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The Impact of Academic Enablers Instruction on Academic Achievement of Elementary School Children

Bryce Kirk
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The Impact of Academic Enablers Instruction on

Academic Achievement of Elementary School Students

Bryce Kirk

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Abstract

The present study investigated the relationship between Academic Enablers (AEs) instruction and student achievement. Specifically, whether such behaviors and attitudes explicitly taught in a small group setting would improve students’ academic performance. Students struggle academically and behaviorally for a variety of reasons, poor or lack of instruction, lack of motivation, or related to a disability, to recognize a few. Existing literature has identified several factors, (e.g., interpersonal/social skills, motivation, study skills, and engagement), known as AEs, that meaningfully contribute toward students’ academic success. However, unlike previous studies that focused on such AEs in isolation, this study addressed this limitation and examined whether the combination of AEs would produce improved effects; specifically, with third grade elementary students. Results suggested some improvement in students’ reading fluency, written expression, and levels of classroom engagement following AE instructions, but not in mathematics, social skills, or study skills. Results and implications are discussed in lieu of the small sample size.
The Impact of Academic Enablers Instruction on Academic Achievement of Elementary School Students

The purpose of this study is to assess the relationship between academic enablers (AEs) and student academic achievement. AEs are specific attitudes and behaviors (social skills, motivation, study skills, and engagement) that allow students to participate in and benefit from academic instruction in the classroom (DiPerna & Elliott, 1999; 2002). This study particularly addressed the question, does teaching specific behaviors and attitudes (e.g., AEs) in a small group setting improve academic performance? Students struggle with learning for various reasons, such as learning disabilities (Torgesen, et al., 2001), poor or lack of instruction (Torgesen, 2002), or behavioral patterns (McLeod & Kaiser, 2004) that do not support academic success. Although well designed and implemented tutoring services have been successful in improving academic achievement (Holliday, 2012), such services are costly (Heinrich et al., 2014) and often target students with academic skills deficits. Therefore, an alternative cost effective approach to aid student academic success may be teaching academic enablers. AEs may help to reduce the number of students needing special education services, and also support students who may not have special education needs, but do not experience academic success. Unlike tutoring that focuses on specific subject areas, teaching AEs may support all subjects. The components of AEs have been studied individually, e.g., motivation or study skills (DiPerna & Elliott, 2002); therefore, the current study attempted to examine the impact of AEs in combination.

Recent research attempted to identify specific factors that influence children’s academic success which has resulted in the understanding that academic success entails a
two-pronged approach involving academic skills and academic enablers (DiPerna, 2006). Both academic skills and academic enablers skills are discussed in more detail next.

**Academic Skills**

Academic skills are the basic and complex skills that provide the foundation for academic instruction at both the elementary and secondary school levels. These skills include reading, written expression, mathematics, and critical thinking. For some students acquiring these skills is challenging, and, therefore, efforts to remedy the situation continues. For example, historically, when a student struggled with academic skills, *tutoring* and increasing study time were used to improve academic achievement (Elbaum, Vaughn, Hughes, & Moody, 2000). However, it is possible that the tutors were teaching other learning strategies in addition to tutoring (Hock, Pulvers, Deshler & Schumaker, 2016), which may support the utility of academic enablers.

For those who do not benefit from tutoring (Shanahan, 1998) or additional evidence-based intervention supports, as required by No Child Left Behind (NCLB, Husband & Hunt, 2015), referral for *special education services* is often the next step. Special education services can be rather costly (Parrish, 2001) and there is no guarantee the students would gain the academic skills (Morgan, Frisco, Farkas, & Hibel, 2010). The cost for educating a typical student is $7,552.00 and special education students cost an additional $9,369.00, totaling $16,921.00 to provide quality education (National Education Association, 2017). When tutoring fails for students who do not qualify for special education services, they are likely to be retained (National Association of School Psychologists, 2011). It was thought that students who struggled academically at one
grade level might benefit from repeating the same grade (e.g., additional instruction at the same level). However, this is not the case for many students and retention was found to be predictive of later drop out (Jimerson, Anderson, & Whipple, 2002).

Finally, the federal government created NCLB in 2002 to reduce the academic achievement gap. Under this law, states are accountable for the performance of their students to meet set standards in reading, written expression, and math and monitor student learning through achievement testing in grade three to grade eight and at least once in high school. Because of the penalty associated with NCLB, teachers seem to be more concerned with meeting standards than effectively teaching their students (Husband & Hunt, 2015), which ultimately loses sight of the meaning of education. For example, teachers teach more towards the test as opposed to providing students with a well-rounded, comprehensive education. These approaches as mentioned above, tend to wait until the student is at risk for failure or is currently failing (Shanahan, 1998). In addition, none of the efforts for increasing student achievement discussed above, tutoring, special education services, retention, or NCLB consider the role of academic enablers in learning. Instead, each focus on drilling academic skills. Even if students show gains in academic skills, it is possible the gains are temporary because they have not learned the skills that support learning.

Furthermore, academic skill building has not taken into consideration other factors that contribute to academic underachievement, such as environmental and social-emotional factors, (e.g., poverty and Attention Deficit Hyperactivity Disorder, ADHD), respectively. Students from low-income families consistently produce lower scores academically in a variety of areas (Davis-Kean, 2005; Eamon, 2005; Lacour &
Tissington, 2011). Low socioeconomic status (SES) and its implications, low educational attainment and unemployment or underemployment, for example can potentially impact the student’s overall ability to learn and attain academic enabler skills. According to Bronfenbrenner’s (1979) ecological model, a child’s surroundings, home, community, and school are interrelated and have implications for learning. Children from low-income families are not necessarily intellectually compromised; rather, they may not have the resources or the model to learn academic enablers. To prevent social and academic failure, it may be helpful to teach academic skills along with academic enablers.

Social-emotional problems present challenges to some students. Students diagnosed with Attention Deficit Hyperactivity Disorder (ADHD) have consistently been associated with academic underachievement (Barry, Lyman, & Klinger, 2002; Birchwood & Daley, 2012). It is possible that these students lack adequate academic enabler skills, which are related to their poor performance, such as study skills, interpersonal skills, and motivation (Volpe, DuPaul, DiPerna, & Jitendra, 2006). It may not simply be enough to focus and target behavioral concerns of students. Students with emotional and social concerns may benefit from teaching social behaviors which support academic learning (e.g., engagement and social skills), in addition to targeting specific behavioral concerns (e.g., inattention or hyperactivity; Demaray & Jenkins, 2011; Vaughn et al., 2009; Volpe et. al., 2006). Based on the forgoing, it is evident that student-learning challenges are not only due to academic skills problems; they can also be related to academic enabler deficiencies. Furthermore, academic skills do not address the ramification of low SES or emotional issues on learning. The traditional way of addressing academic failure has not
been successful either (Sousa & Armor, 2015). For this reason, teaching academic enablers along with academic skills may prevent academic failure.

**Academic Enablers**

Academic Enablers are attitudes and behaviors that enable students to partake in and benefit from academic instruction in the classroom. Academic enablers include interpersonal/social skills, motivation, study skills, and engagement (DiPerna & Elliott, 1999; 2002).

Research that theorizes and conceptualizes what specific factors influence students’ academic achievement has been going on for numerous years (e.g., DiPerna & Elliott, 2002; Malecki & Elliott, 2002; Wentzel, 1993). In 2002, DiPerna and Elliot identified interpersonal/social skills, motivation, study skills, and engagement as academic enablers, hypothesizing that such behaviors meaningfully impact students’ academic success. Among many researchers in the area (e.g., Bennett, 1978; Carroll, 1963; & Glaser, 1976), Walberg (1981) identified nine variables that influenced educational outcomes. The variables include student ability/prior achievement, motivation, age/developmental level, quantity and quality of instruction, classroom climate, home environment, peer group, and exposure to media outside of school. To determine which variables have the most impact on student achievement, Wang, Haertel, and Walberg (1993) analyzed 228 variables through three different review methods (e.g., content analysis, expert ratings, and meta-analysis). Based on this review, the authors separated their findings into two groups, proximal and distal. Proximal included variables such as psychological, instructional, and home environment characteristics and distal variables included demographics, policy, and organizational variables. The authors
concluded that proximal variables have a more significant impact on achievement than distal variables. Proximal variables include such student characteristics as social, behavioral, motivation, affective, cognitive, and metacognitive and have the greatest significant influence on student outcomes (Wang et al., 1993).

Based on previous research, DiPerna (2006) proposed a model, which hypothesized the relationship between academic enablers, academic skills, and classroom instruction (DiPerna, 2006). This model specifies that quality of instruction directly influences the students’ development of academic skills. Also, the impact of instruction is enhanced, or inhibited, by students’ other skills, attitudes, and behaviors (academic enablers). Additionally, the quality and effectiveness of instruction impacts students’ development and utilization of academic enablers in the classroom (DiPerna, 2006). This model suggests that academic enablers play a meaningful role in facilitating classroom learning and should be considered as a part of comprehensive assessments and interventions for addressing learning difficulties of students. Each academic enabler is briefly discussed below.

**Interpersonal/Social skills.** One component of academic enablers, social skills, as defined by Gresham and Elliott (1984), are learned behaviors that allow an individual to interact with others in ways that influence positive responses and aid in eluding negative responses. Examples of such social skills entail sharing, initiating conversations, asking for help, and giving compliments. Several researchers suggest that there is a strong relationship between theses interpersonal/social skills and academic performance (DiPerna & Elliott, 1999; Malecki & Elliot, 2002; Wentzel, 1993; Wentzel & Watkins,
Wentzel (1993) conducted a study that examined the relationship between prosocial and antisocial classroom behaviors and academic achievement. Although dated, her research was central for several other research studies that followed (DiPerna & Elliott, 1999; Malecki, & Elliot, 2002). The study consisted of 432 sixth through eighth grade students and 11 teachers in the middle school. She measured academic achievement in two ways, grade point average (GPA) and Basic Scale scores from the Stanford Test of Basic Skills (STBS), a standardized measure. Social behavior was measured by peer and teacher nominations of students who exhibited prosocial and antisocial characteristics. Results showed that both GPA and STBS scores were significantly and positively associated with prosocial behavior \( (r = .54\) and \( r = .38\), respectively), academic behavior \( (r = .66\) and \( r = .39\), respectively), and teacher preference for students \( (r = .51\) and \( r = .30\), respectively) and were negatively associated with antisocial behavior \( (r = -.55\) and \( r = -.35\), respectively). Further analysis showed that prosocial behavior was a significant, positive, predictor of GPA and a significant, independent predictor of STBS scores. In contrast, antisocial behavior was a significant, negative predictor of GPA and a negative predictor of STBS scores. Neither academic behavior nor teacher preference were significant predictors of STBS scores (Wentzel, 1993).

Malecki and Elliott (2002) conducted a very similar study, inspired by Wentzel (1993), attempting to address similar concerns. Their study included 139 third and fourth grade students from two large school districts in Massachusetts. The researchers assessed
these measures by analyzing results from the Social Skills Rating System (SSRS) and the Iowa Test of Basic Skills – Survey Battery (ITBS). Malecki and Elliott (2002) concluded that social skills and problem behaviors show positive and negative relationships with academic achievement, respectively. Social skills was the only variable to appear as a significant predictive factor for future academic functioning and problem behavior may vary as a function of ethnic and cultural backgrounds. Social skills significantly accounted for about 25% of the variance on the ITBS and problem behaviors did not account for a significant portion of the variance on the ITBS.

Taken together, results from Malecki and Elliott’s (2002) and Wentzel’s (1993) studies suggest that students who display prosocial behaviors perform better academically and that positive evaluations of their performance may reinforce socially appropriate behaviors in the classroom. Classmates typically are not fond of students who break rules and cause disruptions in the classroom; and teachers typically reprimand and isolate such students, which may result in limited social interaction with peers, hindering the student’s social development (Wentzel, 1991). Peer status may also play an influential role in students’ academic performance. Those with higher social status (e.g., popular) and accepted widely amongst their peers were more successful academically than those who were rejected and less accepted. Those who are perceived as socially responsible, try to be socially responsible, trust their classmates, and adaptively solve interpersonal problems earn higher grades compared to those who do not (Wentzel, 1991).

Nonetheless, some educators are concerned that teaching social skills takes time away from academic instruction. Although a noteworthy concern, investing time in social skill interventions may be warranted. Promoting and developing positive academic and
Social behaviors has shown to significantly influence academic success (DiPerna, 2006). Competent social skills positively predict academic achievement (Malecki, & Elliot, 2002), prosocial behaviors may be more influential toward future academic success than problem behavior and early academic skills (Caprara et. al., 2000; Ray & Elliott, 2006), and interventions targeting social skills improves academic achievement (Zins, Bloodworth, Weissberg, & Walberg, 2007).

Social skills training programs have been developed for a wide range of individuals, including those with (Mathews, Vatland, Lugo, Koenig, & Gilroy, 2017; Webster-Stratton, Reid, & Hammond, 2001) and without disabilities (Caldarella, Shatzer, Gray, Young, & Young, 2011; Homer et al., 2009). One of the most commonly used programs for addressing deficits in social skills is Social Skills Training (SST), (Frey, Elliot, & Miller, 2014). SST is used to remediate students’ social skills deficits and eliminate or reduce the problem behaviors that may be associated with their limited social skills.

An effective social skill intervention includes assessment procedures for a broad range of prosocial behaviors and antisocial behaviors (Frey, Elliot, & Miller, 2014). This allows for assessing and targeting specific skills in need of intervention. The intervention also includes a method of determining whether the students’ skill deficit is a result of an acquisition or performance deficit and the students’ social skills strengths. Students who do not perform desired behaviors because they do not know how to perform these behaviors are considered to have acquisitions deficits (e.g., can’t do behaviors). These students need to be explicitly taught and reinforced. Students who do not consistently display the desired behaviors are considered to have performance deficits (e.g., won’t do
behaviors). Performance deficits necessitate intervention targeting students' motivation as these students have performed the desired skill, but do not consistently show it.

Finally, outcome measures are used to assess the impact of the intervention. Although several techniques are utilized during social skills interventions including instruction and rationale, modeling, rehearsal, feedback, and reinforcement; the SST components of the program include behavioral social skills training, social perception skills training, self-regulation techniques, social problem solving, and reduction of inappropriate social responses (Spence, 2003). The techniques are implemented in a systematic manner to help the individual develop the necessary skills to positively interact socially (Smith, Jordan, Flood, & Hansen, 2010). Such interventions have shown positive outcomes for children with a wide range of social deficits (Smith et al., 2010; Elliott & Gresham, 1993; Bellini & Akullian, 2007). Overall, promoting appropriate student social behavior may be a proactive method to support their academic success.

Children with good social skills work well with and learn from others.

**Motivation.** Another component of academic enablers, motivation, research suggests that higher motivation is related to higher academic achievement. However, motivation has been elusive to define and its path to academic success has not been fully understood. According to Schunk, Pintrich, and Meece, “Motivation is the process whereby goal-directed activity is instigated and sustained” (2008, p. 4). Some link motivation to intrinsic motivation, doing a job for its own sake (Schunk, Meece, & Pintrich, 2012), goal orientation, mastery vs. competence (Linnenbrink & Pintrich, 2002), self-efficacy, sense of competency built on prior success (Bandura, 1997), and attribution, explanation of cause of failure or success (Weiner, 1986; Linnenbrink &
Pintrich, 2002). Each of these perspectives is assumed to be related to academic achievement. Regardless, it is important to note that motivation is a multifaceted construct, and not a binary concept. In other words, students are not simply motivated or not motivated to learn about specific academic material (DiPerna, 2006). Students’ motivation is considered to be more situated, contextual, and domain specific, proposing that student motivation is malleable and sensitive to course material and instruction (DiPerna, 2006; Linnenbrink & Pintrich, 2002).

The key question is, how do teachers instigate and sustain goal-directed activities? Intrinsic motivation reveals an individual’s inclination to participate in an activity for the activity itself (Schunk et al., 2012), and it involves personal and situational interest. Personal interest reflects a student’s interests in a particular topic or area. This is relatively stable over time and is moderately a function of the student’s preferences and aspects of the topic or task. Conversely, situational interest is entirely based on the features of the class content and this may be short term or long term (Hidi & Harackiewicz, 2000). Situational interest is the idea teachers need to harness, and it is further broken down into two factors, catch and hold (instigate and hold). Catch refers to the content that simply stimulates the students’ attention. In other words, the content simply “catches” the students’ attention. Instructional techniques that facilitate this “catch” involve such activities as computer software programs, games, group work, and group projects. Such novel approaches are expected to interest students in the subject matter. The “hold” factor reflects how meaningful the course content is for the students. This strategy is thought to empower students to identify the usefulness of the subject matter. Providing real-life examples in the classrooms allows students to see that what
they are learning can be utilized, to a certain extent, to make sense of the world around them (Linnenbrink & Pintrich, 2002). In sum, both facets of situational interest, catch and hold, are associated with other academic enablers such as engagement and study skills (Schunk et al., 2012).

Another perspective associated with motivation is goal orientation, which is divided into mastery and performance goals (Linnenbrink & Pintrich, 2002). Mastery goals emphasize mastery of the material to be learned, while performance goals focus on competition. Mastery goals enable students to focus on their own performance and skills, whereas performance goals focus on the performance of other students. Research suggests that mastery goals compared to performance goals may be more beneficial to students’ overall learning. Overall, mastery mindset appears related to academic achievement as well as other academic enablers, such as study skills, engagement, and interpersonal skills (Linnenbrink & Pintrich, 2002). The goal then should be to help students understand that their education is not one of competition, but rather one of personal development. Further, goal orientation may be enhanced by accurate self-monitoring (students self-monitor their progress). When students demonstrate accurate self-monitoring skills for academic performance, they often show improvements in productivity and accuracy, and increase on task behaviors across all areas (Levendoski & Cartledge, 2000; Rock, 2005; Shimabukuro, Prater, Jenkins, & Edelen-Smith, 1999). The positive feedback of self-monitoring appears to motivate students towards the set goal.

Self-efficacy, a sense of self-competency built on prior success, is related to learning (Bandura, 1997). Students with strong self-efficacy appear to succeed at a task even when it is difficult and seem to be intrinsically motivated. To develop strong self-
efficacy, students need to have mastery experience, which teachers can provide at the students’ level. Further, modeling, vicarious learning, and verbal persuasion are known to boost self-efficacy (Margolis & McCabe, 2006). Self-efficacy appears to be enhanced by self-monitoring as well. Efficacious students are more likely to take on stronger academic challenges, persist through difficult situations and tasks, and believe they will succeed in the future (Wigfield & Wentzel, 2007).

The last facet of motivation is attribution, in other words, an explanation of the cause of success or failure. Such an explanation can be internal and stable or external. For success, it is adaptive to credit the success to stable and internal factors, such as personal ability. For failure, it is more adaptive to attribute the negative event to unstable factors, such as lack of effort. When attributing failure to a lack of effort, it allows students to see and understand where they went wrong and learn how to avoid the cause again (Weiner, 1986; Linnenbrink & Pintrich, 2002). Teachers can help students to reach appropriate attributions that facilitate learning.

Although motivation is challenging to teach, applying what is already known in the classroom may contribute to student achievement. For instance, teachers can increase and sustain student attention by making learning attractive and meaningful, focusing on mastery learning, providing opportunities for success to develop self-efficacy, and encouraging explanation of success or failure that reflects ability and effort, respectively. Helping students develop high motivation to learn at an early age may be the most opportune time as poor motivation worsens due to repeated failure that contributes to a sense of incompetency (Urdan & Schoenfelder, 2006).
**Study skills.** A third component of academic enablers is study skills. Some student underachievement may be explained by poor study skills. Students who demonstrate effective study skills are likely to produce positive outcomes across academic areas (Gettner & Seibert, 2002). Devine (1987), as cited by DiPerna (2006), describes study skills as a number of cognitive skills and processes that aid students in acquiring new information in a manner that is effective and efficient. Such skills and processes may include recording, organizing, synthesizing, remembering, and applying the information learned. Effective studying is a skill that is developed over time and requires training and practice for most students (Gettner & Seibert, 2002). Some researchers suggest that even though study skills are viewed as academic enablers, and meaningfully contribute to students’ academic achievement, teachers typically do not allocate time for direct, explicit instruction of these skills (Zimmerman, 1998), nor are such skills actively or continuously taught (Shinn & Walker, 2010).

When teaching study skills, the teacher must utilize explicit instruction of the target study skills through modeling (including “thinking loud” step by step), giving rational, and guiding the class through the strategy and to help students transfer and generalize the skills to other settings. This is followed by the assessment of students’ acquisition of the specific skills by giving them the opportunity to use the strategies independently (Shinn & Walker, 2010). In one study, students who received explicit instruction maintained the effects at a two year follow up and had generalized the skills to other settings, for example word recognition accuracy in connected text (Ryder, Tunmer, & Greaney, 2008).
There is ample evidence that suggests students with learning disabilities and behavioral challenges, such as ADHD, struggle to learn in the general education setting (e.g., Barry, Lyman, & Klinger, 2002; Gettinger & Seibert, 2002; Hock et. al., 2016; & Vaughn, Klingner, & Bryant, 2001). Since students with challenging conditions show limited skills in planning and execution, it is possible that poor study skills may be one reason for their learning difficulties (DuPaul & Stoner, 2014; Meyer & Kelley, 2007). Fortunately, study skills are teachable and should be taught to the entire student population as a preventative measure (Gettinger & Seibert, 2002), in addition to targeted intervention for students with additional challenges. In sum, teaching study skills to students equips them with strategies for successful learning.

**Engagement.** The last component of academic enablers, engagement, has attracted growing interest because of its association with academic achievement and school dropout. Greenwood, Horton, & Utley (2002) defined engagement as student behaviors that reflect active participation during instruction, which include such behaviors as writing, task participation, reading aloud, asking questions, and providing answers to others. Students who are academically engaged show higher levels of academic performance (Greenwood et al., 2002; Feldman & Matjasko, 2005). Fortunately, engagement is relatively amenable and alterable to intervention efforts, and it is thought to be the link between environments (e.g., school, home, and peer) and student outcomes (Reschly, Appleton, & Pohl, 2014). Research further suggests that engagement mitigates the effects of academic and demographic risk on student outcomes, which promotes resiliency (Finn & Zimmer, 2012).
Engagement is understood as a multidimensional construct entailing four dimensions, academic (e.g., homework completion), behavioral (e.g., following rules), cognitive (e.g., self-regulation), and affective domains, e.g., belonging (Christenson, Reschly, & Wylie, 2012; Fredricks, Blumenfeld, & Paris, 2004; Reschly et al., 2014). Considering that engagement domains are interrelated, it may be more meaningful to think of engagement as a “meta-construct” (Fredricks et al., 2004). When an intervention is targeted toward a specific area of engagement (e.g., cognitive), improving the student’s self-regulation may in turn influence the student’s time on task or homework completion (e.g., academic). Nonetheless, years of studies (Cobb, 1972; Greenwood, Delquadri, & Hall, 1984; Greenwood, 1991) have concluded that the key to student engagement is instruction that increases academic responding. In addition to instruction, the emotional climate of the classroom is important (Reyes, Brackett, Rivers, White, & Salovey, 2012). It is understandable that distress in the classroom diverts emotional and cognitive resources from active engagement.

Providing opportunities for active responding during academic instruction in the classroom is one strategy known to be effective in increasing student engagement (Lewis, Hudson, Richter, & Johnson, 2004; Partin et al., 2009; Sutherland, Alder, & Gunter, 2003). Not only has this strategy been effective for typical students in the general education classroom, there is also evidence for its efficacy for students with emotional and behavioral disabilities (Sutherland et al., 2003). Examples of strategies that increase active student response to instruction include choral responding (oral response in unison), student response card (selecting from response card options), guided notes (teacher note handouts for guiding students), or student response systems (e.g., clickers); (Haydon,
Marsicano, & Scott, 2013; Jimenez, Lo, & Saunders, 2014; Randolph, 2007). For example, in a study by Christle and Schuster (2003), when compared to typical classroom responding methods, such as hand raising to answer questions, overall participation increased when students used response cards. Further, active student engagement in the classroom also reduces disruptive behaviors; academically engaged students cannot engage in disruptive behaviors at the same time (mutually exclusive behaviors). This is advantageous for teachers; particularly considering teachers receive little to no training in classroom behavior management (Simonsen, Myers, & DeLuca, 2010).

In summary, as seen in the foregoing, academic enablers (social skills, motivation, study skills, and engagement) are skills that support learning, academic achievement, improve peer relationships, and decrease disruptive behaviors (DiPerna & Elliott, 1999; 2002). However, these skills are not systematically taught in the school system similar to academic skills. This is rather disadvantageous for students, particularly students from low SES communities, students with disabilities, and students in poverty (Davis-Kean, 2005; Eammon, 2005; & Lacour & Tissington, 2011).

Further, the current literature shows that researchers so far have focused on individual academic enablers; and there are no studies to date, this researcher could identify, that have simultaneously examined the efficacy of the four academic enablers (social skills, motivation, study skills, engagement), (Gettinger & Seibert, 2002; Greenwood et al., 2002; Linnenbrink & Pintrich, 2002; Malecki, & Elliot, 2002). Thus, the current study is an attempt to begin to fill this void. Considering academic enablers are interrelated, teaching the skills simultaneously is expected to improve overall academic achievement.
The Current Study

The primary role of the public school system is to educate children to enable them to be self-sufficient and contributing adults to the larger society. The effort to do so continues to undergo reforms; however, the skills, academic enablers that support academic achievement have been mostly ignored. Therefore, the current study proposed that academic enablers (social skills, motivation, study skills, and engagement) should be taught along with academic skills in a developmentally appropriate manner. For example, it is understood that the manner academic enablers are taught before third grade would be different from late elementary school or middle school. It is also proposed that academic enablers should be taught similar to academic skills.

The current study is designed to assess the influence of multiple academic enablers on students' academic achievement and the efficacy of teaching specific behaviors and attitudes (social skills, motivation, study skills, and engagement) in the classroom. Overall, the study was designed to examine the efficacy of academic enablers instruction in a small group setting for improving academic achievement of students. The following questions were posed:

1. Does teaching academic enablers explicitly in small group improve academic achievement of students in the classroom in general?

Research shows that academic enabling skills and behaviors can be taught to promote academic achievement (DiPerna, 2006). Therefore, it was hypothesized that participating students would show improved academic achievement.
2. Does teaching AEs improve peer relationships?

Competent social skills positively predict academic achievement (Malecki, & Elliot, 2002), and interventions targeting social skills improve academic achievement (Zins, Bloodworth, Weissberg, & Walberg, 2007). It was then hypothesized that participants would show improved social skills.

3. Does teaching AEs improve motivation?

Motivation is assumed to be related to academic achievement (Linnenbrink & Pintrich, 2002; & Schunk, Meece, & Pintrich, 2012), and AEs included motivation skills. Based on this, it was hypothesized that participating students would show higher motivation.

4. Does teaching AEs instruction improve study skills?

Research suggests that when students receive explicit instruction targeting study skills, as AEs does, they often show improvements in their achievement, which is due to their newly acquired knowledge of studying strategies (Gettinger & Seibert, 2002; Ryder et al., 2008). It was, therefore, hypothesized that participating students would show improvement in study skills.

5. Does teaching AEs improve engagement?

Based on research, students who are academically engaged demonstrate higher level of academic performance. Further, academic engagement lessens behavior problems (Greenwood et al., 2002, & Feldman & Matjasko, 2005). Therefore, it was hypothesized that participants would demonstrate higher-level engagement.
Method

Participants and Setting

During the early data collection stages of the study, the study included a total of 14 students. Due to participant attrition, over half (eight) withdrew from the study, either they moved away, or the primary researcher never obtained parental consent. Participating students were from two, third grade classrooms in a school district at the primary researcher’s internship site located in a low income community (an elementary school in north central Illinois). Both teachers were Caucasian. The teacher for group 1 has four years of teaching experience and the teacher for group 2 has 22 years of teaching experience; both earned bachelor’s degree in elementary education. Based on teacher input, student discipline referrals, work completion record, attendance record, and benchmarking scores, students who seem to struggle with learning participated in the study. The group was randomly assigned by flipping a coin: Students in one class made up Group 1, Academic Enablers (AEs) condition and the other class, Group 2, Control condition. Group 1 received small group instruction explicitly targeting academic enablers (i.e., social, motivation, study, and engagement skills) and Group 2 received homework time. Following teacher input, a total of four students in group 1 were pulled for AEs instruction provided by the primary researcher, and a total of two students in group 2 were pulled for extra help with homework.

The experimental group consisted of two boys and two girls. Based on demographic information, two students were either African American or biracial. Three of the four parents reported two parent households. Three of the four reported the child received free or reduced price lunch. The control condition included two girls; both were
Caucasian. One reported the child resided in a single parent home and the other reported a two parent household. Both reported to have siblings and received free or reduced price lunch.

**Instruments**

First, teacher input, student discipline referrals, school attendance record, homework completion record, grades, and benchmarking scores, each described below, were used to identify students who were struggling with learning. Once students were identified, teachers were asked to complete the Academic Enabler Observation Checklist and the researcher observed students during instruction to collect baseline data on learning engagement behaviors. The primary researcher also administered Curriculum-based Measurement to the students, to gain a baseline score, in reading fluency, mathematic computation and application, and written expression, and collected demographic information from the teachers and students.

**Student needs assessment rating form.** The form was developed by the researcher to seek input from teachers to identify students who benefit from academic enablers instruction. Using the Student Needs Assessment Rating Form (Appendix C), teachers ranked order their students, i.e., the first student on the list needs the intervention the most, while the last student on the list needs it the least. In addition, teachers identified which of the academic enablers skills a student would benefit from the most by writing a number, 1 to 5 (1=needs to develop all four skills, 2=needs to develop social skills, 3=needs to develop engagement skills, 4=needs to develop study skills, and 5=needs to develop motivation skills). If a student needs, for example two skills, teachers can write 2 and 4, needs to develop social skills and study skills, respectively.
Student discipline referrals. The principal or vice principal of each school maintains a discipline referral record. High or frequent discipline referrals may indicate problems with social skills. There is evidence for the validity (both concurrent and predictive) of school discipline referral data. Students with two or more discipline referrals seem to show deficit in social skills (Walker, Cheney, Stage, & Blum, 2005). Students’ total number of referrals were analyzed to determine pre-post intervention outcome.

Attendance record. Schools are mandated to keep record of attendance and intervene to improve attendance, or involve the truancy officer who works with families to improve attendance. High absenteeism may indicate lack of engagement. Although most studies have focused on high school students and associate poor attendance with school dropout, Lehr, Sinclair, and Christenson (2009) asserted that students who drop out of school show problems with attendance, academics, and behavior early in the third grade. Students’ total number of absences were used to analyze pre-post intervention.

Homework completion record. Teachers maintain record of assignments completed and turned in. High level of incomplete work record may indicate poor academic skills, study skills, student engagement, or motivation (Bryan & Burstein, 2010). Students’ rate of homework submissions (e.g., both complete and incomplete) were used to analyze pre-post intervention.

Student grades. Although controversial, schools traditionally use grades as one indicator of learning. There is also evidence that grades may be related to school engagement (Poorthuis, et al., 2015). In this study, grades were used as one indicator of academic achievement.
**Academic enablers observation rating scale.** To assess more specifically each student's current level of academic enabler skills, the classroom teachers completed the Academic Enabler Observation Checklist (Appendix G). In addition to a total score, total subscale scores (e.g., Motivation score) may also be used. The checklist was adapted from Intervention Central (Wright, 2010). In addition, behaviors identified as academic enablers in the literature, such as sharing and asking for help (interpersonal skills), goal setting and self-monitoring (motivation skills), prioritizing and organization (study skills), and task participation and team work (engagement skills) were included (DiPerna & Elliott, 1999; 2002). Although the psychometric properties are unknown, this checklist is designed to assess participants' academic enablers skills and also inform intervention.

**Benchmarking scores.** To progress monitor student learning, schools assess student learning four or three times a year using Curriculum-based Measurement. In this study, benchmarking scores before and after intervention were used to assess intervention outcome. The primary researcher administered his own benchmark assessment, AIMSweb, to assess academic performance levels.

**Curriculum-based measurement (CBM).** In order to assess outcome, the researcher administered CBM reading fluency, mathematic computation and application, and written expression. CBM is a specific sequence of steps for measuring student growth in basic skills including, reading, spelling, mathematics computation, and written expression (Hintze, Christ, & Methe, 2006) and was originally developed at the University of Minnesota through the Institute for Research on Learning Disabilities (IRLD); (Deno, 1985). According to Deno, “When procedures for measurement are employed with stimulus materials drawn directly from the instructional material used by
teachers in their classrooms, the approach is referred to as *curriculum-based* (Deno, 2003, p. 184). Therefore, CBM is a set of standardized procedures utilized for assessing student academic progress.

CBM has sound psychometric properties and it is considered a valid and reliable measure for reading, mathematics (Marston, 1989), and writing (NCS Pearson Education, 2012). CBM also has good reliability and validity estimates for all students (Fuchs & Fuchs, 1992; Hale et al., 2010; McGlinchey & Hixson, 2004; Parker, Hasbrouck, & Tindal, 1992; Shinn & Shinn, 2002). CBM is a sound method of assessment which aids accurate identification of students who struggle academically as well as those who are at-risk for developing academic problems.

**Classroom observations.** Classroom observations were conducted to collect baseline data on student engagement. Classroom observations are one of the most common methods of collecting student information by school psychologist, as well as a quantitative method of measuring classroom behaviors from direct observations (Shapiro & Heick, 2004). The behaviors that are to be observed are first identified, e.g., the student is working on assigned material, responding to teacher question, or asking question (on task behaviors), and out of seat or talking out of turn (off task behaviors). *Engagement* was defined as any such on-task behavior, like those mentioned above, that matches the ongoing classroom instruction. Additional engagement behavior may include reading out loud or talking with another student about the assigned task. *Off task behaviors* were defined as any behaviors that do not match the ongoing instruction or activity. Additional examples of off task behavior may include attending to unassigned materials, head on the desk, and playing with an unrelated item. Engagement behaviors were measured utilizing
momentary time sampling (last three seconds of 15-second intervals) and off task behaviors were measured using partial interval recording. The researcher conducted three 20-minute observations, and the average of the three observations served as an indicator of student engagement.

**Demographic information.** Two forms were developed by the researcher for collecting demographic data on participating students and teachers. The Student Demographic Form (Appendix B) was completed by parents, and sought out such information as gender and learning behaviors of the student. The Teacher Demographic Form (Appendix F) was intended to collect information, such as years of teaching experience and experience with academic enablers.

In summary, pre-post data on student discipline referrals, school attendance record, work completion record, grades, benchmarking scores, Academic Enabler Observation Rating Scale completed by teachers, and scores from Curriculum-based Measurement, administered by the researcher, were used to assess the impact of AEs intervention on academic achievement. In other words, the pre-post data answered the research question; does explicit instruction of academic enablers (i.e., social skills, motivation, study skills, and engagement) improve academic achievement of students?

**Procedure**

Firstly, permission to conduct the study was sought out from the researcher’s internship site, school district, followed by the Institutional Review Board (IRB) at Eastern Illinois University. Secondly, participating teachers signed the Teacher Consent Form (Appendix A) and they identified students who may benefit from academic enablers instruction (Academic Enablers Observation Rating Scale, Appendix G).
Parental consent was also sought out (Parent Letter, Appendix D and Parent Consent Form, Appendix E) for student participation. A self-addressed envelope and a brief instruction for how to return the signed consent form and completed Student Demographic Information Form (Appendix F) was provided to parents. Parents were expected to place both documents in the self-addressed envelope, seal the envelope, sign it across the flap, and instruct their child to hand it to her or his teacher. The teacher placed the envelope in a box provided by the researcher, who picked up the envelopes each day. Finally, to encourage participation, participants signed an assent form (Appendix H). The study received 100% of students’ assent to participate in the study.

To assure confidentiality, each teacher and students were assigned an identification number rather than using identifying information, such as names. For example, students were identified as AE1, AE2, and AE3 or C1, C2, and C3 to signify the respective group the student is assigned to, academic enabler group and control group, respectively. In a similar pattern, the teachers were known as AET and CT. These lists, in addition to all student records and scores, are stored in a password protected electronic file that only the primary researcher can access. When the research protocol for maintaining record after the end of a study is met, the list will be permanently deleted.

**Academic enablers instruction.** As previously mentioned, academic enablers consist of attitudes and behaviors (i.e., motivation, social skills, study skills, and engagement) that aid student academic success. Each academic enabler was covered in two sessions in a format known as S.A.F.E. (sequenced, active, focused, and explicit) (Durlak, Weissberk & Pachan, 2010). Each session occurred for a duration of 40 minutes and was adapted from Elliott and Gresham (2007) as cited by “Behavior Management”.
Table 1, below, provides a sample group sessions format.

### Sample Group Sessions Format

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 min.</td>
<td>Opening</td>
<td>Introduction, homework processing, and presentation of agenda, learning objectives. This allows the researcher to monitor progress, and review lessons from the previous session, if necessary.</td>
</tr>
<tr>
<td>20 min.</td>
<td>Work time</td>
<td>Explicit instruction of agenda items (lessons), modeling, role playing, video, scenarios, and so on.</td>
</tr>
</tbody>
</table>
| 8 min.| Processing Time| Participants brainstorm about how the new skills apply to them in the context of their situation. This exercise allows the researcher to provide corrective feedback. Participants:  
  - identify when to use the skills every day.  
  - commit to using the skills in a specific situation, i.e., homework, and report back the next week. |
| 5 min.| Closing Time    | Student rating and graphing, and integrity check by the researcher.                                                                           |

The Academic Enablers (AEs) instruction consisted of eight lessons, two for each academic enablers. The first two lessons focused on study skills. The study skills lessons sought to educate the students about the importance of homework and specifically what effective study habits consisted of good practice. For example, addressing strategies such
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as where to complete their homework, what time should they work on their homework, work prioritization, and effective studying strategies (Kruger, 2017; Seaman, 1996).

Lessons three and four focused on positive classroom engagement behaviors. Students were explicitly taught and practiced on-task behaviors that would aid their ability to maintain focus and attention throughout instruction. For example, students practiced how to appropriately participate and remain focused during classroom instruction (Kruger, 2017; Seaman, 1996). Lessons five and six focused on social skills. During the social skills lessons the students learned how to identify and appropriately express their emotions, as well as learning to use effective coping strategies to help manage their emotions during aroused episodes. Students learned what and how to use “I Messages” and what steps to use to reduce their aroused state (Sheridan, 2010; Webster-Stratton, 2013). Lessons seven and eight focused on motivation. During the motivation lessons the students learned what goals were and how to effectively set appropriate goals (e.g., SMART goals; Kruger, 2017). Also, the students were taught how to work through and persevere through their frustration when tasks became more difficult and challenging (Khan Academy, 2018; Webster-Stratton, 2013). The intervention was implemented with full integrity, please refer to Appendix I for the checklist.

Results

The primary purpose of the study was to assess the efficacy of academic enablers (social skills, motivation, study skills, and engagement) instruction in a small group setting for improving academic achievement of students in general. The result of each of the five research questions is presented next. Overall, a two-way mixed factorial analysis of variance was conducted to determine the efficacy of the intervention. Pre- and post-
test scores constituted the within-subjects factor while the grouping (Academic Enablers vs. control group) was the between-subjects factor.

**Research Question 1**

In order to answer the first research question, whether or not a small group explicit academic enablers instruction would improve academic achievement of students in general, a two-way mixed factorial analysis of variance was conducted on each of the CBM measures. Results indicated that there was no significant interaction between time (pre- vs. post-test) and group (AE vs. control) on reading fluency. There was also no significant main effect of group. However, there was a significant main effect of time, \( F(1, 4) = 10.91, p = .03, \eta^2_p = .73 \). R-CBM scores were significantly higher \( (M = 110.67, SD = 10.02) \) at post-test than at pre-test \( (M = 95.67, SD = 23.48) \).

Similar results were observed for written expression. There was no significant interaction between time (pre- vs. post-test) and group. There was also no significant main effect of group. However, the results yielded a significant main effect of time, \( F(1, 4) = 15.37, p = .02, \eta^2_p = .79 \). WE-CBM scores were significantly higher at post-test \( (M = 38.00, SD = 15.27) \) than at pre-test \( (M = 20.00, SD = 7.90) \).

For both math computation and application, there was no significant interaction between time (pre- vs. post-test) and group. There were also no significant main effects of group.

In sum, the introduction of academic enablers instruction did not have an effect on the students’ academic achievement as participants in both the intervention and control groups showed similar results. Both groups made progress in reading fluency and written expression from pre to post test, but not in math computation and application.
Research Question 2

To answer the second research question, whether teaching AEs instruction would improve peer relationships, a two-way mixed factorial analysis of variance was conducted on the teacher rated social skills subscale total. Results showed that there was no significant interaction between time (pre- vs. post-test) and group. Likewise, the results did not yield a significant main effect of group.

Research Question 3

A two-way mixed factorial analysis of variance was conducted to examine if teaching AEs instruction would improve students’ motivation, as measured by total number of absences. Results showed that there was no significant interaction between time (pre- vs. post-test) and group. There was also no significant main effect of group. However, there was a significant main effect of time, \( F(1, 4) = 20.83, p = .01, \eta_p^2 = .84 \). Post-test school absence (\( M = 8.83, SD = 4.17 \)) was significantly higher than at pre-test (\( M = 4.00, SD = 2.76 \)).

Research Question 4

To answer research question four, whether teaching AEs instruction would improve study skills, a two-way mixed factorial analysis of variance was conducted on the teacher rated study skills subscale total. Results showed that there was no significant interaction between time (pre- vs. post-test) and group, and no significant main effects related to group, or time.

Research Question 5

To answer the fifth research question, whether teaching AEs instruction improve engagement, a two-way mixed factorial analysis was conducted on the teacher rated
engagement subscale total. There was no significant interaction between time (pre-vs. post-test) and group. Similarly, there was no significant main effect of group. However, there was a significant main effect of time, $F(1, 4) = 8.31, p = .05, \eta^2_p = .68$. Levels of engagement were significantly higher ($M = 22.50, SD = 5.82$) at post-test than at pre-test ($M = 20.83, SD = 5.31$).

**Additional Analysis**

To answer the general question, whether the students who participated in AEs instruction would show improved ratings of academic enablers skill, a two-way mixed factorial analysis was conducted. There was no significant interaction between time (pre-vs. post-test) and group. Likewise, there was no significant main effect of group. However, there was a significant main effect of time $F(1, 4) = 8.56, p = .04, \eta^2_p = .68$. Academic enablers skill levels were significantly higher ($M = 98.33, SD = 23.98$) at post-test than at pre-test ($M = 88.17, SD = 21.12$).

In summary, research questions one and five addressed, academic achievement (reading fluency, written expression, and math calculation and computation) and engagement during instruction, respectively. Pre-post data analysis showed that both groups had higher academic achievement (reading fluency and written expression) and instruction engagement at posttest. Results of research question three showed a significant increase in school absences (indicator of motivation) from pre-to post-test. On the other hand, participants did not show change in interpersonal/social skills and study skills (research question two and four, respectively) at posttest.
Discussion

The effects of small group academic enablers instruction on overall student achievement, particularly in third grade, was examined. It was hypothesized that teaching academic enablers, such as skills in peer and interpersonal relationships, motivation, study, and engagement would improve academic achievement, because effective social, study, motivation, and engagement skills are known to support academic achievement (DiPerna & Elliott, 2002). Hypothesis one, students in the intervention group would show improved achievement as a result of academic enablers instruction as measured by CBM, was not supported. Regardless of which group the students participated in, there was a significant difference between pre- and post-test CBM measure for reading fluency (R-CBM) and written expression (WE-CBM). One explanation for this result may be that some of the students received more intensive services (e.g., Title I, Tier 2, or Tier 3 support) to address their English language arts difficulties. Such students receive individual or small group supplemental instruction to support the curricula content provided in the classroom. Thus, the significant improvements in the students’ reading skills may be credited to the additional services. The literature suggests that high-quality classroom instruction concurrently with more intensive instruction results in the most efficacious outcomes (Fuchs & Fuchs, 2006; Slavin, Lake, Davis, & Madden, 2011; Vaughn et al., 2009). Due to the strong relationship between reading and writing (Fitzgerald, & Shanahan, 2000), students who show improvement in their reading skills subsequently would be expected to improve their ability to express themselves through writing.
Regarding students' math achievement, the results suggested that the introduction of academic enablers instruction did not meaningfully or significantly impact their math skills, unlike reading. This may possibly reveal a larger issue in math education. As discussed earlier, effective classroom instruction with supplemental support for students who require repeated teaching is an effective teaching approach. However, math teachers may not be well prepared in effective math instruction. Although, reform in teacher preparation has continued to improve over the last decade or so, pre-service teachers' (prospective teachers) courses in mathematics consistently fall short of standards (e.g., Conference Board of Mathematical Sciences; Masingila, Olanoff, & Kwaka, 2012). In addition, research suggests that many mathematics teachers have little to no elementary teaching experience or have a comprehensive understanding about important ideas in elementary mathematics (Masingila et al., 2012; Strawhecker, 2005). Therefore, the current base mathematics instruction may not have reached some of the students in the current study. Furthermore, in this study, unlike the reading support, participating students did not receive additional intervention efforts to address their math deficits.

Hypothesis two, participants would show improved social skills (peer and interpersonal skills), was not confirmed due to the lack of significant improvement, however, students did show some improvements when comparing pre- and post-teacher rated social skills. The lack of skills generalization may be responsible for this outcome. Although, the social skill components of the group instruction incorporated evidenced-based behavioral strategies (e.g., modeling, behavioral rehearsal, reinforcement; DiPerna, 2006; Smith et al., 2010; Spence, 2003), these students may not have been afforded opportunities to practice those skills outside of the small group environment, hence, not
evoking a sense of a generalized skill set (Maag, 2006). Future research efforts should develop a plan for generalization that also incorporates reinforcement contingencies (e.g., behavior charts; Shinn & Walker, 2010). An example of a generalization plan may consist of implementing behavior charts in the classroom that focuses on the specific skills that are targeted in various small group, such as AEs group, or counseling settings provided by school social workers or the school psychologists.

Hypothesis three, participating students would show improved motivation, as measured by school attendance, was unsupported. However, regardless of group type, participating students showed a significant difference in the number of school absences before and after the intervention phase, i.e., they missed more school days. One explanation for this outcome may be due to the diverse, extraneous factors that influence school attendance within this population (Ford & Sutphen, 1996); the school is located in a low income community. It is understood that at risk students in low income communities are more susceptible to frequent school absences. Family income and school attendance independently impact student achievement (Morrissey, Hutchison, & Winsler, 2014). At risk children with potential school attendance concerns may require a more comprehensive effort (e.g., Ford & Stuphen, 1996) to improve school attendance rates than what participants in the current study received. This is especially concerning for students and families who reside in low income communities, because school absences may be more detrimental to these children due to the limited resources available to the school and surrounding community to effectively intervene and ameliorate the problem (Chang & Romero, 2008; Leventhal & Brooks-Gunn, 2004). Therefore, students at-risk
for chronic school absences may benefit from a more comprehensive effort targeted to addressing contributing factors to reduce the number of absences.

The introduction of academic enabler instruction for increasing students’ levels of study skills (hypothesis four) was not supported. One reason for this outcome may be that two AE students did not entirely complete all eight AEs lessons. Both students missed a lesson focusing on study skills, which might have influenced the results that almost reached significance. In addition, participants needed sustained instruction and practice in addition to the small group instruction. Unfortunately, the classroom teacher did not actively or consistently teach and reinforce academic enablers, which is consistent with previous research (Zimmerman, 1998; Shinn & Walker, 2010). Lower achieving students tend to show weaker study skills and require explicit instruction, training, and practice in order to gain the skills of productive studiers (Gettinger & Seibert, 2002); such skills may even aid the maintenance of later achievement (Ryder et al., 2008). Therefore, future studies may benefit from a treatment component that enables teachers to explicitly teach and reinforce study skills in the classroom.

The last hypothesis expected the introduction of academic enablers instruction to improve students’ levels of engagement. Regardless of group type, students were reported to be more engaged during classroom instruction following the intervention phase when compared to pre-test levels of engagement. One reason for this outcome might be attributed to the teachers’ natural use of providing students opportunities to respond (OTR). Although measuring the frequency at which each teacher afforded their students OTR is beyond the scope of this study, each teacher was observed to use various forms of OTR (e.g., asking students questions and guided notes). These instructional
techniques, prompting, guided notes, asking questions, to identify a few, support
teachers' instructional efforts in increasing academic on-task behavior (Simonsen,
Fairbanks, Briesch, Myers, & Sugai, 2008; Simonsen et al., 2010). When students are
actively or passively engaged during instruction, the students are less likely to display
off-task behaviors (mutually exclusive behaviors, Simonsen et al., 2008; Simonsen et al,
2010), even for students with significant behavioral needs (Sutherland et al., 2003).
Consequently, it is difficult to definitively posit that the Academic Enablers instruction
directly influenced the students' level of classroom engagement from the current study.
Future studies should focus on teachers who do not teach academic enablers in the
classroom.

Overall, pre-post data showed participating students in both intervention and
control groups realized some growth in academic achievement (reading fluency and
written expression) and engagement during instruction. It is possible that other
instructions over time may be responsible for these results. The intervention began well
into the second semester, which by this time students have settled down into the school
year and learned some skills and expectations. Conversely, pre-post data did not show
growth in math for both groups. In addition to the historical challenges with teaching
elementary school math, it is possible that these students missed a portion of instruction
in math because the next instructional area was math. The students' rate of transition
back to the classroom varied each week, which may have influenced the amount of
instructional time they received that day. Furthermore, students made no gains in social
skills and study skills; it is possible that these students did not have the required
opportunity to practice skills to reach automaticity and need to be incorporated in
training. In a study by Lally, et al. (2010) that attempted to identify how long it would take to form a new habit, the researchers found individual differences, 18 to 254 days. It is understood that habits, new behaviors, are formed through incremental repetition and reinforcement (Shinn & Walker, 2010) of the new behavior in a consistent context until automaticity develops (Verplanken, 2006; Wood & Neal, 2007). This might have implications for teaching academic enablers in general, but particularly to struggling learners.

**Limitations**

To address the major limitation, the small sample size and uneven comparison group did not allow for definitive conclusion or generalizability beyond this effort. In addition, the intervention lasted only eight weeks, once a week for less than an hour, which might not have allowed for enough practice time. Future studies may want to correct for these limitations and replicate the study with a larger and even sample size between the intervention and control group and extend the intervention over a full semester.

**Implications and Conclusion**

In this study, both groups improved AEs skills, as rated by the teacher. This result might raise a question despite the small sample size. The teacher from group 2 reported teaching AE in the classroom whereas the teacher for group 1, the academic enablers group, did not report such instructional efforts, raising the question, is AEs instruction in the classroom an effective instructional method for enhancing student achievement? In an effort to measure such instructional practices, future studies should develop an Academic Enablers Observation Checklist to measure teachers’ level of AEs instruction reliability.
In other words, the observation would explicitly measure the reliability of teachers’ AEs instructional practices.

In conclusion, teaching academic enablers skills in the classroom may be cost effective as it reaches more children and provides practice in context overtime. Therefore, future studies may want to focus on teaching academic enablers in the classroom first, followed by additional small group instructions for students who require repeated teaching. There is some evidence to show additional intervention to the classroom instruction is effective. For example, Title I reading programs have been found to be effective when delivered after school or in the summer, but not when children were removed from the regular reading instructions (Weiss, Little, Bouffard, Deschenes, & Malone, 2009), and the practice of pulling out children from classroom instruction for RtI services has been questioned for similar reasons (Balu, Zhu Doolittle, Schiller, Jenkins, & Gersten, 2015).
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Elbaum, B., Vaughn, S., Tejero Hughes, M., & Watson Moody, S. (2000). How effective are one-to-one tutoring programs in reading for elementary students at risk for


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Urdan, T., & Schoenfelder, E. (2006). Classroom effects on student motivation: Goal


Appendix A

Teacher Consent Form

The Impact of a Small Group Academic Enablers Instruction on Academic Achievement of Elementary School Students

You are invited to participate in a research project conducted by Bryce Kirk who is completing his internship in school psychology at (school...). The purpose of this research project is to determine the effectiveness of multiple academic enabler instruction in (grade...).

If you volunteer to participate in this study, you will be asked to:

• Complete demographic information, which will take you about 3 minutes to complete
• Complete a Student Needs Assessment Rating Form of student in the classroom, which will take you about 5 minutes to complete
• Agree to allow the participating students to be pulled out of the classroom to receive small group instruction
• Agree to allow access to student grades and homework/work completion record

Also, please know the following:

• There is no risk involved in the study.
• All information will remain confidential about you as a teacher and your students. No identifying information will be used.
• Participation in this project is voluntary, not a requirement of the school, and you can withdraw at any time without penalty.
• You will immensely contribute to knowledge.

If you have any questions or concerns pertaining to this project, you may call or write us:

Dr. Assege HaileMariam (217-581-2127)
Professor of Psychology
Eastern Illinois University
Department of Psychology
600 Lincoln HWY
Charleston, IL 61920

Bryce Kirk (630-254-5029)
Primary Researcher
1575 Orchard Circle
Naperville, IL 60565

Additionally, if you have any questions or concerns about the treatment of human participants in this study, you may call or write to:

Institutional Review Board
Eastern Illinois University
600 Lincoln Ave.
Charleston, IL 61920
Telephone: (217)581-8576 E-mail: eiuirb@www.eiu.edu
You will be given the opportunity to discuss any questions about your rights as a research subject with a member of the IRB. The IRB is an independent committee composed of the members of the University community, as well as lay members of the community not connected with EIU. The IRB has reviewed and approved this study.

I agree to voluntarily participate in this study. I understand that no identifying information will be used, and I am free to withdraw my consent and discontinue my participation at any time during the study. I have received a copy of this form.

Please print your name: ________________________________

<table>
<thead>
<tr>
<th>Participating Teacher Signature</th>
<th>Date</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Signature of Investigator</th>
<th>Date</th>
</tr>
</thead>
</table>

Thank You!
Appendix B
Teacher Demographic Information

Please tell us about yourself.

Name: ____________________________________________________________
1. Gender (please circle): Male Female
2. Highest Degree Earned: ___________________________(please write in)
3. Number of Years Teaching: ___________________________(please write in)
4. I regularly teach academic enablers. (please circle one):
   Yes No
5a. If you answered ‘Yes’ to number 4 above, please give an example of academic
    enablers you teach: ____________________________________________
    ____________________________________________
    ____________________________________________
    ____________________________________________

5b. If you answer ‘No’ to number 4 above, please tell us who should be responsible for
    teaching academic enablers skills to school children._____________________
    ____________________________________________
    ____________________________________________
    ____________________________________________

6. My teacher-training curriculum included instructions in how to teach academic
   enablers skills to my students. Please circle one.
   Yes No

Thank you!
Appendix C

Student Needs Assessment Rating Form

*Directions*: Please identify students in your class who would benefit from academic enablers instruction. For example, which students in your class seem to lack academic enablers (e.g., motivation, study skills, social skills, and engagement)?

First, please list students by name in order of needs below (*No. 1 being the student needs to develop academic enablers skills the most, and 20 being needs it the least*).

Second, rate each student’s current needs (*1=needs to develop all four skills, 2=needs to develop social skills, 3 needs to develop engagement skills, 4=needs to develop study skills, and 5=needs to develop motivation skills. You can assign more skills separated by a comma (,) if indicated. For example, if a student needs both social skills and study skills, you can assign 2, 4.*

<table>
<thead>
<tr>
<th>Need Scale</th>
<th>Student Name</th>
<th>Academic Enabler to be Taught</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example</td>
<td>Example</td>
<td>2, 4</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
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<tr>
<td>3</td>
<td></td>
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<td>4</td>
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<td>5</td>
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<td>7</td>
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<td>9</td>
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<td>10</td>
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<td>11</td>
<td></td>
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<td>12</td>
<td></td>
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<td>13</td>
<td></td>
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<td>14</td>
<td></td>
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<tr>
<td>15</td>
<td></td>
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<td>16</td>
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<td>17</td>
<td></td>
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<td>18</td>
<td></td>
<td></td>
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<tr>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix D

Parent Letter

Dear Parent,

My name is Bryce Kirk, and I am a graduate student in School Psychology and an Intern at (location...). This letter is to let you know that I will be conducting a research project on skills children need for learning academic skills, such as study skills and full participation in the classroom. As you know, if a student does not complete homework or turn it in, or does not participate in classroom activities, such a student has a difficult time earning good grades; and research supports your observation. Without these skills, children have a difficult time learning or making good grades. The instruction I will conduct on these topics will greatly benefit students and will help me meet the partial requirement for completing the Specialist in School Psychology degree at Eastern Illinois University. I respectfully ask you to allow your child to participate in this small group instruction.

Your child was recommended for this small group instruction as someone who will benefit from the lessons and activities. If you allow your child to participate in this study, the student will be pulled out of the classroom once a week for about 40 minutes to receive instruction on study skills and participating in class (engagement) skills that support learning. This small group instruction will last for eight weeks.

In order to learn if the instruction has benefited participants, I need your permission to monitor the student’s progress using school records. All information about the student will be confidential, that is, your child’s school record, such as grades or work completion record will not be reported using names or any other identifying information. Instead, each student will be known by a number.

If you give permission for your child to participate in this study, please sign the attached Consent Form and complete the Demographic Information and return both with your child to school with instruction to give to his or her teacher by (date...). For confidentiality purposes, please put the completed forms in the envelope provided, seal the envelope, and sign it across the sealed flap. The teacher will place the unopened envelope in a box and the primary researcher will collect the unopened envelopes. As stated in the attached Consent Form, participation in this study is entirely voluntary. If you have any questions, please contact me (bekirk@eiu.edu or 630-254-5029), or my thesis supervisor, Dr. Assege HaileMariam, Psychology professor at Eastern Illinois University (ahailemariam@eiu.edu or 217-581-2127).

Thank you for allowing your child to participation in this study. I believe your child will benefit from learning or reviewing the behavior skills needed to support academic skills. Furthermore, the knowledge we gain from this group will help us support other students. Please keep this letter for your record.

Respectfully,

Bryce Kirk
School Psychology Intern
Appendix E

Parent Consent Form

The Impact of a Small Group Academic Enablers Instruction on Academic Achievement of Elementary School Students

Your child is invited to participate in a research project conducted by Bryce Kirk who is completing his internship in school psychology at (location…). The purpose of this research project is to teach children behavior skills (known as academic enablers) that support academic skills learning, such as study skills and skills for participating in the classroom.

If you agree for your child to participate in this study, you agree:

• Your child will be pulled out of the classroom for about 40 minutes a week for eight weeks to participate in small group instruction.
• You will allow access to your child’s school record, e.g., grades or work completion record to monitor progress.
• You will complete the Student Demographic Information Form, which will take about 3 minutes to complete.

Also, please know the following:

• There is no risk involved; in fact, previous research suggests that teaching academic enablers (i.e., motivation, study skills, social skills, and engagement) improves learning, academic achievement.
• All information will remain confidential about you and your child’s identifying information, i.e., no name or any identifying information will be used.
• Participation in this project is voluntary, not a requirement by the school, and you can withdraw your child at any time during the study without penalty.
• You will contribute to knowledge. What we learn from this experience will help other children.

Please understand that if you have any questions or concerns about this study, you are welcome to call or write us:

Dr. Assege HaileMariam (217-581-2127)    Bryce Kirk (630-254-5029)
Professor of Psychology                      Primary Researcher
Eastern Illinois University                  1575 Orchard Circle
Department of Psychology                    Naperville, IL 60565
600 Lincoln HWY                              
Charleston, IL 61920

Additionally, the Institutional Review Board (IRB) has reviewed and approved this study.
The IRB is an independent committee composed of the members of the University community, as well as lay members of the community not connected with EIU. You will be given the opportunity to discuss any questions about your rights as a research subject with a member of the IRB.

However, if you have any questions or concerns regarding the treatment of human participants in this study, you may call or write:

Institutional Review Board
Eastern Illinois University
600 Lincoln Ave.
Charleston, IL 61920
Telephone: (217)581-8576  Email: eiuirb@www.eiu.edu

Parent’s Name (please print): ____________________________________________

Student’s Name (please print): __________________________________________

_________________________________________  Date
Signature of Parent

_________________________________________  Date
Signature of Investigator

Thank You!
Appendix F

Student Demographic Information

Student Name: ____________________________________________

1. Student Grade (please write in): ______________________________________

2. Gender (please circle) Male Female

3. Family Make-up (please circle all that apply):
   Two Parents Single Parent Has siblings
   Other (please write in): ___________

For the following, please circle one that applies:

4. My child receives free or reduced lunch.  
   Yes           No

5. My child is often curious and likes to learn.  
   Yes           No

6. My child often needs help with homework.  
   Yes           No

7. My child likes school.  
   Yes           No

8. My child often needs help with study skills.  
   Yes           No

9. My child gets along with other students.  
   Yes           No
Appendix G

Academic Enablers Observation Rating Scale

Direction: For each of the following skills, please rate the student by circling one of the choices. If you have observed a skill the student struggles with, please circle 1, Poor, if the student is developing the skill, but is not yet consistent, circle 2, Fair; if the student consistently uses the skill, circle 3, Good; and if the skill does not apply, circle 0, NA (not applicable).

Name: Student

<table>
<thead>
<tr>
<th>Study Skills. The Student</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Takes organized class notes in legible form and maintains them in one accessible notebook.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>2. Reviews class notes frequently to ensure understanding.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>3. When reviewing notes, uses highlighters to note important items or questions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>4. Manages stress by distributing studying, avoiding cramming.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>5. Allocates enough time to study for tests and quizzes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>6. Writes down homework assignments accurately.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>7. Is efficient in switching work material from one learning activity to another.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>8. Makes use of available time in school (e.g., study halls) to work on homework</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>9. Creates a work plan before starting work, e.g., sequencing the order in which assignments are completed.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>10. Uses such study skills as repetition or elaboration.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>11. Other:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

Motivation. The Student

<table>
<thead>
<tr>
<th>Motivation. The Student</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. Arrives to class on time.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>13. Maintains organization to store and retrieve learning material.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>14. Takes care in completing work—as evidenced by the quality of the finished assignment</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>15. Is self-directed, finds learning activities to engage in.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>16. Is reliable in turning in in-class assignments</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>17. Is persistent on task.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>18. Is independent worker.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>19. Has a positive sense of ‘self-efficacy’ about the academic content area (self-efficacy can be defined as the confidence that one can be successful in learning if one puts forth reasonable effort)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>
### Academic Enablers Observation Rating Scale: Continued

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>20. Displays some apparent intrinsic motivation to engage in school work (e.g., is motivated by topics and subject matter discussed or covered in the class; finds the act of working on assignments to be reinforcing in its own right)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>21. Displays apparent extrinsic motivation to engage in class work (e.g., is motivated by grades, praise, public recognition of achievement, or other rewarding outcomes)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>22. Checks his work before turning it in.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>23. Other:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

**Interpersonal/Social Skills. The Student**

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>24. Refrains from distracting behaviors (e.g., talking without permission)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>25. Requests teacher assistance in an appropriate manner.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>26. Shares with peers in an appropriate manner.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>27. Initiate conversations</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>28. Acknowledges peers strengths, i.e., gives compliments</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>29. Takes turns.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>30. Shows skills for solving conflict constructively.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>31. Is accepting of others.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>32. Works well with others.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>33. Takes responsibility for her/his actions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>34. Shows good age appropriate listening and speaking skills.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>35. Other:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

**Engagement: The Student**

<p>| | | | | |</p>
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>36. Seeks help from the teacher to answer questions or clear up areas of confusion.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>37. Participates in class discussion.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>38. Is on-task during assignment at a level typical for students in the class.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>39. Participates fully in group/pair activities.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>40. Does ‘fair share’ of work during group/pair activities.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>41. Is willing to take a leadership position during group/pair activities.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>42. Recognizes when help is needed and accepts it from peers.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>43. Often helps peers with class activities.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>44. Identifies resources for support, e.g., peer or teacher.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>45. Other</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

Adapted from: www.interventioncentral.org
Appendix H

Student Assent Form

My name is Bryce Kirk. I work with teachers and children, but I am also a student. Right now I am trying to learn more about ways to help students do well in school.

Your parents have agreed for you to help me, that is, participate in a study. To do so, you will be asked to work with me and a couple other students for 40 minutes, once per week, for eight weeks. You will be asked to do your best and cooperate each day. I would really appreciate your help!

Please know I will not discuss with your parents, teachers, and classmates what you are working on in the group. This is called confidentiality and helps people to openly work together. Also, please feel free to ask any questions that you have about our work together.

By writing your name below, you are agreeing to do the best you can with all the activities we will be doing in this group.

-------------

Thank you!
Appendix I
Treatment Integrity Check

<table>
<thead>
<tr>
<th>Date: ______________________</th>
<th>Session: ______</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepared all session materials</td>
<td>Yes: ___ No: ___</td>
</tr>
<tr>
<td>Introduced new skill</td>
<td>Yes: ___ No: ___</td>
</tr>
<tr>
<td>Demonstrated new skill</td>
<td>Yes: ___ No: ___</td>
</tr>
<tr>
<td>Students practiced new skill in groups</td>
<td>Yes: ___ No: ___</td>
</tr>
<tr>
<td>Students self-monitored</td>
<td>Yes: ___ No: ___</td>
</tr>
<tr>
<td>Discussed other areas where skill could be used</td>
<td>Yes: ___ No: ___</td>
</tr>
<tr>
<td>Encouraged participation: For the day</td>
<td>Yes: ___ No: ___</td>
</tr>
<tr>
<td>Encouraged participation: For future</td>
<td>Yes: ___ No: ___</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Treatment Integrity Percentage</strong></td>
<td></td>
</tr>
</tbody>
</table>

Session Notes: ________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________