. Therefore, the teacher should ensure that
groups have role models for the desired behaviors for both their peers with special needs and the
effectiveness of CRGs (O’Brien, 2007).

In each group, establishing group goals and then evaluating performance accordingly is
critical for model fidelity and meeting critical student needs. Evaluation of any goal not only
helps promote understanding but also demonstrates collaboration as a social skill (Daniels,
2002a). Attention to a student’s performance of a prescribed reading role provides another
example of how the academic context promotes desirable social skills. When a student is given a
role, the expectations are defined in a direct and measurable manner and a focus on the task is
promoted (Blum et al., 2002). Furthermore, the focus on the academic task, combined with
increased opportunities to respond, equate with lowered rates of disruptive behavior (Lewis et
al., 2004).

CRGs rely heavily upon evidence-based cooperative learning strategies to promote
behavioral progress. CRGs require that students have face-to-face interactions, actively process
their own and the group’s achievements, and work together to promote positive interdependence
and individual accountability. These skills promote and enhance social skills through
cooperative learning and self-assessment (Johnson & Johnson, 1999). The procedures necessary
for discussing a common text require face-to-face interaction. The process of establishing the
group roles and having each member of the group make a unique contribution to the
understanding of a text underscores positive interdependence and individual accountability. The
process of establishing and evaluating goals via group assessment provides students with the
opportunity for collaborative work and group processing of achievement (Johnson & Johnson,
1999). In classrooms that serve students with and without disabilities, these practices promote
more active inclusion by increasing positive peer interactions (Sutherland et al., 2000), and they address many of the academic and behavioral needs of students with or at-risk for E/BD.

The primary advantage that CRGs potentially have over other interventions designed to meet the needs of students with or at risk of E/BD is that they address their needs comprehensively within a meaningful instructional context. By balancing academic and social skills, CRGs provide a model that matches the needs of students with E/BD and this coordination of treatment with need is critical for success (Maag, 2006). Additionally, CRGs address the shortcomings that many social skills interventions embody. First, they are set in the classroom instead of being based out of the classroom. Second, they are designed to be an aspect of regular instruction and not a separate element in the curriculum. Finally, CRGs address social skills deficits by simultaneously ameliorating a problem and replacing it with a more beneficial one. Many interventions attempt to eliminate disruptive or negative behaviors without recognizing the social function that these negative social skills provide the student. CRGs are used to provide a student with a social and academic alternative to the student’s disruptive or otherwise negative behavior (Gresham, 2002).

**Coaching**

While CRGs provide a means by which students can acquire social skills, their greater strength is as a context where social skills performance deficits can be addressed. In order to best meet the needs of students with or at risk of E/BD, who demonstrate a pattern of having both acquisition and performance deficits, it is important to bolster the efforts of CRGs with an intervention that can directly address targeted academic social skills. Coaching provides this complimentary intervention. With coaching, a desired academic social skill can be succinctly described, its advantage over the behavior it is meant to replace can be clarified, how and when
the skills can and should be utilized can be demonstrated, and performance of the skill can be evaluated in context (Campbell, 2003; Gresham & Nagle, 1980). Additionally, coaching can be done in a relatively unobtrusive manner that does not detract from classroom instruction, which is likely to promote the functional generalization and maintenance of the social skills over time as well as decrease any stigma associated with an intervention (Gresham, 2002). In combination with CRGs, coaching can provide a social skills support and intervention both in and out of the classroom context that is found to support independent performance (Shepherd, 2010).

**Description of coaching.** The literature concerning social skills coaching clearly describes two patterns. First, coaching is essentially synonymous with instruction of social skills and, therefore, is considered elemental to either academic instruction or behavior management. According to Gresham and Nagle (1980), social skills coaching is a process in which a desired social skill is first described to a student in terms of what should be done instead of what is being demonstrated at the time. Campbell (2003) elaborated on this idea by explaining that the skills need to be described in terms of the context in which they will be performed while the student is away from that particular context. In this way, a student has the opportunity to provide feedback about the context of a classroom and provide detail about the competing behaviors that are targeted. With the opportunity to provide feedback and describe context details, the student can clarify misunderstandings that might contribute to both acquisition and performance deficits. Following this clarification, the student can participate in an individual training with the desired academic social skill. Gresham and Nagle (1980) emphasize the role of modeling and role-playing during this specified and individualized process so that the student can observe and attempt the desired social skill in a contrived setting, away from the classroom, with few repercussions for poor performance.
The student then has the opportunity to perform the desired academic social skills in the context of the classroom. Following this opportunity, it is critical that the last step of coaching is conducted: evaluation. In this step of the process, the student is given the opportunity to self-assess personal performance by first describing the desired social skill and then assessing how she or he performed that skill. The student then receives feedback that either confirms or challenges the self-assessment. In situations where the teacher and student disagree regarding how well the skill was performed, the student has another opportunity for clarification.

**Recent history of coaching.** The literature concerning social skills coaching also demonstrates that it has not been addressed in earnest in the literature since the 1980’s. Since then, the pattern has been that social skills coaching is either discussed in terms of its foundational elements (i.e., modeling, clarification, etc.), incorporated into larger social skills curriculums, or utilized in non-academic contexts (i.e., athletics, professional development, etc.). Even in a seminal article that operationally defined coaching as a social skills intervention, Gresham and Nagle (1980) compared coaching against modeling and found that, while both were effective, their respective benefits not additive. Kavale, Mathur, and Mostert (2004), in a review of social skills interventions for students with disabilities, listed coaching among six other intervention approaches. This included aspects of coaching such as modeling and rehearsal. They concluded that these interventions did not bring about the desired changes in behavior.

Social skills coaching has more frequently been incorporated into larger social skills training packages. For example, Skillstreaming (Goldstein, 1999), the ACCEPTS curriculum (Walker, 1983), the PATHS curriculum (Kam, Greenberg, & Kusché, 2004), and Getting Along with Others program (Jackson, Jackson, & Monroe, 1983), all utilize coaching as a means of promoting pro-social behaviors for students with E/BD characteristics (Shepherd, 2010).
Unfortunately, these programs have been found to have only moderate effects (Kavale et al., 2004) in bringing about generalized changes in student social skills. Additionally, these programs do not result in teachers sustaining the practices, which are additive to classroom instruction and they require additional expenses, which makes them less accessible (Gresham, 2002).

The current investigation differed from previous approaches in that coaching was combined with an academic intervention to create a structured context for practicing the skills addressed in coaching, CRGs. It was hypothesized that the combination would make coaching more effective than it has been previously.

**Summary**

As a professional community, educators who conduct research with and serve students with E/BD recognize that these students have identified academic and behavioral needs that are independent and reciprocal (Lane et al. 2006; Kauffman & Landrum, 2013). It is commonly accepted that these students are not identified as early as they could be, and, as they mature, their problems become more complex, intensify, and become more resistant to intervention (Kauffman & Landrum, 2006). It is often lamented that interventions implemented are less effective because they typically emphasize behavioral needs and deemphasize academic needs, establishing a mismatch between condition and intervention. At the same time, the evidence suggests that while academic problems are worsening for these students, teachers are not prepared to effectively and appropriately respond to the students’ academic needs and this contributes to their behavioral problems (Bos et al., 2002). Ultimately, the statistics demonstrate that these problems have resulted in a pattern of school failure and subsequent lifelong, negative consequences. However, structured and targeted academic intervention in balance with
evidence-based behavioral intervention, may help us begin to make progress through this complex maze of problems.

In the current investigation, coaching, an evidence-based behavioral intervention was combined with CRGs, an evidence-based academic intervention, to address the needs of students at-risk for E/BD. Considering what has been determined about students with or at risk of E/BD since the early 1980s, it seems reasonable to reassess the usefulness of coaching. While coaching seems suited to work well with CRGs or other intervention techniques, it is important to understand that any coaching technique is not well suited to independently address the cycle of failure described by the A-BC model. The A-BC model (Scott et al., 2001) describes the risk factors and cycle of academic and behavioral difficulties that students with E/BD experience, resulting in difficulties both in and out of school. Coaching is limited in that would only address modeling and challenging behavior, a risk and cycle element, respectively. Furthermore, with coaching alone, the modeling is only provided by an adult not peers. Given these limitations, it is not reasonable to expect that coaching would be an effective way to address challenging behaviors on its own.

Partnering coaching with CRGs, however, make both viable and desirable techniques for the social skill and academic performance of the students with or at risk of E/BD. Considering that students with E/BD characteristics can demonstrate both or either acquisition and performance deficits (Gresham, 1998), it is important to have an intervention that addresses both types of deficits. Coaching provides the means by which acquisition deficits can be directly addressed, described, clarified, trained, and evaluated. At the same time, CRGs provide an academic context with peer models in which performance deficits can be practiced and appraised. Both coaching and CRGs can be introduced with relative ease in the context of an
general education classroom, which is the context where extant problematic behavior occurs. Combined, they address the A-BC model in various points to potentially ameliorate risk factors and break the cycle at various points. In these ways, functional generalization of the desired academic social skills becomes more viable and the success of the students becomes more realistic. In the current study, these assertions were tested using an alternating treatment single subject design, changes in the use of targeted social skills were assessed when coaching and CRGs were used independently and in combination.
CHAPTER 3

Methods

The purpose of this research was to investigate the impact of Collaborative Reading Groups (CRGs) and coaching on academic social skills for students at-risk of Emotional/Behavioral Disabilities (E/BD) in a general classroom setting. CRGs and coaching were investigated independently and in combination in order to determine their differential impact on positive academic social skills and the disruptive behaviors that negatively impact a student’s learning and/or the learning of her or his peers.

Research Questions

This study employed an alternating treatment single subject design to address research questions in three different areas:

1. Extinguishing disruptive behavior
   
   Question One. Is coaching associated with a decrease in the frequency of targeted problem behaviors?
   
   Question Two. Are CRGs associated with a decrease in the frequency of targeted problem behaviors?
   
   Question Three. Is coaching combined with CRGs associated with a decrease in the frequency of targeted problem behaviors?

2. Promoting replacement behavior
Question Four. Is coaching associated with an increase in the frequency of desired academic social skills?

Question Five. Are CRGs associated with an increase in the frequency of desired academic social skills?

Question Six. Is coaching combined with CRGs associated with an increase in the frequency of desired academic social skills?

3. Functional Generalization of Social Skills

Question Seven. Do students generalize social skills to a non-target academic setting when receiving coaching?

Question Eight. Do students generalize social skills to a non-target academic setting when participating in CRGs?

Question Nine. Do students generalize social skills to a non-target academic setting as associated with an increase in the frequency of coaching combined with CRGs?

Participants and Setting

Recruitment and Selection

Recruitment began in a middle school in rural North Carolina at the end of the school year preceding the year when data was collected. After approval was secured from the superintendent as well as the principal and two assistant principals, a meeting was held with both 7th grade language arts teachers to discuss the parameters of the study. Both teachers were receptive and welcomed the study. Once the class lists for the upcoming school year were considered, one teacher recognized that, based on her conversations with assistant principals and 6th grade teachers, she would have more students who would likely benefit from additional
attention to social skills development. A meeting was then conducted with the language arts teacher and the 7th grade science teacher to outline the study in detail and to obtain consent to participate in the study from the teachers (see Appendix A, Teacher Consent Form).

At the beginning of the following year, the teacher sent home consent forms with a letter that described the study to the parents of students who demonstrated the prescribed social skills deficits to an extent that they negatively impact their own learning and the learning of their peers (see Appendix B, Parental Permission Form and Student Assent Form). The students were all on the general classroom roster, demonstrated fluency in speaking and understanding English, and had no currently identified disabilities for which they were receiving special education or related services.

Identifying potential participants for the study was a multi-step process. First, the 7th grade language arts teacher considered the social skills deficits that were identified by 6th grade colleagues during the previous school year. As approved by the IRB, the language arts teacher met with the researcher following initial few weeks of teaching the language arts classes at the beginning of the fall semester. Only the students that both the researcher and language arts teacher agreed displayed behavior that was potentially problematic in terms of social interaction with peers and adults were considered. There were seven students that met this criterion. Permission forms were sent home for the seven students. Of these students, five students returned parental permission and agreed to participate, one student did not receive parental permission, and one student never returned a reply. Of the five students whose parents provided consent, four were randomly selected for participation in the study. However, one student decided not to participate during the first week of intervention and was replaced with the lone remaining student. The final four participants were split between two instructional teams,
meaning that the four students were not in the same class at the same time. For this study, students were given an alias to protect their identity.

Participant Descriptions

Information regarding the number of times each participant had been retained and whether the student received free or reduced-price lunch was collected from the school. The Woodcock Reading Mastery Test – Revised/Normative Update (WRMT-R/NU, 1998) was administered individually to each student by the primary researcher. Standard scores (ss) on the WRMT-R/U were calculated as prescribed in the testing manual and performance (at, below, and significantly below average) was then determined based on standard deviation variations from the mean. The four participants are described below.

- Charlie was a 12-year-old African-American student. He was never retained and did not receive a free or reduced-price lunch during the semester that the data was collected. On the WRMT-R/NU, he scored in the significantly below average range in reading readiness (ss=67), below average range in basic skills (ss=80), and in the below average range in reading comprehension (ss=74). For total reading, he scored in the below average range (ss=76). He was in language arts with one of the other participants, Vida, but none of the other participants were in his science class.

- Danny was a 13-year-old African-American student. He was never retained and did receive a free or reduced-price lunch during the semester that the data was collected. On the WRMT-R/NU, Danny scored in the below average range in reading readiness (ss=80), average range in basic skills (ss=89), and in the average range in reading comprehension (ss=87). For total reading, he scored in the average range (ss=88). Danny was in language arts with one of the other participants, Karl, and in science class with Vida.

- Karl was a 13-year-old African-American student. He was retained once in elementary school and received a free or reduced-price lunch during the semester that the data was collected. Karl scored in the below average range in reading readiness (ss=79), average range in basic skills (ss=95), and in the average range in reading comprehension (ss=96) on the WRMT-R/NU. For total reading, he scored in the average range (ss=95). Karl was in language arts with Danny, but none of the other participants were in his science class.

- Vida is a 12-year-old European-American student. He was never retained and received a free or reduced-price lunch during the semester that the data was collected. Vida scored in the significantly below average range in reading readiness (ss=65),
average range in basic skills (ss=96), and in the average range in reading comprehension (ss=88) on the WRMT-R/NU. For total reading, he scored in the average range (ss=93). Vida was in language arts with Charlie and in science class with Danny.

Procedures

Identifying Target Behaviors

After the final pool of participants was identified, both the language arts and science teacher completed inventories that described the students’ target behaviors in their respective classes and described desired replacement behaviors (see student behavior inventory, Appendix C). The inventories were then used as the language arts teacher and researcher worked together to achieve consensus regarding the social skills to target and desired replacement behaviors to promote for each student. The language arts teacher and researcher then sought student input about their interactions with peers and teacher in the classroom before finalizing the operational definition of each of the behaviors. The targeted behaviors for each participant are described briefly in Table 3.1 and in more detail in the dependent variables section of this chapter.

Coaching Intervention

In the context of this study, coaching was operationally defined as the technique of using direct instruction to explicitly address behaviors with students, provide an opportunity for students to rehearse these behaviors, and then evaluate their accomplishments (Gresham, 1981; Gresham & Nagle, 1980; Taylor, 2001). In this study, coaching was conducted individually by the researcher with the students during five minutes at the beginning of English language arts class four times per week during the coaching intervention phases.
Table 3.1

*Student Target and Replacement Behaviors*

<table>
<thead>
<tr>
<th>Student</th>
<th>Target Behaviors</th>
<th>Replacement Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charlie</td>
<td>Extraneous noise making</td>
<td>Cued self-assessing redirection</td>
</tr>
<tr>
<td>Danny</td>
<td>Manipulation of inappropriate classroom objects</td>
<td>Cued self-assessing redirection</td>
</tr>
<tr>
<td>Karl</td>
<td>Attempted initiation of interaction outside of the small group</td>
<td>Initiating conversation within the small group; demonstrating encouragement or positive recognition</td>
</tr>
<tr>
<td>Vida</td>
<td>Attempted initiation of interaction outside of the small group</td>
<td>Initiating conversation within the small group; demonstrating encouragement or positive recognition</td>
</tr>
</tbody>
</table>

During the coaching sessions, target behaviors were described to students in terms of what should and should not be done in the classroom setting. In efforts to avoid assumptions about acquisition or performance skill deficits, the researcher and the student first defined the behaviors to be extinguished and the behaviors to replace them. Then the researcher provided
role-play examples of both the targeted behaviors as well as the replacement behaviors. Following this, the student provided role-play examples of both target and replacement behaviors. Then, each student joined the class and participated in the classroom setting as expected. Finally, in the last five minutes of the class period, the students evaluated themselves in terms of how well they demonstrated the desired replacement behaviors and avoided the target behaviors to be extinguished. This evaluation was supported by feedback from the researcher who observed each participant’s performance during each class period.

**Cooperative Reading Groups**

Cooperative Reading Groups were operationally defined as the small group reading comprehension intervention in which students engaged in reading according to prescribed roles while the teacher facilitated group interaction and comprehension-based discussions (O’Brien, 2007). The language arts teacher played the role of facilitator in the instructional process as outlined in CRGs and emphasized cooperative learning between students (Johnson & Johnson, 1999). In this study, student roles, teacher responsibilities, and group processes were all critical aspects of CRGs.

Prior to the beginning of the CRG intervention, the teacher was trained in the CRG model. Over the course of five, 90-minute trainings, the language arts teacher involved in the intervention was exposed to all of the aspects of coaching and CRGs (Appendix E – Professional Development lesson plans). The first training reviewed the design of the study and reviewed the procedures and practices for coaching. The second training reviewed the procedures for CRGs and outlined how to fit CRGs into a regular language arts class schedule. The third provided explicit description of the roles of the investigator, the teacher, the students involved in the study, and the other students involved in the class. In the fourth training, the student roles, use of the
role sheets, responsibilities of the teacher as a facilitator, schedule for student training, and the place in regular classroom instruction were established according to anticipated needs. The final training reviewed all of the primary topics and provided the teacher with an opportunity to ask any questions and provide feedback about concerns. Following the period of baseline and coaching data collection, the students were trained for two weeks on the structure of CRGs as well as the individual and group roles and responsibilities therein.

Following the model suggested by Daniels (2002a), the two weeks of student training centered on the utilization of short stories to teach the roles to the group. The teacher provided approximately 20 minutes a day, for at least two weeks, to train student groups. Subsequent trainings focused on allowing students to practice with short stories in CRGs, evaluate their progress, and make plans to refine their skills in future meetings.

During the first week of training, the language arts teacher used what Daniels (2002a) describes as the “fishbowl method” and video modeling (O’Brien & Diekers, 2008) to teach the CRG process. In the fishbowl method, a group models the actions of a CRG, while the remainder of the class observes the specific roles being enacted and the interactions between participants. In this setting, the teacher and researcher acted as two of the students, along with three student volunteers, while the rest of the class observed and asked questions before, during, and after. With video modeling, the process and procedures for each of the group roles and the function of a group as a unit was demonstrated via a training video. Students were also trained in their roles and responsibilities by watching the same video model used in the 2008 study conducted by O’Brien and Diekers.

On the final two days of the first week, students met in groups of four, organized according to common roles. The students in these groups utilized these roles as a way of
addressing comprehension in a small-group format and learned how to utilize the group role sheets. At the end of the training session, the small groups, and then the entire class, evaluated the process and the different roles.

In the second week of student training, groups of five students with different roles met to discuss literature on a daily basis. Over the course of the second week, the roles rotated on a daily basis. Evaluation was conducted by the entire class at the end of every session and primarily focused on the understanding of a shared text and secondarily focus on the CRG process.

After the training was complete, the CRGs met four times per week at regularly scheduled times to discuss a variety of texts. At the conclusion of a week, the students would choose texts that they were interested in reading, and the CRGs would be formed around these choices. In these groups, students completed the responsibilities associated with two separate roles both on the sheet and in discussions with their group. The students were not allowed to complete the same role twice in the same week. This rotation of roles ensured that students addressed the texts from a variety of perspectives on a weekly basis while also ensuring that roles were evenly distributed. Additionally, students had approximately 20 minutes set aside, in the 95-minute block, for independent reading.

The five foundational roles recommended by Daniels (2002a) were employed: Connector, Question Asker, Passage Master, Artful Artist, and Word Wizard (see Appendix D for a more detailed description). The group’s Connector was responsible for connecting the reading for the day with experiences, events, or other things that he read. The Question Asker developed questions about meaning, possible misunderstandings, or things that he would ask the author, if he could. The Passage Picker chose a part of the reading to read aloud and then
explained why it was chosen. The *Artful Artist* created an illustration for the reading and then allowed the others in the group to determine what it was and why it was chosen. Finally, the *Word Wizard* found special words in the reading that either stood out in their importance or were unknown. It is important to note that there was no “lead” role so students had to work together to play their assigned roles, promote conversation, and report back to the rest of the class at the end of their conversations.

During CRGs, students used role sheets designed by the researcher to organize their ideas and support their contributions to the group conversation. The roles and role sheets clearly defined expectations and responsibilities and ensured that every student knew how to contribute to the group conversation (O’Brien, 2007; O’Brien & Diekers, 2008). The roles and the role sheets helped students that may otherwise have had difficulties with the social skills necessary for collaboration or cooperation. Role sheets were used during all CRG meetings during the CRG intervention phrases of the current study.

The language arts teacher was trained in the use of mini-lessons as an approach to facilitate the beginning of CRG meetings (Daniels, 2002a). These mini-lessons, which lasted no longer than five minutes, focused on the procedures of CRGs and allowed the teacher to provide feedback and pointers about how the groups were working. Occasionally, the teacher used the mini-lessons to focus on literary issues and model discussions about the texts, on these occasions she typically described something that she read or connected CRGs with the topic in class. These mini-lessons supported the role of teacher-as-facilitator implementing the CRGs (O’Brien, 2007; O’Brien & Diekers, 2008).

Both the teacher and students were responsible for assessing the process of CRGs. This was accomplished through a conversation in which the teacher gave the group feedback about
their performance based on observations and the students provided group-based self-evaluation. In the current study, CRGs emphasized free-flowing conversations about the text. Student roles were dynamic and the teacher changed groups and group roles as new texts were introduced. The following procedures were followed in training the students as effective participants in CRGs.

To promote model fidelity, the researcher participated in the facilitation of the group process and shared responsibilities for procedural or literary mini-lessons with the teacher during the two-week training session that was dedicated to CRG training. When CRGs met during this training period, the researcher modeled the teacher’s role as facilitator. The researcher modeled this when the CRGs convened during the last two days of the first week and then twice during the second week. Along with the teacher, the researcher provided mini-lessons on group structure and interaction as well as mini-lessons that reinforced the topics in language arts (such as the literary elements of foreshadowing or personification) being taught at that time. At the conclusion of each of these days, the researcher responded to the teacher’s questions, provided instructional feedback to the teacher, and discussed the progress that the class was making.

**Design**

This study utilized an alternating treatment design in a middle school language arts class to determine the independent and combined effects of coaching and CRGs on the social skills of four targeted students. During each phase of the investigation, data was collected in a science class where no specific intervention was delivered in order to measure the generalization of the skills being taught in the language arts classroom. This design allowed for the examination of the effects of the coaching and CRGs individually and in combination across contexts. Table 3.2 provides a summary of the phases of the intervention with more details regarding each phase provided below.
The coaching, CRG, and combined intervention phases were not randomized in the design of the current study. According to Onghena and Edgington (1994), there are potential prohibitive effects of particular ordering to interventions, both in terms of Type I errors and practical application. Here, due to the training that was necessary for the entire class, including the students not involved as participants in the study, it was impractical to introduce CRGs and then withdraw them. Therefore, the coaching phase necessarily had to precede the CRG phase.

The only other possible randomization could have been the CRG and CRG and coaching combined sessions. However, this would have opened up the possibility for a student to have consecutive CRG sessions, which introduced possible threats to internal validity (Onghena & Edgington, 1993). Additionally, according to Ferron and Ware (1994), “a completely responsive design precludes the use of randomization” (p. 788) when an experiment must ensure stability before progressing. All of these factors led to a design with a predetermined rather than

Table 3.2

*Research Design Across Multiple Conditions*

<table>
<thead>
<tr>
<th>7th Grade Language Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
</tr>
<tr>
<td>Baseline</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7th Grade Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
</tr>
<tr>
<td>Baseline</td>
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</tbody>
</table>
randomized order of phases.

**Intervention phases and data collection**

**Baseline.** Baseline involved observing the frequency of the negative and replacement social skills to be addressed in the interventions during business-as-usual sessions of English language arts and science. During this phase, data was collected three to four times per week in both settings.

**Coaching.** The coaching sessions lasted for approximately five minutes before the beginning of the language arts class period, which coincided with the conclusion of lunch for two students and the conclusion of homeroom for the other two students. The coaching sessions also included an evaluation session at the end of every language arts period in order for the student and researcher to evaluate performance, both independently and as a dyad. This evaluation period typically lasted less than two minutes and was conducted as the student was preparing to transition from language arts to his next class. During this phase, data was collected three to four times per week in the language arts class and once a week in the science class.

**Cooperative Reading Groups.** In this study, CRGs were conducted for the first half of the language arts period for four days a week, following the two-week training during which they were conducted daily. Data on the student social skills was gathered via direct observation four days each week when students were working in CRGs and the remainder of the class period. During this phase, data was collected three to four times per week in the language arts class and once a week in the science class.

**Coaching and Cooperative Reading Groups.** This phase involved the combination of the coaching sessions with CRGs. Prior to the class meeting, students met with the researcher during a coaching session that followed the format described above. The students then
participated in a CRG session. Following class, the participants met with the researcher in an evaluation coaching session to briefly evaluate how well they did in terms of performing the target behaviors. During this phase, data was collected three to four times per week in the language arts class and once a week in the science class.

**Maintenance.** The final phase of study involved a maintenance phase. During this phase, neither CRGs nor coaching were conducted. As with the baseline phase, data was collected three to four times per week in both settings.

**Generalization Observations.** Throughout the phases of the study in the language arts classroom, there were weekly observations conducted during science class. These observations were designed to examine each participant’s progress according to their identified social skills in a classroom where the interventions were not being conducted. Science class was purposefully selected because the science curriculum required students to engage in cooperative groups to complete a variety of experiments and activities but without the support of assigned roles such as those used in CRGs. Observations occurred in the science classes regardless of stability of performance of phase of the intervention being conducted in the language arts class until the maintenance phase, when they were conducted three to four times a week. Observations in the science class were discontinued when stability was achieved in the Maintenance phase of the language arts classrooms.

**Data collection.** During each phase of the intervention, frequency data was collected for both the target and replacement behaviors. Danny and Karl were in the same language arts class, as were Charlie and Vida. In these language arts classes, which lasted 90 minutes, approximately half of the time was dedicated to small group work, including the use of CRGs, once they were introduced. In each of the language arts classes, each student was observed seven times, for two
minutes at a time with one minute intervals between observation period. The observations
alternated between students, creating a pattern of observing one student, followed by one minute
of no observation, followed by the observation of the other student with a subsequent minute of
no observation.

In the science classes, which were dedicated exclusively to small group work, Danny and
Vida shared a class but Charlie and Karl had science classes without any of the other subjects in
the study. For equity between settings, the science class, which lasted 60 minutes, was only
observed for 42 minutes, which is the length of time necessary to conduct seven two-minute
observations of two separate students. For Danny and Vida, the pattern of observation was the
same as in the language arts class. For Charlie and Karl, respectively, observations were
conducted for two minutes with four-minute intervals to match the pattern of a single student in
either language arts class.

In all phases except for the maintenance phase and the period of weekly observational
data collection in the science class, data was collected until stability of data was demonstrated.
According to Kennedy (2005), stability is determined as consistency of data across three or more
observational periods and is calculated via visual analysis of the data, which is described in the
data analysis section and, in greater detail, in the results chapter.

Variables

Dependent Measures

Following teacher interviews to identify participants’ needs, the researcher observed the
seventh grade language arts and science classrooms in order to operationally define the specific
social skills deficits evident and to determine the best method for measurement. Each classroom
was observed four times while the researcher took notes. Participants were then interviewed
individually to discuss the behaviors that each considered detrimental to his classroom performance and what he could do instead. Following this, the language arts teacher conducted a similar interview with each participating student, with the researcher present. This was done to establish consistency between all involved parties and to reinforce, with each student, the operationally defined behavior. The operational definitions of the behaviors to be extinguished and the targeted academic social skills were then determined, along with the appropriate measurement techniques.

**Targeted off-task behaviors.** Each student’s specific behaviors were operationally defined through interview with his teachers, direct feedback, and direct observation of the classroom. The definitions were also influenced by Patterson, et al. (2006), who defined off-task behaviors as those behaviors that disrupt the class. These include behaviors such as talking with peers, making noises while seated at a desk, being out of seat, touching other students, or playing with or manipulating items that are not a part of the lesson or class activity. Detailed definitions of the targeted off-task behaviors for each participant are provided below.

**Charlie.** For Charlie, the off-task behaviors that detracted from participation in the small-group setting included talking with peers who were not in his small group about topics unrelated to the subject being examined and making extraneous noises. In the meeting with Charlie, he described noise making as the behavior that others would notice when he is not paying attention. While both behaviors could have a potentially negative impact of Charlie’s success in the classroom, CRGs require discussions that do not relate directly to the text being read. As a result, it would have been difficult to target a reduction of talking with peers. Therefore, the teachers and researcher decided to target a reduction in the frequency of noise making. Noise making was operationally defined for Charlie as drumming a writing utensil on his desk or chair, humming,
or making the sound of dripping water by flicking his cheek. These noise-making behaviors were
chosen due to the fact that both the student and teacher identified them as indications that the
student was not paying attention. Other incidents of noise making, such as tapping his feet, were
not recognized as a persistent sign of inattentiveness or as consistently distracting by either
Charlie or the teacher and, therefore, were not included in the operational definition of the target
behavior to be extinguished.

Danny. For Danny, the off-task behaviors that detracted from participation in small-
group activities were attending to and manipulating objects that were unrelated to the activity,
such as objects in his school bag. In meeting with Danny, he volunteered that manipulating
unrelated objects, as opposed to attending to a conversation or talking with a classmate or the
teacher, was the primary obstacle that others notice in him. The teacher and researcher selected
object manipulation as the behavior to target for reduction. Object manipulation was
operationally defined as retrieving items from his bag that were not prescribed by the teacher or
the use of a prescribed item for a purpose other than its intended purpose. The teacher
consistently prescribed what items would be necessary for the successful completion of a lesson
(class binder, writing utensil, paper, journal, etc.) by both writing it on the board and reviewing it
verbally. Furthermore, the teacher identified the intended purpose for using the item. Common
examples of violation of item use included using a writing utensil as a drumstick, a piece of
paper as a ball, or a book as the fulcrum of a catapult. Non-productive, non-examples such as
drawing pictures during class, were not recognized as target behavior to be extinguished because
there was the possibility that Danny would be specifically asked to draw pictures during the role
of artful illustrator in a CRG.
**Karl and Vida.** For both Karl and Vida, the off-task behavior that detracted from participation in small-group activities was discussion with classmates outside of their assigned small groups. Through consensus between observation, teacher interviews, and interviews with both Karl and Vida, the primary off-task behaviors each demonstrated was talking with non-group members, both about the topic at hand and irrelevant topics. Given that conversations in CRGs were intended to extend beyond the specific information in the text, it was not possible to target a reduction in irrelevant conversations. As a result it was decided that the targeted off-task behavior for both Karl and Vida was the number of times that each talked with individuals who were not involved in their assigned groups.

**Replacement behaviors.** The targeted replacement behaviors reflect the broad academic social skill areas described by Patterson, et al. (2006). The participants met with the teacher and researcher to define the specific behaviors they would employ as a replacement for the targeted off-task behaviors. For example, the participants reported that they engaged in the off-task behaviors when they found it difficult to attend to the teacher, activity, or assignment while remaining in their seats. The replacement behaviors were designed to support students in identifying when these difficulties were arising so that they could prevent the off-task behavior that typically resulted.

The language arts teacher and researcher then met in order to develop operational definitions of the desired replacement behaviors, taking into consideration the behaviors that the teacher was interested in promoting as well as the context of the classroom and pedagogical techniques. In terms of the behaviors to promote, the teacher chose the one that best complimented the target behavior from the multiple examples of alternative behaviors that each student provided. Selecting the behavior was a process that took into account the classroom
context, the content of the small group activities, the teacher’s instructional strategies and techniques, and the teacher’s classroom management strategies and techniques. Finally, the teacher and students met one on one with the researcher to discuss the target and replacement behaviors that the student and the teacher agreed upon, based on the behaviors that the students described. Replacement behaviors for each student are described in detail below.

**Charlie.** The explanation that Charlie provided for the off-task behavior (making noises) was that he was having difficulty with focusing on the task at hand. His teacher confirmed that when she sustained his attention, he did not make these noises. As a result, his replacement behavior was designed to help him sustain his attention. He agreed to give the teacher a sign to indicate that he was paying attention to the discussion or other small group activity. Since he also explained that he did not like to be confronted for being off-focus, it was agreed that this replacement behavior would need to be subtle so as to not draw undesirable attention from the teacher or his peers. He agreed to give the teacher a thumbs-up gesture. He agreed to use eye contact from the teacher as the cue to self-assess and provide the thumbs up gesture if he was attending to the task at hand.

Since the teacher utilized proximity control to remain in his immediate presence as frequently as possible while maintaining a steady rotation around the room, this was recognized as a feasible means of assessing his replacement behavior. While the thumbs-up gesture was given in response to eye contact from the teacher, only the thumbs up gesture was measured.

**Danny.** Similarly, Danny utilized a self-assessment technique to remind himself to remain attentive to the group discussions and activities. Danny recognized that, when he was distracted, he would go through the items in his bag. However, there was not anything specific in his bag that was particularly distracting. Teachers confirmed that when he was going through his
bag, he was primarily removing pencils and pens, looking in a folder, or going through the pages of a magazine. He was receptive to the idea of utilizing a self-assessment technique as a means of reminding himself to remain focused on the task at hand and using eye-contact from his teacher as a means of reminding himself to self assess. He chose to scratch his temple as a sign that he was self-assessing and being attentive. The frequency of the temple scratches was measured in the small group setting.

**Karl.** In order to find a suitable replacement behavior for Karl, it was necessary to determine the means by which his social skills could still be maintained but directed to more productive ends. Specifically, Karl’s propensity to talk, openly, with his classmates was a strength that would support his success during CRGs. He did require strategies to support focusing his discussions on the members of his small group. The teachers and researcher decided that the best way to address this was by teaching Karl to direct his conversation and attention to the other students in his group. In conference with Karl, it was decided that his replacement behavior was to provide positive feedback to the peers in his small group. This required him to attend to his group members and gave him an opportunity to talk frequently with his group members. The frequency of comments directed to a group member about their perspective or to recognize the value of someone else’s perspective was measured.

**Vida.** Vida’s propensity to talk with students outside of his group was typically limited to three or four other students. In conference with the teachers, in observation, and in interview with Vida, it was determined that his replacement behavior should focus on directing his propensity to talk to the members of his group. Therefore, the frequency of initiating conversations with the students in his group or verbally recognizing the value of the perspective of another member of the group was measured.
Data Analysis

In order to determine significant change in the dependent variable, visual analysis of the data was conducted in a systematic manner. According to Horner and colleagues (2005) and Kennedy (2005), in the prescribed procedure for single subject design, the critical elements of analysis are the level, trend, and variability of the data points. Between phases, changes in the level, trend, and variability were examined in order to determine a functional relationship between the elements of the intervention (independent variables) and the targeted social skills (dependent variables). The level is the mean frequency of each targeted behavior during a single phase of the intervention. The trend is the increase or decrease of the dependent variable as indicated in the slope of the line of best fit. Within each phase of the experiment, a trend line was calculated using the least squares regression to determine the magnitude and slope of the data in each phase. Variability is the measure of fluctuation of data points around the line of best fit. The variability across phases was determined by calculating the percentage of non-overlapping data (PND) between baseline and each of the phases as well as among the phases. For each phase of the experiment, the level, trend, and variability of the target behavior and the replacement behavior were calculated for analysis.
CHAPTER 4

Results

The study investigated the impact of Collaborative Reading Groups (CRGs) and coaching on academic social skills for students at-risk of Emotional/Behavioral Disabilities (E/BD) in a general education classroom. Using an alternating treatments single subject design, the impact of the two interventions was explored independently and in combination in order to determine their effectiveness in supporting positive academic social skills while reducing disruptive behaviors that negatively impact a student’s learning or the learning of peers.

The analysis combined systematic visual analysis of the data with the analysis of level, trend, and variability of the data points (Horner et al., 2004; Kennedy, 2005). Between phases, changes in the level, trend, and variability were visually examined in order to determine a functional relationship between the elements of the intervention (independent variables) and the targeted social skills (dependent variables). To determine variability between phases, the percentage of non-overlapping data (PND) was calculated between each phase and the baseline for each participant (Kennedy, 2005). A treatment was considered unreliable if the PND was less than 50%, of questionable effectiveness if the PND was between 50% and 70%, fairly effective if the PND was between 70% and 90%, and highly effective if the PND was greater than 90%. If a baseline included basal or ceiling scores, the PND was not calculated since the range of data was constricted by the margins of measurement (Scruggs, Mastropieri, Cook, & Escobar, 1986).
In this study, ceiling scores could not be defined but basal scores were defined as the absence of an observed behavior.

For the current study, level was determined for each participant, in each phase, on each of the dependent variables by calculating the mean within the phase. The trend was determined by calculating the least squares regression to determine the magnitude and slope of the data in each phase for each participant. Variability, the fluctuation of data points around the line of best fit, was determined according to the fit of data points around the line of best fit. For each phase of the experiment, the level, trend, and variability was calculated for analysis and the immediacy and overlap of data was calculated for between phase analyses.

**Extinguishing Disruptive Behavior**

In order to analyze the impact of the interventions on the reduction of disruptive behavior and the promotion of replacement behaviors, the research questions were clustered. The first three questions addressed the reduction of disruptive behaviors. Specifically, the cluster of three research questions is as follows:

Question One. Is coaching an effective means of addressing and extinguishing problem behaviors?

Question Two. Are CRGs an effective means of addressing and extinguishing problem behaviors?

Question Three. Is coaching combined with CRGs an effective means of addressing and extinguishing problem behaviors?

The results are reported below first for each participant individually and then for the participants as a group.
**Charlie: Question One.** In order to determine the effectiveness of coaching as a means of addressing and extinguishing problem behaviors, the data within the coaching phase were analyzed and compared with both the baseline and maintenance phases. Figure 4.1 shows that during the coaching phase, the level of problem behaviors was 1.4 instances of the target behavior per session. The trend for this data is linear and flat and there is little variability around the trend line.

Figure 4.1 also shows that there was rapid change between the baseline and coaching phase, with a mean reduction of 7.1 instances of the target behavior per session, and a PND of 100% between the phases. This indicates that coaching immediately reduced the frequency of the target behavior for Charlie. Between the coaching and maintenance phases, there was little change (mean lines of 1.4 and 1.5, respectively) with 100% overlap, indicating that the change was maintained beyond the period of intervention.

**Figure 4.1**
*Extinguishing Target Behavior Across Phases, Charlie*

**Charlie: Question Two.** The data in both of the CRG phases were analyzed and then compared against each other as well as the baseline and maintenance phases to determine the effectiveness of CRGs in decreasing the frequency of targeted problem behaviors. The level of target
behavior per session for the first phase of CRG data was 0.83. The trend was both linear and flat and there was little variability. For the second phase of CRGs, the level was 0.25 and the trend was both linear and flat, with little variability.

For the first CRG phase, Figure 4.1 shows little change in terms of immediacy of effect following the coaching phase, with a reduction in level of 0.57 and an overlap of 67%. However, in comparison with the baseline phase, there was a rapid change (reduction of 7.67 behaviors per session) and a PND of 100%. This indicates a sustained reduction of the target behavior in the initial CRG phase but little difference between the coaching and CRG interventions. Between the initial CRG and maintenance phases, there was slow change (increase in level of 0.67) with 75% overlap, indicating that change was maintained beyond the period of intervention.

During the second CRG phase, there was little change in terms of immediacy of effect following the combined intervention phase, with an increase in level of 0.05 and an overlap of 100%. Compared with the initial CRG phase, there was little change (level decrease of 0.58) and 100% overlap. Compared with baseline, there was rapid change in level (level decrease of 8.5) and a PND of 100%. This indicates a sustained and marked decrease in the frequency of the target behavior from baseline levels but little difference between intervention phases. In comparison against the maintenance phase, there was an increase in the level (a difference of 1.25) and 100% overlap from the second CRG phase to the maintenance phase, indicating that the change was sustained beyond the periods of intervention.

**Charlie: Question Three.** The reduction in Charlie’s targeted problem behaviors in response to the combined interventions must be understood both within the phase and between it and the baseline and maintenance phases. According to Figure 4.1, the level for the combined interventions was 0.2, the trend was linear and flat, and there was little variability.
In comparison with the initial CRG phase, which immediately precedes it, the combined intervention shows little change in terms of immediacy of effect (reduction in level of 0.63) with 100% overlap. In comparison with the baseline phase, there was rapid change (decrease of 8.3) with a PND of 100%. This indicates that the combined interventions lead to a sustained difference from the previous intervention but brought about little difference in terms of response rate. Compared with the maintenance phase, there was slow change (increase of 1.3) with 100% overlap, indicating that the intervention led to a sustained reduction in the target behaviors.

**Danny: Question One.** In order to determine the effectiveness of coaching as a means of addressing and extinguishing problem behaviors, the data within the coaching phase for Danny were analyzed and compared with both the baseline and maintenance phases. Figure 4.2 shows that the level for the coaching data was one instance of the target behavior per session. The trend for this data was linear and flat with little variability.

Figure 4.2 also shows that there was rapid change between the baseline and coaching phase, with a decrease of 4.2, and that there was a PND of 100%, indicating that coaching immediately reduced the frequency of the target behavior. Between the coaching and maintenance phases, there was little change (mean of 1 and 0.75) with 100% overlap, indicating that the change was maintained beyond the period of intervention. This is especially notable considering that Danny showed the lowest rate of target behaviors in the small group setting.

**Danny: Question Two.** Danny’s data in both of the CRG phases were analyzed and then compared against each other as well as the baseline and maintenance phases to determine the effectiveness of CRGs in decreasing the frequency of targeted problem behaviors. For Danny, the level for the first phase of CRG data was 0.83, the trend was both linear and flat, and there was little
variability. For the second phase of CRGs, the level was 0.25, the trend was both linear and flat, and there was little variability.

Figure 4.2
Extinguishing Target Behavior Across Phases, Danny

In the first CRG phase, Figure 4.2 shows little change in terms of immediacy of effect following the coaching phase, with a decrease in level of 0.57, with an overlap of 100%. Compared against the baseline phase, there was a rapid change (decrease in 4.37) and a PND of 100%. Between the initial CRG and maintenance phases, there was slow change (decrease in level of 0.08) with 75% overlap, indicating that the change evident in the intervention periods was maintained.

During the second CRG phase, there was little change in terms of immediacy of effect following the combined intervention phase, with an increase in level of 0.15, with an overlap of 100%. Compared against the initial CRG phase, there was little change (level decrease of 0.58) and 100% overlap. Compared against the baseline, there was rapid change in level (level decrease of 4.95) and a PND of 100%. Like the data for Charlie, this indicates a sustained and marked decrease in the frequency of the target behavior from baseline levels but little difference between intervention phases. In comparison against the maintenance phase, there was an increase
in the level (a difference of 0.5) and 100% overlap, indicating that the change was sustained beyond the periods of intervention.

**Danny: Question Three.** According to Figure 4.2, the level of targeted problem behaviors for Danny in response to the combined interventions was 0.4, the trend was linear and flat, and there was little variability. In comparison with the initial CRG phase, which immediately precedes it, the combined intervention shows a reduction in level of 0.43 with 100% overlap. In comparison with the baseline phase, there was a reduction in level of 4.8 with a PND of 100%. This indicates that the combined interventions sustained the difference of the previous intervention but brought about little difference in terms of response rate. Compared against the maintenance phase, there was a reduction in level of 0.35 with 100% overlap, indicating a sustained response in the absence of an intervention.

**Karl: Question One.** In order to determine the effectiveness of coaching as a means of addressing and extinguishing problem behaviors, the data within the coaching phase were analyzed and compared with both the baseline and maintenance phases for Karl. Figure 4.3 shows that the level for the coaching data was 3 instances of the target behavior per session. The trend for this data was linear and flat and there was little variability.

Figure 4.3 also shows that there was rapid change between the baseline and coaching phase, with a decrease of 4.25 (level change of 7.25 to 3), and that there was a PND of 100%, indicating that coaching immediately reduced the frequency of the target behavior. Between the coaching and maintenance phases, there was little change (level of 3 and 2.75) but with a PND of 100%, indicating that the change was maintained beyond the period of intervention with more variability in the data in the absence of the intervention.
**Karl: Question Two.** The data in both of the CRG phases were analyzed and then compared against each other as well as the baseline and maintenance phases to determine the effectives of CRGs in decreasing the frequency of targeted problem behaviors for Karl. The level for Karl in the first phase of CRG data was 1, the trend was both linear and flat, and there was little variability. For the second phase of CRGs, the level was 0.25, the trend was both linear and flat, with little variability.

Figure 4.3
*Extinguishing Target Behavior Across Phases, Karl*

In the first CRG phase, Figure 4.3 shows little change in terms of immediacy of effect following the coaching phase, with a decrease in level of 2, with an overlap of 83.33%. Compared against the baseline phase, there was a rapid change (decrease in level of 6.25) and a PND of 100%. Between the initial CRG and maintenance phases, there was slow change (increase in level of 1.75) with 75% overlap, indicating that the change evident in the intervention periods was maintained.

During the second CRG phase, there was little change in terms of immediacy of effect following the combined intervention phase, with a decrease in level of 0.55, with an overlap of 100%. Compared against the initial CRG phase, there was little change (level decrease of 0.75)
and 100% overlap. Compared against the baseline, there was rapid change in level (level decrease of 7) and a PND of 100%. In comparison against the maintenance phase, there was an increase in the level (a difference of 2.5) and 75% overlap, indicating that the change was sustained beyond the periods of intervention.

**Karl: Question Three.** Figure 4.3 also shows that the level for Karl’s response to the combined interventions in terms of frequency of target behaviors was 0.8, the trend was linear and flat, and there was little variability of the data around the trend line. In comparison with the initial CRG phase, there was a decrease in level of 0.55 in the combined intervention phase, with 100% overlap. In comparison with the baseline phase, there was a decrease in level of 7 with a PND of 100%. Compared with the maintenance phase, there was an increase in level of 2.5 with 75% overlap, indicating a sustained response in the absence of an intervention.

**Vida: Question One.** In order to determine the effectiveness of coaching as a means of addressing and extinguishing problem behaviors, the data within the coaching phase were analyzed and compared with both the baseline and maintenance phases for Vida. Figure 4.4 shows that the level for the coaching data was 1.4 instances of the target behavior per session. The trend for this data was linear and flat, with little variability.

There was rapid change between the baseline and coaching phase, with a decrease of 6.4 and a PND of 100%, indicating that coaching immediately reduced the frequency of the target behavior. Between the coaching and maintenance phases, there was little change (level of 1.4 and 0.75) with 100% overlap, indicating that the change was maintained beyond the period of intervention.

**Vida: Question Two.** The data in both of the CRG phases were analyzed and then compared against each other as well as the baseline and maintenance phases to determine the
effectives of CRGs in decreasing the frequency of targeted problem behaviors for Vida. The level for the first phase of CRG data for Vida was 0.5, the trend was both linear and flat, and there was little variability of the data around the trend line. For the second phase of CRGs, the level was 0.25, the trend was both linear and flat, and there was little variability.

Figure 4.4
*Extinguishing Target Behavior Across Phases, Vida*

In the first CRG phase, Figure 4.4 shows little change in terms of immediacy of effect following the coaching phase, with a decrease in level of 0.9, with an overlap of 0%. Compared against the baseline phase, there was a rapid change (decrease in 7.3) and a PND of 100%. Between the initial CRG and maintenance phases, there was slow change (increase in level of 0.25) with 50% overlap, indicating that the change evident in the intervention periods was maintained.

During the second CRG phase, there was little change in terms of immediacy of effect following the combined intervention phase, with a decrease in level of 0.35, with an overlap of 100%. Compared against the initial CRG phase, there was little change (level decrease of 0.25) with 100% overlap. Compared against the baseline, there was rapid change in level (level decrease of 7.55) and a PND of 100%. This indicates a sustained and marked decrease in the
frequency of the target behavior from baseline levels but little difference between intervention phases for Vida. In comparison against the maintenance phase, there was an increase in the level (a difference of 0.5) and 75% overlap, indicating that the change was sustained beyond the periods of intervention.

_Vida: Question Three._ According to Figure 4.4 the level of the combined interventions, in terms of frequency of target behaviors, was 0.6, the trend was linear and flat, and there was little variability of the data around the trend line. In comparison with the initial CRG phase, which immediately precedes it, the combined intervention shows an increase in level of 0.1 with 100% overlap. In comparison with the baseline phase, there was a decrease in level of 7.2 with a PND of 100%. Compared against the maintenance phase, there was an increase in level of 0.15 with 75% overlap, indicating a sustained response in the absence of an intervention.

**Comparison Across Students: Extinguishing Disruptive Behavior**

Figure 4.5 shows the frequency of the target behaviors across phases for all four students. The figure highlights the immediacy of the effect of coaching as a means of extinguishing disruptive behavior for three of the four students as reflected in the dramatic decrease in problem behaviors with the initiation of the coaching phase. The fourth student, Karl, demonstrated a slower change but, like the other students, did not demonstrate any overlap between the baseline and coaching phases. For all four students, there was considerable overlap in all successive phases of the study, even considering outlier spikes in behavior in Charlie’s fourth session of the maintenance phase and Karl’s second session of the maintenance phase. This was primarily due to the scores being near zero for the number of observed target behaviors in subsequent phases.
Figure 4.5
Extinguishing Target Behavior Across Phases

Charlie

Danny

Karl

Vida
It is important to point out that all four students showed a dramatic but single spike in target behavior during the third session of the CRG phase. This is primarily attributed to a substitute teacher that was present in the class. While the substitute was prepared for CRGs meeting during the class period, it was still an aberration in the typical class session. Furthermore, the maintenance phase shows an ongoing decrease in problem behaviors when compared to the baseline phase except for one session with Karl. The overlap between maintenance and the previous CRG phase for Karl suggests that the rise in level was more an indication of a spike in the second session of the maintenance phase and not an overall increase in target behavior in the absence of an intervention.

Promoting Replacement Behavior

Like the cluster of questions that addressed targeted behaviors, questions regarding the promotion of replacement behaviors by intervention were also clustered. For each student, the use of the previously specified, individualized replacement behaviors were analyzed according to the use of coaching, CRGs, or the combined use of both. Specifically, analysis of the data was conducted to answer the following questions:

Question Four. Is coaching an effective tool for promoting desired academic social skills?

Question Five. Are CRGs an effective tool for promoting desired academic social skills?

Question Six. Is coaching combined with CRGs an effective tool for promoting desired academic social skills?

Charlie: Question Four. In order to determine the effectiveness of coaching as a means of promoting desired behaviors that would serve to replace the problematic behaviors, the data within the coaching phase were analyzed and then compared against both the baseline and maintenance phases. Figure 4.6 shows that the level for the coaching data was 6.2 instances of
the replacement behavior per session in the coaching phase. The trend for this data was linear and positive.

Figure 4.6 also shows that there was rapid change between the baseline and coaching phase, with an increase of 6.2 incidents of positive behavior per session and 20% overlap, indicating that coaching immediately increased the frequency of the replacement behavior. Between the coaching and maintenance phases, there was rapid change (decrease in level of 6.2), indicating that the change brought about by the intervention was not maintained. The PND could not be calculated due to the basal effect of no observed behavior during the baseline phase.

Charlie: Question Five. The data in both of the CRG phases were also analyzed and then compared against each other as well as the baseline and maintenance phases in order to determine the effectiveness of CRGs as a means of promoting desired behaviors that would serve to replace the problematic behaviors. The level for the first phase of CRG data was 0.83. The trend was linear and negative. For the second phase of CRGs, the level was 1.75 and the trend was also linear and negative.
For the first CRG phase, Figure 4.6 shows rapid change following the coaching phase, with a decrease in level of 5.36 and 100% overlapping data. In comparison with the baseline phase, there was little change (increase of 0.83) and 83% overlap. This indicates that the increase brought about in the coaching phase was not sustained in the CRG phase, with little difference between the baseline and CRG interventions. Between the initial CRG and maintenance phases, there was slow change (decrease in level of 0.83) with 100% overlap, indicating that change was evident in the coaching phase but absent in the first CRG phase and following all intervention.

During the second CRG phase, there was rapid change following the combined intervention phase, with a decrease in level of 6.65, with an overlap of 0%. Compared against the initial CRG phase, there was little change (level increase of 0.92) and 100% overlap. Compared against the baseline, there was slow change in level (level increase of 1.75) and 50% overlap. In comparison against the maintenance phase, there was a decrease in the level (a difference of 1.75) and 100% overlap from the second CRG phase to the maintenance phase, indicating that the lack of change that was evident in the CRG phases was sustained. The PND could not be calculated in either phase due to the basal effect of no observed behavior during the baseline phase.

**Charlie: Question Six.** In order to determine the effectiveness of combined interventions, the data within the combined phase were analyzed and compared against both the baseline, the initial CRG phase that immediately preceded it, and maintenance phases. Figure 4.6 shows that the level for the combined interventions data was at its highest level, with 8.4 instances of the target behavior per session in the coaching phase. The trend for this data was linear and neutral.

There was rapid change between the baseline and combined phase, with an increase of 8.4 and 0% overlap, indicating that combined interventions increased the frequency of the
replacement behavior. Following the initial CRG phase, which preceded it, there was an increase of level of 7.57 and 0% overlap, indicating that the increase in frequency was not due to any carryover effect from the previous intervention. Between the combined and maintenance phases, there was rapid change (decrease in level of 8.4) with 0% overlap, indicating that the change brought about by the intervention was not maintained. The PND could not be calculated due to the basal effect of no observed behavior during the baseline phase.

**Danny: Question Four.** The data in the coaching phase were analyzed and then compared against the baseline and maintenance phases in order to determine the effectiveness of coaching as a means of promoting desired behaviors that would serve to replace the problematic behaviors. Figure 4.7 shows that, for Danny, the level for the coaching data was 2 instances of the replacement behavior per session in the coaching phase. The trend for this data was linear and negative.

Figure 4.7
*Promoting Replacement Behavior Across Phases, Danny*

![Graph showing frequency of behavior across phases](image)

Figure 4.7 also shows that there was slow change between the baseline and coaching phase, with an increase of 2, and that there was 0% overlap, indicating that coaching immediately increased the frequency of the replacement behavior. Between the coaching and maintenance phases, there was slow change (decrease in level of 1.25) with 50% overlap,
indicating that, while there was little change in number of incidences of the replacement behavior, those changes were maintained beyond the periods of intervention. The PND could not be calculated due to the basal effect of no observed behavior during the baseline phase.

**Danny: Question Five.** The data in both of the CRG phases were also analyzed and then compared against each other as well as the baseline and maintenance phases in order to determine the effectiveness of CRGs as a means of promoting desired behaviors that would serve to replace the problematic behaviors. There were no occurrences of the replacement in the first CRG phase and, therefore, the level was 0, the trend was linear and neutral. For the second phase of CRGs, the level was 0.25 and the trend was also linear and neutral.

For the first CRG phase, Figure 4.7 shows slow change following the coaching phase, with a decrease in level of 2, with 0% overlap. In comparison with the baseline phase, there was no change (both levels were 0) and 100% overlap. This indicates that the increase brought about in the coaching phase was not sustained in the CRG phase. Between the initial CRG and maintenance phases, there was slow change (increase in level of 0.75) with 50% overlap, indicating that the change that was evident in the coaching phase but absent in the first CRG phase was also absent following all interventions.

During the second CRG phase, there was slow change following the combined intervention phase, with an increase in level of 2.15, with an overlap of 0%. Compared against both the baseline and initial CRG phase, when there were no incidences of replacement behavior, there was little change (level increase of 0.25) and 75% overlap. In comparison against the maintenance phase, there was an increase in level (an increase of 0.5) and 75% overlap from the second CRG phase to the maintenance phase. The PND could not be calculated in either phase due to the basal effect of no observed behavior during the baseline phase.
**Danny: Question Six.** In order to determine the effectiveness of combined interventions, the data within the combined phase were analyzed and compared against both the baseline, the initial CRG phase that immediately preceded it, and maintenance phases. Figure 4.7 shows that, for Danny, the level for the combined interventions data was at its highest level, with 2.4 instances of the target behavior per session in the coaching phase. The trend for this data was linear and neutral.

There was slow change between the baseline and combined phase, with an increase of 2.4 and 0% overlap, indicating that combined interventions increased the frequency of the replacement behavior. Much like the identical data for the baseline phase, the data following the initial CRG phase demonstrated an increase in level of 2.4 and 0% overlap. Between the combined and maintenance phases, there was slow change (decrease in level of 1.65) with 25% overlap. The PND could not be calculated due to the basal effect of no observed behavior during the baseline phase.

**Karl: Question Four.** The data in the coaching phase were analyzed and then compared against the baseline and maintenance phases in order to determine the effectiveness of coaching as a means of promoting desired behaviors that would serve to replace the problematic behaviors. The data for Karl during the coaching phase, as shown in Figure 4.8, shows that the level for the coaching data was 2 instances of the replacement behavior per session in the coaching phase. The trend for this data was linear and positive.

Figure 4.8 also shows that there was slow change between the baseline and coaching phase, with an increase of 2, and that there was 20% overlap, indicating that coaching increased the frequency of the replacement behavior. Between the coaching and maintenance phases, there was slow change (decrease in level of 1.75) with 100% overlap. The PND could not be
calculated due to the basal effect of no observed behavior during the baseline phase.

Figure 4.8
Promoting Replacement Behavior Across Phases, Karl

*Karl: Question Five.* The data in both of the CRG phases were also analyzed and then compared against each other as well as the baseline and maintenance phases in order to determine the effectiveness of CRGs as a means of promoting desired behaviors that would serve to replace the problematic behaviors. As shown in Figure 4.8, the level for data in the initial CRG phase for Karl was 0.17 and the trend was linear and neutral. For the second phase of CRGs, there were no incidences of the replacement behavior and, therefore, the level was 0, the trend was linear and neutral.

For the first CRG phase, Figure 4.8 shows slow change following the coaching phase, with a decrease in level of 1.83, with 100% overlap. In comparison with the baseline phase, there was slow change (increase in level of 0.17) and 100% overlap. As with Danny, this indicates that the increase brought about in the coaching phase was not sustained in the CRG phase. Between the initial CRG and maintenance phases, there was slow change (increase in level of 0.08) with 100% overlap.

During the second CRG phase, there were no observed incidences of the replacement behavior with slow change following the combined intervention phase, a decrease in level of 2.2,
and an overlap of 0%. Compared against the baseline phase, when there were no incidences of replacement behavior, there was no difference in level and 100% overlap. Compared against the initial CRG phase, when there was one observed incident of the replacement behavior, there was a slow difference in level (decrease of 0.17) and 100% overlap. In comparison against the maintenance phase, there was an increase in level (a difference of 0.25) and 75% overlap from the second CRG phase to the maintenance phase. The PND could not be calculated in either phase due to the basal effect of no observed behavior during the baseline phase.

**Karl: Question Six.** In order to determine the effectiveness of combined interventions, the data within the combined phase were analyzed and compared against both the baseline, the initial CRG phase that immediately preceded it, and maintenance phases. Figure 4.8 demonstrates that the level for the combined interventions data was at its highest level, with 2.2 instances of the replacement behavior per session in the combined interventions phase. The trend for this data was linear and slightly positive.

Despite the increase to the highest frequency of replacement behavior, there was slow change between the baseline and combined phase, with an increase of 2.2 and 0% overlap. The data following the initial CRG phase demonstrated an increase in level of 2.03 and 80% overlap. Between the combined and maintenance phases, there was slow change (decrease in level of 1.95) with 25% overlap. The PND could not be calculated due to the basal effect of no observed behavior during the baseline phase.

**Vida: Question Four.** The data in the coaching phase were also analyzed and then compared against the baseline and maintenance phases in order to determine the effectiveness of coaching as a means of promoting desired behaviors that would serve to replace the problematic behaviors. Figure 4.9 shows that the level for the coaching data was 0.4 instances of the
replacement behavior per session in the coaching phase. The trend for this data was linear and neutral.

Figure 4.9 also shows that there was slow change between the baseline and coaching phase, with an increase of 0.4, and that there was 60% overlap, indicating that there was almost no change. Between the coaching and maintenance phases, there was slow change (decrease in level of 0.15) with 100% overlap, indicating that there was little change in number of incidences of the replacement behavior during or following the interventions. The PND could not be calculated due to the basal effect of no observed behavior during the baseline phase.

Figure 4.9
Promoting Replacement Behavior Across Phases, Vida

Vida: Question Five. The data in both of the CRG phases were also analyzed and then compared against each other as well as the baseline and maintenance phases in order to determine the effectiveness of CRGs as a means of promoting desired behaviors that would serve to replace the problematic behaviors. There was one occurrence of the replacement in the first CRG phase with a level of 0.17 and a trend that was linear and neutral. For the second phase of CRGs, the level was 0.25 and the trend was also linear and neutral.

For the first CRG phase, Figure 4.9 shows slow change following the coaching phase, with a decrease in level of .23, with 100% overlap. In comparison with the baseline phase, there
was slow change (increase in levels of 0.17) and 17% overlap. Between the initial CRG and maintenance phases, there was slow change (decrease in level of 0.08) with 100% overlap.

During the second CRG phase, there was slow change following the combined intervention phase, with a decrease in level of 1.95, with an overlap of 0%. Compared against both the baseline and initial CRG phase, when there were no incidences of replacement behavior, there was little change (level increase of 0.25) and 75% overlap. In comparison against the maintenance phase, there was no change in level and 100% overlap from the second CRG phase to the maintenance phase. The PND could not be calculated in either phase due to the basal effect of no observed behavior during the baseline phase.

**Vida: Question Six.** In order to determine the effectiveness of combined interventions, the data within the combined phase were analyzed and compared against both the baseline, the initial CRG phase that immediately preceded it, and maintenance phases. For Vida, Figure 4.9 shows that the level for the combined interventions data was at its highest level, with 2.2 instances of the target behavior per session, in the coaching phase. The trend for this data was linear and neutral.

Since there were no incidences of the replacement behaviors, there was slow change between the baseline and combined phase, with an increase of 2.2 and 0% overlap, indicating that combined interventions increased the frequency of the replacement behavior. Much like the data for the baseline phase, the data following the initial CRG phase demonstrated slow change (increase in level of 2.03) with 0% overlap. Between the combined and maintenance phases, there was slow change (decrease in level of 1.95) with 0% overlap. The PND could not be calculated due to the basal effect of no observed behavior during the baseline phase.
Comparison Across Students: Promoting Replacement Behavior

The frequency of replacement behaviors across all phases for all of the boys is displayed in Figure 4.10. Note that the level for replacement behavior in the baseline phase for all subjects was zero. This is noteworthy in that any subsequent change in this behavior would be positive and, therefore, changes should be considered between subjects. Furthermore, Figure 4.10 shows that replacement behaviors were much more likely to occur during coaching. Three of the four students showed a rapid change in level followed by a rapid decrease when the intervention changed to CRG. The fourth student, Vida, showed a pattern of increase and decrease as well, but the change in level was slower.

The third pattern was that replacement behaviors had the highest level during the combined interventions phase. The final pattern was that, in the absence of intervention, the propensity for the four students to utilize these replacement behaviors approached baseline levels again. In other words, the interventions individually and in combination promoted the use of positive replacement behaviors, but students did not maintain the use of the behaviors when the interventions ended.

The most noteworthy difference between the students was in the performance of Charlie, who rapidly fluctuated between intervention phases. While all students demonstrated an increase in the use of replacement behaviors during in the coaching phases, Charlie’s rates were comparatively dramatic.
Figure 4.10
Promoting Replacement Behavior Across Phases
**Generalizing Behavior**

In order to address the impact of these interventions on the use of replacement behaviors outside of the classroom where the interventions were conducted, the students’ propensity to demonstrate their respective unproductive target behaviors as well as the productive replacement behaviors were observed during science class. For consistency, these behaviors were measured in the small group setting during their science classes. Generalization measures were taken at the same rate as in the language arts classes where the interventions were being conducted in the baseline and maintenance phases but only once a week during the various intervention phases. Each of these weekly observations was represented by a single data point, against which the level of behavior in the language arts class for that phase was compared. Therefore, generalization was described in terms of difference between data points in the science class versus the level in the language arts class as well as change over the course of the study. This is illustrated on each graph with the data point from science class contrasted against a dashed line, which represents the level in the language arts class during the same phase. Discussion of level, trend, variability, immediacy of effect, and overlap of the data in the science class was inapplicable, and, therefore is not included since there were only single data points during the intervention phases. The generalization of these social skills was addressed in the following questions:

**Question Seven.** Do students generalize social skills to a non-target academic setting as a result of coaching?

**Question Eight.** Do students generalize social skills to a non-target academic setting as a result of CRGs?
Question Nine. Do students generalize social skills to a non-target academic setting as a result of coaching combined with CRGs?

**Charlie: Question Seven.** In order to determine the extent of generalization of behavior between treatment and non-treatment settings, the data points from the science class were compared against the level for the language arts class as well as the levels in the baseline and maintenance phases. For Charlie, Figure 4.11 shows that the initial data point in the coaching intervention, which was also the first day of the intervention, was at the same approximate level as the baseline for both the science and language arts classroom (data point = 8; language arts level = 8.5, science level = 9.25). The second data point, on the other hand, was closer to the level for the language arts classroom during the coaching phase as well as the levels for the maintenance phase for both the science and language arts classes (data point = 1; language arts phase level = 1.4, science maintenance level = 1.5, language arts maintenance level = 1.5). This indicates that Charlie generalized the intervention beyond the period of interventions and that the initial data point could be best understood as a layover effect.

Conversely, Figure 4.11 shows that Charlie did not generalize the replacement behaviors. While this lack of generalization is congruent with baseline and maintenance levels (both are 0), it demonstrates a difference from the level of replacement behavior in the language arts class (both science data points = 0, language arts level = 6.2).

**Charlie: Question Eight.** In order to determine the extent of generalization of behavior between treatment and non-treatment settings, the data points from the two CRG phases in science class were compared against each other and the levels for the language arts class, as well as the levels in the baseline and maintenance phases. For the initial CRG phase, Figure 4.11 shows that the frequency of occurrence for the targeted behavior was noticeably lower than the
baseline levels in both the language arts and science classrooms (data point = 0, language arts level = 8.5, science level = 9.25). It was, on the other hand, comparable to the level for the language arts classroom in the initial CRG phase (0.83), the level for the language arts classroom in the coaching phase that immediately preceded it (1.4), and the levels for the maintenance phase for both the science and language arts classes (data point = 0; science maintenance level = 1.5, language arts maintenance level = 1.5).

Figure 4.11
Generalization of Behavior Across Phases, Charlie

Likewise, in the second CRG phase, the frequency of occurrence for the targeted behavior was noticeably lower than the baseline levels in both the language arts and science classrooms (data point = 3, language arts level = 8.5, science level = 9.25). As opposed to the
initial CRG phase, it was slightly higher than the level for the language arts classroom in the initial CRG phase (0.83) and the level for the language arts classroom in the combined phase that immediately preceded it (0.2). It showed little difference from the levels for the maintenance phase for both the science and language arts classes (data point = 0; science maintenance level = 1.5, language arts maintenance level = 1.5).

Much like the data from the coaching intervention, Figure 4.11 shows that Charlie did not generalize the replacement behaviors. This lack of generalization is congruent with baseline and maintenance levels (both are 0) and it demonstrates a small difference from the level of replacement behavior in the language arts class in both CRG phases (both science data points = 0, language arts level, initial CRG phase = 0.83 second CRG phase = 1.75).

**Charlie: Question Nine.** In order to determine the extent of generalization of behavior between treatment and non-treatment settings, the data point from the combined phase in science class was compared against the levels for the language arts class, as well as the levels in the baseline and maintenance phases. Figure 4.11 shows that the level in the combined intervention phase was below the baseline for both the science and language arts classroom (level = 0; language arts level = 8.5, science level = 9.25). The same data point (0) was near the level for the language arts classroom in the combined phase (0.2), the CRG phase that immediately preceded it (0.83), and both the science and language arts classes during the maintenance phase (both = 1.5). This indicates that the student generalized beyond the period of interventions but remained low following the coaching intervention phase.

Figure 4.11 shows that Charlie did not generalize the replacement behaviors when the interventions were combined, much like the phases when the interventions were conducted independently. This lack of generalization is congruent with baseline and maintenance levels
(both are 0) and it demonstrates a difference from the level of replacement behavior in the language arts class in the combined intervention phase (science data point = 0, language arts level = 8.4).

**Danny: Question Seven.** In order to determine the extent of generalization of behavior between treatment and non-treatment settings, the data points from the science class were compared against the level for the language arts class as well as the levels in the baseline and maintenance phases. For Danny, Figure 4.12 shows virtually no stability in the baseline phase in terms of target behavior and, therefore, a level in the science class that was 2.6 incidents higher than the level for the language arts class (7.8, compared against 5.2). Four of the five data points in the science class were higher than the level for the language arts class. The initial data point in the coaching intervention was at the same approximate level as the baseline for the language arts classroom (data point = 5; language arts level = 5.2). The second data point was closer to the level for the language arts classroom during the coaching phase as well as during maintenance (data point = 2; language arts coaching phase level = 1, language arts maintenance phase level = 0.75). This indicates that the student generalized the intervention beyond the period of interventions.

Conversely, Figure 4.12 shows that, like Charlie, Danny did not generalize the replacement behaviors. While this lack of generalization was comparable to the baseline and maintenance levels in the science class (baseline level = 0.2, maintenance level = 0.75), it demonstrates a difference from the level of replacement behavior in the language arts class (both science data points = 0, language arts level = 2).

**Danny: Question Eight.** In order to determine the extent of generalization of behavior between treatment and non-treatment settings, the data points from the two CRG phases in
science class were compared against each other and the levels for the language arts class, as well as the levels in the baseline and maintenance phases. In the initial CRG phase, Figure 4.12 shows that the occurrence of the targeted behavior was considerably closer than the baseline levels in both the language arts and science classrooms (data point = 6, language arts baseline level = 5.2, science baseline level = 7.8). On the other hand, it was considerably higher than the level for the initial CRG phase in the language arts class (0.83) as well as the level for the language arts coaching and maintenance phases (coaching = 1, maintenance = 0.75). The data point in the initial CRG phase in the science class fell within the range for the levels for the target behaviors in the baseline and maintenance phases (science baseline level = 7.8, science maintenance level = 4.25).

In the second CRG phase, though, the observed occurrence for the targeted behavior was noticeably lower than the baseline levels in both the language arts and science classrooms (data point = 1, language arts baseline level = 5.2, science baseline level = 7.8). This data point was equivalent to the level for the second CRG phase in the language arts class (0.25), the combined intervention phase level in language arts (0.4), and the language arts maintenance phase (0.75). It was considerably lower than the level for the science class maintenance level (4.25). This indicates that, while the student didn’t appear to demonstrate the targeted behaviors in the second CRG phase, the interventions in the language arts class did not generalize or maintain their effect in the science class.
Figure 4.12 shows that Danny did not generalize the replacement behaviors. This lack of generalization was congruent with baseline and maintenance levels (baseline = 0.2, maintenance = 0.75). It demonstrates no difference from the level of replacement behavior in the language arts class in the initial CRG phases (science data points = 0, language arts level = 0) and only slight difference from the language arts level in the second CRG phase (science data point = 0, language arts level – 0.25).

**Danny: Question Nine.** In order to determine the extent of generalization of behavior between treatment and non-treatment settings, the data point from the combined phase in science class was compared against the levels for the language arts class, as well as the levels in the baseline and maintenance phases. Figure 4.12 shows that the occurrence of target behavior in
the combined intervention phase was below the baseline for both the science and language arts classroom (data point = 2; language arts level = 5.2, science level = 7.8). The same data point (2) was near the level for the language arts classroom in the combined phase (0.4), the CRG phase that immediately preceded it (0.83), and the language arts class during the maintenance phase (0.75). On the other hand, it was below the level for the maintenance phase in the science class (4.25). Figure 4.12 shows that Danny did not generalize the replacement behaviors when the interventions were combined, much like the phases when the interventions were conducted independently. This lack of generalization is congruent with baseline and maintenance levels in science (baseline = 0.2, maintenance = 0.75) and it demonstrates a difference from the level of replacement behavior in the language arts class in the combined intervention phase (science data point = 0, language arts level = 2.4).

**Karl: Question Seven.** In order to determine the extent of generalization of behavior between treatment and non-treatment settings, the data points from the science class were compared against the level for the language arts class as well as the levels in the baseline and maintenance phases. Figure 4.13 shows that the initial data point in the coaching intervention, which was also the first day of the intervention, was higher than the baseline for both the science and language arts classroom (data point = 16; language arts level = 7.25, science level = 12.75). The second data point, on the other hand, was closer to the level for the language arts classroom during the coaching phase as well as the levels for the maintenance phase for both the science and language arts classes (data point = 5; language arts coaching phase level = 3, science maintenance level = 7.25, language arts maintenance level = 2.75).

Figure 4.13 shows that Karl did not generalize the replacement behaviors as evidenced by no observed uses of the replacement behaviors in the science classroom throughout the course of
the study. While this lack of generalization is congruent with baseline and maintenance levels in language arts (baseline = 0, maintenance = 0.25), it demonstrates a difference from the level of replacement behavior in the language arts class (both science data points = 0, language arts level = 2).

Figure 4.13
*Generalization of Behavior Across Phases, Karl*

*Karl: Question Eight.* In order to determine the extent of generalization of behavior between treatment and non-treatment settings, the data points from the two CRG phases in science class were compared against each other and the levels for the language arts class, as well as the levels in the baseline and maintenance phases. In the initial CRG phase, Figure 4.13 shows that the occurrence of Karl’s targeted behavior was slightly higher than the baseline levels in the language arts and slightly lower than the baseline level in the science classroom (data point
It was also higher than the level for the language arts classroom in the initial CRG phase (1), the level for the language arts classroom in the coaching phase that immediately preceded it (3), and the level for the maintenance phase for the language arts class (data point = 9, language arts maintenance level = 2.75). On the other hand, it was comparable to the level for the science maintenance phase (7.25) indicating that the interventions did not bring about a maintained response to the interventions. In the second CRG phase, the number of observed instances of the targeted behavior was 8 and the baseline, maintenance, and second CRG phase in language arts were each 0.25. Again, Figure 4.13 shows that Karl did not generalize the replacement behaviors since he did not demonstrate the replacement behaviors in the science class.

**Karl: Question Nine.** In order to determine the extent of generalization of behavior between treatment and non-treatment settings, the data point from the combined phase in science class was compared against the levels for the language arts class, as well as the levels in the baseline and maintenance phases. Like with the CRG phases, Figure 4.13 shows that the data point in the combined intervention phase (11) was slightly higher than the baseline levels in language arts and slightly lower than the baseline level in the science classroom (language arts level = 7.25, science level = 12.75). The same data point (11) was significantly higher than the level for the language arts classroom in the combined phase (0.8), the CRG phase that immediately preceded it (1), and the language arts class during the maintenance phase (2.75). On the other hand, it was comparable to the level for the science maintenance phase (7.25) reinforcing the observation that the interventions did not bring about a maintained response to the interventions. Figure 4.13 shows that Charlie did not generalize the replacement behaviors.
when the interventions were combined, much like the phases when the interventions were conducted independently or were not present at all.

**Vida: Question Seven.** In order to determine the extent of generalization of behavior between treatment and non-treatment settings, the data points from the science class were compared against the level for the language arts class as well as the levels in the baseline and maintenance phases. As was true for the other three students, Figure 4.14 shows that Vida’s initial data point in the coaching intervention was at the same approximate level as the baseline for the science class (data point = 5, science baseline level = 5.4), though slightly lower than the language arts class (language arts baseline level = 7.8). The second data point, on the other hand, was closer to the level for the language arts classroom during the coaching phase as well as the levels for the maintenance phase for both the science and language arts classes (data point = 1; language arts phase level = 1.4, science maintenance level = 1.25, language arts maintenance level = 0.75). This indicates that, despite the fact that Vida was less likely to demonstrate the target behavior in the science class prior to the intervention, he generalized the intervention beyond the period of interventions and that the initial data point could be best understood as a layover effect.

Conversely, Figure 4.14 shows that Vida did not generalize the replacement behaviors during the coaching phase, with only two observed instances of the replacement behaviors being utilized across the entire study, neither of which occurred in the coaching phase. This lack of generalization is congruent with the level of replacement behavior in the language arts class during the baseline phase (0), coaching phase (0.4), and maintenance levels (0.25).

**Vida: Question Eight.** In order to determine the extent of generalization of behavior between treatment and non-treatment settings, the data points from the two CRG phases in
science class were compared against each other and the levels for the language arts class, as well as the levels in the baseline and maintenance phases. In the initial CRG phase, Figure 4.14 shows that the frequency of occurrence for the targeted behavior was comparable to the baseline levels in both the language arts and science classrooms (data point = 6, language arts level = 7.8, science level = 5.4). It was higher than the level for the language arts classroom in the initial CRG phase (0.5), the level for the language arts classroom in the coaching phase that immediately preceded it (1.4), and the levels for the maintenance phase for both the science and language arts classes (science maintenance level = 1.25, language arts maintenance level = 0.75).
In the second CRG phase, the frequency of occurrence for the targeted behavior was lower than the baseline levels in both the language arts and science classrooms (data point = 4, language arts level = 7.8, science level = 5.4). Much like the initial CRG phase, it was slightly higher than the level for the language arts classroom in the initial CRG phase (0.5), the level for the language arts classroom in the combined phase that immediately preceded it (0.6), and the maintenance phases for both the science and language arts classes (science maintenance level = 1.25, language arts maintenance level = 0.75). These points are noteworthy in that the target behaviors occurred most frequently when coaching was not an aspect of the intervention in the language arts class.

Figure 4.14 shows that Vida did not generalize the replacement behaviors. This lack of generalization is congruent with baseline and maintenance levels (baseline level = 0.2, maintenance level = 0.25) and it demonstrates a small difference from the level of replacement behavior in the language arts class in both CRG phases (both science data points = 0, language arts level, initial CRG phase= 0.17, language arts level, second CRG phase = 0.25).

**Vida: Question Nine.** In order to determine the extent of generalization of behavior between treatment and non-treatment settings, the data point from the combined phase in science class was compared against the levels for the language arts class, as well as the levels in the baseline and maintenance phases. For Vida, Figure 4.14 shows that the data point in the combined intervention phase was below the baseline for both the science and language arts classroom (data point = 0; language arts level = 7.8, science level = 5.4). The same data point (0) was near the level for the language arts classroom in the combined phase (0.6), the CRG phase that immediately preceded it (0.5), and both the science and language arts classes during the maintenance phase (science maintenance level = 1.25, language arts maintenance level = 0.75).
Most notably, figure 4.14 shows that Vida did not generalize the replacement behaviors when the interventions were combined, since it was in this phase that Vida demonstrated the highest propensity to use the replacement behaviors in the language arts class (science data point = 0, language arts combines intervention level = 2.2). This lack of generalization is congruent with baseline levels (language arts level = 0, science level = 0.2) and maintenance levels (both = 2.5).

**Comparison Across Students: Generalizing Behavior**

The data supports the perspective that the four students did not generalize the replacement behaviors to a setting where the intervention was not conducted. While this was less noteworthy with Vida, who did not consistently utilize the individualized replacement behaviors in the language arts classroom where the intervention was being conducted, it is noticeable with the other three students who demonstrate a marked departure from the utilization of these behaviors once they were no longer in the language arts classroom.

Figure 4.15 shows the frequency of the target behaviors across phases for all four students in science class. The figure highlights the tendency for each student to have a stable relationship between target behaviors in the language arts and science settings, when comparing baseline and maintenance phases. With the exception of Vida, each student demonstrated a higher propensity for the target behaviors in science. For these three students, the frequency of the target behaviors decreased in the maintenance phase. Additionally, the difference between the levels for language arts and science remained relatively stable; the difference, for these three students was a similar difference in the maintenance phase, albeit with lower frequency in both the language arts and science classrooms.
Vida was the only student that demonstrated a lower level of target behavior in the science class than in the language arts class at baseline. Additionally, he also had the lowest level of target behavior out of the four students. Due to this, his decrease in rate was not as great as his peers.

All four students also showed a carryover effect in terms of frequency of target behaviors at the beginning of the coaching phase followed by a marked decrease when a second generalization recording was taken. With all four students, the level of the target behavior during the second generalization phase aligned very closely with the level in the language arts classroom. This is also noteworthy since all four students responded to the coaching phase with a dramatic reduction in target behaviors. This was especially true for Karl, who demonstrated higher rates of target behaviors in the science class than the other three students and a greater difference in all phases in the science class versus the language arts class.

Figure 4.16 shows the frequency of the replacement behaviors across phases for all four students in science class. The figure highlights three things. First, the students did not utilize the replacement behaviors outside of the language arts classroom during any of the intervention periods. Second, in the four instances where the behaviors were observed (two times for Danny and Vida), the behaviors were observed in the baseline and maintenance phases, when no interventions were being conducted. Finally, in these four instances, there was no consistency and, therefore, no evidence of generalization between settings.
Figure 4.15
Generalized Extinction of Target Behavior Across Phases

[Graph showing data for four individuals: Charlie, Danny, Karl, and Vida.]
Figure 4.16
Generalization of Replacement Behavior Across Phases
Summary

This study employed an alternating treatments single subject design to investigate the impact of Collaborative Reading Groups (CRGs) and coaching on academic social skills for students at-risk of Emotional/Behavioral Disabilities (E/BD) in a classroom setting. The results reveal various levels of response to the interventions independently and in combination. For all four students, the rates of their specific target behaviors immediately dropped once the coaching intervention started and these low rates of behavior were sustained throughout the changes in intervention. In terms of replacement behaviors, each student responded differently but there was greater usage of the chosen replacement behaviors when coaching was partnered with CRGs. The replacement behaviors never generalized to the science classroom for any of the students but there was a pattern of decreased usage of the target behaviors between the baseline and maintenance phases that was comparable to the language arts classroom.
CHAPTER 5

Discussion

The purpose of this research was to investigate the impact of Collaborative Reading Groups (CRGs) and coaching on academic social skills for students at-risk of Emotional/Behavioral Disabilities (E/BD) in a general education classroom. Using an alternating treatments single subject design, CRGs and coaching were investigated independently and in combination in order to determine their differential impact on positive academic social skills and the disruptive behaviors that negatively impact a student’s learning or the learning of her or his peers. Specifically, this study was designed to investigate the effectiveness of the intervention techniques as a means of extinguishing disruptive behavior, promoting positive replacement behaviors, and promoting the generalization of any skills acquired to a different classroom.

Four 7th grade male students from a rural middle school participated in this study, with their parents’ consent. Participants all exhibited a pattern of disruptive behavior as reported by their team of teachers, yet none of them was receiving special education instructional or related services. Interviews were conducted with each participant and the language arts teacher to identify target behaviors to extinguish. The target behaviors identified were those that impeded academic and social achievement in the context of the classroom. The replacement behaviors
were designed to provide the students with a more adaptive means of meeting the needs that the target behaviors met, as per the description of effective social skills training (Gresham, 1998).

While both male and female students were identified by their teachers as viable candidates for this study and were, therefore, actively recruited, the final participants were all male. While this was not intended, it does reflect the fact that the overwhelming majority of students identified as or considered at risk of Emotional or Behavioral Disabilities (E/BD) are male (Kauffman & Landrum, 2013).

**Extinguishing Target Behaviors**

In order for social skills interventions to be successful, they must balance the behaviors that are targeted for elimination with behaviors that are developed to meet the needs that the disruptive behaviors fill (Gresham, 1998). Both the elimination and replacement of disruptive behaviors were targeted in the current study. The frequency of both the target and replacement behaviors were measured and addressed separately in the research questions.

The interventions led to a consistent response, in terms of extinguishing the target behaviors, across all four students following the initiation of each intervention phase. All four students demonstrated an immediate decrease in the frequency of the targeted problem behaviors once coaching started. Charlie and Vida made the most change but that is due, in part, to their comparatively high level of disruptive behavior prior to the beginning of the coaching intervention. Karl also had a relatively high level of disruptive behavior, but his overall decrease in frequency was not as notable due to the fact that he was not as responsive to the intervention in the first session. However, he responded very well to the second session of the coaching phase.
All four students were also very responsive to the initial CRG intervention with a decrease in target behavior when compared with the frequency of the disruptive behavior in the baseline phase. The change in level for each student in response to the CRG intervention was lower than the change associated with the introduction of coaching. This pattern continued through the phases when CRG and coaching were combined and the second CRG-only phase. The change from one intervention phase to another did not result in any further significant reductions in the target behaviors; however, the reduction within each of the intervention phases was notable when compared with the frequency of disruptive, target behavior in the baseline phase. However, when comparing the students’ responses in the maintenance phase, there were some differences between the students.

All students demonstrated a drop in level between their baseline and maintenance scores, but the pattern for Danny and Vida is different than for Charlie and Karl. Danny and Vida maintained a low level of the target behavior during maintenance, which was comparable with the consistently low levels of the target behavior following the beginning of all interventions. Karl and Charlie had an increase in the level of their target behavior during the maintenance phase, but the level did not revert to the level of the baseline. Furthermore, the increase during maintenance was primarily due to one significantly higher score for each of the boys. Karl had a slight overall increase following the second CRG phase with one high score, indicating that the frequency of his target behaviors was generally increasing. Charlie’s single higher score occurred during the last session. This one score raised the level of target behaviors within the maintenance phase.

**Promoting Replacement Behaviors**
In comparison to the relatively stable and uniformly positive response to the interventions utilized to extinguish the target behaviors, the increase in use of replacement behaviors was less consistent across participants and phases. Despite this comparative inconsistency, clear patterns emerged in the use of replacement behaviors across each phase of the study.

First, there was no utilization of the replacement behaviors during the baseline phase for any participant. This was particularly interesting given that the participants selected these replacement behaviors because they existed in their repertoire of understood, pro-social or productive behavior prior to the intervention. Nonetheless, these replacement behaviors were not observed during the baseline phase, making the percent of non-overlapping behavior (PND) impossible to interpret as all scores were zero and the data was therefore constricted by the measurement procedure. On the other hand, the absence of the replacement behaviors during baseline meant that any change across subsequent phases was positive.

The second pattern was actually the absence of a clear pattern during the phases when coaching and CRGs were used independently. Vida did not demonstrate the replacement behaviors that were coached and rehearsed during the coaching phase or either of the CRG phases. Danny and Karl used the replacement behaviors during the coaching phase but neither demonstrated the replacement behaviors during the CRG phases. Charlie demonstrated a dramatic increase in the use of replacement behaviors during the coaching phase and then only moderate use of the replacement behaviors during the second CRG phase.

The third pattern that emerged was that all four participants demonstrated a consistently positive response when provided with both coaching and CRGs. In comparison to the various effects of coaching and CRGs independently, the combined intervention consistently led to an increase in use of the replacement behavior. While the replacement behaviors were not used at
the same level across the participants, the levels during this phase of the study were consistently higher for each participant than at every other phase of the study. What makes this noteworthy is that, during this phase, the level of target behaviors remained consistently low for each of the students. During the combined intervention period, each of the four participants demonstrated the replacement skills while simultaneously reducing the use of the interfering target behaviors.

The final pattern that emerged was that all participants returned to baseline levels of use of the replacement behaviors during the maintenance phase. This indicated that, while the replacement behaviors increased to varying degrees for each student during the intervention phases, the participants required the structure of the intervention in order to maintain the use of replacement behaviors. In this way, the interventions could be considered successful when used in combination, in order to bring about a decrease in the target behavior and promote beneficial replacement behavior. Gresham (1998) indicated that, in order for the social behaviors necessary for success in the classroom to be independently mastered, the target and replacement behaviors must complement one another. Here, this complimentary relationship was best observed when students were being supported with coaching and provided with an opportunity to practice the skills in CRGs.

**Independent Replacement Behaviors**

Beyond the patterns of responses for the students in the different phases of the study, it is also important to note that Charlie and Danny described and chose a replacement behavior to target through coaching and CRGs that could be defined as self-monitoring strategy. As self-monitoring strategies, the selected replacement behaviors worked as a means of reminding the boys to monitor their own progress. These self-monitoring behaviors were pursued by Danny and Charlie when they described their problems as being connected to inattention in class and sought
a means by which they could be reminded to pay attention to what they were doing without
drawing uncomfortable attention. Considering the success that self-monitoring strategies have
with students with attention disorders (Kauffman & Landrum, 2013) and the tendency of the
language arts teacher to effectively use proximity control to manage the behavior of disruptive
students (Levin & Nolan, 2014), the self-monitoring strategy was accepted. While the selection
of self-monitoring behaviors introduced limitations in the current study, what was most
significant was the differential response of the two participants to a similar strategy. The action
that Charlie used (a “thumbs up” signal to his teacher to indicate that he assessed himself
positively) was very successful. It helped Charlie remain attentive to the task at hand and self-
aware of his classroom performance. Despite the fact that he explicitly recognized that it would
be personally beneficial and desirable for his teachers if he demonstrated self-awareness and
attentiveness, the additive action of signaling to his teacher seemed to help him more than simply
returning the eye contact of his teacher.

In Danny’s case, however, he was less attentive to the self-monitoring process and
frequently made eye contact with the teacher while involved in his small group activities, both
CRG and otherwise, but did not always use the signal that he was self-assessing (i.e., a subtle
scratch of the temple). In this case, the self-monitoring action was not acting as a replacement.
The eye contact reminder and the description of the behavior provided during coaching had
greater efficacy.

**Generalization of Target and Replacement Behaviors**

The science class was selected as the setting to investigate generalization during each
phase of the study. The science classroom was selected due to the fact that students frequently
worked on projects in small groups during science; therefore, science demanded social
interaction with peers during class in a way that paralleled the language arts class. In the science classroom, data was collected during the baseline and maintenance phases during the same period and at the same frequency as in the language arts class. During the periods of intervention, though, data was only collected once per week as a means of understanding progress over the course of the intervention for the individual students outside of the language arts class.

For all four students, there was little change in use of the replacement behavior between the baseline and maintenance phases. There are several possible interpretations of the few sessions during which Danny and Vida demonstrated replacement behaviors in the science class. For both, these occurred at the end of the baseline phase and at the beginning of the maintenance phase. Since the students were instrumental in the development of their own operational definitions, this may be a carryover effect from that interview process. This was unlikely, however, since it does not appear with either Charlie or Karl, who also participated in similar interviews. It was more likely that Danny and Vida identified these behaviors as reasonable functional replacement behaviors due to the fact that they were familiar with their use but had received neutral or no response to them by teachers in the past. This would reinforce the premise that these behaviors are indicative of a social skill performance deficit and not a skill deficit.

All four students also demonstrated a decrease in the frequency of their respective target behaviors during science. While this was consistent, there were some notable student performances that demonstrate generalization. For example, Charlie’s level for the targeted negative behavior was the same in language arts and science class during both the baseline and maintenance phases. Whereas Karl was much more likely to demonstrate the target behaviors in science class than language arts, this difference between classes remained constant when
comparing the target behaviors in the baseline and maintenance phases. Vida was the only student who was less likely to demonstrate target behaviors in science class.

While these results seem to suggest that the students responded well to the coaching and best to the CRGs when they were paired with coaching, it was important to point out some anecdotal evidence that may have influenced student behavior outside of the language arts class. The language arts teacher who participated in this study demonstrated a mastery of critical classroom management and behavioral management that complimented the purpose of the study. In contrast, the science teacher’s approach to classroom management and student discipline was inconsistent and did not directly support cooperative learning. While the language arts teacher used proximity control and consistent rotation among the entire class, the science teacher did not. While the data supports the conclusion that changes in student behavior can be attributed to their response to the interventions, the difference in the classroom milieu is important to note as a potential mediating variable in understanding the generalization, or lack of generalization.

**Connection to the Conceptual Model**

This study was grounded in the Academic-Behavior Connection Model (A-BC; Scott et al., 2001). According to the A-BC Model, having deficits with reading skills is a characteristic of students with or at-risk of behavioral and emotional disabilities. Despite no discernable relationship between the reading readiness, basic reading skills, and reading comprehension cluster scores from the Woodcock Reading Mastery Test-Revised/Normative Update (WRMT-R/NU, 1998) and the rate of target behavior at baseline, individual reading ability may have had an impact on the students’ relative capacity to participate in CRGs. The language arts teacher anticipated challenges that might result from reading a text that was too challenging and utilized short stories from high-interest, seasonal books that were rated as being at a sixth grade reading
level or lower to ameliorate the effect of reading level. Specifically, she chose *13 Ghosts: Strange but True Stories* (Osborne, 1988), *Torment of Mr. Gully: Stories of the Supernatural* (Clarke, 1990), and selections from *Great Ghost Stories, Unabridged* (Grafton, 1992). In the current study, challenges that students may have experienced in reading the text were not assessed directly. In future studies, the collection of more in-depth information may help illuminate possible relationships between reading skill and target behavior or time spent reading and participation in the CRGs.

**Limitations**

While this study demonstrated a means by which non-disruptive interventions can be introduced to students that demonstrate the characteristics of E/BD, there are limitations to its application and conclusions. The first limitation to this study was that there was no measurement of the number of times that the teacher prompted both Danny and Charlie by making eye contact. In this study, the measurement focused on the frequency of use of replacement behaviors by the student and not prompting or acknowledgement from the teacher. While informal measurement indicated that the teacher provided ample opportunities, many of which did not garner a response, this omission presents a limitation. Nonetheless, this choice of replacement behaviors provided the students with opportunities to manage their own behavior with minimal support and yielded positive results.

Understanding that the behaviors of the teacher were neither controlled nor measured, the propensity for Charlie to demonstrate these behaviors at a rate higher than Danny could be a function of the opportunity to respond. While the opportunities far exceeded both students response rate, this was a variable that was neither controlled nor measured. In future studies, self-monitoring techniques should also include a means of measuring related student and teacher
behaviors. Nevertheless, considering the students’ response in terms of both eliminating target behavior and promoting replacement behavior, self-monitoring should be utilized as a means of promoting attention to the use of productive classroom social skills.

Another limitation of this study was that Charlie and Danny had more opportunities to utilize their replacement behaviors than Karl and Vida. It was important that the students were active in describing and defining their replacement behavior. However, actively involving the boys resulted in different solutions. The self-monitoring strategy that Danny and Charlie selected provided them with a means of monitoring their own behavior in an active and cognizant manner whereas the behaviors chosen by Karl and Vida did not include a self-regulated means of demonstrating that they were utilizing the strategies described. Instead, the behaviors that they chose were at least partially contingent upon the interactions of their group members. Self-monitoring is a well-known intervention for students who demonstrate difficulties with attention (Kauffman & Landrum, 2013). This introduced potential limitations in interpreting results. Charlie and Danny clearly utilized self-monitoring and, given the body of research that supports the effectiveness of self-monitoring, it is possible that the change in behavior was due to the introduction of self-monitoring rather than coaching or CRGs.

Another possible limitation to this study was the reading level of the students. The four participants ranged from one to three years below grade level on the standardized test of reading administered at the beginning of this study. While low reading levels are indicative of the challenges that a student with or at-risk of E/BD would likely experience, the breadth of this study did not provide for the instructional support or time to demonstrate whether CRGs with or without coaching effectively met the literacy needs of the participants. It is possible that the participant reading levels made it difficult for them to access the information in the stories used
in language arts throughout the semester. Having difficulty accessing the information, in turn, may have had a potentially detrimental effect on their ability to participate with their small group. However, Charlie had the lowest reading abilities and responded the best to the interventions while Karl and Vida had the highest reading abilities of the group and the lowest response to the interventions. This is not what one might expect, and provides evidence that a study that carefully addresses reading ability and outcomes is an important next step.

As the students completed their training of CRGs and prepared to perform them independently in class, questions arose regarding whether they were required to read independently for their roles to be performed correctly. The students requested time to read the texts together instead of individually, and organic shared reading groups emerged as a result. Considering that the concept of CRGs emerged from the central concepts of literature circles (Daniels, 2002a) and the effectiveness of CRGs in terms of improvements in students’ reading comprehension (O’Brien, 2007; O’Brien & Dieker, 2008), the request seemed both reasonable and desirable. Since participation in these shared reading groups was not uniform, the propensity to utilize replacement behaviors or the frequency of target behaviors was not measured during these times.

The emergence of shared reading groups served to highlight the potential that CRGs have for working with students with disabilities. The attention was on reading comprehension and the completion of specific roles to target specific comprehension skills; CRGs were not designed to replace or dominate a balanced reading program. Instead, they were designed to serve students that require more individualized attention and support with their specific and identified reading disabilities with an opportunity to get that additional support. As these shared reading groups developed from the structure of CRGs, the groups and individuals within the groups sought and
received additional, individualized support from the participating classroom teacher or the special education teacher who provided inclusion service for students with identified disabilities in the classroom. Admittedly, this support could have been provided if each student read their story or passage individually. In this particular situation, though, it emerged as a function of the shared reading groups, which, in turn, emerged from the CRGs and the request of the students in the class.

While anecdotal evidence was provided (e.g., thank you notes from the students and conversations with the language arts teacher) that supported the idea that the class and the teacher would be willing to continue to use CRGs in the future, there was no assessment given that would determine the student participant’s willingness to utilize CRGs or actively participate in coaching in the future. Their response to coaching was consistently positive in its ability to focus them on limiting the frequency of target behaviors. Their participation in the CRGs was generally active. The teacher provided direct and supportive feedback about her willingness to utilize CRGs as a reading strategy in the future. Unfortunately, no interviews were conducted nor data gathered otherwise that would support the use of these interventions in the future. Considering the ease by which these were introduced into an already structured class setting, this omission left questions about model fidelity unanswered.

**Implications for Practice and Future Research**

Both CRGs and coaching demonstrated adaptability to the structure and curriculum of the class. Additionally, they integrated well into the school-wide systems that were designed to meet students’ academic, social and behavioral needs. As discussed earlier, two of the students received tier II intervention for behavioral issues that were affecting their academic performance, as designated by the school’s Response to Intervention (RtI) model. Tier II of an RtI model is the
first point at which research-based interventions, beyond the structure and instruction of the
general education classroom, are provided to students. Typically, these interventions are
provided in a small-group setting but must be provided in addition to, and never in lieu of,
classroom structure and instruction (Vaughn & Bos, 2007). The minimally invasive manner of
coaching, combined with the attention to specific behaviors to be eliminated and their
coordinated replacement behaviors, provide for targeted intervention without the loss of the
instruction and setting of tier I intervention. The small-group setting and cooperative structure of
the CRGs provide the tier II means by which social and behavioral expectations can be
reinforced within the context of classroom structure and effective instruction.

CRGs also demonstrated a means by which tier III intervention can be supported. Within
the RtI model, tier III intervention is provided on an individual basis and is initiated in response
to data collected when a student does not demonstrate mastery of curricular objectives in either
the tier I or tier II settings (Vaughn & Bos, 2007). As the final means of providing increasingly
intensive intervention before considering special education services, tier III services are typically
individually based but, again, are not provided in lieu of classroom instruction or structure.
CRGs could provide a means by which the targeted skills that are taught in the tier III setting
could be applied to the general education classroom. Additionally, since the teacher is not the
focal point in the CRG setting, he or she could more easily assess student progress and utilization
of the targeted techniques being taught in tier III.

During and following the intervention, the language arts teacher and student participants
were directly asked about their perspectives toward CRGs. The teacher and the student
participants indicated that they thoroughly enjoyed the CRGs and wanted to continue to use them
in the future. This was noteworthy in two key areas. First, this classroom had an established
structure in to which CRGs fit with minimal effort because there was dedicated time for reading and discussing literature. By design, CRGs should work as an unobtrusive element of a class’ reading program (Daniels, 2002a; O’Brien, 2007). If CRGs did not fit in to the extant class structure, then they would not have been as positively received or promoted for future use.

Second, the language arts classes in the 6th and 7th grades in this school were responsible for utilizing a Balanced Literacy (Rief, 2007) approach to reading and writing instruction. The teachers were all trained in the specifics of this particular approach and received coaching on a biweekly basis to ensure fidelity to the model. Within this model, though, CRGs worked as a means of providing opportunities for both guided and self-selected reading. Furthermore, in the process of preparing materials to present information about their roles, these students demonstrated preparation for the writer’s workshops that were a part of their language arts curriculum. While these were not the designated goals of the CRGs, the integrity of both processes was maintained and reinforced. In this way, CRGs demonstrate adaptability. An intervention that is adaptable to an extant curriculum or instructional approach is one that will likely be sustained. Kennedy (2005) addressed sustainability as an important consideration when assessing the social validity of an intervention.

Regardless of how well it was received, the critical issue is one of results. It was demonstrated that, for each of the students, the combined intervention phases were the most successful at both eliminating target behavior and promoting replacement behavior. Therefore, it seems reasonable to conclude that the best approach is to do both. However, this was not true for Vida who did not respond to the coaching in the same way as the other three students. Because Vida’s pattern of behavior differed from that of his peers, the data was re-analyzed without him. These new results suggest that coaching was the intervention that brought about the most change.
This is important, considering that coaching only requires minimal training, lesson planning that provided for a time for goal setting and evaluation on a daily basis for students in greatest need, and no materials. Furthermore, its social validity was reinforced in that Horner et al. (2005) indicated that practicality and cost effectiveness of an intervention is a critical measure of social validity.

In the end, Vida was a part of the study and the results of the complete study suggest that, in some circumstances, coaching alone is insufficient. Considering that the CRG intervention also requires few other materials, takes place in the social context of the classroom, combines the setting for the critical literacy skills along with the context for social skills performance, it seems reasonable to consider using these interventions in harmony. Since it would seem likely that the desired results continue over time without the continued presence and activity of an outside agent, such as a researcher, these interventions not only demonstrate important social validity (Horner et al., 2005) but also sustainability that benefits the entire class. That said there are some directions for future research that would further support our understanding of these interventions.

**Future research.** Prior to this study, the purpose of most research regarding CRGs was to improve the reading comprehension skills of students with Specific Learning Disabilities in reading (O’Brien, 2007; O’Brien & Dicker, 2008). These results demonstrated that, due to the fact that roles in CRGs are linked to specific reading comprehension strategies, CRGs improve reading comprehension for students with SLD. Therefore, future research should examine the impact that this intervention has on the reading skills of students at-risk for EBD. Instruction for students with E/BD requires that there is a balance between the social/behavioral and the academic interventions in order to best ensure future success (Lane et al., 2007). The first aspect of the current study that would need to be modified would be the length of the study. The current
study extended 14 weeks at the beginning of the school year and only seven weeks were devoted to the CRG intervention. This is not a reasonable amount of time to bring about notable change in reading comprehension when measured through a valid and reliable assessment.

Considering that the current study examined the utilization of coaching and CRGs with students that demonstrated characteristics of E/BD without being identified for special education services, future research should focus on whether CRGs bring about a common result with students who have been identified with E/BD and are subsequently receiving specialized instruction and/or related services. While this would include a diverse group of students (Kauffman & Landrum, 2013), it could provide evidence for the utilization of both coaching and CRGs as Tier II and Tier III interventions in a Response-to-Intervention framework.

Another issue to address more directly in future research is the use of self-monitoring techniques as replacement behaviors. In the cases of Charlie and Danny, as previously discussed, it is possible that it was the self-monitoring techniques that they chose to use that brought about the change rather than coaching. Therefore, it would be beneficial to conduct a study where the desired replacement behaviors did not include self-monitoring exercises and compare these results against students who were taught self-monitoring techniques without coaching, such as being taught in a separate setting from the one where the behaviors are to be demonstrated.

Finally, it would be valuable to determine the effectiveness of CRGs on the social skills of a class without the utilization of coaching. If CRGs were introduced in comparable classes that are primarily small group and project based, one class could utilize CRGs while the other would not. Classroom social skills could be measured and compared within and across the classes. Performance could be measured according to project completion and grades on exams.
Conclusion

This study examined the use of coaching and CRGs as a means of extinguishing targeted behaviors that impede the interactions and success of students and promoting the replacement behaviors that would potentially serve each student’s needs. Both interventions demonstrated effectiveness in extinguishing the targeted behaviors in each of the four participants. However, the interventions’ effectiveness in promoting the use of replacement behaviors selected by the participants was less consistent. While not to the same extent, the reduction in target behavior was generalized to the science classroom where no interventions were being conducted; however, there was no change in the utilization of replacement behaviors. The effectiveness of coaching was affirmed.

While the reduction in the target behaviors does suggest that the interventions were successful, it is important to recognize that these disruptive behaviors served a purpose for these students and that long term success, both socially and academically, is inexorably linked to the utilization of a productive replacement behavior. Furthermore, this study demonstrated limitations that should be examined in future research: the utilization of these interventions with students already identified as E/BD, as well as the effectiveness of the interventions on social skills, reading skills, and teacher-student interactions during coaching.
APPENDIX A: Teacher Consent Form

University of North Carolina at Chapel Hill Consent to Participate in a Research Study Teacher Participant

Consent Form Version Date: August 15, 2012
IRB Study # 12-1713
Title of Study: Utilizing Coaching and Collaborative Reading Groups to Improve Academic Social Skills
Principal Investigator: Erik Bentsen
Principal Investigator Department: School of Education
Principal Investigator Phone number: 252.213.3711
Principal Investigator Email Address: bentsen@live.unc.edu
Faculty Advisor: Karen Erickson
Faculty Advisor Contact Information: karen_erickson@med.unc.edu

What are some general things you should know about research studies?
You are being asked to take part in a research study. To join the study is voluntary. You may refuse to join, or you may withdraw your consent to be in the study, for any reason, without penalty.

Research studies are designed to obtain new knowledge. This new information may help people in the future. You may not receive any direct benefit from being in the research study. There also may be risks to being in research studies.

Details about this study are discussed below. It is important that you understand this information so that you can make an informed choice about being in this research study.

You will be given a copy of this consent form. You should ask the researchers named above, or staff members who may assist them, any questions you have about this study at any time.

What is the purpose of this study?
The purpose of this research study is to learn about how coaching students and how specialized reading groups can help them productively interact with their classmates. In coaching, selected students will briefly discuss how they should work with their classmates. They will also talk about problems that they sometimes have working with classmates. Then they will set a goal to work on something specific during the class. At the end of class, a conversation will be held with Mr. Bentsen (the person conducting the research) about how well they did.

In the specialized reading group, the entire language arts class will work together. The class will be broken up in to small groups and each student will be given a role to complete while reading. This group will only take place in the language arts class.
You are being asked to be in the study because you work directly with students who have difficulties with their academic social skills and it is critically important to understand if and how work like this has an impact on both students and teachers.

**Are there any reasons you should not be in this study?**
You should not be in this study if you believe that participation will be an obstacle to your instruction.

**How many people will take part in this study?**
There will be approximately six people in this research study, including up to two teachers and four students.

**How long will your part in this study last?**
This study will take place between the beginning of the school year and the Thanksgiving break, about 12-15 weeks. For the majority of the study, though, the researcher will simply be observing the selected students in your classroom.

**What will happen if you take part in the study as a science teacher?**
1. You will allow Mr. Bentsen to observe the students who have chosen to be in the study (see below) in your science class to see how each of them work with his or her classmates as well as how each is performing in science class. For several weeks at the beginning and the end of the study period, Mr. Bentsen will observe three to four times a week. For the majority of the time, Mr. Bentsen will only observe science class weekly. Observations and note-taking by Mr. Bentsen will take place during small group instruction, approximately 20-30 minutes a day.
2. Mr. Bentsen will ask permission to make copies of classroom artifacts, that is, items that represent planning materials or work products by teachers or the students in the study. These artifacts could include digital photographs of work done on the board, written work by students, lesson plans, and informal assessments done by you during the lesson.

**What will happen if you take part in the study as a language arts teacher?**
1. You will meet with Mr. Bentsen to identify students who might benefit from an intervention and to participate in training for specialized reading groups, called “cooperative reading groups, or CRGs.
2. The students will be invited to participate; up to four students will be selected from those with parent permission and student assent.
3. You will receive training on CRGs and the process of training your entire class of students to engage in CRGs as part of reading comprehension instruction. It is anticipated that learning how to use CRGs will require your active involvement over the course of approximately two weeks. Note that you will receive 0.6 CEU credits for completing the six hours of this professional development training.
4. After the prospective students are selected, you will meet with Mr. Bentsen to clarify what behaviors should be specifically and directly addressed, in regards to their participation and performance with other students in class.
5. You will allow Mr. Bentsen to observe the selected students in your class to see how each of them works with his or her classmates as well as how each is performing in class. Mr. Bentsen will
initially observe during the entire language arts class period while you are learning about CRGs, and will then switch to observing three to four times a week throughout the remaining study period during small group instruction, approximately 20-30 minutes a day. If the selected students are in multiple sections of your class, Mr. Bentsen will observe each section for the same amount of time.

6. Mr. Bentsen will ask permission to make copies of classroom artifacts, that is, items that represent planning materials or work products by teachers or the students in the study. These artifacts could include digital photographs of work done on the board, written work by students, lesson plans, and informal assessments done by you during the lesson.

7. Each student will participate in the specialized small reading groups, as will all other students in the class. Students will be asked to complete a role while they work through a text and then use that to work with the other members of their small group.

In addition, the students and Mr. Bentsen will interact in the following ways:

8. The students will meet with Mr. Bentsen before the beginning of their language arts class to discuss and practice effective and ineffective ways to work with classmates. Each will then set a goal for what he or she will do during the class. These meetings will take approximately 5 minutes and will be video recorded to document that the student is not being bribed or coerced into acting in any particular way. In the future, these videos might be utilized to train teachers on how to coach students for greater classroom success.

9. At the end of the language arts class, each student will meet with Mr. Bentsen to evaluate how well he or she met the goal that had been set.

What are the possible benefits from being in this study?
Research is designed to benefit society by gaining new knowledge. If you are a language arts teacher, the benefits to you include CEUs for the reading group training and the development of a simple intervention to directly address students’ academic social skills challenges that may be useful both for your selected students, and students in the future.

What are the possible risks or discomforts involved from being in this study?
There are no perceivable risks to participating in this study. There may be uncommon or previously unknown risks. You should report any problems to the researcher.

What if we learn about new findings or information during the study?
You will be given any new information gained during the course of the study that might affect your willingness to continue your participation.

What if you want to stop before your part in the study is complete?
You can withdraw from this study at any time, without penalty.

Will you receive anything for being in this study?
You will not receive anything if you are a science teacher, but you will receive CEUs related to the reading group training you received as part of your role in this study.

Will it cost you anything to be in this study?
It will not cost you anything to be in this study.

**What if you have questions about this study?**
You have the right to ask, and have answered, any questions you may have about this research. If you have questions about the study, complaints, or concerns, you should contact the researchers listed on the first page of this form.

**What if you have questions about your rights as a research participant?**
All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject, or if you would like to obtain information or offer input, you may contact the Institutional Review Board at 919-966-3113 or by email to IRB_subjects@unc.edu.

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**Participant’s Agreement:**

I have read the information provided above. I have asked all the questions I have at this time. I voluntarily agree to participate in this research study.

__________________________________________________________  Date

Signature of Research Participant

__________________________________________________________

Printed Name of Research Participant

__________________________________________________________  Date

Signature of Research Team Member Obtaining Consent

__________________________________________________________

Printed Name of Research Team Member Obtaining Consent

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University of North Carolina at Chapel Hill
Parent permission for Minor Participation in a Research Study

Permission Form Version Date: 8-12-2012
IRB Study # [IRBNO WILL BE INSERTED]
Title of Study: Utilizing Coaching and Collaborative Reading Groups to Improve Academic Social Skills
Principal Investigator: Erik Bentsen
Principal Investigator Department: School of Education
Principal Investigator Phone number: (252) 213-3711
Principal Investigator Email Address: bentsen@live.unc.edu
Faculty Advisor: Karen Erickson
Faculty Advisor Contact Information: karen_erickson@med.unc.edu

What are some general things you and your child should know about research studies?
You are being asked to allow your child to take part in a research study. To join the study is voluntary.

You may refuse to give permission, or you may withdraw your permission for your child to be in the study, for any reason, without penalty. Even if you give your permission, your child can decide not to be in the study or to leave the study early.

Research studies are designed to obtain new knowledge. This new information may help people in the future. Your child may not receive any direct benefit from being in the research study. There also may be risks to being in research studies.

Details about this study are discussed below. It is important that you and your child understand this information so that you and your child can make an informed choice about being in this research study.

You will be given a copy of this parent permission form. You and your child should ask the researchers named above, or staff members who may assist them, any questions you have about this study at any time.

What is the purpose of this study?
The purpose of this research study is to learn about how coaching students and how specialized reading groups can help them get along with their classmates. In coaching, your child will briefly discuss how he or she should work with his or her classmates. He or she will also talk with Mr. Bentsen, the person conducting the research, about problems he or she sometimes has working with classmates. Then he or she will set a goal to work on something specific during the class. At the end of class, a conversation will be held with Mr. Bentsen again about how well he or she did.
In the specialized reading group, your child will participate with other students in his or her class. The class will be broken up in to small groups and each student will be given a role to complete while reading.

Your child is being asked to be in the study because he or she was identified by his or her teachers as someone who could benefit from support for working with classmates and teachers to perform up to his or her potential.

**How many people will take part in this study?**
There will be up to two teachers and approximately four students in this research study.

**How long will your child’s part in this study last?**
Your child will be asked to participate in this study for approximately 12 weeks (until approximately Thanksgiving). After the study is complete, you will still be welcome to ask any questions that you might have but there is no follow-up work.

**What will happen if your child takes part in the study?**
1. Your child will be observed over the 12-week period in small groups in his or her language arts and science classes to see how he or she works with his or her classmates as well as how he or she is performing in class.
2. Your child will meet with Mr. Bentsen before the beginning of some of your child’s language arts classes to discuss and practice effective and ineffective ways to work with classmates. Your child will then set a goal for what he or she will do during the class. These meetings will take approximately 5 minutes and will be video recorded to document that your child is not being bribed or coerced into acting in any particular way. In the future, these videos might be utilized to train teachers on how to coach students for greater classroom success.
3. At the end of the class periods, your child will briefly meet with Mr. Bentsen again to evaluate how well he or she met the goal that had been set for each day.
4. Your child will participate in a specialized small reading group, just like all other students in class. Students will be asked to complete a role while they work through a text and then use that to work with the other members of their small group.

**What are the possible benefits from being in this study?**
Research is designed to benefit society by gaining new knowledge. The benefits to your child from being in this study may be the enhancement of some skills that will help him or her work with classmates and teachers, potentially enhancing participation in all classes.

**What are the possible risks or discomforts involved from being in this study?**
The risk in this study is that it might be slightly embarrassing for your child to meet with Mr. Bentsen, away from the rest of class, at the very beginning and the very end.
of class. As will be discussed with your child, this risk is minor, since these meetings are very brief, and can be minimized the earlier that your child arrives for class. Your child does not have to explain exactly what your child is doing if other students are curious. Your child will also be offered the opportunity to create with Mr. Bentsen a “cover story” about their meetings.

There may be uncommon or previously unknown risks. You or your child should report any problems to the researcher.

**What if we learn about new findings or information during the study?**
You and your child will be given any new information gained during the course of the study that might affect your willingness to allow your child’s participation in the study to continue.

**How will your child’s privacy be protected?**
- All electronic records, such as collected data or notes, will be maintained through UNC’s secure system. All records will be maintained by the researcher (Mr. Bentsen) only.
- Mr. Bentsen, his advisor, and the teachers that are involved in this study will be the only ones who will have access to the information.
- In the final report of this research, a pseudonym will be given to your child. All information identifying your child, except for the videos, will be destroyed or deleted at the conclusion of this study. Parts of the videos may be used to create training materials for other teachers, so they can learn the coaching process too.

Participants will not be identified by name in any report or publication about this study.

**What if you or your child wants to stop before your child’s part in the study is complete?**
You can withdraw your child from this study at any time, without penalty.

**Will your child receive anything for being in this study?**
Neither you nor your child will receive anything for being in this study.

**Will it cost you anything for your child to be in this study?**
No, it will not cost anything to be in this study.

**What if you or your child has questions about this study?**
You and your child have the right to ask, and have answered, any questions you may have about this research. If there are questions about the study, complaints, or concerns, contact the researchers listed on the first page of this form.

**What if there are questions about your child’s rights as a research participant?**
All research on human volunteers is reviewed by a committee that works to protect your child’s rights and welfare. If there are questions or concerns about your child’s
rights as a research subject, or your rights as a parent, or if you would like to obtain information or offer input, you may contact the Institutional Review Board at the University of North Carolina at Chapel Hill at 919-966-3113 or by email to IRB_subjects@unc.edu.

Parent’s Agreement:

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<tr>
<th>I give permission for</th>
<th>Printed Name of Research Participant (child)</th>
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<td>✓ Yes my son/daughter to participate in this study. I understand that participation will involve videotaping my child in brief conversations with the researcher.</td>
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<th>I do not want my</th>
<th>Signature of Parent Date</th>
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</thead>
<tbody>
<tr>
<td>✓ No son/daughter to participate in this study</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Printed Name of Parent</th>
</tr>
</thead>
</table>

Signature of Research Team Member Obtaining Permission Date

Printed Name of Research Team Member Obtaining Permission
These are some things we want you to know about research studies:
Your parent needs to give permission for you to be in this study. You do not have to be in this study if you don’t want to, even if your parent has already given permission.

You may stop being in the study at any time. If you decide to stop, no one will be angry or upset with you.

Sometimes good things happen to people who take part in studies, and sometimes things happen that they may not like. We will tell you more about these things below.

Why are they doing this research study?
The reason for doing this research is to see if preparing to work with your classmates and then discussing how you did at the end of class helps you to do your best work. Also, this research is being done to see if using a specialized reading group with specific roles helps you to participate in language arts class so that you can do the best work possible.

Why are you being asked to be in this research study?
Your language arts teacher thought that it would be helpful for you to be involved in this research. Your teacher wants to see you do your best in class and thinks that talking about what you should and shouldn’t do with your classmates will help. Also, your teacher thinks that trying out a new kind of reading group will help you to be more involved in your work and to work better with your classmates.

How many people will take part in this study?
If you decide to be in this study, you will be one of about four students in this research study.

What will happen during this study?
This study will take place in your language arts and science classes and will last for about 12 weeks (until Thanksgiving).
During this study, you will meet with Mr. Bentsen (the person doing the research) at the beginning of some language arts classes to talk about how to work with your classmates. Then, at the end of these classes, you will talk with Mr. Bentsen about how well you did. When you are meeting with Mr. Bentsen away from your classmates, your conversations will be video recorded to document that he is not forcing you or bribing you to behave in any particular way.

During another part of the study, you and everyone else in your class will work in small reading groups. In these groups, you will be given a job to do when you read through a book. All of the students in class will be given jobs, too; nothing in your class will be video recorded.

Mr. Bentsen also will observe students in this study in some of their language arts classes and in some of their science classes, during the weeks between when the study starts and Thanksgiving.

**Who will be told the things we learn about you in this study?**

What Mr. Bentsen learns from this research may will be discussed with your teachers and your parents, but not with anyone else at the school. Nobody else will know that you took part. You can develop a “cover story” with Mr. Bentsen about why you meet with him before class sometimes, if having a “cover story” would make you more comfortable in case anyone asks you about it. Your name and everything else that might identify who you are will be kept secret during the research and after the research is over. After the study is over, all information that could be used to identify you will be destroyed or deleted, except for the videos. Mr. Bentsen may use parts of those videos in the future to help show other teachers ways to help coach students.

We will not tell anyone your comments about the study except your parents and language arts teacher, who is helping with this study, without your permission, unless you tell us that there is something that could be dangerous to you or someone else.

**What are the good things that might happen?**

Research is designed to benefit society by gaining new knowledge. The benefits to you from being in this study may be helping you to learn new ways to participate in your class. This could help you get better grades and get along better with your classmates and teachers. We cannot guarantee that being in the study will help, but we think that it will.

**What are the bad things that might happen?**

Sometimes things happen to people in research studies that may make them feel bad. These are called “risks.” The risks of this study are that it might be a little embarrassing to take time at the beginning and end of the class, away from your classmates, to talk about what you should or shouldn't do with Mr. Bentsen.

Being embarrassed might not happen to you. Nothing might happen or things may happen that the researchers don’t know about. You should report any problems to the researcher. To
reduce the chances of your being embarrassed, you do not have to tell anyone who is curious about exactly what you are doing or talking about. If you like, you and Mr. Bentsen can create a “cover story” about why you are meeting with him sometimes before and after class.

**Will you get any money or gifts for being in this research study?**
No.

**Who should you ask if you have any questions?**
If you have questions you should ask the people listed on the first page of this form. If you have other questions, complaints or concerns about your rights while you are in this research study, you or your parents may contact the Institutional Review Board at the University of North Carolina at Chapel Hill, at 919-966-3113 or by email to IRB_subjects@unc.edu.

---

**If you sign your name below, it means that you agree to take part in this research study.**

_________________________  __________________________
Sign your name here if you want to be in the study  Date

_________________________
Print your name here if you want to be in the study

_________________________  __________________________
Signature of Research Team Member Obtaining Assent  Date
Teacher Name:  Date:
Interviewer:

The questions below serve as a guide to begin a conversation with teachers during the interview. However, due to the emergent nature of research, participant responses may drive additional questions particular to each subject and their experiences in the classroom. In addition, not all questions may be asked if a similar question sufficiently addresses the topic.

Teacher background
1. How many years have you been teaching?
2. What certifications do you have?

Classroom behavior
1. What are the student’s areas of strength?
2. What behavior is the most problematic and interferes with his/her performance in the classroom?
   a. -How frequently does this behavior occur?
   b. -What is the intensity of this behavior?
   c. -When this behavior is evident, how long do individual episodes last?
3. What situational variables are most likely present when the student’s problem behavior occurs?
   (Check all that apply)
   - Independent seat work
   - Small group instruction
   - Unstructured activity
   - Specific time of day
   - Specific teacher
   - Specific peer
   - Specific subject
   - Specific Day
   - Specific Day
   - Specific teacher
   - Specific subject
   - Specific peer
   - Specific subject
   - Structured activity
   - Unstructured activity
   - Specific time of day
   - Specific Day
   - Specific teacher
   - Specific subject
   - Specific peer
   - Specific subject
   - Independent seat work
   - Large group instruction
   - Individualized instruction
   - Structured activity
   - Unstructured activity
   - Specific time of day
   - Specific Day
   - Specific teacher
   - Specific subject
   - Specific peer
   - Specific subject
   - Crowded setting
   - Other
   - Specify:

4. What is/are the apparent trigger(s) or antecedent(s) for the student’s problem behavior?
   (Check all that apply)
   - Lack of social reinforcement / attention
   - Teacher’s demand or request
   - Confusion about designated instructional activity
   - Transition between designated instructional tasks
   - Transition between school settings
   - Change / interruption in daily routine
   - Negative peer interaction
   - Consequence imposed for student’s behavior
   - Difficulty processing verbal directions
   - Excessive sensory stimulation
   - Other
   - Specify:

5. How do his/her classmates respond to him/her:
   a. -In a large class setting?
b. -In a small group setting?
6. What behaviors would you like to see the student display?

*Conclusion: Ask the teacher if there is anything they would like to add or share about their experience that has not been covered, or that they would like to expand upon. Thank them for their participation!*
APPENDIX D: Student Group Roles

Book/Story:

<table>
<thead>
<tr>
<th><strong>QUESTIONER</strong></th>
<th><strong>CONNECTOR</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop <em>inferential, literal</em>, and <em>evaluative</em> questions, like:</td>
<td>Connect what you are reading to things that are going on:</td>
</tr>
<tr>
<td>- What was this passage all about?</td>
<td>- in class</td>
</tr>
<tr>
<td>- If a character in the story was real, what would you ask them?</td>
<td>- in school</td>
</tr>
<tr>
<td>- If the author walked in to the room, what would you ask her/him?</td>
<td>- at home</td>
</tr>
<tr>
<td>- Can you stump your group?</td>
<td>- in the news</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>VOCABULARY ENRICHER</strong></th>
<th><strong>PASSAGE MASTER</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Write down and define words that are:</td>
<td>Find the most significant or funny or important section of your reading</td>
</tr>
<tr>
<td>- confusing, tough, or unfamiliar</td>
<td>Find it, read it out loud, and tell the group what you thought was significant/funny/important</td>
</tr>
<tr>
<td>- unique and used multiple times</td>
<td></td>
</tr>
<tr>
<td>- being used in a new way</td>
<td></td>
</tr>
<tr>
<td>Define them... and then see if you can trick your group as they try to define them</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX E: Professional Development Lesson Plans

Professional Development Planning Form

<table>
<thead>
<tr>
<th>Title of the activity or program:</th>
<th>Collaborative Reading Groups – Design, Procedures, Coaching</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning and end dates:</td>
<td>September 6, 2012</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Estimated costs (as they appear in the budget included in Section of the plan)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct costs:</td>
</tr>
<tr>
<td>In-Kind Costs:</td>
</tr>
<tr>
<td>Total Costs:</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Budget source of code (for Direct Costs only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact person(s):</td>
</tr>
<tr>
<td>Position/Title:</td>
</tr>
<tr>
<td>Telephone:</td>
</tr>
<tr>
<td>Email:</td>
</tr>
<tr>
<td>Fax:</td>
</tr>
<tr>
<td>Mailing address:</td>
</tr>
<tr>
<td>Members of the planning team (list with contact information):</td>
</tr>
</tbody>
</table>

Plan Summary
This will be the first of five professional development lesson plans that address the parameters of Collaborative Reading Groups, the process of coaching, and the varied responsibilities of the adults and students involved in this study. This training will attend to the projected amount of time that the entire study will take place, how it will function within the parameters of the classroom, and what will occur during the student-specific coaching sessions.

Section 1: Need
In order to incorporate the needs of both the teachers and the students involved with this study, it is important to conduct a five-part series of trainings and preparations with the pertinent teachers. The trainings will cover the study design, the procedures for coaching, the procedures for Collaborative Reading Groups (CRGs), the responsibilities of all parties involved, and the individual roles and responsibilities therein. The final meeting will be reserved for an informal interview and to provide an opportunity to address all questions and concerns heretofore unaddressed.

Section 2: Participants

<table>
<thead>
<tr>
<th>Grade level:</th>
<th>PreK-2</th>
<th>Gr. 3-5</th>
<th>XGr. 6-8</th>
<th>Gr. 9-12</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Subject area:</th>
<th>English</th>
<th>Math</th>
<th>Science</th>
<th>Social Studies</th>
<th>Foreign Languages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Which of the following are also expected to participate in the professional development?</th>
</tr>
</thead>
<tbody>
<tr>
<td>__ Principals/Other School Leaders       __ Resource Teachers, Mentors, Coaches  __ Paraprofessionals __ Other</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Will the participants work as members of a group or team?</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated number of participants:</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Estimated number of participant groups or teams:</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
What strategies will be used to ensure that teaches and others who are the intended participants do, in fact, participate?

In the training process, the teachers would review the steps in the process of the study, including an overview of the steps involved in the procedures of the CRGs, the process of coaching, and its intended impact, including how it would be conducted and how it would be evaluated. Specifically, the process of interview with the teacher, interview with the students, role playing the specific behavior and scenarios, establishing and setting goals, and evaluating the student’s progress.

**Section 3: Professional Development Outcomes and Indicators**

The teacher will be responsible for identifying students according to whether or not they demonstrate effective classroom social skills, while not receiving special education services. The teacher will also serve to specify the behaviors that he/she find challenging, in order to determine a better definition of the idea of classroom social skills for the specific students.

**Section 4: Professional Learning Activities and Follow-Up**

- Identify any and all students that meet the above criteria and might benefit from direct assistance
- Establish a process by which the permission notes are sent home to the families

**Section 5: Budget**

Use the template in the planning form to prepare the budget necessary to support the learning activities, follow-up and evaluation. Direct Costs are those costs for which you are requesting funding. In-Kind Costs are those which are available from other sources or which you are requesting funding. In-Kind Costs are those which are available from other sources or which may be included as part of matching requirement. Not every budget will include line items in each of the six categories and some budgets may not include In-Kind Costs.

<table>
<thead>
<tr>
<th>Budget Category</th>
<th>Direct Costs</th>
<th>In-Kind Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Personnel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Staff (e.g., PD coordinator, principal, curriculum resource teacher)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Consultants (e.g., presenters, facilitators, evaluator)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II. Stipends/substitutes (for participants)</td>
<td></td>
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</tr>
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<td>III. Travel</td>
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<tr>
<td>IV. Facilities, Equipment, Materials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V. Communications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VI. Other Costs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total Costs**

$0.00
# Professional Development Planning Form

<table>
<thead>
<tr>
<th>Title of the activity or program:</th>
<th>Collaborative Reading Groups – Balanced Literacy and Class Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning and end dates:</td>
<td>September 11, 2012</td>
</tr>
</tbody>
</table>
| Estimated costs (as they appear in the budget included in Section of the plan) | Direct costs: None  
In-Kind Costs: None  
Total Costs: None |
| Budget source of code (for Direct Costs only) | Principal, Butner-Stem Middle School |
| Contact person(s):              | Erik Bentsen                                                             |

## Plan Summary
This will be the second of five professional development lesson plans that address the parameters of Collaborative Reading Groups, the process of coaching, and the varied responsibilities of the adults and students involved in this study. This training will attend to the elements of the Balanced Literacy needs of the classroom and the school system, the procedures necessary for the entire class, and how to establish a balance between the county responsibilities and what is necessary for effective Collaborative Reading Groups.

## Section 1: Need
In order to incorporate the needs of both the teachers and the students involved with this study, it is important to conduct a five-part series of trainings and preparations with the pertinent teachers. The trainings will cover the study design, the procedures for coaching, the procedures for Collaborative Reading Groups (CRGs), the responsibilities of all parties involved, and the individual roles and responsibilities therein. The final meeting will be reserved for an informal interview and to provide an opportunity to address all questions and concerns heretofore unaddressed.

## Section 2: Participants

<table>
<thead>
<tr>
<th>Grade level:</th>
<th>___PreK-2</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>___Fine Arts/Humanities</td>
<td>___Special Education</td>
<td>___English Language Learners</td>
<td>___Health/P.E.</td>
<td>___Career Prep</td>
</tr>
</tbody>
</table>

Which of the following are also expected to participate in the professional development?

___Principals/Other School Leaders  
___Resource Teachers, Mentors, Coaches  
___Paraprofessionals  
___Other

Will the participants work as members of a group or team?  
___YES  
___NO

Estimated number of participants: __2__  
Estimated number of participant groups or teams: __3__
What strategies will be used to ensure that teachers and others who are the intended participants do, in fact, participate?

In the training process, the teachers would review the elements of the Balanced Literacy approach in coordination with the county trainer and compare those responsibilities against the procedures and requirements for Collaborative Reading Groups, specifically in terms of how they address the NRP’s position on utilizing multiple scientifically-based comprehension techniques in order to address reading comprehension. Additionally, the training of CRGs for the entire class will be reviewed, addressing:

- Video modeling
- Student Role Training
- Fishbowl Instruction

Section 3: Professional Development Outcomes and Indicators
The teacher will be responsible for coordinating with the investigator conducting the study in order to establish a standard daily and weekly schedule, in order to ensure that the parameters of the CRGs are being met without interference with the Common Core standards or the established Balanced Literacy approach to reading instruction.

Section 4: Professional Learning Activities and Follow-Up
- Organization of texts and activities in order to document academic progress throughout the CRG process

Section 5: Budget
Use the template in the planning form to prepare the budget necessary to support the learning activities, follow-up and evaluation. Direct Costs are those costs for which you are requesting funding. In-Kind Costs are those which are available from other sources or which you are requesting funding. In-Kind Costs are those which are available from other sources or which may be included as part of matching requirement. Not every budget will include line items in each of the six categories and some budgets may not include In-Kind Costs.

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<td>VI. Other Costs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Costs

$0.00
### Plan Summary
This will be the third of five professional development lesson plans that address the parameters of Collaborative Reading Groups, the process of coaching, and the varied responsibilities of the adults and students involved in this study. This training will attend to the roles that all students will have in the successful completion of their Collaborative Reading Group roles, the role of the teacher as a facilitator of the CRG process, and the role of the investigator as a trainer to the teacher and students to the teacher and students as they master the skills necessary for CRGs.

### Section 1: Need
In order to incorporate the needs of both the teachers and the students involved with this study, it is important to conduct a five-part series of trainings and preparations with the pertinent teachers. The trainings will cover the study design, the procedures for coaching, the procedures for Collaborative Reading Groups (CRGs), the responsibilities of all parties involved, and the individual roles and responsibilities therein. The final meeting will be reserved for an informal interview and to provide an opportunity to address all questions and concerns heretofore unaddressed.

### Section 2: Participants

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<thead>
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</table>
What strategies will be used to ensure that teaches and others who are the intended participants do, in fact, participate?

In the training process, the teachers would review the roles of students that are agents that are responsible for their own reading, comprehension, and learning, by having each student attend to a specific reading comprehension strategy found to be effective by the National Reading Panel. While the students are responsible for taking a greater role in their own reading development, the teacher provides support for peer-based direction as they complete task designed to help them participate in small-group activities in a productive manner. The teacher, on the other hand, assumes the role of facilitator, supporting the process of peer reading. The investigator takes the initial role as trainer for the teacher and the students and then simply provides support as the student assumes responsibility for the process and the teacher assumes a supportive role.

Section 3: Professional Development Outcomes and Indicators
The teacher will be responsible for selecting the students that will be targeted participants in the study. Additionally, the teacher will provide information about the behaviors that will be targeted for elimination, as well as the replacement behaviors, once the students are interviewed and their perspectives are weighed. The teacher will complete the student assessments, providing codified data on the students’ behavior.

Section 4: Professional Learning Activities and Follow-Up
- Identify student-friendly texts for the groups
- Establish a timeline for the beginning of the intervention periods
- Identify and select the students, whose consent will be confirmed prior to the next meeting
- Establish initial assessment data for each potential participant

Section 5: Budget
Use the template in the planning form to prepare the budget necessary to support the learning activities, follow-up and evaluation. Direct Costs are those costs for which you are requesting funding. In-Kind Costs are those which are available from other sources or which you are requesting funding. In-Kind Costs are those which are available from other sources or which may be included as part of matching requirement. Not every budget will include line items in each of the six categories and some budgets may not include In-Kind Costs.

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</tr>
<tr>
<td>VI. Other Costs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Costs
$0.00
Professional Development Planning Form

Title of the activity or program: Collaborative Reading Groups – Process and Student Roles

Beginning and end dates: September 18, 2012

Estimated costs (as they appear in the budget included in Section of the plan)

Direct costs: None
In-Kind Costs: None
Total Costs: None

Budget source of code (for Direct Costs only)

Contact person(s): Andre Ross
Position/Title: Principal, Butner-Stem Middle School
Telephone: (919) 575-9429
Email: rossa@gcs.k12.nc.us
Fax: (919) 575-5894
Mailing address: 501 East D Street, Butner NC 27509

Members of the planning team (list with contact information): Erik Bentsen

Plan Summary
This will be the fourth of five professional development lesson plans that address the parameters of Collaborative Reading Groups, the process of coaching, and the varied responsibilities of the adults and students involved in this study. This training will attend to the roles that the students will need to complete in their Collaborative Reading Groups, how these roles compliment one another, and how the groups will function.

Section 1: Need
In order to incorporate the needs of both the teachers and the students involved with this study, it is important to conduct a five-part series of trainings and preparations with the pertinent teachers. The trainings will cover the study design, the procedures for coaching, the procedures for Collaborative Reading Groups (CRGs), the responsibilities of all parties involved, and the individual roles and responsibilities therein. The final meeting will be reserved for an informal interview and to provide an opportunity to address all questions and concerns heretofore unaddressed.

Section 2: Participants

Grade level: _PreK-2 _Gr. 3-5 _Gr. 6-8 _Gr. 9-12

Subject area: _English _Math _Science _Social Studies _Foreign Languages
_Fine Arts/Humanities _Special Education _English Language Learners
_Health/P.E. _Career Prep _Other

Which of the following are also expected to participate in the professional development?

_Principals/Other School Leaders _Resource Teachers, Mentors, Coaches _Paraprofessionals _Other

Will the participants work as members of a group or team? _YES _NO

Estimated number of participants: 2 Estimated number of participant groups or teams: 3
What strategies will be used to ensure that teaches and others who are the intended participants do, in fact, participate?

In the training process, the teachers would review the roles of the Artful Artist, the Connector, the Passage Master, the Word Wizard, and the Questioner. Each of these roles provides the students with a means by which they can address a narrative text in a manner that is supported by the National Reading Panel’s suggestions for reading comprehension instruction.

Section 3: Professional Development Outcomes and Indicators
The teacher will be demonstrate an understanding of the roles, how they are essential for students with reading delays, how they might be beneficial for students identified as having a high-incidence disability, and how they are used to promote conversation about a text that students choose.

Section 4: Professional Learning Activities and Follow-Up
- Prepare for the fifth session by marking any questions that might emerge as the students become familiar with the ideas of Collaborative Reading Groups
- Establish a schedule for the daily, weekly, and long-term plans, from September, 2012 through Thanksgiving, 2012

Section 5: Budget
Use the template in the planning form to prepare the budget necessary to support the learning activities, follow-up and evaluation. Direct Costs are those costs for which you are requesting funding. In-Kind Costs are those which are available from other sources or which you are requesting funding. In-Kind Costs are those which are available from other sources or which may be included as part of matching requirement. Not every budget will include line items in each of the six categories and some budgets may not include In-Kind Costs.

<table>
<thead>
<tr>
<th>Budget Category</th>
<th>Direct Costs</th>
<th>In-Kind Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Personnel</td>
<td></td>
<td></td>
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<tr>
<td>A. Staff (e.g., PD coordinator, principal, curriculum resource teacher)</td>
<td></td>
<td></td>
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<tr>
<td>B. Consultants (e.g., presenters, facilitators, evaluator)</td>
<td></td>
<td></td>
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<tr>
<td>II. Stipends/substitutes (for participants) III. Travel</td>
<td></td>
<td></td>
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<tr>
<td>A. Personnel Travel</td>
<td></td>
<td></td>
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<tr>
<td>B. Consultant Travel</td>
<td></td>
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<tr>
<td>IV. Facilities, Equipment, Materials</td>
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<td></td>
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<tr>
<td>V. Communications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VI. Other Costs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Costs
$0.00
REFERENCES


Bos, C.S., Coleman, M., & Vaughn, S. (2002). Reading and Students with E/BD: What Do We Know and Recommend? In K.L. Lane, F.M. Gresham, & T.E. O’Shaughnessy (Eds.), Interventions for Children With or At Risk for Emotional and Behavioral Disorders (p. 87-103)


Gresham, F.M. (2002). Social Skills Assessment and Instruction for Students with Emotional and Behavioral Disorders. In K.L. Lane, F.M. Gresham, & T.E. O’Shaughnessy (Eds.), Interventions for Children With or At Risk for Emotional and Behavioral Disorders (p. 242-258)


Individuals with Disabilities Education Improvement Act of 2004, Pub. L. No. 108-446, 118 STAT. 2647


Public Law 94-142. The Education for All Handicapped Act (Nov. 29, 1975).


