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Implementing a Dropout Prevention Program to Improve Student Outcomes in a Title I School

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Melissa Leigh Berggren, Ph.D.
University of Connecticut, 2019

Middle school is a sensitive time in a student’s development as multiple variables can impact academic and social-emotional success. Educational and social demands increase as does the prioritization between the two. To make coping more difficult, physical and emotional maturation occur on a continuum, impacting social interactions and expectations. For students in high-poverty regions, additional factors such as trauma exposure, poverty, drugs, homelessness, violence, linguistic barriers, parental involvement and transiency make managing middle school challenges more complex. Understanding the variables capable of impeding the success of urban middle school students, it is critical to monitor academic performance as an indicator of school engagement during the middle school years, as middle school engagement can impact future successes. While middle school achievement has been found to be a critical indicator of future success (Balfanz, Herzog and MacIver, 2007), limited research is being conducted to address the attendance difficulties that sixth grade students living in high poverty regions experience. This study utilized single-subject design methodology to evaluate the effectiveness of Check and Connect (C&C), a school dropout program, as applied to sixth-grade students in a title I middle school to improve school attendance and academic engagement. In addition, this study aimed to improve the collaboration among schools and parent/guardians.
Implementing a Dropout Prevention Program to Improve Student Outcomes
in a Title I School

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B.A., Central Connecticut State University, 2008
M.A., University of Connecticut, 2011

A Dissertation
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APPROVAL PAGE

Doctor of Philosophy Dissertation

Implementing a Dropout Prevention Program to Improve Student Outcomes

in a Title I School

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2019

iii
DEDICATION

Neither my dissertation or my academic career would have been successful without one person. One person keeping me company while writing at 2am, one person listening to me vent, one person preparing the food that I forgot to eat, one person who was always there no matter what or when. Always there to pick me up with encouragement when I was down and never letting me forget how important each of my successes were. I will eternally be grateful for her guidance and wisdom; she is my ultimate role model. She is my mom. It is for these reasons that I am dedicating the success of my dissertation to her. Thank you, mom.
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Nobody has been more important to me while on this journey than my parents, siblings, grandfather and my own personal Avenger who provided subtle and not-so-subtle encouragement to bolster my success. All of their support and patience shined through in various ways, mostly through a healthy mix of compassion, sarcasm, and competition; I could not be more appreciative. I am sure they are all breathing a huge sigh of relief now that this process has successfully concluded.
# TABLE OF CONTENTS

I. Chapter 1: Statement of the Problem ............................................................................. 1  
II. Chapter 2: Literature Review ....................................................................................... 3  
   Attendance ................................................................................................................. 3  
   At-Risk Populations ................................................................................................. 6  
   Check & Connect ..................................................................................................... 9  
   Research Questions ................................................................................................. 13  
III. Chapter 3: Methodology ............................................................................................ 13  
    Setting ..................................................................................................................... 13  
    Participants ............................................................................................................ 14  
    Materials ............................................................................................................... 17  
    Measures ............................................................................................................... 17  
    Procedures ............................................................................................................ 21  
    Data Analysis ....................................................................................................... 23  
IV. Chapter 4: Results .................................................................................................... 24  
    Attendance Rate .................................................................................................... 24  
    Systematic Direct Observations ........................................................................... 28  
    Daily Behavior Ratings ......................................................................................... 33  
    Inter-observer Agreement ..................................................................................... 37  
    Treatment Integrity ............................................................................................... 37  
    Home-School Communication .............................................................................. 38  
    Social Validity ...................................................................................................... 39  
    Usage Rating Profile – Intervention Revised ....................................................... 40  
V. Chapter 5: Discussion ................................................................................................. 42  
    Student Outcomes ................................................................................................. 42  
    Overall Outcomes ................................................................................................. 45  
    Limitations ............................................................................................................. 46  
    Implications ........................................................................................................... 47  
    Conclusion ............................................................................................................. 47  
VI. Appendices  
   Appendix A: Systematic Direct Observation Form .................................................. 50  
   Appendix B: Daily Behavior Rating Form ................................................................ 51  
VII. References .............................................................................................................. 52
CHAPTER 1
STATEMENT OF THE PROBLEM

Public schools have become places that serve many purposes. They are institutions of learning, places where students learn social/emotional skills needed to navigate society, and for some children, a safe haven, a place where they can rely on getting their basic needs met. Thus, attending school is critical, regardless of reason for attendance. To continue to grow both academically and socially/emotionally, children need to attend school, especially those residing in disadvantaged regions. In high-poverty areas, children miss school for various reasons but with two thirds of children reporting exposure to a traumatic event before the age of sixteen (Copeland, Keeler, Angold, & Costello, 2007), it is the obligation of schools to implement services that can encourage their students to attend school.

Middle school is a critical time to implement interventions to improve school attendance and academic achievement, particularly for sixth grade students residing in urban settings as they face a unique set of barriers and stressors relative to their suburban counterparts. Students who improve middle school attendance have better high school outcomes than their peers who just improve their test scores (Allensworth, Gwynne, Moore & de la Torre, 2014). More specifically, sixth grade attendance (attending less than 80%), maladaptive sixth grade behavior, and suspensions as well as failing math and/or English in the sixth grade have been identified as predictive indicators for high school graduation rates (Balfanz, Herzog and MacIver, 2007).

Sixth grade students living in high-poverty neighborhoods while attending high-poverty school districts are at a high risk for trauma exposure and subsequently poor school attendance and ultimately below standard academic performance among other maladaptive outcomes. Thus, it is critical to adopt a school-wide approach that is capable of bolstering the protective factors
that are capable of superseding the risk factors these students are exposed to every day to improve student performance.

Having the knowledge that multiple domains of sixth grade performance are key indicators for future success as well as the presence of risk factors that are associated with high-poverty neighborhoods, interventions need to be implemented. The Check & Connect program (Anderson, Christenson, Sinclair & Lehr, 2004) was originally designed to promote school engagement and learning for youth placed at risk for dropping out of school. The goal of the program is to help students attend and participate regularly in school by individualizing the child’s needs. Key features of the program promote building relationships, providing routine monitoring, building competency in persistence, utilizing problem solving methods, and encouraging learning both in and out of school (Lehr, Sinclair & Christenson, 2009). Therefore, the Check & Connect program contains the qualities of a system that has the ability to bolster student success by targeting multiple domains at an individualized level.
CHAPTER 2
LITERATURE REVIEW

Attendance

Logic suggests that attending school is critical for access to academic curricula, social skill growth, opportunities to critically think both in and out of the classroom, and development of life skills. If a student is not in school, they are not accessing valuable resources. School attendance has been found to have a significant relationship with academic achievement (Gottfried, 2010). As school attendance plays a critical role in a student’s development in all facets of a student’s life, public schools are mandated to monitor attendance and provide support to students with excessive absences.

To better classify absences, the state of Connecticut utilizes two terms: truancy and chronic absenteeism. Often times the educational terms of truant and chronic absenteeism are used interchangeably; however, there are distinct differences between the two, both in definition, impact and services available to support students. The Connecticut State Board of Education defines “truant” students as any “child age five to eighteen, inclusive, who is enrolled in a public or private school and has four unexcused absences from school in any one month or ten unexcused absences from school in any school year” (CGA Sec. 10-198a).

A chronically absent child is defined by the state as “a child who is enrolled in a school under the jurisdiction of a local or regional board of education and whose total number of absences at any time during a school year is equal to or greater than ten percent of the total number of days that such student has been enrolled at such school during such school year” (CGA Public Act No. 15-225, p.3). Under Public Act No. 15-225, the state defines absence as unexcused, excused or disciplinary absence, which also includes more than half a school day in
an in-school suspension program. Thus, the underlying difference between truant students and those who are chronically absent are the number of unexcused absences versus the number of both excused and unexcused absences.

**Truancy.** Truancy and chronic absenteeism differ in their impact on student outcomes. Truancy has been found to be a primary risk factor for “potential delinquent activity, social isolation, teen pregnancy, substance abuse, and educational failure as documented in multiple suspensions, expulsions, and in school dropout rates” (Spencer, 2009, p. 309). In Connecticut, when a student has been found to be truant, school boards are required by law to hold a meeting with the student’s guardian, followed by the coordination of non-punitive community services with appropriate agencies. A common service includes a *Family with Service Needs* (FWSN) referral, prompting community-based service provision. If ongoing truancy occurs, schools can file child welfare complaints for educational neglect, which will ultimately lead to similar services as a FWSN referral. Regardless of referral method, a case manager and subsequent oversight is provided.

**Chronic Absenteeism.** While districts largely rest their focus on truancy, districts are slower to address the needs of chronically absent students. In the 2013-2014 school year, approximately 60,000 students were chronically absent in Connecticut, which equates to over 10% of all Connecticut students according to the Commissioner’s Back to School Meeting held on August 19, 2015. In Connecticut, schools are not required to individually address students who are absent with the exception of notifying the student’s guardian of the absence if the guardian did not contact the school. In addition, a notice is to be mailed to the student’s residence, which also notifies the guardian(s) that two unexcused absences in a month or five unexcused absences in a school year may result in a filed complaint.
For districts that have high rates of chronic absenteeism, attendance teams are required to hold monthly meetings to monitor attendance and implementation of interventions. Connecticut law requires that a chronic absenteeism prevention and intervention plan include a research-based model, a mentorship program for students with concerning attendance rates, and an incentive program, which recognizes schools and individual students that improve attendance rates. Often times, resources are not available for regular mentorship meetings or if they do occur, the relationship with the mentor is not strong enough to bring the child to school. Further, incentive programs often cannot compete with the factors keeping the student away from school. In addition, specific interventions are not suggested to districts and with only once a month mandated meeting, attendance teams cannot effectively progress monitor student outcomes impacting their ability to make informed data-based decisions to guide treatment planning.

**Best practices to address attendance.** School attendance has an impact on standardized achievement tests, graduation rates, academic success, and delinquent behaviors (Sheldon, 2007). Thus, attendance affects students both academically and socially/behaviorally. However, there are few interventions that directly address attendance. Interventions often target high school dropout prevention, with a primary goal of improving school connectedness. These interventions are then modified and/or adapted to target primary grades with the purpose of targeting school connectedness and/or engagement, and family-school partnerships. While schools target attendance through educational mandates such as attendance teams, interventions are not uniform across districts let alone states.

Best practices suggest that attendance interventions consist of a comprehensive approach that consists of school, home, and community components. However, in urban settings the three components (school, home and community) are not consistently available. Community
organizations have limited resources available and those that are available address the needs of truant students. Urban schools have limited available resources and the school-based mental health workers tend to have large caseloads and limited time to monitor students who are chronically absent outside the once a month attendance meetings. Parent engagement is also limited. While parent engagement is critical, the reality of connecting parents to schools can be a struggle. Indeed, an overhaul is needed in the prioritization of fiscal and personnel resources in urban school districts as well as the prioritization of improving positive family-school partnerships; however, in addition to fostering a positive school, home, community partnership; a realistic, and cost-effective intervention is needed in addition that targets chronically absent students without putting additional demands on their guardians.

At-Risk Populations for Chronic Absenteeism

The following populations vulnerable to chronic absenteeism are those students exposed to trauma, those living in poverty and students in the sixth grade (Belfanz, Herzog, and MacIver, 2007; Kataoka, Langley, Wong, Baweja, & Stein, 2012; Komro, Flay, & Biglan, 2011).

**Trauma.** By age sixteen, more than two thirds of children report experiencing at least one traumatic event (Copeland, Keeler, Angold, & Costello, 2007). An experience that threatens an individual becomes traumatic once the individual’s ability to cope is overwhelmed (NCTSN, 2008). Thus, an experience that is traumatic to one individual may not be traumatic to another. Situations that can be traumatic to middle school students as outlined by the National Child Traumatic Stress Network (2008) include physical/sexual abuse, neglect, abandonment, accidents, loss of loved ones, bullying, witnessing community violence, natural disasters, and terrorism. Trauma can affect behavior, cognition, emotions and learning. Manifestation of trauma can include maladaptive coping skills, inability to self-regulate, distorted perceptions and
difficulties processing social cues (Cole, 2014). Specifically, youth living in urban areas exposed to trauma have been found to have reduced emotion regulatory control with heightened risk of long-term effects including post-traumatic stress disorder, anxiety and depression (Thomason et al., 2015).

Often, children exposed to trauma have heightened stress responses as they are unable to regulate their arousal to stressors and regulate their emotions to the stressor (Cole et al., 2005). Children with heightened arousal and high stress, have been found to be difficult to manage in the classroom, and inconsistent in their responses and actions (Mendelson, Tandon, O’Brennan, Leaf & Ialongo, 2015). Further, trauma may also manifest as non-observable behaviors such as depression and avoidance, which is why it is integral to be aware of all students; not just those displaying overt symptoms (NCTSN, 2008).

Since trauma impacts behaviors, cognitions, and emotions, it is logical to assume it will also impact academic performance as cognitive resources available to the student are being utilized elsewhere as a result of the trauma. In one study, students exposed to trauma had a significant decrease in reading achievement; whether the trauma exposure was moderate or high (Duplechain, Reigner, & Packard, 2008). Further impacting the ability to learn is attendance. Students with trauma exposure have been found to have more missed days of school, and increased rates of peer rejection (Kataoka, Langley, Wong, Baweja, & Stein, 2012).

Children can be exposed to trauma at home, in the community, or at school with symptoms capable of impacting every part of their life; particularly in school where expectations are high to succeed both academically and socially. Thus, providing a nurturing, consistent and structured environment within schools is integral to support all children, particularly those with trauma exposure.
Poverty: In the schools and in the community. Students attending schools in high-poverty districts encounter a unique set of stressors and various disruptions to their educational experience. Students that attend a school that has a higher proportion of students living in high-poverty have lower educational performance regardless of their own economic status (Komro, Flay, & Biglan, 2011).

In high poverty schools, high rates of teacher turnover due primarily to poor working conditions, which impede their ability to effectively teach their students and consequently affects how their students learn (Ronfeldt, Loeb, & Wyckoff, 2013; Simon & Johnson, 2015). As teachers have the greatest effect on the achievement of low-income students out of any school-based factor (Stosich, 2016), high rates of teacher turnover disrupt the opportunity for students to establish and maintain meaningful relationships with their teachers, particularly those at-risk. Students who reside in high-poverty communities face challenges that have the potential of negatively impacting their educational experience. When students return home from school, they continue to encounter obstacles that can interfere with their social-emotional development.

Living in high-poverty neighborhoods expose residents to greater levels of depression, adolescent delinquency, child maltreatment, teenage pregnancy, and dropping out of school (Komro, Flay, & Biglan, 2011). Neighborhoods of concentrated poverty expose children to risks such as gangs, drugs and violence (Snell et al., 2012). In a study that surveyed sixth grade students on their exposure to violence, students that attended an urban school reported greater incidences of school and community violence than their counterparts attending a suburban school (Campbell, & Schwarz, 1996). Children who grow up in low-income urban neighborhoods are regularly exposed to trauma as they tend to be regularly exposed to violence, maltreatment, and
incarceration; thus, developing traumatic stress at a disproportionate rate (Kiser, 2007; Kiser, Medoff, & Black, 2010).

**Students in the Sixth Grade.** Intervening on the attendance of middle school students, particularly those in the sixth grade is imperative. Belfanz, Herzog, and MacIver (2007) clearly outlined the need for targeted sixth grade intervention, since sixth grade represents a transitional milestone. According to the authors, sixth grade is a common transitional marker into adolescence. Additionally, the transition to middle school is often accompanied by larger class sizes, new curriculum challenges, new assessment practices, as well as the need to move between classes, including classes that may be in different wings of the building. In addition, multiple elementary schools typically merge into one middle school, resulting in new peer dynamics. With such changes in the social strata, students may attempt to reposition themselves at a time that coincides with decreased levels of adult supervision (Rudasill, Niehaus, Crockett, & Rakes, 2014). Furthermore, students entering middle school who reside in high-poverty neighborhoods encounter additional factors that may impact attendance including the potential of becoming caregivers to younger siblings and/or relatives, being recruited for drug involvement, or being influenced by peers to partake in activities out-of-school (Belfanz, Herzog, & MacIver, 2007). And as previously discussed, high-poverty middle schools posit characteristics that can make learning and school engagement difficult. Furthermore, at this critical developmental period, trauma exposure peaks (Nooner et al., 2012).

**Check & Connect**

Public schools have become buildings that serve many purposes. They are institutions of learning, places where students learn social/emotional skills needed to navigate society, and for some children, schools are a safe haven, a trusted place where basic needs are met. Thus,
attending school is critical, regardless of reason for attendance. To grow both academically and socially/emotionally, children need to attend school, particularly those residing in disadvantaged regions. In high-poverty areas, children miss school for various reasons but with two thirds of children reporting exposure to a traumatic event before the age of sixteen (Copeland, et al. 2007), it is the obligation of schools to implement programs that encourage students to attend school.

Check & Connect (C&C) is a school engagement program found to be acceptable for students with and without disabilities in elementary, middle and high school (Sinclair, Christenson, & Thurlow, 2005). Built on a model that promotes student engagement and learning by building relationships, problem solving and persistence, the C&C program aims to prevent school dropout for at-risk students (Kortering & Christenson, 2009). Closely aligned with coping theory, C&C is based on assumptions that address school dropout in the context of school engagement. C&C assumes that dropping out of school occurs over time as a process in which the student disengages and feels alienated (Christenson & Carroll, 2000). Thus, Christenson & Carroll (2000) assume that interventions should target predictors that can be changed by educators, family and students while empowering the student in a multicomponent effort. To address these assumptions, C&C adopted features of both cognitive-behavior therapy and coping theory in that the program is based on the notion that learning to cope requires a competency in problem solving. Therefore, problem-solving skills are taught in conjunction with coping skills.

C&C is a two-part program that systematically checks the student’s school engagement levels as evidenced by attendance, suspensions and grades. Student’s also connect with a monitor that provides individualized attention and intervention by working with parents and the community to provide comprehensive support. A school-based professional identified as the monitor is charged with implementing C&C. The key role of the monitor is to “create a person-
environment fit between the student and his or her school and home contexts that enhances the students’ engagement with school” (p. 19) by recognizing all the important environments of the student by creating positive relationships among all (Christenson et al., 1997).

The monitor’s role is a hybrid between a case manager, mentor, problem solver, coach and advocate as he/she works very closely with students, families, and school personnel to keep the student’s education a priority and a salient concern for all stakeholders (Lehr, Sinclair & Christenson, 2004). The role of the monitor can be understood within the five elements of C&C as outlined by Christenson et al. (1997). The first role is relationship building. The monitor aims to develop positive relationships with his/her students by building trust, spending time with the student, demonstrating acceptance, being an advocate, and by connecting the student to necessary community resources. The second role is the monitoring of the students’ academic and behavioral performance for signs of risk indicators while also collaborating with the teacher and providing tutoring to the student if needed. The third role is helping the student cope by teaching problem solving skills according to a cognitive-behavioral intervention and by building coping capacity. Monitors teach students to stop and think about problems, probe for choices, have the student select a choice, carry it out, and reflect on how it worked. To assist in the generalization of this skill, monitors are asked to teach guardians the steps to problem solving so support can be provided at home as well. As the student builds his/her competency in problem solving, coping skills are taught: seek social support, focus on solving the problem, work hard to achieve the problem and seek to belong (Christenson & Carroll, 2000). The fourth role is having the students feel connected to the school. This is done by acting as a role model and promoting the importance of school while encouraging the student to be involved with school activities. Lastly, the fifth role is persistence-plus. This all-encompassing term reflects the positive characteristics
of a successful monitor: providing continuity, consistency and persistence. For students who are at-risk and tend to be mobile, having a stable adult role model is essential for successful relationships.

C&C has been found effective throughout various group design studies; however, it has yet to be evaluated using single subject methodology. Lehr, Sinclair, & Christenson (2004) examined the effectiveness of a two-year implementation of C&C on 147 elementary students who regularly missed school, results indicated that school engagement increased as evident by improved attendance. In addition, social validity suggested intervention feasibility and acceptability. Similarly, Sinclair et al. (2005) found that C&C lowered rates of dropout, mobility and improved attendance of 144 ninth grade students with emotional and behavioral disabilities. A third study that targeted 94 students with learning or emotional/behavioral disabilities in an urban setting found that students exposed to the C&C program increased academic performance and participated more in school as evident by attendance and homework (Sinclair, Christenson, Evelo, & Hurley, 1998). Based on a systematic review conducted by the What Works Clearinghouse, C&C has been found to have positive effects for keeping students in school (WWC, 2006).

C&C is an intervention program aimed to improve the school engagement of students by means of building relationships with trusting adults, teaching problem-solving skills and persistence while promoting the importance of education. While studies have yet to apply this program to the psychoeducational functioning of sixth grade students who exhibit chronic absenteeism the foundational framework of C&C consists of components appropriate for addressing the needs of chronically absent adolescent students residing in high poverty regions. C&C provides an opportunity for students who lack adult support to be paired with an adult
mentor who provides motivation, support and guidance while teaching problem solving and coping skills.

Research Questions

The following research questions were addressed:

1. The primary purpose of this study was to determine if the implementation of an individualized school dropout prevention program can improve the school engagement as indicated by attendance of sixth grade students identified as chronically absent. It was believed that the implementation of C&C would result in an increased positive trend and stability of attendance.

2. The secondary purpose was to examine the influence of C&C on the rate of academic engagement. It was believed that academic engagement would increase in a positive, stable trend with low variability.

3. The tertiary purpose was to determine if the implementation of C&C could improve stakeholder communication and collaboration. It was believed that the implementation of C&C would improve school-guardian communication and collaboration.
CHAPTER 3
METHODS

Setting

This study was conducted in an urban, title I middle school in the Northeast. The school served 393 students in grades six through eight, with 80.1% qualifying for free or reduced lunch. Of the 393 students enrolled, 195 were males and 198 were females. The school reports the following student demographics in accordance to the Federal Ethnicity and Race Categories from the U.S Department of Education: 6 students identified as American Indian or Alaskan Native, 27 identified as Asian, 79 as Black or African American, 1 as Native Hawaiian/Other Pacific Islander, 102 as White, 139 as Hispanic/Latino and 39 identified as having two or more races. Prior to the start of the study, 68 students were identified as chronically absent, 17.3% of enrolled students. The average attendance rate of the 68 students identified as chronically absent was 84%.

Participants

All participant names were changed to pseudonyms to maintain confidentiality.

Monitor. The attendance interventionist/paraprofessional who monitored attendance on a daily basis and had access to a private office fulfilled the role as the monitor. The monitor participant, Ms. H, was a paraprofessional with an associate’s degree in early childhood development and five years’ experience as a paraprofessional. She identified her race and ethnicity as White, Non-Hispanic.

Teachers. Sixth grade, general education teachers who taught targeted students were eligible to participate. Teacher participants were Mr. M and Ms. C, both veteran teachers. Mr. M was a sixth-grade science teacher with a master’s degree in education and certificate of advanced
graduate studies in educational leadership with fifteen years of teaching experience. Ms. C was a writing teacher with a master’s degree in education and nineteen years of teaching experience. Both teachers identified themselves as White, Non-Hispanic.

**Students & Guardians.** The target students were sixth grade students identified as chronically absent. The chronic absenteeism must be occurring during the enrollment period. Guardian participants were those of the targeted students willing to participate.

Student participant 1, identified as Max, was an eleven-year-old male in the sixth grade under the guardianship of his mother. Max was identified as Black, Non-Hispanic with no reported disabilities. During the screening period, Max’s attendance rate was 86%. Max did not have historical concerns for attendance. At the conclusion of fifth and fourth grade his attendance rate was 99.2% and 99.4%, respectively. Prior to fourth grade, Max resided in a different state. Max’s mother was identified as a single, Black, Non-Hispanic female. Three individuals reside in the home including Max, his older brother and their mother.

Student participant 2, identified as Carly, was an eleven-year-old female in the sixth grade. She was under the guardianship of her father and was identified as White, Non-Hispanic. Carly did not have a reported disability. During the screening period, Carly had an attendance rate of 75%. Carly had a history of chronic absenteeism as she was identified as chronically absent at various points during her fifth, fourth, and third grade years. At the conclusion of fifth grade her overall attendance rate was 90.1%. At the end of fourth grade it was 87.8% and at the end of third grade it was 92.8%. In third and second grade she was not identified as chronically absent at any point with end of the year attendance rates being 94% for both years. Her father was identified as a single and divorced, White, Non-Hispanic male. Four individuals reside in the home including Carly, her two older half-sisters and their father.
Student participant 3, Desiree, identified as White, Non-Hispanic, was a twelve-year old female in the sixth grade. She was under the guardianship of her mother who did not report a disability. As of the screening period, her attendance rate was 87%. Desiree has been identified as chronically absent at various points throughout each year of her education starting in first grade. Her attendance rates as of the last day of school were 83.3% for fifth grade, 91.7% for fourth grade, 90.6% for third grade, 93.4% for second grade, and 90.7% for first. Desiree’s mother identified as a single, White, Non-Hispanic female who resides with Desiree. There are no other children or adults in the residence.

Student participant 4, Javon, was an eleven-year old male in the sixth grade with no reported disabilities. He was under the guardianship of his mother and was identified as bi-racial Black and White, Non-Hispanic. As of the screening period, Jovan’s attendance rate was 87%. Jovan has been identified as chronically absent since fourth grade. At the conclusion of fifth, fourth, third, second and first grades, his attendance rates were 87.4%, 89.4%, 94.5%, 96.7% and 94%, respectively. Jovan’s mother identifies herself as a single, Black, Non-Hispanic female who resides with Jovan, his older sister, a maternal uncle and a roommate.

Student participant 5 was identified as Trey, an eleven-year-old male in the sixth grade who was under the guardianship of his mother and father. Trey was identified as American Indian or Alaska Native and White, Non-Hispanic with no disabilities. His attendance rate during the screening period was 81%. Trey had a history of chronic absenteeism each year beginning in first grade. In fifth grade his attendance rate was 85.5%, in fourth grade 92.8%, in third grade 91.2%, in second grade 90.1% and in first grade 88.5%. Trey’s mother is identified as an American Indian female who was divorced from Trey’s father but has since remarried. Four individuals reside in the home including Trey, his younger sister, mother and step-father.
Materials

**Check & Connect form.** The C&C form was a daily progress-monitoring tool completed by the monitor to track indirect constructs related to school engagement. The form was bifurcated into two components: (1) Check and (2) Connect. The Check segment monitored the indirect measures of school engagement by tracking tardiness, skipped classes, absences, detentions, suspensions and the failure of any classes. The Connect component monitored problem-solving and social skill development as well as community involvement.

**Online database.** The monitor utilized the district’s online platform, which managed student information to collect attendance, behavior and academic data.

**Other intervention supports.** Other implementation materials included a study folder for each participating student that contained the C&C form, a reminder card that outlined intervention steps, guardian contact information, resources for community supports such as tutoring and mentoring, list of school clubs/activities, school calendar, and a reminder card outlining the steps for collaborative problem-solving.

Measures

The independent variable for this study was the Check & Connect dropout prevention program. The primary dependent variable of school engagement was assessed repeatedly across time, according to two indicators: school attendance and academic engagement. To allow for accurate data collection, academic engagement was defined as “active or passive participation in the classroom activity (e.g., writing, hand raising, answering a question, talking about a lesson, listening to the teacher, reading silently, or looking at instructional materials)” (Chafouleas, Sanetti, Kilgus, & Maggin, 2012, p. 495). The secondary dependent variable, communication and collaboration, was assessed according to qualitative feedback forms.
**Permanent Product.** Daily attendance was collected by the monitor and noted on the C&C program form providing a permanent product of student attendance. Student attendance was noted on the form regardless of meeting with the student.

**Systematic Direct Observations.** Academic engagement was assessed during all phases of the study and measured according to Systematic Direct Observations (SDO; Appendix A). Systematic Direct Observations are repeatable, reliable and valid methods of assessing behavior change in single-subject research design. SDOs are a beneficial tool for progress monitoring as the target behaviors are operationally defined and have standardized procedures for gathering the data which allow for increased confidence that the data is an accurate representation of the child's behavior (Chafouleas, Riley-Tillman, & Sugai, 2007). The time-based recording technique of momentary time sampling was utilized as adapted from the Behavioral Observations of Students in Schools (Shapiro, 2004). Project staff conducted 15-minute momentary time sampling observations with 15-second intervals, which was cued by an interval application. Each target student was observed five days a week, if attendance permitted.

**Daily Behavior Ratings.** Daily Behavior Ratings (DBR; Appendix B) were used to collect supplementary data on academic engagement. A formative measure containing characteristics from both SDOs and behavior rating scales, DBRs are an efficient tool to collect supplementary student data (Chafouleas, Riley-Tillman, & Sugai, 2007). At the end of a specified class period, the participating teachers completed brief ratings on the student’s academic engagement, which reflected the definition of academic engagement used for systematic direct observations. The DBR scale ranges from 0 (never) to 10 (always).

**Records.** The attendance and discipline records of participating students were provided weekly to cross-reference the data collected on the C&C program form.
Treatment integrity checklists. To ensure that the C&C program was implemented correctly, data collectors gathered treatment integrity data for at least 30% of sessions across phase B by the use of checklists outlining program steps. The treatment integrity percentage was calculated by dividing the number of correctly implemented intervention steps by the total twelve possible intervention steps. In addition, to ensure agreement of integrity data, inter-observer agreement (IOA) was assessed for at least 30% of integrity sessions across the intervention phase. If the treatment integrity observation indicated that monitor was not implementing the intervention at least 80% correct for three days, the Student Investigator would discuss implementation strategies during a consultation meeting.

Inter-observer agreement. To have confidence in results, reliability must be evident. To limit observer error and ensure reliability during Systematic Direct Observations, IOA was conducted on at least 30% of sessions of each phase for each participant by trained data collectors. If IOA fell below 80%, observers would participate in a systematic direct observation refresher training until agreement was equal to or greater than 80%.

Usage Rating Profile-Intervention Revised. At the conclusion of the study, the monitor completed the Usage Rating Profile-Intervention Revised (URP-IR; Chafouleas, Briesch, Riley-Tillman, & McCoach, 2009), a self-report measure that evaluated the acceptability, understanding, feasibility and systems support of the implemented intervention. The URP-IR includes 35 items rated using a six-point Likert-type scale (i.e., strongly disagree to strongly agree).

Qualitative feedback. At the conclusion of the study the monitor, teachers and guardians completed open-ended narrative questions to obtain social validity. Questions
addressed intervention implementation procedures, interest in the continuation of implementation once the study concludes, and perceptions of intervention impact on student outcomes.

**Design**

A concurrent multiple baseline design across participants was implemented with five participants identified as being chronically absent with academic engagement difficulties. Multiple baseline designs consist of “A” and “B” phases for each participant. A one-week follow-up phase was also included. Within this design, “A” phases represented the absence of intervention, while “B” indicated the presence of intervention. All participants concurrently began in the baseline phase. The intervention was introduced to the participants in a staggered manner in order to establish experimental control. Baseline for the first participant lasted for five school days, for the second participant eight school days, and the third participant eleven school days, continuing on in this pattern until adequate baseline data was collected for each participant. No less than five data points was collected per intervention phase and a stability criterion of 10% was used. Therefore, if a data point varied from the mean of the phase by 10% or greater in either direction, data collection continued until results stabilized before the next phase commenced. Replication was achieved by observing multiple participants while using a staggered, randomized baseline.

**Procedures**

**Training.** Following informed consent, the monitor was trained by the student investigator over two, one-hour sessions. The first session occurred during the morning hours of a school day and the second hour occurred in the afternoon of the same school day.

**Baseline (Phase A).** During the baseline phase, there was no systematic change or manipulation to the participating students’ school day. Systematic direct observations and direct
behavior ratings took place daily, as attendance permitted. Attendance data was collected daily by the monitor.

**Intervention (Phase B).** The intervention consisted of students participating in the Check & Connect program three days a week for twenty to twenty-five minutes. Each day the monitor checked the school’s online database to complete the *check* component of the intervention. They tracked absences, tardiness, detentions, office discipline referrals, grades, missing assignments etc. To fulfill the individualized part of the intervention, the *connect* component, the monitor met with each student three days a week during an agreed upon time that did not interfere with core academic class time in the monitor’s office. At this time the monitor kept education a salient issue, provided needed support and promoted the use of conflict resolution strategies and the capacity to find solutions rather than place blame (Sinclair, Christenson, & Thurlow, 2005). Students reviewed both real and hypothetical problems according to a cognitive behavior problem-solving approach such as coping with familial discord, peer conflict, and difficulties with teachers. In addition, the monitor promoted and encouraged the student to engage in a school activity to foster a sense of belonging and community such as joining a sports team, after-school program, student council, or attending a school event (i.e.: a dance). The monitor tracked and recorded the *connect* meetings as described on the C&C form. In addition to meeting with students, the monitor called the guardians of each participating student one to three times a week to review their student’s school performance and problem solve difficulties that may be interfering with student success. Phone calls lasted an average of ten minutes. At this time, the monitor facilitated the utilization of school and community supports and/or activities including after-school programming (tutoring, sports, clubs), and community services (volunteering, recreational sports, mentoring programs through
local agencies). During intervention implementation systematic direct observations and daily behavior ratings were conducted daily, as attendance permitted. Attendance data was collected daily by the monitor.

**Follow-Up.** The follow up phase occurred one week after the conclusion of the intervention phase. Across the follow up phase, three data points of systematic direct observations and three attendance data points were collected for each participant. In addition to three data points of systematic direct observations, the monitor completed the revised version of the Usage Rating Profile-Intervention Revised (URP-IR; Briesch, Chafouleas, Neugebauer, & Riley-Tillman, 2013), a self-report measurement that evaluated the acceptability, understanding, feasibility and systems support of the implemented intervention (Chafouleas, Briesch, Neugebauer, & Riley-Tillman, 2011). The monitor, teachers and willing guardians completed a semi-structured questionnaire. Questions addressed the teachers’ perceptions of intervention effectiveness on student outcomes, and home-school communication as well as ease and difficulties of implementation. In addition, the monitor and teachers were asked if they continued the intervention following study completion, and what supports would help improve implementation. Questionnaires remained confidential and optional.

**Data Analysis**

To evaluate the effectiveness of the intervention visual analysis in a graphical format was utilized. The What Works Clearinghouse (WWC; Kratochwill et al., 2010) criterion for Visual Analysis was employed as the standard for determining a functional relationship. Evidence standards set forth by the WWC Single-Case Design Technical Documentation guided the assessment of within and between phase data patterns according to level (mean performance), trend (slope), variability (fluctuation of the slope during a specific phase), immediacy of effect,
overlap, and consistency of data patterns across similar phases (Horner et al., 2005; Kratochwill et al., 2010). To account for possible attrition, the following procedures took place as recommended by the 2010 WWC Single-Case Design Technical Documentation (Kratochwill et al., 2010): (a) minimum of 5 data points, (b) three phase repetitions, (c) monitoring of unit composition, (d) additional students were enrolled.
Chapter 4

RESULTS

Assessing single subject design entails the utilization of visual analysis. The purpose of visual analysis as outlined by Kratochwill et al. (2010) is to determine if the experiment demonstrated a causal relationship between an independent and dependent variable and if so, the strength of that relationship. Specifically, sufficient data within a phase is needed to document a pattern followed by a demonstration of effect between two phases for at least three students. Visual analysis includes the assessment of data pattern levels, trends, variability, immediacy of effect, overlap across adjacent phases and consistency in similar phases.

Attendance Rate

Please note that goal attendance rate was established as ≥90%. Table 1 illustrates the mean attendance rate and standard deviation for each student. Figure 2 illustrates the attendance rate for each student.

| Table 1. Attendance Rate Mean (M) and Standard Deviation (SD) Data by Student |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
|                             | M  | SD  | M  | SD  | M  | SD  |
| Baseline                   |    |     |    |     |    |     |
| Max                        | 87.8 | .84 | 88.46 | .93 | 90 | 0 |
| Carly                      | 74.25 | .46 | 75.43 | 1.33 | 78 | 0 |
| Desiree                    | 87.82 | .40 | 86.39 | .70 | 86 | 0 |
| Jovan                      | 83.07 | .83 | 82.87 | .74 | 82.67 | .58 |
| Trey                       | 79.76 | .56 | 78.67 | .50 | 80 | 0 |
Figure 1. Attendance rate by student.
Max. Max’s baseline data demonstrated a consistent pattern of behavior in need of change with a baseline mean attendance rate of 87.8%. Variability was consistent (SD=.84) and the stable trend was moving away from the therapeutic direction. Within-intervention phase analysis demonstrated a predictable pattern with sufficiently consistent variability (SD=.93). The trend was moving in the hypothesized direction with a mean attendance rate of 88.46%. Max’s between phase data did not demonstrate an immediacy of effect as there were not discriminably different levels and trends between the first and last three data points in adjacent phases. There was an overall change in level and trend, although there was not a decrease in variability. There was however, low overlap of data points between baseline and treatment phases. Based on within and between phase visual analysis, data patterns indicated a demonstration of basic effects on attendance. At the time of follow-up, Max’s attendance rate continued to meet goal with a mean of 90%.

Carly. Baseline data demonstrated a behavior in need of change (M=74.25) with a predictable and stable data pattern with low variability (SD=.46). Within-intervention phase analysis demonstrated a predictable data pattern with sufficiently low variability (SD=1.33) that was moving in the therapeutic direction (M=75.43). Between phase analysis did not demonstrate immediacy of effects as the level and trend of the first and last three data points in adjacent phases were not discriminally different. Overall data patterns between baseline and intervention phases indicated changes in level and trend with low variability as the data pattern gradually moved in the therapeutic direction. Based on visual analysis, data patterns demonstrated basic effects on attendance. While Carly’s attendance rate to did not meet goal by follow-up, it remained improved with a mean of 78%.
**Desiree.** Desiree’s baseline data demonstrated a consistent and stable pattern of behavior in need of change with low variability and a mean baseline attendance rate of 87.82% (SD=.40). Within-intervention phase analysis demonstrated a predictable pattern with sufficiently consistent variability (SD=.70); however, the trend was moving away from the hypothesized direction with a mean attendance rate of 86.39%. Between phase data patterns did not demonstrate immediacy of effects as the level and trend between the first and last three data points in adjacent phases were not discernibly different. Between phase data patterns do not indicate basic effects. There was an overall level change with minimal overlapping data points however, data was trending away from the therapeutic direction. Based on visual analysis, there was not a demonstration of basic effects on attendance. At time of follow-up Desiree’s attendance rate decreased to a mean of 86%.

**Jovan.** Jovan’s baseline data pattern demonstrated a predictable and stable pattern of behavior in need of change with a baseline mean of 83.07% and low variability (SD=.83). Within the intervention phase, the data pattern was stable, predictable and sufficiently consistent with low variability (M=82.87; SD=.74). Between phase data patterns did not indicate immediacy of effects on level or trend between the first and last three data points in adjacent phases. Overall effects were not present as there was significant overlap between baseline and treatment data points as well as minimal change in level, trend and variability. Data patterns remained rather consistent across phases. Based on visual analysis, there was not a demonstration of basic effects on attendance. At the time of follow-up, Jovan’s attendance rate slightly decreased to a mean of 83%.

**Trey.** Baseline data demonstrates a predictable, consistent and stable pattern of behavior in need of change with a baseline mean of 79.76% and low variability (SD=.56). Within the
intervention phase, data demonstrated a stable, predictable and consistent pattern with low variability (M=78.76; SD=.50). Between phase data patterns indicated immediacy of effects on level and trend between the first and last three data points in adjacent phases however, the data was not moving in the therapeutic direction. Overall basic effects were not present as there was significant overlap between baseline and treatment data points as well as minimal change in level, trend and variability; data patterns remained consistent across phases. Based on visual analysis, there was not a demonstration of basic effects on attendance. Although chronically absent, Trey’s attendance rate at follow-up improved to a mean of 80%.

**Overall Effectiveness on Attendance Rate.** This study provided five opportunities to demonstrate an effect on attendance. Based on visual analysis, data patterns for two students demonstrated basic effects which is not sufficient to suggest treatment effects on attendance.

**Systematic Direct Observations**

Please note that goal academic engagement was established as ≥80%. Table 2 illustrates the mean and standard deviation of the systematic direct observations for academic engagement. Figure 2 illustrates the results of the systematic direct observations on academic engagement.

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<td>53.61</td>
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<td>48.9</td>
<td>3.11</td>
</tr>
<tr>
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<td>45.36</td>
<td>22.09</td>
<td>64.88</td>
<td>28.33</td>
<td>65.17</td>
<td>12.27</td>
</tr>
</tbody>
</table>
Figure 2. Percentage of academic engagement by student.
Max. Max’s baseline data demonstrated a consistent pattern of behavior in need of change as his baseline mean for academic engagement was 48% (SD=11.87). Variability was sufficiently consistent and the trend was relatively stable and moving away from the therapeutic direction. Within-intervention phase analysis demonstrates a predictable pattern with sufficiently consistent variability (SD=9.44). The trend was moving in the hypothesized direction with a mean of 86.34. Max’s between phase data demonstrated an immediacy of effect with discriminably different levels and trends between the first and last three data points in adjacent phases. Between phase data patterns demonstrated an overall change in level and trend and a decrease in variability with low overlap between baseline and treatment phases. Based on within and between phase visual analysis, data patterns indicated a demonstration of effect on academic engagement. At the time of follow-up, Max’s academic engagement greatly improved to a mean of 94.7%.

Carly. Carly’s baseline data demonstrated a predictable pattern of behavior in need of change with a baseline mean of 47.76% (SD=17.33) for academic engagement. Seven baseline data points demonstrated sufficiently consistent variability with the exception of the eighth data point, which dropped to 8.9% as she was documented to be sleeping during most of the observation session. The data trend was relatively stable and moving away from the therapeutic direction. Analysis of within-intervention phase demonstrated a predictable data pattern with sufficiently consistent variability that is moving toward a therapeutic direction (M=70.95; SD=14.70). Between phase data did not demonstrate an immediacy of effect as there was not a discriminably different level or trend between the first and last three data points in adjacent phases however, data demonstrated overall effects. More specifically, data patterns between baseline and intervention exhibited overall level and trend changes as well as slight changes in
variability. Between the baseline and intervention phases, Carly’s data patterns moved in the therapeutic direction at a stable, upward trend with sufficiently low overlap. Based on within and between phase visual analysis, data patterns indicated a demonstration of effect on academic engagement. Carly’s academic engagement continued to improve to a mean of 85.93% at follow-up.

**Desiree.** Baseline data for Desiree demonstrated a predictable pattern of behavior in need of change (M=24.45%; SD=14.84). Variability was sufficiently consistent and stable with the data moving away from the therapeutic direction. There were two data points in the baseline phase with 0% academic engagement as Desiree was reported to be sleeping. Analysis of within-intervention phase demonstrated a relatively predictable data pattern with sufficiently consistent variability that was moving toward the therapeutic direction (M=45.25; SD=22.30). One data point in the intervention phase signified 0% academic engagement as Desiree was reportedly sleeping. Similar to Carly, between phase data did not demonstrate an immediacy of effect as there was not a discriminably different level or trend between the first and last three data points in adjacent phases. However, data patterns indicated a gradual overall level and trend change as data was moving in the therapeutic direction at an increased level with less variability. Further, there was sufficiently low overlap between baseline and intervention phases. Based on within and between phase visual analysis, data patterns indicated a demonstration of effect on academic engagement. Desiree’s academic engagement continued to improve at follow-up with a mean of 62.93%.

**Jovan.** Jovan’s baseline data demonstrated a relatively predictable pattern of behavior in need of change with a mean of 35.39. While the data pattern demonstrated large variability (SD=25.19), it was consistent in nature and the trend was largely stable. Two baseline data points
indicated 0% engagement as he was reported to have refused to remain in the classroom while demonstrating disruptive behavior. Analysis of Jovan’s within-intervention phase data did not demonstrate predictability. Overall, the level and trend were moving in the therapeutic direction but demonstrated high variability (M=53.61; SD=27.82). One data point in the intervention phase indicated 0% engagement as it was documented that Jovan ran out of the classroom and did not return. Between phase data did not demonstrate an immediacy of effect as there was not a discriminably different level or trend between the first and last three data points in adjacent phases. Examining between phase data, there was evidence for overall level change but not in trend or variability. Further data patterns between phases indicated significant overlap of data points. Based on within and between phase visual analysis, data patterns did not indicate a demonstration of effect on academic engagement. At the time of follow-up, Jovan’s academic engagement declined to a mean of 48.9%.

**Trey.** Baseline data for Trey demonstrated a relatively predictable pattern of behavior in need of change (M=45.36) however, the data pattern varied inconsistently (SD=22.09) and was moving toward the therapeutic direction. Analysis of within-intervention phase data demonstrated an unpredictable data pattern with high variability (M=64.88; SD=28.33) that was gradually moving toward the therapeutic direction. Examining between phase data did not demonstrate an immediacy of effect as there was not a discriminably different level or trend between the first and last three data points in adjacent phases. Between phase analysis did not indicate basic effects. There was evidence of overall level change but not in trend or variability. Further, there was significant overlap between phase data points. At the time of follow-up, Trey’s academic engagement improved to 65.17%.
Overall Effectiveness on Academic Engagement. This study provided five opportunities to demonstrate an effect on academic engagement. Based on visual analysis, data patterns for three students demonstrated basic effects suggesting treatment effects on academic engagement.

Daily Behavior Ratings

Please note that goal academic engagement was established as ≥80%. Table 3 illustrates the mean and standard deviation of daily behavior ratings on academic engagement. Figure 3 illustrates the results of the daily behavior ratings of academic engagement.

| Table 3. Daily Behavior Rating Mean (M) and Standard Deviation (SD) Data by Student |
|----------------------------------|------------------|------------------|
|                                  | Baseline         | Intervention     |
| M                                | SD               | M                | SD               |
| Max                              | 32               | 13.04            | 79.41            | 14.24            |
| Carly                            | 36.25            | 16.85            | 62.14            | 18.05            |
| Desiree                          | 27.27            | 18.49            | 44.09            | 23.43            |
| Jovan                            | 28.21            | 22.84            | 47.5             | 22.52            |
| Trey                             | 39.12            | 22.03            | 58               | 28.42            |
Figure 3. Daily Behavior Ratings of Academic Engagement.
Max. Max’s baseline data indicated a consistent behavioral pattern in need of change (M=32%; SD=13.04) as it was moving away from the therapeutic direction. Within the intervention phase, the data demonstrated a consistent pattern with low variability (SD=14.24), which was moving in the therapeutic direction (M=79.41). Between phase data demonstrated a discriminably different level and trend between the first and last three data points in adjacent phases. Between baseline and intervention phases, there were changes in overall level, trend, and variability with low overlap. Based on visual analysis, there was a demonstration of basic effects on daily behavior ratings of academic engagement.

Carly. Carly’s baseline data demonstrated a pattern of behavior data in need of change. Data was consistent with a stable trend and sufficiently low variability (M=36.25; SD=16.85) aside from an outlier (observation eight), which Carly was documented to be sleeping. Within-intervention phase data demonstrated a sufficiently consistent pattern moving in the therapeutic direction (M=62.14; SD=18.05). In regard to immediacy of effects, the level and trend between the first and last three data points of adjacent points were not discriminably different. However, there were sufficient overall changes in level, trend, and variability between the baseline and treatment phases with minimal overlap. Visual analysis did not suggest immediacy of effects but overall basic effects on daily behavior ratings of academic engagement.

Desiree. Baseline data for Desiree demonstrated behavior in need of change (M=27.27) with inconsistent variability but a stable trend (SD=18.49). Data within the intervention phase was moving in the hypothesized direction although variability remains high (M=44.09; SD=23.43). Between phases, immediacy of effects was not evident as there was not a discriminable difference in level or trend between the first and last three data points of adjacent phases. Between phase analysis did not indicate overall changes in trend despite overall changes
in level and variability. Experimental effects cannot be declared due to the presence of overlapping data points and no changes to overall trend.

**Jovan.** Jovan’s baseline data suggested a behavior pattern in need of change (M=28.21%) trending away from the therapeutic direction with high variability (SD=22.84). The data pattern within the intervention phase (M=47.5%) continued to demonstrate inconsistent trend and variability (SD=22.52). Between phase analysis did not suggest immediacy of effects as the level and trend between the first and last three data points of the baseline and intervention phase were not discriminably different. Between phase analysis indicated an overall change in level and trend but not variability. Further, there was not sufficiently low overlap between the baseline and treatment phase; thus, experimental effects are not present.

**Trey.** The baseline data pattern for Trey indicated a behavior in need of change (M=39.12%) however variability was high and inconsistent (SD=22.03) and the trend was neither sufficiently low or moving away from the therapeutic direction. Within the intervention phase, there was sufficient variability with a data pattern trending in the hypothesized direction (M=58%; SD=28.42). Immediacy of effect between the first and last three data points of adjacent phases was not evident as the level and trend were not discriminably different. Between phase analysis did not indicate experimental effects due to overlapping data and a lack of change in trend and variability despite changes in level.

**Overall Effectiveness.** This study provided five opportunities to demonstrate an effect on daily teacher ratings of academic engagement. Based on visual analysis, data patterns for two students demonstrated basic effects, which is not sufficient to suggest treatment effects on teacher ratings of academic engagement for this measure.
**Interobserver Agreement**

To ensure assessor consistency, inter-observer agreement must be collected in each phase on at least twenty percent of observation sessions for each participant while being validated by a statistical measure (Kratochwill et. al., 2010). Inter-observer agreement (IOA) was collected on at least 30% of observations in each phase for each participant by trained data collectors. During baseline, IOA was collected twice for participant one, three times for participant two, four times for participant three, five times for participant four and six times for participant five. During intervention, IOA was collected six times for participant one, five times for participant two, four times for participant three, three times for participant four and two times for participant five. Between baseline and intervention, IOA was collected during six sessions for each participant equating 36.36% of total sessions. IOA was not able to be collected during the two to three follow-up sessions.

Percentage agreement for each interval was utilized to assess interobserver agreement as data was collected using event recording. A total of forty IOA sessions took place with an average agreement of 89% (SD=.05). Agreement sessions ranged from 82% to 100%. Due to acceptable IOA, a refresher session was not required and observation data can be considered valid.

**Treatment Integrity**

To ensure that the C&C program was implemented correctly, data collectors gathered treatment integrity data for 30% of sessions across the intervention phase by the use of checklists outlining program steps. The treatment integrity percentage was calculated by dividing the number of correctly implemented intervention steps by the minimum of twelve possible intervention steps. Treatment integrity was collected four times for participant one, three times
for participant two, two times for participant three and four and once for participant five totaling twelve treatment integrity sessions. Treatment integrity ranged from 92% to 100% with a mean of 99% (SD=.03). To ensure assessor consistency of treatment integrity sessions, inter-observer agreement was collected on 33.3% of treatment integrity sessions (four out of twelve sessions) using percentage agreement. Treatment integrity IOA had a mean of 100% (SD=0).

**Home-School Communication**

Qualitative feedback addressing home-school communication was provided by the monitor, teachers, and parents of Max and Carly. Feedback was not provided by the parents of Desiree, Jovan and Trey.

**Max.** Max’s teacher, mother and monitor reported improved home-school communication. Max’s teacher indicated improved home-school communication, which included parent request for weekly updates via email and requests for phone calls home to address positive and concerning updates that should not wait for the weekly update. The monitor reported improved home-school communication as well. She shared that once positive rapport was established, Max’s mother demonstrated an improved interest and understanding of Max’s education. Further, she sought and followed through with community-based resources that could assist herself, Max and his siblings.

**Carly.** Home-school communication was reported to have improved by Carly’s teacher, father and monitor. As a single father with a full-time job the monitor reported that it was initially difficult to reach Carly’s father but once a mutually-agreeable calling schedule was identified, he became an active participant. According to Carly’s teacher, her father began to email with questions and/or concerns which he had not previously done. Carly’s father shared
that home-school communication greatly improved and that he felt his opinions and thoughts now mattered.

Desiree. Desiree’s teacher and monitor did not report improved home-school communication. The monitor spoke with Desiree’s mother twice, albeit briefly, during the intervention phase. Following the first two consultative phone calls, Desiree’s mother regularly reported that she was not available to talk. Desiree’s mother did not return the qualitative feedback form.

Jovan. Jovan’s teacher and monitor did not report improved home-school communication. The monitor shared that beyond the first session, Jovan’s mother did not participate in collaborative discussions nor did she return the qualitative feedback form.

Trey. The teacher and monitor did not report improved home-school communication. The monitor shared that Trey’s mother did not participate in collaborative phone calls or return the qualitative feedback form.

Social Validity

Both teachers reported the desire to continue intervention implementation. Further, they both believed that the intervention would be an appropriate intervention for at-risk students, whether for attendance and/or behavior. Both teachers reported that the monitor had a positive impact on student success as the role was a hybrid of a mentor and case manager. Teachers also shared that this study validated their understanding of school engagement and the need to target school engagement in a comprehensive manner. In regard to the Daily Behavior Ratings, teachers found them convenient and straight-forward. Since they took minimal time to complete, teachers would consider using them for basic, progress monitoring purposes. Additional supports were not identified by teachers.
The monitor reported that the intervention was continued after the end of the study. She shared that the most beneficial part of the intervention was the “check” component and the relationship between the student and herself which helped the student, “feel like someone cares and want them to do well.” In regard to intervention implementation, the monitor reported that the check component was easiest to implement but identifying community resources was most difficult. She considered the identification of additional supports an area of need as there were limited community resources available.

Parent feedback was provided by Max’s mother and Carly’s father. The parents of Desiree, Jovan or Trey did not return the qualitative feedback form. Parents believed that the intervention helped their children with “liking school” and “do[ing] better.” They were appreciative of the phone calls from the monitor as they made them feel more included in their child’s education. They also enjoyed not receiving as many “complaining” and “bad” phone calls related to their child’s school performance. Both parents shared that Max and Carly spoke more positively about school and reported a desire for the intervention to continue. Carly’s father noted that students need to feel that someone in the school cares about their success.

Based on feedback, school staff reported a positive experience with the intervention as did the parents who provided feedback.

**Usage Rating Profile – Intervention Revised**

The Usage Rating Profile – Intervention Revised (URP-IR) was completed by the monitor to assess factors related to the likelihood an intervention will be implemented outside of research (Briesch, Chafouleas, Neugebauer, & Riley-Tillman, 2013). The monitor reported multiple positive perceptions related to intervention implementation. In particular, the monitor reported high levels of intervention acceptability ($M=5.44$; $SD=.53$) and understanding ($M=6$;
SD=0). The monitor believed that Check & Connect was appropriate for addressing a variety of problems and reported a positive attitude and high commitment to continuing this intervention. Feasibility (M=4.83; SD=.41) was reported as manageable with no concerns related to required time or implementation complexity. The monitor also reported that the intervention aligns with the school’s mission and that administrators would be supportive of its continued use (system climate; M=5.2; SD=.45). Support such as consultation or professional development was not reported as necessary (system support; M=3.33; SD=.58) however, positive home-school collaboration was identified as necessary (M=4; SD=1).

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CHAPTER 5
DISCUSSION

The purpose of this study was threefold: to determine if the implementation of Check & Connect could improve the attendance, academic engagement and home-school communication of sixth grade students identified as chronically absent.

Max & Carly

Max began the study with an attendance rate of 86% and no historical attendance concerns. Following intervention implementation, Max’s attendance rate and academic engagement as measured by systematic direct observations and daily behavior ratings demonstrated treatment effects. Max’s attendance rate at the conclusion of the study was 90% (goal) and remained at 90% at follow-up. Further, his academic engagement as measured by SDOs had a mean 48.42% at baseline and a mean of 86.34% during intervention. Max maintained goal engagement levels at follow-up with a mean of 94.7%. The monitor shared that Max utilized his check & connect sessions and appeared to be invested in his grades and progress. Max’s teacher and monitor reported an improved attitude toward school and improved class participation. Further, the monitor, his teacher and mother reported improved home-school communication. As the intervention progressed, Max’s mother actively sought more communication with his teacher as well as community resources for additional support. Based on results, it appears Max improved his overall school engagement following exposure to the comprehensive intervention.

Carly began the study with a 75% attendance rate. Since third grade, Carly was chronically absent at various points each school year. Following intervention implementation, Carly’s attendance rate and academic engagement as measured by both systematic direct
observations and daily behavior ratings demonstrated treatment effects. Carly’s attendance rate at the conclusion of the study was 78% (goal=90%) where it remained during follow-up. Her baseline academic engagement according to SDOs had a mean of 47.76% and improved to 70.95% during intervention. At follow-up, her mean academic engagement was 85.93%. The monitor shared that Carly was an active participant during her check and connect sessions and that she was eager to see and celebrate her progress. Carly’s teacher, father and monitor reported improved home-school communication despite the father’s busy work schedule. All adult stakeholders reported that Carly demonstrated an improved attitude toward school. It appears that Carly, despite historical absenteeism, improved school engagement following comprehensive intervention implementation.

Max and Carly experienced treatment effects for both attendance and academic engagement as well as home-school communication as reported by adult stakeholders. For these particular students, regardless of historical absenteeism as Max did not have historical concerns whereas Carly did, it appears a comprehensive program was beneficial for positive behavior change.

**Desiree**

Desiree experienced treatment effects for academic engagement but not attendance or home-school communication as reported by stakeholders. Desiree began the study with an attendance rate of 87% and a baseline mean of 24.45% for academic engagement as measured by systematic direct observations. Since first grade, Desiree has been chronically absent at various points each school year. Following intervention implementation, her attendance rate decreased to 86% where it remained at follow-up. Her academic engagement improved to an intervention mean of 45.25%, which further improved to 62.93% at follow-up. The monitor shared that
Desiree was actively involved in her check and connect sessions and despite continued work avoidance, her teacher reported longer durations of task engagement. While historical chronic absenteeism and lack of parent involvement did not impede improvements with academic engagement they may have impacted attendance.

**Jovan & Trey**

Jovan began the intervention with an attendance rate of 84% and a baseline mean of 35.39% for academic engagement as measured by systematic direct observations. Since fourth grade, Jovan has been identified as chronically absent. Following intervention implementation, Jovan’s attendance rate decreased to 83% where it remained at follow-up. His academic engagement had a mean of 53.61% during intervention but decreased to 48.9% at follow-up. The monitor reported that Jovan attended his check and connect sessions but did not appear to be invested in his progress or the recommended supports. His mother briefly participated in one collaborative session with the monitor. Jovan’s teacher did not report changes in behavior or attendance. It appears that minimal personal investment and lack of parent involvement may have impacted intervention effectiveness.

Trey began the intervention with an attendance rate of 79% and a baseline academic engagement mean of 45.36%. Trey has been chronically absent since first grade where he had an attendance rate of 88.5%. Following intervention implementation his attendance rate was 79%, which improved to 80% at follow-up although still chronically absent. His mean academic engagement improved to 64.88% during intervention then to 65.17% at follow-up. Trey’s teacher expressed continued difficulties with academic engagement although decreased incidences of disruptive behavior. The monitor reported that Trey regularly canceled his check & connect meetings citing he was too busy.
Both Jovan and Trey did not experience treatment effects for attendance, academic engagement or home-school communication as reported by adult stakeholders. While Jovan participated in check & connect sessions, he exhibited limited personal investment whereas Trey did not participate in sessions. Both have an extensive history of chronic absenteeism, had limited or no parent involvement, and exhibited limited or no personal investment thus potentially impacting outcomes.

Overall

Teacher response in the classroom may be a relevant factor in behavior change. Both teachers reported positive behavioral changes in three out of five students and shared that partaking in the study was a positive experience as they enjoyed watching the systematic change. As Max, Carly and Desiree’s behaviors changed for the positive, teachers may have unintentionally provided more positive feedback and positive experiences to these students further improving their connection to school. Further supporting this implication is feedback from parents who shared that they no longer received as many “complaining” and “bad” phone calls from the school. While Jovan and Trey continued to struggle with attendance and academic engagement, teachers may have limited positive feedback and opportunities, further impacting feelings of school engagement.

For the purpose of this study’s participants, regardless of historical absenteeism, students who utilized the monitor and participated in meaningful check and connect sessions in addition to having parent involvement demonstrated greater outcomes including improved attendance, academic engagement and home-school communication. Regardless of historical absenteeism, if parents were not involved, attendance did not improve; although, if the student was engaged during check and connect sessions, academic engagement improved. If the student was not
invested and parents were not involved, regardless of historical absenteeism, academic engagement did not improve.

For the participating students, it can be presumed that when students were invested, they developed a meaningful relationship with the monitor while simultaneously their parents were becoming a more active participant in their child’s education, which in turn may have promoted the parent’s and child’s investment in education. As results indicated, a comprehensive intervention is needed to improve school engagement, a multi-faceted construct.

Check & Connect was a desirable and feasible intervention to implement. Teachers, the monitor and parents (those who completed the qualitative feedback form) considered Check & Connect a highly acceptable intervention and reported a desire for continued use. Feedback indicates that parents want to feel like active participants in their child’s education thus suggesting they lack the knowledge and/or skills to be active participants on their own accord. Based on the monitor, teacher and parent feedback, the monitor played a critical role for both students and parents as they acted as a mentor and case manager, facilitating supports and encouraging success. Based on results, having an identified school-based professional to encourage success and facilitate supports is a critical factor for school engagement.

Limitations

Like every study, limitations arise which for this study include those related to design and units of measure. Single case design (SCD) is an experimental methodology that is often appropriate for educational research as it assesses data from multiple subjects who are considered a good representation of a larger population (Riley-Tillman & Burns, 2009). Treatment effects are then systematically replicated across conditions to ensure confidence in effectiveness (Riley-Tillman & Burns, 2009). To suggest an intervention is appropriate for a
greater population, a causal relationship between the intervention and dependent variables need to be confidently identified through the process of replication. By conducting multiple replications, we can then build a better evidence base for the effectiveness of Check & Connect on student outcomes of sixth grade students with chronic absenteeism. While this study improved student outcomes, replication needs to occur before additional statements of effectiveness can be made to those outside of the immediate participants.

Another limitation was measurement of attendance according to rate. As this study was conducted further into the school year and over a relatively brief period of time, in comparison to its group design counterparts, attendance rate was minimally impacted by change as students had little time to make-up for absences in comparison to total days enrolled. While teachers reported improvements in attendance, due to insensitivity to change overall attendance rate did not reflect short-term gains.

Implications

Results from this study raise multiple implications that may inform the direction of future research in terms of purpose and methodology. Implications regarding methodology revolve around single case design. This study was the first to add to the Check & Connect evidence base using single case design. In order to do so, the intervention was implemented over the course of weeks, not the recommended years. Despite the shortened implementation period, positive student outcomes were observed. To ensure the effectiveness of this intervention on the targeted population, results need to be replicated. Lastly, to generalize outcomes, this study needs to be implemented and replicated across populations and settings to expand upon the findings.
In regards to purpose of future research, four out of the five participating students had a history of chronic absenteeism with two beginning in the first grade. Due to early onset of chronic absenteeism and its continued presence, future research should explore targeted interventions beginning as early as kindergarten and first grade. Additionally, the two students with the strongest treatment effects had the greatest parental engagement whereas students with limited or no treatment effects had minimal parental engagement. Due to the potential impact of parent involvement or lack thereof, future research should target parent involvement of students with and without chronic absenteeism in early elementary school. Understanding these considerations, Check & Connect should be implemented in early elementary grades to assess impact on a younger student population.

Moving beyond the immediate intervention, rather than reacting to attendance concerns, researchers and policy makers should consider the implementation of preventative measures as early as kindergarten in an effort to thwart school disconnectedness. Relatedly, parents from this study reported that they appreciated being included in their child’s education and becoming an active participant which suggests they had the desire to be included but lacked the skills and/or tools to do so. Thus, future research should identify the barriers that impede parents to take on an active role in their child’s education as well as the skills and/or tools needed for participation.

Translating research to practice suggests a socially acceptable intervention that is manageable and feasible in its use. Check & Connect offers a manageable effective intervention requiring limited resources and limited professional support to implement with integrity. As policy makers and district administrators begin to accept that school engagement carries implications larger than academic performance, effective interventions such as Check & Connect will be necessary to support the mission of schools to build positive climate and
social/emotional/behavioral supports. As such, Check & Connect is an appropriate intervention to meet the multi-faceted needs of districts, teachers, parents and students.

**Conclusion**

Dropping out of high school has been linked to severe consequences which negatively impact quality of life and increase risk of criminal behavior, joblessness and single parenthood (Morrow & Villodas, 2017). While intervention and prevention are a necessity, not all dropouts follow the same pathway as the decision to drop out is influenced by multiple risk factors over time (Franklin & Trouard, 2016; Jerald, 2006). Poor middle school attendance and performance have been found to be primary predictors (Balfanz, Herzog and MacIver, 2007; Morrow & Villodas, 2017) in addition to exposure to trauma, which is more likely to occur in socioeconomically disadvantaged regions (Kataoka, Langley, Wong, Baweja, & Stein, 2012). Due to the potential impact of trauma exposure and poor sixth grade performance, it is necessary to provide intensive interventions to mitigate the risk for dropping out of high school. Utilizing single case design methodology, results of this study established intervention effectiveness on the academic engagement of sixth grade students with chronic absenteeism. While the study demonstrated treatment effects on the attendance rate for two out of the five participants, it was not sufficient to establish treatment effects on attendance rate. Home-school communication was reported to have improved for two of the five students. Further, this study found that single case design methodology was an able method of research to contribute to the evidence base of Check & Connect. Future research will include replication of the findings and generalizability across settings, specifically grades in order to target earlier intervention.
APPENDIX A: SYSTEMATIC DIRECT OBSERVATION FORM

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<tr>
<th>Date:</th>
<th>Student ID:</th>
<th>Activity Description:</th>
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Rater:

Observation Time:
Start: __________
End: __________

Behavior Descriptions:

Academically Engaged is actively or passively participating in the classroom activity. For example: writing, raising hand, answering a question, talking about a lesson, listening to the teacher, reading silently, or looking at instructional materials.

Directions: Observations should occur over a 15-minute period. Momentary time sampling with a 20 second interval should be used. Use + or – to indicate whether the behavior was observed at the specified interval mark.

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Narrative Comments:
### APPENDIX B: DAILY BEHAVIOR RATING FORM

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<th>Rater:</th>
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**Observation Time:**
- **Start:**
- **End:**
- Check if no observation today

**Behavior Descriptions:**
- **Academically engaged** is actively or passively participating in the classroom activity. For example: writing, raising hand, answering a question, talking about a lesson, listening to the teacher, reading silently, or looking at instructional materials.

**Directions:** Place a mark along the line that best reflects the percentage of total time the student exhibited each target behavior. Note that the percentages do not need to total 100% across behaviors since some behaviors may co-occur.

**Academically Engaged**

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<th>10</th>
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<td></td>
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<td>1%</td>
<td>2%</td>
<td>3%</td>
<td>4%</td>
<td>5%</td>
<td>6%</td>
<td>7%</td>
<td>8%</td>
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<td>10%</td>
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V1.4 DBR Standard Form was created by Sandra M. Chafouleas, T. Chris Riley-Tillman, Theodore J. Christ, and Dr. George Sugai.
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Please note: This form was adapted to exclude the behaviors of “Respectful” and “Disruptive.”
REFERENCES


