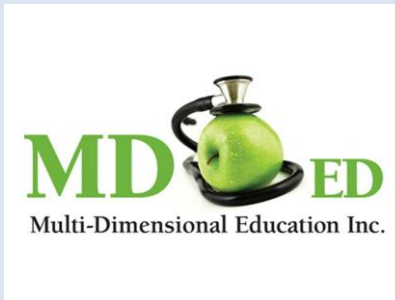


A Quasi-Experimental Study on the Efficacy of
School-Connect®: Optimizing the High School Experience

Provided by



Comprehensive Evaluation Report

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Abstract

This comprehensive evaluation report provides evidence related to the efficacy of the *School-Connect* intervention, a social and emotional learning (SEL) based program aimed at preparing students for the academic rigor and social challenges of high school. Research that correlates *school connectedness* with academic motivation and risk behavior prevention, underscores the social foundation of learning, and serves as the inspiration behind the program title, *School-Connect*. The Multivariate Analysis of Covariance (MANCOVA) results of this study suggest that while statistically controlling for variables (covariates) of baseline dependent variable measures, classrooms reporting higher levels of implementation of *School-Connect* also report statistically significant higher, more healthy and positive levels of school climate, faculty fidelity, educational attitudes and developmental perspectives when compared to classrooms reporting lower levels of implementation. Utilizing a multi-dimensional approach to assessing the outcomes associated with the implementation of *School-Connect*, this study supports *School-Connect's* positive impact on education and classrooms seeking to help students successfully transition into high school.

I. Literature Review

Social and emotional learning (SEL) is the process by which we develop the skills to recognize and manage emotions, form positive relationships, solve problems that arise, motivate and organize ourselves to accomplish a goal, make responsible decisions, and avoid risky behavior. The Collaborative for Academic, Social and Emotional Learning (CASEL), a national non-profit has identified five groups of social and emotional competencies; these include: 1) self-awareness, 2) self-management, 3) social awareness, 4) relationship skills, and 5) responsible decision making (CASEL, 2005). These core SEL competencies provide the framework for *School-Connect®: Optimizing the High School Experience*, a 40-lesson SEL curriculum for high school students, and are supported by research as critical to healthy development and academic success in children and youth (Payton, Weissberg, Durlack, Dymnicki, Taylor, Schellinger & Pachan, 2008).

A growing body of research suggests social and emotional learning is fundamental to students' success in school and beyond. Pro-social behavior and more specifically prosocial education has been linked with positive academic outcomes, while anti-social behavior has been correlated with poor academic outcomes (Brown, Corrigan & Higgins-D'Allesandro, 2012). Similarly, *school connectedness* – feeling a sense of belonging in school – has demonstrated to be a protective factor against emotional distress, suicidal thoughts and behaviors, violence, and substance use (Resnik et al., 1997). Learning itself is considered a social process. Students learn best in collaboration with teachers and peers, rather than in isolation, and benefit from the support of their families. Research that correlates *school connectedness*—feeling a sense of belonging in school—with academic motivation and achievement underscores the social foundation of learning, thus the inspiration behind the program title, *School-Connect*.

Just as learning is social in nature, it is also an affective process within the individual. To perform well, students need to motivate themselves to seek challenges, persevere in the face of obstacles, and find interest and joy in discovery and achievement. When students repeatedly display these attributes, it is more likely that they will become self-directed, lifelong learners. A meta-analysis of school-based SEL program evaluations found a broad range of benefits to students, ages 5 -18 years (Durlak et al., 2011):

- decrease in conduct problems, such as classroom misbehavior and aggression
- decrease in emotional distress, such as anxiety and depression
- improvement in attitudes about self, others, and school
- improvement in social and emotional skills
- improvement in school and classroom behavior
- 11-percentile-point gain in achievement test scores

The vast majority of the studies utilized for the meta-analysis were conducted at the elementary and middle school level (Payton et al., 2008), reflecting the limited amount of such programs currently available to high schools. Kathy Beland, lead author of *School-Connect*, is the original author of one of the most widely used and effective of these programs: *Second Step: A Violence Prevention Curriculum (Pre/K – Middle School)*, which is implemented in 26 countries and in 20% of elementary schools in the United States. *School-Connect* builds on the research-based strategies contained in *Second Step* to create a Pre-K – 12 sequence of researched-based lessons in SEL.

Most high school SEL programs narrow their scope to specific problems (e.g., bullying, youth violence, substance abuse) and short-term implementations of one to two weeks, delivered primarily as part of a one-semester health course. Research suggests that more intense programs of longer duration typically have greater impacts than shorter, less intense programs (Greenberg et al., 2003). High schools are in need of evidence-based programming that target a broad range of social and emotional skills across the grade levels, and are linked to reduced risk behavior and academic skill building, *especially* for students transitioning into high school and for those preparing to graduate and continue their education and/or enter the workforce.

In the typical high school, 9th-grade is a watershed year. Entering freshmen encounter a larger, more impersonal environment, increased academic rigor, and fewer emotional supports than they did in middle school (Bridgeland et al., 2006). For the first time, their grades and discipline record will have a direct impact on their post-high school options. Many freshmen are ill prepared for these challenges and fail to earn the credits necessary for promotion to the next grade level, thereby swelling the ranks of the 9th-grade class. In the United States, only 69% of American Indian/Alaska Native students, 83% of white students, 71% of Hispanic students, and 66% of African-American students graduate from high school (Stillwell & Sable, 2013), with

large urban school districts showing the lowest graduation rates (NCES, 2011). Ninth grade is a critical time to intervene to prevent grade retention and further academic decline (West, 2009).

Of the students who do survive this critical juncture and go on to graduate, many lack sufficient skills for success in college and the workplace. In a 2005 survey, 42% of college instructors reported that students were unprepared for college-level classes, 45% of employers reported disappointment with high school graduates' job-readiness, and 40% of high school students reported feeling inadequately prepared for either arena (Peter D. Hart Research Associates, 2005). A 2006 study of over 400 corporate executives and human resource specialists found that the work skills most needed but largely lacking in high school graduates were "applied" (i.e., work ethic, teamwork collaboration, oral communication, and social responsibility) rather than academic (i.e., English writing, mathematics, science). Applied skills are the very ones included in the SEL competencies (The Conference Board, et al., 2006). In 2009 the US Department of Education (ED) asked high schools to focus on post-secondary outcomes and improve their "college proficiency score"—the percentage of their graduates who continue in college or a technical school *after* their first year (Schramm & Zalesne, 2009).

High schools have responded to these pressing issues largely by ratcheting up academics, instituting freshman transition programs and/or student advisory periods similar to those implemented in middle schools, and reorganizing schools into smaller academies focused on professions (e.g., health, science and technology, the arts). Providing more challenging courses and academic rigor help some students find purpose and relevance in their education, but can compound the problems of students who are already struggling academically and are most at-risk of dropping out. Freshman transition programs vary from a one-day school orientation to a one- or two-semester freshman seminar, but are of short duration in most high schools. Additionally, student advisories suffer from inadequate classroom time and a general lack of teacher preparation (Johnson, 2009).

Reorganization has had mixed results (Evans et al., 2006). In an effort to increase the relevancy of high school and develop what have been coined *21st Century Skills*, many schools have designed academies that mimic the workplace. Students work in teams and are given opportunities for real world applications of academic learning. This approach assumes that, in the process of working together, students will naturally develop skills in collaboration, problem solving, and self-management. In reality, these skills need to be discussed, modeled, practiced, and reinforced. This instruction needs to be intentional, developmentally sequenced, and implemented over time.

When it comes to providing educational programming outside of core academics, two resources have been traditionally scarce in high schools: time in the schedule and funding for training and materials. In response to high dropout rates and issues with bullying and other behavioral problems, the Federal government and local districts have increased funding and legislative support for SEL programming in schools (CASEL, 2013). In response, high schools are opening

up space in their schedule, e.g., creating freshman seminars to help with ninth grade transition, and student advisory periods to improve relationships among students and staff. This has left schools scrambling to find quality and affordable programs to ensure these new courses are effective with students and worth the time and money. *School-Connect* fills this void by providing an affordable, structured, engaging, research-based curriculum applicable for different implementation models (freshman seminar, advisory, special education, alternative ed) and different student populations. One comment the authors of *School-Connect* hear repeatedly is “*I looked at your table of contents and it matches nearly exactly what I am looking for [or have been trying to create on my own] for my class.*”

The Intervention

School-Connect®: Optimizing the High School Experience is a comprehensive program containing 40 lessons distributed in four modules (10 lessons per module), plus four Culminating Project Lessons (one for each module). *School-Connect* is designed *primarily* to help students transition successfully into high school, resist risk behaviors, and prepare for productive adulthood. Currently, it is implemented in approximately 1,000 schools in all 50 states and three countries, primarily in freshman seminars, student advisory, alternative education programs, and special education courses. Each lesson is designed for a 45-50 minute class period and some lessons require two class periods. The lessons can be sub-divided by activities in order to fit into shorter sessions in advisory classes.

Each module focuses on one or more of the CASEL competency areas mentioned previously. The Collaborative for Academic, Social and Emotional Learning (CASEL) staff served as advisors during the development of *School-Connect* and assessed the curriculum using an instrument designed to measure coverage of the competency areas. The curriculum received the highest score (Program Strength) in four out of five competency areas. Subsequently, *School-Connect* authors added lessons on negotiation skills to strengthen the remaining competency area. CASEL previously used this instrument to assess over 250 youth development programs in a landmark national study on evidence-based social and emotional learning (CASEL, 2003). See Table 1. *School-Connect* Table of Contents for a list of S-C modules and lessons.

Table 1. School-Connect Table of Contents

MODULE 1: CREATING A SUPPORTIVE LEARNING COMMUNITY		MODULE 3: BUILDING ACADEMIC STRENGTHS AND PURPOSE	
Lesson 1.1	Introducing Emotional Intelligence	Lesson 3.1	Using Multiple Intelligences
Lesson 1.2	Getting Acquainted	Lesson 3.2	Growing Your Mindset
Lesson 1.3	Creating Classroom Guidelines	Lesson 3.3	Looking Ahead
Lesson 1.4	Developing Social Radar	Lesson 3.4	Exploring Career and College Options
Lesson 1.5	Standing in the Other Person's Shoes	Lesson 3.5	Setting and Achieving Goals
Lesson 1.6	Empathizing with Others	Lesson 3.6	Managing Multiple Priorities
Lesson 1.7	Refuting Labels and Stereotypes	Lesson 3.7	Developing Academic Support
Lesson 1.8	Appreciating Diversity	Lesson 3.8	Improving Memory Skills
Lesson 1.9	Addressing and Preventing Bullying	Lesson 3.9	Making the Most of Note Taking
Lesson 1.10	Building Rapport with Teachers	Lesson 3.10	Preparing for Tests
MODULE 2: DEVELOPING SELF-AWARENESS AND SELF-MANAGEMENT		MODULE 4: RESOLVING CONFLICTS AND MAKING DECISIONS	
Lesson 2.1	Understanding the Teenage Brain	Lesson 4.1	Developing and Maintaining Friendships
Lesson 2.2	Being Aware of Our Emotions	Lesson 4.2	Responding to Conflict
Lesson 2.3	Recognizing the Power of Thought	Lesson 4.3	Developing a Problem Statement
Lesson 2.4	Managing Anger	Lesson 4.4	Brainstorming and Evaluating Solutions
Lesson 2.5	Coping with Change and Uncertainty	Lesson 4.5	Implementing and Monitoring a Solution
Lesson 2.6	Inducing Positive Emotions	Lesson 4.6	Developing a Problem-Solving Approach
Lesson 2.7	Finding Flow	Lesson 4.7	Negotiating an Agreement
Lesson 2.8	Recognizing Character Strengths	Lesson 4.8	Making Personal Decisions
Lesson 2.9	Tuning In and Tuning Out the Media	Lesson 4.9	Refusing and Persuading
Lesson 2.10	Building True Happiness	Lesson 4.10	Apologizing and Forgiving

School-Connect has shown promise in addressing the needs of freshmen, special education students, and at-risk students in mainstream and alternative education programs. Schools often adopt the curriculum after hearing positive reports from neighboring schools and districts, followed by piloting in their own school. Through semi-structured telephone interviews and email correspondence initiated by the authors, *School-Connect* schools have reported decreases in the number of suspensions, fights, disciplinary referrals, and students on academic probation, as well as improvements in attendance, classroom climate, student attitudes about school, and work internship evaluations.

Evidence-Based Past Performance

Schools using *School-Connect* report specific improvements after integrating *School-Connect* into their schedule and programming. According to school administrators at Beecher Ninth Grade Academy in Flint, Michigan, *School-Connect* is the foundation for their one-year freshman seminar designed to improve student attitudes/behaviors and prepare students for high school and postsecondary education. Compared to the same students' 8th grade school records, Beecher Ninth Grade Academy students showed:

- 70% reduction in misconduct referrals from 1st semester to 2nd semester in ninth grade (8th grade = 999 misconduct referrals, 9th grade 1st semester = 528 misconduct referrals, 9th grade 2nd semester = 155 misconduct referrals).
- 11% improvement in the average GPA between 8th grade and 9th grade (8th grade = 1.989 and 9th grade = 2.239)
- 35% reduction in absentee rates. On average, students were absent 32 times in 8th grade and 21 times in 9th grade.
- Remarkable improvements on the Northwest Evaluation Association Assessment (NWEA). Approx. 44% of students scored significantly higher on NWEA Math and Reading test scores and 55% scored significantly higher on the Language Usage test. Beecher Ninth Grade Academy students showed the largest point gains on NWEA Reading and Language compared to other ninth graders at Beecher High School.

In an online student satisfaction survey, a majority of Beecher Ninth Grade Academy students reported enjoying and learning from the *School-Connect* lessons:

- 82% enjoyed the *School-Connect* curriculum “somewhat”, “mostly”, “yes, very”;
- 80% found the lessons interesting “somewhat”, “mostly”, “yes, very”;
- 95% thought the lessons easy to understand “somewhat”, “mostly”, “yes, very”;
- 93% used the knowledge & skills in real life “somewhat”, “mostly”, “yes, very”;
- 78% agreed, “all high school students should get *School-Connect* lessons.”

In an online teacher satisfaction survey, Beecher Ninth Grade Academy teachers who responded reported that their colleagues, students, and administration were “very” to “highly satisfied” with *School-Connect*. They reported that classroom climate, school-wide climate, student attitudes about school and learning, and students’ problem-solving and study skills were “moderately,” “very” or “highly improved” after using *School-Connect*.

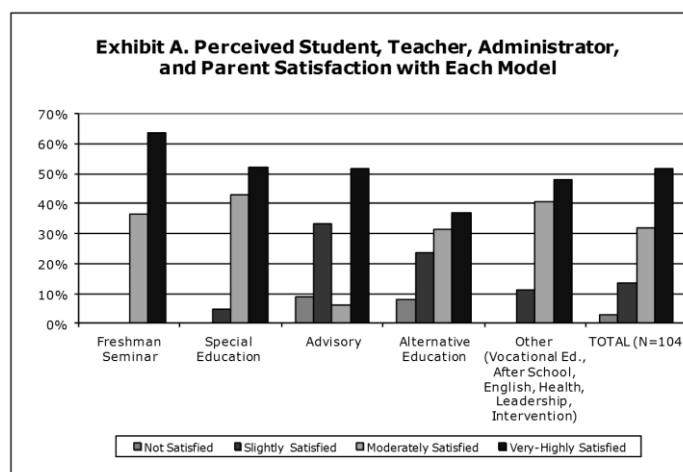
At **Northridge Academy High School (NAHS)** in Northridge, California, *School-Connect* is an integral component in their efforts to strengthen teacher-student relationships and equip students with the social, emotional, and academic skills/habits necessary for school and the workforce. All Northridge Academy ninth and tenth students received *School-Connect* lessons either in a freshman life skills course (SY 2009-2010) or ninth and tenth grade daily advisory course (SY 2010-2011 and SY 2011-2012) and approximately 50% of the staff attended a one-day *School-Connect* Teacher Training. In that same time period, Northridge Academy saw a steady improvement in their California Schools’ Academic Performance Index (API) score (2007 = 680; 2008 = 711; 2009 = 726; 2010 = 728, and 2011 = 750) and California High School’s Exit Exam (CAHSEE): (English Language Arts % Passing: 2007 = 81%; 2008 = 88%; 2009 = 85%; 2010 = 84%, and 2011 = 89%; Math % Passing: 2007 = 73%; 2008 = 77%; 2009 = 85%; 2010 = 84%, and 2011 = 89%). Northridge Academy High School is ranked number one out of 197 high schools in the Los Angeles Unified School District (LAUSD) and was recently selected by *US*

News and World Reports as one of the top high schools in the nation (#736 out of nearly 22,000) based on their College Readiness Index, Academic Performance Index and other factors.

At **Iola High School in Iola, Kansas**, tensions between upperclassmen and incoming freshmen were having a significant impact on school climate and student outcomes. The school counselor turned this dynamic around by using *School-Connect* as the foundation for her junior/senior leadership class. Upper classmen were trained to facilitate the *School-Connect* lessons with freshmen. In the first year of implementation, suspension rates dropped nearly 50%, Saturday School detention dropped 62%, and the number of students who needed mandatory tutoring for falling grades improved by more than 60% (1st semester Fall 2007: suspensions: 77; suspension for fighting: 23; Saturday School: 152 students; Mandatory Tutoring: averaged ~ 65 students per week compared to 2nd semester Fall 2008: suspensions: 35; suspension for fighting: 10; Saturday School: 58 students; Mandatory Tutoring: averaged ~ 25 students per week.) The counselor reported, “*There used to be a lot of tension between upperclassmen and freshmen. Now [with School-Connect] there’s no more fighting. They just get along.*” This positive impact has continued. Iola High School was awarded a Promising Practice Award primarily for this program by the Character Education Partnership (CEP) in 2010 and was selected as a 2012 State School of Character through CEP’s National Schools of Character Awards program.

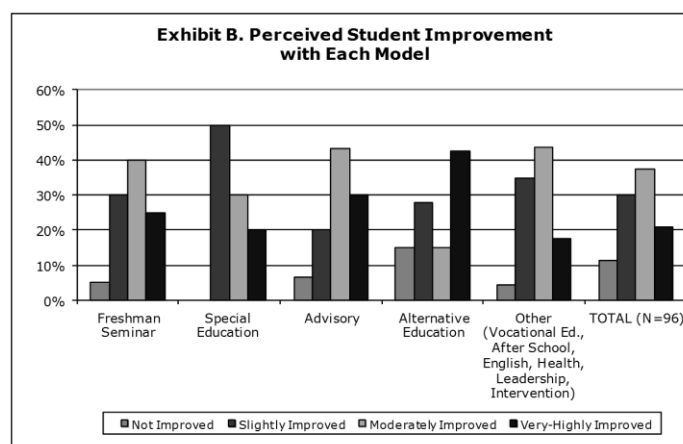
In a Spring 2012 online survey of *School-Connect* teachers and program coordinators, respondents reported being very to highly satisfied with the program and observing significant improvements in their students.

Approximately 120 of 800 (~15%) people surveyed responded to the survey, representing a 95% confidence interval. Respondents reported on their perceived satisfaction of the following groups: teachers, students, administrators, and parents. The majority of respondents (51.9%) perceived that these groups as a whole were very or highly satisfied; 31.7% perceived that they were moderately satisfied, and 13.5% perceived that they were slightly satisfied. [See Exhibit A for satisfaction rates per implementation model.] Perceived satisfaction levels were highest among schools using *School-Connect* in freshman seminar and special education classes.



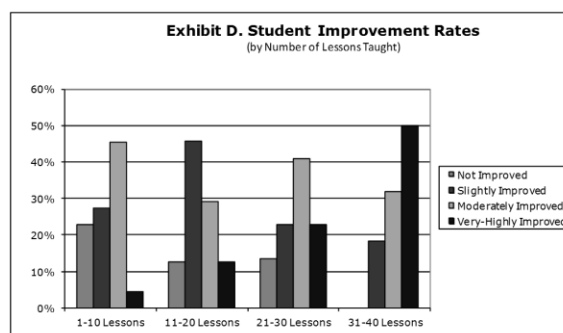
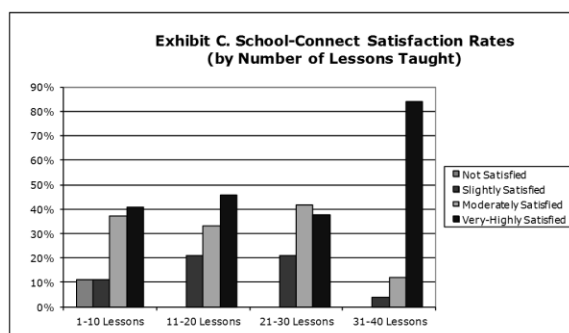
Respondents were asked how much improvement they had observed students making in social, emotional, and academic skill areas since starting *School-Connect*. [See Exhibit B.] The majority of respondents perceived that students’ skills as a whole were either moderately improved (37.5%) or very-to-highly improved (20.8%) after using *School-Connect*. Improvement rates (including moderately-to-highly improved) were highest among advisory classes (73.3%),

freshman seminars (65.0%), and alternative education (57.4%). Significantly more respondents reported students were “slightly improved” among special education classes (50.0%). This is not surprising given the social, emotional and academic skill deficits of ED/BD students relative to the general student population. Slight or moderate improvements could be considered



significant breakthroughs for many special education students. Perceived improvement was greatest in two areas across all implementation models: Teacher-Student Relationships and Classroom Climate. Respondents’ perceptions of student improvement were highest in the areas of Problem-solving Skills, Conflict Resolution, and Attitudes about School & Learning. Respondents using the advisory model perceived stronger student improvement in the reduction of bullying than respondents using other implementation models.

The greatest predictor of satisfaction and positive student outcomes was number of lessons taught. Those who taught 31-40 lessons (all or nearly all of the lessons) over the school year reported significantly higher levels of satisfaction (84.0% reported being very-to-highly satisfied) and greater student improvements (50.0% reported very-to-highly improved student outcomes). [See Exhibits C & D.] Please note that the process evaluation used for this report's



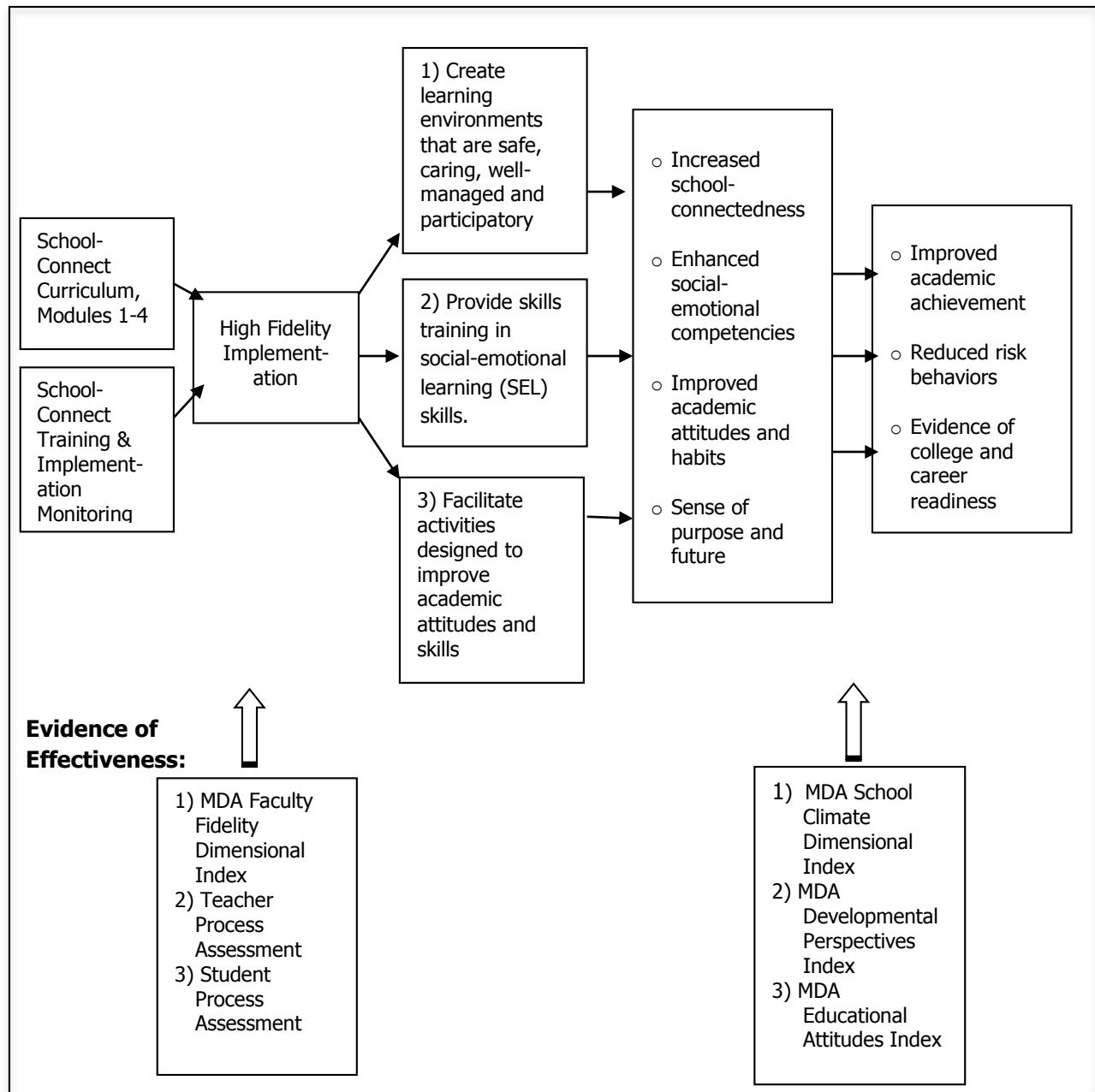
study accounted for the number of lessons integrated. Data from the customer survey suggests that *School-Connect: Optimizing the High School Experience* is well-received in general by teachers, students, and school administrators, and affects positive student outcomes. This survey indicates that lesson coverage is the most important variable, with “the more the (much) better.” Results also varied by implementation model. Freshman seminar received the highest overall satisfaction ratings, possibly because it is a credit-bearing course that requires teacher prep time, meets frequently, and, perhaps most importantly, provides the time needed to cover most or all of the lessons. Freshman seminar teachers tend to be selected based on their rapport with students and skills in social and emotional learning. Additionally, many seminar teachers are responsible

for teaching more than one section, allowing these teachers to focus their efforts and further develop their facilitation skills. For these reasons, this evaluation study focuses on schools using *School-Connect* in a one-semester or one-year freshman seminar, rather than the other implementation models (e.g., advisory, special education, alternative education).

II. Theoretical Framework

The theoretical underpinnings of *School-Connect* are embedded within the individual lessons, teaching strategies, and overall framework of the four modules. As exhibited in *Table 2. School-Connect Logic Model and Evaluation Measures* the outcome objectives – improved academic achievement, reduced risk behaviors, and evidence of college and career readiness – are the product of all four *School-Connect* modules, quality implementation and fidelity, and student learning through the curriculum activities. The student learning is aimed at bolstering important protective factors – increased school-connectedness, enhanced social-emotional competencies, improved academic attitudes and habits, and sense of purpose and future. The following sections explain the research-base behind each module to support the overall theoretical framework.

Table 2. *School-Connect* Logic Model & Evaluation Measures



Each *School-Connect* lesson builds on previous lessons and lays the groundwork for what is to come. During the early development of *School-Connect* lessons, the authors contacted a number of researchers regarding lessons that highlighted their theories and received feedback from them on lesson drafts and, in several cases, were granted permission to use or adapt specific strategies for high school students. For example, Howard Gardner granted permission to develop a lesson on his theory of Multiple Intelligences, Mihaly Csikszentmihalyi on his theory and diagram of Flow, Carol Dweck on Mindset Theory and her Theories of Intelligence Scale, and Richard Rahe to adapt his Recent Life Changes Questionnaire (RLCQ) to one more suited for teens (RLCQT).

Module 1: Creating a Supportive Learning Environment. The primary research supporting the concepts and skills taught in Module 1 is in the area of empathy development. Research studies of young children identified three components of empathy: 1) the ability to recognize emotions in others, 2) the ability to take the perspective of others, and 3) the ability to respond emotionally to others (Feshbach, 1975). By middle childhood, most young people have an understanding of the types and causes of emotions, including situations that involve mixed or contrasting emotions, and show personal concern for others in distress (Hoffman, 2000). This is not true for students with behavioral problems, who, as they grow older, tend to show less personal concern for others (Hastings et al., 2000). In adolescence, empathy is an important skill in friendship but is not readily extended to those outside of one's sphere of friends (Worthen, 1999). Peer bullying, particularly in the form of relational aggression (i.e., exclusion, shunning, gossip, and verbal abuse), reduces students' empathy for those who are targets of this behavior (O'Connell, Peplar, & Craig, 1999).

Module 1 aims to interrupt these negative social processes by awakening students' natural empathic tendencies. It does this by providing practice in: recognizing micro-expressions of emotions, identifying situational social cues, actively listening to others' viewpoints, and developing strategies for caring about the welfare of people who students perceive as different from themselves. Activities that have students listen to each other's experiences with labeling, stereotyping, prejudice, and bullying; and assess their own reactions to diversity, help fuel students' desire to act in accordance with their better selves.

Module 2: Developing Self-Awareness and Self-Management. Module 2 employs cognitive-behavioral interventions that help students understand how their thought processes affect their emotions, which in turn drive their behavior. This cycle, well documented in the literature on depression, psychological pathology, and violence prevention, impacts the way students perceive and respond to social and academic challenges, directly affecting their success in either realm (Beck, 1976; Seligman, 1998; Guerra & Slaby, 1990). The *School-Connect* curriculum helps students learn to recognize automatic negative thoughts and attributions prompted by different situations, such as going into a test ("I'm going to blow this.") or passing a friend who doesn't acknowledge them ("He just dissed me!"). Students learn to challenge these thoughts with more neutral or positive assessments and recognize the effect these self-statements have on their feelings and behavior.

In addition to addressing their thoughts, students learn to manage their affective states. They practice reducing negative emotions, such as anger, fear and anxiety, which can become barriers to learning and making friends. Students also learn to employ positive emotions that can increase optimism and their ability to concentrate and apply themselves (Isen, 1990).

Module 3: Building Academic Strengths and Purpose. In Module 3, students learn to apply the automatic thoughts cycle and other psychological strategies to academic planning, self-organization, and study skills (Weinstein & Hume, 1998). The module starts with an introduction to Multiple Intelligences (MI) Theory, the theory that true intelligence can be exhibited in a range of abilities outside the traditional view of intelligence. The MI aptitudes include: body-kinesthetic, interpersonal, verbal-linguistic, logical-mathematical, intrapersonal, visual-spatial, musical, and naturalistic (Gardner, 1983; Gardner, 1999). Students choose an MI aptitude that best reflects their natural skills and interests, and discuss ways to better utilize their MI strengths in the school environment.

Students also examine their underlying beliefs that lead to “mindsets” about intelligence and personality, habits of thinking proven to have profound effects on student behavior and achievement (Dweck, 2000, 2006). They learn about research documenting the debilitating effects of having a fixed mindset about intelligence and personality (i.e., our intelligence and/or personality is fixed and we can’t do much to change them). Students who exhibit a fixed mindset learn to challenge their beliefs, while those who exhibit a growth mindset (i.e., believe that effort pays off) learn why this attitude works in their favor and how to strengthen it, especially as it applies to academic engagement.

Module 3 then delves into the relevance and purpose of high school by tying high school responsibilities to long-term goal attainment. In an extensive study of resilient youth, Benard (1991) found that young people who showed the greatest success in adolescence and adulthood shared five common factors: 1) a sense of autonomy, 2) problem-solving skills, 3) social competence, 4) a sense of purpose and future, and 5) a relationship with a caring adult. While the curriculum addresses all of these factors, Module 3 focuses primarily on factor four: developing a sense of purpose and future. Students envision what they will be doing five and 10 years after high school and at age 65 as they look back on their career and life, and then begin mapping a path to reach their envisioned self. They create a budget for a 30-year-old adult and compare this budget to average incomes of high school drop-outs, graduates, and those with higher education degrees. Next, they research career paths and college acceptance criteria to gain a greater perspective of how high school grades and activities will impact their future plans and opportunities.

To help reach their goals, students practice essential study skills, including effective note-taking, time-management, and collaborative learning; and apply research-based stress-reduction techniques to test preparation. Module 3, in partnership with the other three modules, is designed to directly address and mitigate the top risk factors associated with academic failure – academic engagement, academic self-efficacy, attendance, homework completion, grade retention, and school misbehavior (Lucio, Hunt, & Bornovalova, 2012) – by teaching study and organizational skills essential to school success.

Module 4: Resolving Conflicts and Making Decisions. The concepts and skills taught in Module 4 are grounded in prevention research. Numerous studies document the positive effects of teaching interpersonal problem solving and other relational skills, such as refusal, positive persuasion, and apologizing, on young people (Zins, Bloodworth, Weissberg, & Walberg, 2004). Research indicates that practicing refusal skills in a non-threatening and supportive environment bolsters young people’s ability to respond appropriately when faced with similar dilemmas in real life (Goldstein, Reagles, & Amann, 1990). Role-playing is a critical strategy used throughout *School-Connect*. Within Module 4 students role-play how to problem-solve interpersonal conflicts, how to negotiate with a parent, and how to talk a friend or acquaintance out of a risky behavior decision. Young people often say that they knew *what* to do in a given situation, they just didn’t know *how* to do it. When students practice social and emotional skills, they gain a greater sense of self-efficacy and preparation for refusing risk behaviors and making wise decisions.

Teaching Strategies. Teaching strategies employed throughout the curriculum are designed to foster the ABCs of student motivation: autonomy, belonging, and competence (Deci, 1995). In a landmark policy paper concerning the efforts of the country’s leading educational associations, Learning First Alliance identified these factors as “basic needs” of young people and central to the learning process. Schools that satisfy these needs benefit from their students’ improved attitudes, behavior, and performance (Learning First Alliance, 2001).

According to Edward Deci, having autonomy “means to act in accord with one’s self—it means feeling free and volitional in one’s actions” (Deci, 1995). Autonomy leads to authenticity in thought and behavior; without it, students are less likely to pursue learning for its own sake or discover the subjects and types of work that truly engage their interest and attention. In education, autonomy is often referred to as “voice and choice”—students having a say about what they think and what they study. Providing voice and choice requires teachers to be facilitators of learning, rather than imparters of information; this style of teaching is the opposite of the top-down lecture format often employed in traditional high school classrooms.

One way *School-Connect* develops voice and choice is by giving students many opportunities to speak. “Think-pair-share” activities encourage students to take a minute for quiet reflection and then turn to a classmate to respond to a prompt, share an experience, or discuss the homework. Afterwards, students have the opportunity to participate in a full class discussion. When students are able to organize their thoughts and try them out with a peer, they are more likely to feel comfortable speaking up in the larger group.

In full class discussions, students often use a Koosh ball to designate a speaker; this encourages them to listen and construct responses to one another, rather than reply directly to the teacher. Early in the program, students receive practice in “adding on” to others’ comments and “thinking differently,” rather than disagreeing or competing with each other. The emphasis is on being

curious, respecting ideas, and seeking truth—not on winning debates, looking smart (or indifferent), or putting down academic engagement. Research has correlated the former habits of mind with increased student participation and academic engagement (Ritchart, 2002).

These simple strategies have a dynamic effect on class discussions and student relations. Teachers report that *School-Connect* helped them become better listeners and develop closer relationships with their students. This is critically important, as research indicates that students benefit greatly from having at least one caring adult advocate at school (Resnick, et al, 1997).

Students are also given voice and choice through small and large self-directed group activities. In an early lesson, for example, they reflect upon what makes a good classroom environment. Working in small groups, they generate group guidelines for behavior that they then discuss and decide upon as a class. The class also devises a plan for taking shared responsibility for adhering to the final set of guidelines (i.e., how students will respond when someone violates a guideline).

Teaching strategies that give students opportunities to interact with one another also help build a sense of belonging, a key factor in student motivation and bonding to school (Resnick et al., 1997). Interacting with different classmates allows students to share experiences and discover what they have in common, helping to increase empathy and break down labels and stereotypes. The program also encourages teachers to share their life experiences, which helps students learn to meet new challenges and adjust to school.

The curriculum further aims to create connections between school and home, and between students and their families. Many of the homework assignments involve students in activities with a parent or other family member. For example, parents discuss their children's character strengths with them and hear how their children view themselves, share an experience they had while growing up and compare and contrast this to what their children experience, and identify obstacles they have overcome to reach a personal goal. Homework and classroom assignments ask students to share and practice the skills and concepts with their families, while maintaining an awareness of cultural differences that may require adaptation of some skills.

Students need to feel a growing sense of competence and confidence in order to pursue new challenges and overcome obstacles to learning. *School-Connect* develops student competence by providing repeated opportunities to apply the concepts and skills presented in the lessons. Social Learning Theory avers that students will not acquire behavioral skills without: 1) observing role models, 2) discussing and practicing the skills, 3) receiving feedback and reinforcement, 4) applying the skills to real-life situations, and 5) reflecting upon the natural benefits of the skills (Bandura, 1986). For example, after discussing and observing what constitutes a sincere apology, students identify whether given responses for different situations meet the criteria, and then role-play sincere apologies for these situations. After each role-play, the class provides feedback and

reinforcement on the student-actors' performances. Teachers follow-up by continuing to model the skills themselves in everyday interactions with students, and by prompting and encouraging students to apply new skills in class and elsewhere.

Please note that the multi-dimensional assessment (MDA) used to evaluate this report's study encompasses measuring many of the variables targeted within each of the modules. Variables such as school climate, educational attitudes, risk behaviors, developmental perspectives and faculty teaching strategies are all part of the assessment. Therefore, the study is designed to assess the variables tied to the modules and theoretical framework of *School-Connect*.

III. Rationale/Purpose

“If we intervene during these windows of opportunity – during the period between the time when symptoms can be first detected and disorders can be diagnosed – we are more likely to prevent the onset of the disorder and produce lasting and long-term impacts. And if we can intervene even sooner, to promote healthy lifestyles, our potential for reducing the toll of behavioral health problems on individuals, communities, and society is even greater.” - SAMHSA Information Sheet 4: The Developmental Framework

Adolescence is an exciting and challenging time, marked by dramatic changes in physical appearance, cognitive abilities, and social and emotional development. As young people move from the relative simplicity and security of childhood to the complexity and uncertainties of adulthood, they seek peers, role models, and social ideals to guide them through the process (Csikszentmihalyi & Larson, 1984; Erikson, 1968). Most adolescents experience some difficulty and confusion during this transition. As a result, they are at greater risk than children for depression, anxiety, substance abuse, violence, self-injurious behavior, and academic failure (Centers for Disease Control and Prevention, 2004; Eccles & Gootman, 2002; Resnick et al., 1997).

School-Connect is a promotion and proactive prevention program that fits well within the *Behavioral Health Continuum of Care Model* recommended by SAMHSA. The intervention is designed for both universal and selective intervention at the critical juncture of early-to-mid-adolescence, a high-risk entry point for early substance abuse and mental health issues. *School-Connect* addresses the risk factors that lead to behavioral health problems head on by building in a multitude of protective factors into the high school system. Each *School-Connect* lesson is a calculated skill-building opportunity to prepare youth for the temptations and challenges of the adolescent-to-adulthood journey. [See Table 3. *School-Connect* Protective Factors.]

Table 3. School-Connect Protective Factors

MIDDLE CHILDHOOD & ADOLESCENT RISK FACTORS	SCHOOL-CONNECT LESSON TITLES (EACH LESSON IS RESEARCH-BASED, 45+ MINUTES)
➤ Peer rejection, isolation, deviant peer groups	Lesson 1.4 Developing Social Radar Lesson 1.5 Standing in the Other Person's Shoes Lesson 1.6 Empathizing with Others Lesson 1.7 Refuting Labels and Stereotypes Lesson 1.8 Appreciating Diversity Lesson 1.9 Addressing and Preventing Bullying Lesson 4.1 Developing and Maintaining Friendships
➤ Anxiety, Depression, Anger/Aggression	Lesson 2.1 Understanding the Teenage Brain Lesson 2.2 Being Aware of Our Emotions Lesson 2.3 Recognizing the Power of Thought Lesson 2.4 Managing Anger Lesson 2.5 Coping with Change and Uncertainty Lesson 2.6 Inducing Positive Emotions Lesson 2.10 Building True Happiness
➤ Poor impulse control and behavior problems	Lesson 4.2 Responding to Conflict Lesson 4.3 Developing a Problem Statement Lesson 4.4 Brainstorming and Evaluating Solutions Lesson 4.5 Implementing and Monitoring a Solution Lesson 4.6 Developing a Problem-Solving Approach Lesson 4.10 Apologizing and Forgiving
➤ School failure, Low commitment to school	Lesson 3.1 Using Multiple Intelligences Lesson 3.2 Growing Your Mindset Lesson 3.6 Managing Multiple Priorities Lesson 3.7 Developing Academic Support Lesson 3.8 Improving Memory Skills Lesson 3.9 Making the Most of Note Taking Lesson 3.10 Preparing for Tests Lesson 2.7 Finding Flow
➤ Peer attitudes toward drugs, Societal/community norms about alcohol and drug use	Lesson 4.8 Making Personal Decisions Lesson 4.9 Refusing and Persuading Lesson 2.9 Tuning In and Tuning Out the Media
➤ Not college bound	Lesson 3.3 Looking Ahead Lesson 3.4 Exploring Career and College Options Lesson 3.5 Setting and Achieving Goals
➤ Parent-child conflict	<i>Parent-child positive activities in homework, e.g:</i> Lesson 1.10 Building Rapport with Teachers Lesson 2.8 Recognizing Character Strengths Lesson 4.7 Negotiating an Agreement

School-Connect is a cost-effective, teacher-friendly, and student-engaging method of embedding prevention methods into public, private, and alternative schools. *School-Connect* leverages the classroom setting by creating a supportive learning community that practices “positive peer pressure” and establishes new norms of acceptable (and unacceptable) behavior around bullying, substance use, and academic apathy. *School-Connect* is applying for the SAMHSA NREPP review to join the list of valuable programs able to provide these necessary services to schools and community centers.

IV. Methods/Methodology

Study:

Participants-

To recruit a representative sample essential to studying the impact of *School-Connect*, participants for this study were selected utilizing a purposive sampling technique. According to Vogt (2007) and Shadish, Cook and Campbell (2002), purposive sampling is probably the most common form of sampling in experiments and quasi-experiments, and when random sampling is not possible it provides the avenue needed to select cases that are representative in a purposive sense. Six schools from six states were recruited for the study. These schools had an existing relationship with *School-Connect*, and at different levels (to be expanded on shortly) were utilizing the *School-Connect* curriculum within their classrooms. The participating students consisted of 709 students in 57 different classrooms across grades 8-12; with 47.9% from the 9th grade. Table 4 details the distribution of students over grade level.

Table 4: Student Sample

<u>Grade</u>	<u>Frequency</u>	<u>Percent</u>
8th	102	14.4
9th	320	45.1
10th	219	30.9
11th	22	3.1
12th	5	.7
Total	668	94.2
Missing	41	5.8
Total	709	100.0

The students were enrolled in a one-semester or one-year “transition-to-high school” course to help students adjust to high school and prepare for the challenges of life. The study collected data on 57 different classrooms within the six schools teaching the transitional support courses and to varying degrees utilizing the *School-Connect* curriculum. The courses were taught by 17 different teachers. The survey administered to all participants under the age of 18 provided opportunity for passive consent and surveys were administered in accordance with guidelines for research with human participants (American Psychological Association and the IRB of institutions involved).

Design-

This study utilized a quasi-experimental design. Specifically, this study utilized an *Archived Proxy Pretest Design*. The study used archival data, qualitative interviews, and standardized test scores to code, compute and complete a scoring rubric designed to assess the pretest levels of participating classrooms and students related to school climate, teacher commitment to SEL programming, classroom issues and risk factors related to academic apathy and risky behaviors. According to Shadish, Cook and Campbell (2002), "To the extent that proxies are correlated with the posttest, they index how much groups might have differed at pretest in ways that might be correlated with outcome (selection bias)" (p. 118). Provided that the outcome variables from the posttest (to be discussed shortly) are focused on school climate, bullying/safety, alcohol, tobacco and other drug use (ATOD), feelings of school isolation, educational attitudes, and developmental factors (character of students), results suggest the inclusion of a proxy pretest and adequate baseline measures serve as covariates to be statistically controlled for within the multivariate analysis of covariance (MANCOVA) performed.

This design was employed because the *School-Connect* curriculum is typically utilized by teachers with a specific group of students during a limited amount of time in specific classrooms (ranging from a nine-week session to multi-year). Furthermore, this study was completed by an outside evaluation company, Multi-Dimensional Education, Inc. (www.MDedInc.com), and funded by *School-Connect*. The funding for this study was limited and the design selected was reasonable to the amount of funding, but could not employ more expensive approaches (i.e. Experimental design with random assignment). Time was also a constraint and designing an experimental study to be administered within the time frame and completed for SAMSHA review was not within the parameters provided. To have the time and resources to collect data from an adequate sample essential to providing the number of cases and power needed to perform a MANCOVA measuring multiple outcome variables and statistically controlling for numerous covariates, the economics and time constraints led to utilizing an acceptable and research supported proxy pretest quasi-experimental design. The decision was made to measure a larger sample utilizing the current design, rather than focus on a much smaller sample using possibly a more common form of quasi-experimental.

There are other reasons that support the design utilized in this study. Given schools are over surveyed in today's education world it has become quite apparent that recruiting schools currently not working with *School-Connect* to complete another survey unconnected to their accountability or curricular demands would be a very difficult task without financial incentives. Thus, limiting the study's ability to recruit and pretest a large enough sample to comprise experimental and control schools (unconnected to *School-Connect*). Furthermore, with the unheard of level of violence taking place in schools today, and the heavy focus on implementing social and emotional learning, character education and related efforts such as Response to

Interventions (RTIs) to combat such violence, behavior challenges, and ongoing issues of bullying, one would be hard pressed to find control schools not currently doing some form of intervention to improve school climate.

Therefore this study focused on the sample of schools currently working with *School-Connect*, and through the use of a reliable process assessment comprised of two reliable indexes assessing the infusion of the intervention, the process assessment score was used to perform a median split to provide a dichotomous independent variable. This is a very common procedure utilized within the social and behavioral sciences for numerous reasons. As is often found in many experimental studies, even though experimental samples (e.g., schools or teachers) are supposed to do the intervention with rigor, what is often found is that schools and teachers seem to reflect more of a dichotomy of infusion. Therefore, through analyzing data, this study documented that the level of *School-Connect* curriculum being infused ranged from high to low levels (even though the school had purchased the curriculum and requested teachers to utilize the program). Thus a median split was performed and the sample of 57 classrooms was divided into high infusion and low infusion sub-sets. This provided the groupings needed to study treatment and comparison schools. This procedure complies with the findings by Angold et al. (2000) and Howard et al. (1986). The analysis and results to follow document that the intervention produced a number of statistically significant positive behavior outcomes for high infusion treatment schools (or more specifically classrooms) greater than their comparison counterparts.

Please note the majority of data utilized in the analysis of this study was collected via online and paper surveys administered according to a strict protocol under controlled group settings and following APA guidelines. Each form of the multiple surveys utilized allowed participants to skip questions they did not feel comfortable answering. As a result, with such a large sample of students taking part, some of the questions on the surveys were not answered by all students. To account for such missing data, initial data cleaning exercises included some cases being excluded from data analysis because of missing data. The syntax applied and listwise deletion approach taken for missing data and this approach will be addressed in more detail to follow.

Intervention

As previously shared, *School-Connect: Optimizing the High School Experience* is a comprehensive program containing 40 lessons distributed in four modules (10 lessons per module), plus four Culminating Project Lessons (one for each module). *School-Connect* is designed *primarily* to help students transition successfully into high school, resist risk behaviors, and prepare for productive adulthood. It is implemented primarily in freshman seminars, student advisory, alternative education programs, and special education courses. Each lesson is designed for a 45-50 minute class period and some lessons require two class periods.

In a meta-analysis of 213 studies evaluating school-based SEL programs, students achieved the most significant gains when the SEL program was well implemented (Durlak, Weissberg, Dymnick, Taylor & Schellinger, 2011). Program effectiveness was compromised if staff failed to conduct certain parts of the intervention, or new staff members arrived and were insufficiently prepared to deliver the program. This study further confirmed these findings; students with the most significant positive outcomes were involved in “high implementation classes,” with teachers who invested the time and resources necessary to implement the program with high fidelity and use the strategies embedded within the lesson format and the *School-Connect* training.

The schools involved in this study all used *School-Connect* in a one-semester or a one-year “transition-to-high school” seminar. For most schools, this class was offered in ninth grade, but one school used the course with eighth students and a second used *School-Connect* with incoming tenth graders on a 10-12 grade campus.

To assess the fidelity of the intervention, process evaluation measures were administered to both the participating teacher and student samples. Both process measures underwent extensive development, piloting and testing before use in this study. The procedures taken for the process evaluation development were designed to insure face, content and evidence of predictive validity. The development of both process assessments was started through an extensive review of the *School-Connect* curriculum and procedures. Once the initial teacher process tool was developed, the teacher process evaluation tool was completed by numerous teachers working with *School-Connect*. The evaluation team then performed focus groups and individual interviews to assess the accuracy of the process evaluation instrument. At this point, several items were deleted from the process evaluation and others were edited or added on. More teachers then completed the next draft of the teacher process evaluation scale, and both qualitative and quantitative analysis was performed to determine reliability and validity. The student version of the process evaluation went through a similar process.

Specifically, the final six-item teacher's process evaluation version was developed to measure level of training, quality of implementation, quantity and frequency of implementation, and produced an alpha coefficient of .74. The final seven-item student process evaluation was developed to further measure implementation but was extended to also assess impact and satisfaction. The student process evaluation produced an alpha coefficient of .92. These two measures were then combined to create a reliable and valid index capable of measuring the *School-Connect* Total Infusion. And as explained previously, the *School-Connect* Total Infusion score was then used to create an independent variable performed through a median split capable of distinguishing between the treatment and comparison groups.

Measures-

To measure the dependent variables that SAMSHA and *School-Connect* identify as important to helping schools and students, and provide variables to be used as covariates, the Multi-Dimensional Assessment was utilized for the study. The Multi-Dimensional Assessment (MDA) is a survey developed by Multi-Dimensional Education Inc. (MDed). The survey collects meaningful demographic data (e.g., ethnicity, grade level) but also focuses on assessing seven dimensions that more than 40 years of research associate with highly effective schools (Corrigan, Grove, & Vincent, 2011; Corrigan, Grove, Vincent, Chapman, & Walls, 2008).

During the past six years, the MDA has undergone numerous revisions, factor analysis, and translation into Spanish, and the dimensional scales were fine tuned to represent what is depicted in the top left corner of Figure 1. The MDA is a reliable instrument (please see Table 5 for Multi-Dimensional Assessment (MDA) Dimensional Index and Sub-Scale Reliabilities) that collects data from students, parents, and teachers that can consist of up to 26 scales (four to 12 items for each scale). These scales have exhibited construct and predictive validity (Corrigan, Grove, & Vincent, 2011; Corrigan, Grove, Vincent, Chapman, & Walls, 2008) that has been tested on more than 30,000 participants from random trials nationwide. The MDA was first created in 2005. The current MDA version has subsequently been through three revisions and presently stands as the most reliable and valid to date. In 2005, the MDA version was subjected to pilot test and re-test reliability where improvements in the assessment were conducted to move each scale and dimension to a minimum alpha score of .72. Since its inception, the MDA has been analyzed and revised each year, as well as undergone extensive review by experts in the field to ensure continued face and content validity. In 2007 and 2008, the MDA data was factor analyzed to reduce the size of the complete battery of questions and to increase the reliability and validity within each of the scales and dimensions.

The current MDA is provided in an elementary-student version for grades 3-6, middle/high school student version for grades 6-12, a parent version in English and Spanish, and an educator version. Each of these MDA versions measure the same constructs from the three different stakeholder perspectives. Through random research trials funded by the U.S. Department of Education based on a four-state sample of more than 30,000 participants, evidence has been collected strongly suggestive of the content and construct validity of the scales within each of the current seven dimensions. Based upon analysis of the separate intervention samples, further convergent validity has been supportive within each dimension, and the strength of the inner scale correlations (.35-.85) within the dimensions combined with the strong reliability (.75-.95) values for the dimensions provides strong evidence to the consistent and valid nature of the dimensional index constructs and scale constructs being measured by the MDA with all participants. Currently, more than 70 school systems have contracted to use the MDA and the MDA has provided data conducive to multivariate analysis.

Figure 1: Dimensional Process Model

In a recent study conducted by MDed and Gargani and Associates for the National Heritage Academies (one of the largest charter school organizations in the country that uses the MDA), the MDA dimensional measures explained more than half of the variation in achievement across teachers (classrooms) and virtually all of the variation in achievement across schools (Corrigan, Grove, & Gargani, April, 2012). The results of these analyses: 1) provide evidence that the MDA is correlated with student achievement; 2) demonstrate that the reliable and valid dimensional indexes of the MDA can explain variation in attitudes, behavior and achievement across classes and schools; and 3) suggest that the constructs measured by the MDA may be factors that influence achievement.

Table 5: Multi-Dimensional Assessment (MDA) Dimensional Index and Sub-Scale Reliabilities

Scales	Student
<i>Interpersonal Community Engagement Scale</i>	.873
<i>Parent Involvement Scale</i>	.799
<i>Service to Community Scale</i>	.845

Dimensional Index 1: Community Engagement	.926
<i>Instructional Curriculum Scale</i>	.834
<i>Educational Rigor</i>	.803
<i>Instructional Creativity</i>	.867
<i>Academic Support Scale</i>	.750
Dimensional Index 2: Curriculum Expectations	.880
<i>School Misconduct Scale</i>	.850
<i>Good Deeds Scale</i>	.833
<i>Compassion for Others Scale</i>	.834
<i>Student Success Traits Scale</i>	.795
Dimensional Index 3: Developmental Perspectives	.859
<i>Motivation to Learn Scale</i>	.758
<i>Personal Academic Empowerment Scale</i>	.900
<i>Student Work Ethic Scale</i>	.890
<i>Feelings for School Scale</i>	.777
Dimensional Index 4: Educational Attitudes	.845
<i>Teacher Trust Scale</i>	.897
<i>Teacher Belief in Students Scale</i>	.881
<i>Teacher Satisfaction Scale</i>	.754
Dimensional Index 5: Faculty Fidelity	.836
<i>Principal Trust Scale</i>	.756
<i>Leadership Satisfaction Scale</i>	.788
<i>Leadership Communication Scale</i>	.812
<i>Leadership Shared Mission & Vision Scale</i>	.933
Dimensional Index 6: Leadership Potential	.871
<i>MDED School Climate Scale</i>	.911
<i>Student Relationships Scale</i>	.847
<i>School Liking Scale</i>	.854
<i>School Isolation Scale</i>	.838
Dimensional Index 7: School Climate	.958

For this study the MDA was shortened for *School-Connect* (Dimensions 1, 2 and 6 were deleted) in order to focus more specifically on SAMSHA related variables and add on two scales measuring alcohol, tobacco and other drug use (ATOD) as well as the Student *School-Connect* Satisfaction and process evaluation items. Please note the ATOD in this study produced an alpha coefficient of .89, and also is strong in face, content and predictive validity. The MDed ATOD scale has been used by MDed in numerous evaluation projects, and for this study serves as a sub-scale for the Developmental Perspectives Dimensional Index. The goal of the MDA is to utilize

reliable and valid scales as sub-scales to create a dimensional index more encompassing and capable of capturing evidence related to the variables associated with each dimension. Corwin Press recently published a book on the MDA, and the majority of research utilized to confirm the psychometrics of the instrument was collected as part of numerous federal grants funded through the U.S. Department of Education. To follow is more detail on what the MDA measures by Dimension:

Dimension 1: The first dimension is Community Engagement, which includes three sub-scales: Interpersonal Community Engagement (measures students' level of community communication); Parent Involvement (measures parents' involvement in school and community); and Service to Community (measures students' level of service to community). *Please note the Parent Involvement Scale was included in this study and utilized as a covariate.*

Dimension 2: Curriculum Expectations includes four sub-scales. The Instructional Curriculum scale measures perceptions of the instruction and lessons received. Instructional Creativity measures perceptions of how creative the staff is in the classroom. Academic Support measures perceived support given to students and Educational Rigor measures the level of rigor perceived. *Please note that the educational rigor scale was deleted because it referred to the overall academic instruction and curriculum of the school, rather than School-Connect specifically.*

Dimension 3: The Developmental Perspectives dimensional index consists of the Student Success Traits Scale, the School Misconduct Scale, the Compassion for Others Scale, and the Good Deeds Scale. The Student Success Traits Scale assesses the level of character understood and exhibited by students. School Misconduct measures how often a student displays misconduct in school. Compassion for Others measures how much a student thinks and cares about others. The Good Deeds Scale measures how often a student has helped others.

Dimension 4: The fourth dimensional index, Educational Attitudes, measures student attitudes towards school. There are four sub-scales included in this index, Motivation to Learn (measures how motivated a student is to learn), Personal Academic Empowerment (measures how empowered a student feels), Student Work-Ethic (measures how hard a student works on academics), and Feelings for School (measures how a student feels about school).

Dimension 5: The Teacher Trust, Teachers Satisfaction, and Teacher Belief in Students Scales make up Dimension 5: Faculty Fidelity. Teacher Trust measures perceptions as to how much a student trusts teachers. Teacher Satisfaction measures perceptions of how teachers feel about their work and Teacher Belief in Students measures perceptions as to how much teachers believe in students.

Dimension 6: The Leadership Potential dimensional index assesses factors such as Leadership Satisfaction (measures how satisfied the stakeholders are with school leadership), Principal Trust (measures how much a student trusts principals), Leadership Communication (measures the level of communication provided by leadership), and Leadership Shared Mission and Vision

(measures the connectedness of shared mission and vision between stakeholders). *None of these scales were used for this study.*

Dimension 7: School Climate includes four sub-scales. The MDA School Climate Scale measures the school climate or environment perceived. The Student Relationships scale measures the quality of relationships between the students. The School Liking Scale measures how much students like their school and the School Isolation Scale measures to what extent students feel isolated within the school.

All scales are measured on a 5-point Likert Scale. Scales with negative suggestions, such as isolation and misconduct, were reverse coded so that a higher mean denotes a positive perspective. All surveys were taken anonymously. For more information on the MDA, please visit www.mdedinc.com.

For this study the dimension indexes and sub-scales mainly served as dependent variables. The parent involvement scale from Dimension 1, however, was kept and used as a covariate along with a demographic question measuring ethnicity and the proxy pretest. The theory behind statistically controlling for ethnicity, parent involvement and pretest scores, is that by doing so we can balance out the effects of highly predictive variables such as parent involvement and ethnicity when it comes to academics and risk factors. The pretest score also serves as a way to balance out the posttest scores. Please note, the archival proxy pretest discussed earlier had a coefficient alpha of .83.

Analysis-

As the first step to account for missing data, a listwise deletion approach was conducted (Barladi & Enders, 2010). Prior to performing the listwise deletion process, however, to configure mean scores for the scales utilized in the study, a 75% threshold was set within the analysis syntax used to clean and recode data. This means if participants did not answer at least 75% of the questions for each scale assessed by each dimension of the survey, the syntax did not compute the mean scores for the answers provided. This helped to provide further detail to identify which cases were to be eliminated via the listwise deletion process. This allowed for further cleaning of missing data. More than three dozen cases were eliminated from the data set.

Utilizing the MDA survey data, along with the pretest scores, and process evaluation measurements, a Multivariate Analysis of Covariance (MANCOVA) was performed using the overall dimensional index scores as well as each of the MDA dimensional sub-scales. Such an analysis allows for the exploration of how the moderately correlated dimensional indexes performed within one analysis exploring statistically significant differences between groups, and to explore in more detail how each of the scales within each dimension differed significantly between the treatment and comparison groups. When more than one dependent variable exists, it is not recommended to run multiple univariate tests. This is mainly due to the fact that multiple

Analysis of Variance run separately cannot take into account the pattern of covariation among dependent measures (Stevens, 2002). A MANCOVA allows for multiple covariates to be entered into the analysis and statistically controlled. Therefore to meet the expectations of the grading criteria provided, this analysis sought to assess the dependent variables together and to control for confounding variables.

V. Results/Findings

Multivariate analysis of Covariance (MANCOVA) was used to analyze statistically significant differences on the dimensional indexes and sub-scale variable scores (Dependent Variables) measured by the MDA between the treatment (high implementers) and comparison (low implementers) groups (Independent Variables). The MANCOVAs performed also used variables of ethnicity, parent involvement and pretest scores as covariates. First, using the posttest MDA dimensional index composite scores as Dependent Variables, we performed a MANCOVA to identify possible significant differences. Note that Levene's Test of Equality of Error Variances and assumptions of homogeneity (Box's Test) were not violated. Multivariate tests confirm there were positive statistically significant differences between students in classrooms receiving higher levels of *School-Connect* (Treatment Group) and lower levels of *School-Connect*: $F(4, 579) = 25.18, p = .001$; Pillai's Trace = .148; partial eta squared = .148.

Tests of Between Subjects identified significant difference on all dimensional indexes with treatment group students reporting higher more positive perceptions of school climate and safety, teachers, educational attitudes and developmental perspectives. Effect sizes range from small to medium according to Cohen (1977).

Table 6: Dimensional Index Score Tests of Between Subjects

<u>Dependent Variable</u>	<u>F</u>	<u>Sig.</u>	<u>Partial Eta Squared</u>
School Climate	56.79	.001	.089
Faculty Fidelity	81.44	.001	.123
Educational Attitudes	35.76	.001	.058
Developmental Perspectives	22.06	.001	.037

Mean Scores show that on all dimensional indexes, treatment groups had statistically significant higher scores than comparison groups.

Table 7: Mean Differences between Groups

<u>Dimensions</u>	<u>Groups</u>	<u>Mean</u>	<u>SD</u>	<u>N</u>
School Climate	Low Implementers	3.21	.534	304
	High Implementers	3.62	.545	283
	Total	3.41	.577	587
Faculty Fidelity	Low Implementers	3.50	.723	304
	High Implementers	3.96	.627	283
	Total	3.72	.716	587
Educational Attitudes	Low Implementers	3.36	.604	304
	High Implementers	3.63	.561	283
	Total	3.49	.599	587
Developmental Perspectives	Low Implementers	3.22	.505	304
	High Implementers	3.48	.537	283
	Total	3.35	.536	587

Please note, given the MDA casts a rather wide net and collects data on a wide array of variables related to education and youth development and behavior, the Dimensional Indexes detailed in Tables 6 and 7 are meant to simplify the analysis and serve as the four "Outcome Variables" for the SAMSHA review. The following further details additional MANCOVA results, however, for each dimensional index and related sub-scales. The following is intended to provide more detail for the reviewer to determine the level of significance/impact the intervention contributed to in relation to each dimension and the sub-scales assessed by each dimension. Please note that for all of the confirmatory dimensional index MANCOVAs to follow, the same covariates of ethnicity, parent involvement and pretest scores were utilized. Furthermore, Levene's Test of Equality of Error Variances and assumptions of homogeneity (Box's Test) were not violated.

Multivariate tests performed specifically on the School Climate Dimension and sub-scales confirm there were positive statistically significant differences between students in classrooms receiving higher levels of *School-Connect* (Treatment Group) and lower levels of *School-Connect*: $F(4, 580) = 17.09, p = .001$; Pillai's Trace = .105; partial eta squared = .105. Tables 8 and 9 provide further detail highlighting findings from multivariate tests on the School Climate dimension's scales and total dimensional index (computed by adding the mean scores of all dimensional scales).

Table 8: School Climate Dimensional Index Score Tests of Between Subjects

<u>Dependent Variable</u>	<u>F</u>	<u>Sig.</u>	<u>Partial Eta Squared</u>
School Climate	39.26	.001	.063
Student Relationships	25.44	.001	.042
School Liking	55.17	.001	.086
School Isolation	3.78	.052	.006
Dimensional Index	55.89	.000	.087

Table 9: School Climate Sub-Scale Mean Differences between Groups

<u>Dimensions</u>	<u>Groups</u>	<u>Mean</u>	<u>SD</u>	<u>N</u>
School Climate	Low Implementers	2.97	.638	304
	High Implementers	3.42	.603	284
	Total	3.19	.659	588
Student Relationships	Low Implementers	3.33	.717	304
	High Implementers	3.67	.687	284
	Total	3.49	.722	588
School Liking	Low Implementers	2.86	.975	304
	High Implementers	3.57	.877	284
	Total	3.20	.993	588
School Isolation	Low Implementers	3.68	.789	304
	High Implementers	3.83	.818	284
	Total	3.75	.806	588

Multivariate tests performed specifically on the Faculty Fidelity Dimension and sub-scales confirm there were positive statistically significant differences between students in classrooms receiving higher levels of *School-Connect* (Treatment Group) and lower levels of *School-Connect*: $F(4, 582) = 40.38, p = .001$; Pillai's Trace = .122; partial eta squared = .122. Tables 10 and 11 provide further detail highlighting findings from multivariate tests on the Faculty Fidelity dimension's scales and total dimensional index.

Table 10: Faculty Fidelity Dimensional Index Score Tests of Between Subjects

<u>Dependent Variable</u>	<u>F</u>	<u>Sig.</u>	<u>Partial Eta Squared</u>
Teacher Trust	65.74	.001	.101
Teacher Belief in Students	73.40	.001	.112
Dimensional Index	80.02	.001	.121

Table 11: Faculty Fidelity Sub-Scale Mean Differences between Groups

<u>Dimensions</u>	<u>Groups</u>	<u>Mean</u>	<u>SD</u>	<u>N</u>
Teacher Trust	Low Implementers	3.51	.858	304
	High Implementers	3.97	.714	284
	Total	3.73	.825	588
Teacher Belief in Students	Low Implementers	3.49	.699	304
	High Implementers	3.95	.619	284
	Total	3.71	.700	588

Multivariate tests performed specifically on the Educational Attitudes Dimension and sub-scales confirm there were positive statistically significant differences between students in classrooms receiving higher levels of *School-Connect* (Treatment Group) and lower levels of School Connect: $F(4, 574) = 11.40, p = .001$; Pillai's Trace = .074; partial eta squared = .074. Tables 12 and 13 provide further detail highlighting findings from multivariate tests on the Educational Attitudes dimension's scales and total dimensional index.

Table 12: Educational Attitudes Dimensional Index Score Tests of Between Subjects

<u>Dependent Variable</u>	<u>F</u>	<u>Sig.</u>	<u>Partial Eta Squared</u>
Motivation to Learn	38.59	.001	.063
Academic Empowerment	24.65	.001	.041
Feelings for School	16.73	.001	.028
Student Work Ethic	13.01	.001	.022
Dimensional Index	34.90	.001	.057

Table 13: Educational Attitudes Sub-Scale Mean Differences between Groups

<u>Dimensions</u>	<u>Groups</u>	<u>Mean</u>	<u>SD</u>	<u>N</u>
Motivation to Learn	Low Implementers	2.87	.817	302
	High Implementers	3.31	.810	280
	Total	3.08	.842	582
Academic Empowerment	Low Implementers	3.62	.667	302
	High Implementers	3.86	.609	280
	Total	3.74	.651	582
Feelings for School	Low Implementers	3.53	.761	302
	High Implementers	3.74	.647	280
	Total	3.63	.715	582
Student Work Ethic	Low Implementers	3.42	.695	302
	High Implementers	3.62	.639	280
	Total	3.51	.676	582

Multivariate tests performed specifically on the Developmental Perspectives Dimension and sub-scales confirm there were positive statistically significant difference between students in classrooms receiving higher levels of *School-Connect* (Treatment Group) and lower levels of School Connect: $F(4, 575) = 7.71, p = .001$; Pillai's Trace = .051; partial eta squared = .051. Tables 14 and 15 provide further detail highlighting findings from multivariate tests on the Developmental Perspectives dimension's scales and total dimensional index.

Table 14: Developmental Perspectives Dimensional Index Score Tests of Between Subjects

<u>Dependent Variable</u>	<u>F</u>	<u>Sig.</u>	<u>Partial Eta Squared</u>
Student Success Traits	8.78	.003	.015
School Misconduct	13.08	.001	.022
Good Deeds	12.65	.001	.021
ATOD	.00	.984	.000
Dimensional Index	21.79	.001	.036

Table 15: Developmental Perspectives Sub-Scale Mean Differences between Groups

<u>Dimensions</u>	<u>Groups</u>	<u>Mean</u>	<u>SD</u>	<u>N</u>
Student Success Traits	Low Implementers	3.97	.841	304
	High Implementers	4.20	.717	279
	Total	4.08	.792	583
School Misconduct	Low Implementers	3.69	1.049	304
	High Implementers	3.98	.937	279
	Total	3.83	1.007	583
Good Deeds	Low Implementers	3.24	1.069	304
	High Implementers	3.48	1.022	279
	Total	3.36	1.053	583
ATOD	Low Implementers	1.99	1.289	304
	High Implementers	2.25	1.444	279
	Total	2.11	1.370	583

VI. Discussion and Conclusions

This comprehensive evaluation report on the quasi-experimental study exploring the efficacy of *School-Connect* provided evidence that this promising intervention is helping schools. *School-Connect* is helping teachers to create and develop the climate, teacher-student relationships, educational attitudes and developmental perspectives needed to help students rise above the

challenges of today. The intervention produced numerous positive behavioral outcomes showing that after receiving instruction based upon the *School-Connect* curriculum, students in high implementation *School-Connect* classrooms reported a multi-dimensional array of much higher perceptions than counterparts in low implementation *School-Connect* classrooms.

Such positive behavioral outcomes were obtained with strict attention to quality of research. Survey data was collected under APA guidelines and via a well-tested instrument. Numerous publications and government reports document how the dimensional indexes and sub-scales used within each dimension are highly reliable and valid. The fidelity of the intervention was measured as well with a reliable and valid process evaluation tool. The study reduced validity threats to the finding through a multivariate analysis capable of encompassing many of the variables at work. Additionally, the study statistically controlled for covariates such as ethnicity, parent involvement, and pretest levels, and with specificity addressed missing data.

The results of this study suggest that high implementation of *School-Connect* in a “transition-to-high school” course is associated with statistically significant higher student perceptions for students entering high school. All of the dimensional indexes used to assess School Climate, Faculty Fidelity, Educational Attitudes and Developmental Perspectives displayed how high implementation *School-Connect* students reported statistically significant higher mean scores. Given the pretest was based on assessing the preexisting climate and attitude baselines of the schools' classrooms and then used to balance out posttest scores accordingly, further supports the interventions relationship to higher posttest scores.

Furthermore, when the analysis digs deeper and shows how every variable assessed in the dimensional indexes was statistically different with high implementers having the higher mean score in every situation, this reinforces that *School-Connect* is contributing positively to the change. The only two variables that did not produce significance were school isolation and the scale measuring Alcohol, Tobacco and Other Drug Use (ATOD). But even these two scales still showed the mean scores trending higher for high implementation classroom students. The power of this study rests in the findings across the board, where students in the high implementation *School-Connect* classrooms that had been exposed to the curriculum for close to a year were much more positive in their attitudes and perceptions.

Limitations

This study did have several limitations. One limitation is the lack of an unrelated control group and random assignment. In the world of evaluation, however, especially when it comes to evaluating students within the education setting, without extensive funding and resources accomplishing either is often an insurmountable challenge. Regardless, no matter if one claims to have an unrelated sample to serve as a control group, and even pretests them far before the

intervention starts, there is likely contamination, bias and error that need to be mitigated. Furthermore, when studies measure the impact of a program focused on social and emotional learning (SEL), one of the most popular efforts at work in our schools today, the challenges get even harder to find a true control school sample not doing some sort of SEL. Experimental research capable of suggesting some causal relationship exists can only be achieved when a control group who shows no sign of improvement during the first part of the experimental design realizes such gains upon once receiving the intervention; and then through multiple study replication the same gain persist. These are just a few of the reasons why any study, be it experimental or quasi-experimental, will have some degree of imperfection that questions the validity of the findings.

A second limitation is the research design employed for this study. Although an Archived Proxy Pretest Quasi-Experimental Design might not be the most ideal form of quasi-experimental research, it is however an accepted and supported form of quasi-experimental research (Shadish, Cook, & Campbell, 2002). Even if a study were able to use the same assessment to pretest and posttest the sample, it still only adjusts the posttest score to make believe the participants were similar to begin with. It is highly likely some level of statistical controls would need to be employed to level or account for group differences, and such controls might not be as accurate as assumed.

A final limitation to this study that is experienced in most studies seeking to control variables is the sheer number of controls that often erode the power of an intervention while maximizing the number of controls. In this study we included as many control variables as we could reasonably capture given time and resource constraints. To this end we also included all of the control variables we had at our disposal. Finding the results we did with maximum controls highlights that the intervention effect did persist even as controls took away from the overall power.

Conclusions

School-Connect is an intervention focused on helping educators help students succeed. *School-Connect*'s focus is on the most challenging transitional period when students are just entering high school. Their materials are highly regarded by the educators interviewed during this study. The implementation materials, training and support resources are considered to be valuable and very worthwhile tools for educators. The analysis in this report provides evidence it holds great promise for helping others help students. Future efforts of research related to *School-Connect* should seek to replicate studies such as this one and if possible employ additional rigorous study methods to examine the same outcomes variables contained in this study.

References

- Angold, A. M., Costello, E. J., & Burns, B. J. (2000). Effectiveness of nonresidential specialty mental health services for children and adolescents in the “real world”. *J Am Acad Child Adolesc Psychiatry*, 39, 154–160.
- Bandura, A. (1977). *Social Learning Theory*. New York: General Learning Press.
- Barladi, A. N. & Enders, C. K. (2010). An introduction to modern missing data analyses. *Journal of School Psychology*, 48, 5-37.
- Beck, A. T. (1976). *Cognitive therapy and the emotional disorders*. New York: New American Library.
- Bernard, B. (1991). *Fostering resiliency in kids: Protective factors in the family, school and community*. Portland, OR: Northwest Regional Educational Laboratory.
- Beuhring, T., Sieving, R. E., Shew, M., Ireland, M., Bearinger, L. H., & Udry, J. R. (1997). *Protecting adolescents from harm: Findings from the National Longitudinal Study on Adolescent Health*. *Journal of the American Medical Association*, 278, 10, 823-832.
- Bridgeland, J.M., Dilulio, J.J., & Morison, K. B. (2006). *The silent epidemic: perspectives of high school dropouts*. A report by Civic Enterprises in association with Peter D. Hart Research Associates. Washington, D.C.
- Brown, P. M., Corrigan, M. W., & Higgins-D'Allesandro, A. (Eds.) (2012). *Handbook of Prosocial Education*, New York: Rowman and Littlefield.
- Centers for Disease Control and Prevention. (May, 2004) Surveillance summaries. *Morbidity and Mortality Weekly Report*, 53.
- Cohen, J. (1977). *Statistical Power Analysis for the Behavioral Sciences*. New York: Academic Press.
- Collaborative for Academic, Social, and Emotional learning. (2003). *Safe and sound: An educational leader's guide to evidence-based social and emotional learning programs*. Chicago: Author.
- Collaborative for Academic, Social, and Emotional Learning (CASEL) (2005). *Social Emotional Learning (SEL) Competencies*. Chicago, IL: Collaborative for Academic, Social, and

Emotional Learning (CASEL). Available www.casel.org.

Collaborative for Academic, Social, and Emotional Learning (CASEL). (2013). *Academic, Social, and Emotional Learning Act of 2013 (HR 1875)*. Retrieved January 5, 2013 from <https://casel.squarespace.com/academic-social-and-emotional-learning-act/>

Corrigan, M. W., Grove, D. & Gargani, J. (April, 2012). *The Variance of Accountability: Investigating Achievement Scores Through Applied Multi-Dimensional Assessment*. Paper presented at American Education Research Association 2012 conference in Vancouver, Canada.

Corrigan, M. W., Grove, D. and Vincent, P. F. (2011). *Multi-Dimensional Education: A Common Sense Approach to Data-Driven Thinking*. Thousand Oaks, CA: Corwin Press.

Corrigan, M. W., Grove, D., Vincent, P. F., Chapman, P. E., & Walls, R. T. (2008). *The importance of multi-dimensional baseline measurements to assessment of integrated character education models*. Paper presented at American Evaluation Association for the annual conference in Denver, Colorado.

Csikszentmihalyi, M. (1997). *Finding flow: The psychology of engagement with everyday life*. New York: Basic Books.

Csikszentmihalyi, M., & Larson, R. (1984). *Being Adolescent: Conflict and Growth in the Teenage Years*. New York: Basic Books.

Deci, E. L. (1995). *Why we do what we do, Understanding self-motivation*. New York: Penguin Books.

[Durlak JA](#), [Weissberg RP](#), [Dymnicki AB](#), [Taylor RD](#), [Schellinger KB](#). (2011). The impact of enhancing students' social and emotional learning: a meta-analysis of school-based universal interventions. *Child Development*, 82(1): 405-32.

Dweck, C. S. (2000). *Self-Theories: Their role in motivation, personality, and development*. Philadelphia: Psychology Press.

Dweck, C. S. (2006). *Mindset: The new psychology of success*. New York: Random House.

Eccles, J. S., Gootman, J. A., (2002). *Community Programs to Promote Youth Development*. Washington, DC: National Academy Press.

- Ekman, P. (2003). *Emotions revealed: Recognizing faces and feelings to improve communication and emotional life*. New York: Times Books.
- Erikson, E. H. (1968). *Identity: Youth and Crisis*. New York: W.W. Norton & Company.
- Evans, A. et al., (2006). *Evaluation of the Bill & Melinda Gates Foundation's high school grants initiative: 2001-2005, final report*. (Washington D.C. and Menlo Park, CA: American Institutes for Research/SRI International)
- Feshbach, N. D. (1975). Empathy in children: Some theoretical and empirical considerations. *The Counseling Psychologist*, 5, 25-29.
- Feshbach, N. (1984). *Empathy, empathy training and the regulation of aggression in elementary school children*. In R.ÊM. Kaplan, V. J. Konecni, and R. Novoco (Eds.), *Aggression in children and youth* (pp. 192-208). The Hague, Netherlands: Martinus Nijhoff.
- Feshbach, N.D., & Feshbach, S. (1987). Affective processes and academic achievement. *Child Development*, 58, 1335-1347.
- Fitzgerald, P. D. & Edstrom, L. V. (2006). *Second Step: A violence prevention curriculum*. In S. Jimerson & M. Furlong (Eds.), *The handbook of school violence and school safety: From research to practice*. Mahwah, NJ: Erlbaum Associates, Inc.
- Gardner, H. (1983). *Frames of Mind: The Theory of Multiple Intelligences*. New York: Basic Books.
- Gardner, H. (1999). *Intelligence reframed: Multiples intelligences for the 21st century*. New York: Basic Books.
- Goldstein, A.P., Reagles, K. & Amann, L. (1990). *Refusal Skill Training*. Champaign: Research Press.
- Greenberg, M. T., Weissberg, R. P., O'Brien, M. U., Zins, J. E., Fredericks, L., Resnik, H., & Elias, M. J. (2003). *Enhancing school-based prevention and youth development through coordinated social, emotional, and academic learning*. *American Psychologist*, 58, 466–474.
- Greenberg, M. T., Weissberg, R. P., O'Brien, M. U., Zins, J. E., Fredericks, L., Resnik, H., & Elias, M. J. (2003). *Enhancing school-based prevention and youth development through*

- coordinated social, emotional, and academic learning. American Psychologist, 58, 466–474.*
- Greene, J. P. (2005). *Public high school graduation and college readiness rates: 1991–2002*. New York: Manhattan Institute. Retrieved March 29, 2006 from www.manhattaninstitute.org/html/ewp_08.htm.
- Guerra, N. G. & Slaby, R. G. (1990). Cognitive mediators of aggression in adolescent offenders: 2. Intervention. *Developmental Psychology, 26, 2, 269-277*.
- Hastings, P. D., Zahn-Waxler, C., Robinson, J., Usher, B., & Bridges, D. (2000). The development of concern for others in children with behavior problems. *Developmental Psychology, 36, 531-546*.
- Hoffman, M. L. (2000). *Empathy and moral development*. New York: Cambridge University Press.
- Howard, K. I., Kopta, S. M., & Krause, M.S. (1986). The dose-effect relationship in psychotherapy. *Am Psychol, 41, 159–164*.
- Isen, A. M. (1990). The influence of positive and negative affect on cognitive organization: Some implications for development. In N. Stein, B. Leventhal, & J. Trabasso (Eds.), *Psychological and biological approaches to emotion* (pp. 75-94). Hillsdale NJ: Lawrence Erlbaum Associates Inc.
- Jenkins, P.H. (1997). *School delinquency and the school social bond. The Journal of Research in Crime and Delinquency*. Beverley Hills:Aug 1997. Vol 34, Iss 3: pg 337.
- Johnson, B. (2009). *Linchpins or lost time: creating effective advisories*. The Coalition of Essential Schools website. Retrieved January 5, 2014. <http://essentialschools.org/resources/517>
- Learning First Alliance. (2001). *Every child learning: Safe and supportive schools*. Washington, DC: Association for Supervision and Curriculum Development.
- Lucio, R., Hunt, E., & Bornovalova, M. (2012). *Identifying the necessary and sufficient number of risk factors for predicting academic failure. Developmental Psychology, 48, 2, p. 422-428*.
- Miller, M.A., & Rahe, R. (1997). *Life changes scaling for the 1990s. Journal of Psychosomatic Research, 43, 279-292*.

- National Center for Education Statistics (NCES). (2011). *Grad rates lowest in large urban cities*. Common Core of Data, Local Education Agency Universe Survey Dropout and Completion Restricted-Use Data File, School Year 2008-09 (version 1a) (NCES 2011-314).
- O'Connell, P, Peplar, D., & Craig, W. (1999). Peer involvement in bullying, Insights and challenges for intervention. *Journal of Adolescence*, 22, 437-452.
- Payton, J., Weissberg, R.P., Durlak, J.A., Dymnicki, A.B., Taylor, R.D., Schellinger, K.B., & Pachan, M. (2008). *The positive impact of social and emotional learning for kindergarten to eighth-grade students: Findings from three scientific reviews*. Chicago, IL: Collaborative for Academic, Social, and Emotional Learning.
- Peter D. Hart Research Associates. (2005). *Rising to the Challenge: Are High School Graduates Prepared for College and Work? A Study of Recent High School Graduates, College Instructors, and Employers*. Washington, D.C.: Achieve, Inc.
- Resnick, M. D., Bearman, P. S., Blum, R. W., Bauman, K. E., Harris, K. M., Jones, J., Tabor, J. Schramm, J.B., & Kinney Zalesne, E. (2009). *The promise of proficiency: How college proficiency information can help high schools drive student success*. Washington: Center for American Progress.
- Ritchhart, R. (2002). *Intellectual character, What it is, why it matters, and how to get it*. San Francisco: Jossey-Bass.
- Schramm, J.B., & Kinney Zalesne, E. (2009). *The promise of proficiency: How college proficiency information can help high schools drive student success*. Washington: Center for American Progress.
- Seligman, M. E. P. (1998). *Learned optimism: How to change your mind and your life*. New York: Pocket Books.
- Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and Quasi-Experimental Designs*. New York: Houghton Mifflin.
- Stevens, J. P. (2002). *Applied multivariate statistics for the social sciences* (4th ed). Mahjah, NJ: Lawrence Erlbaum.
- Stillwell, R., and Sable, J. (2013). *Public School Graduates and Dropouts from the Common Core of Data: School Year 2009–10: First Look (Provisional Data)* (NCES 2013-309rev). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved January 5, 2014 from <http://nces.ed.gov/pubsearch>.

- The Conference Board, Corporate Voices for Working Families, Partnership for 21st Century Skills, Society for Human Resource Management. (2006) *Are they really ready to work? Employers' perspectives on the basic knowledge and applied skills of new entrants to the 21st century workforce*. Washington: The Conference Board.
- Weinstein, C. E., & Hume, L. M. (1998). *Study strategies for lifelong learning*. Washington, DC: American Psychological Association.
- West, T. C. 2009. *Still a freshman: examining the prevalence and characteristics of ninth-grade retention across six states*. Baltimore: Johns Hopkins University Center for Social Organization of Schools.
- Worthen, M. F. (1999). *The role of empathy in adolescent friendship*. (Unpublished doctoral dissertation). University of Texas, Dallas.
- Vogt, P. (2007). *Quantitative research methods*. New York: Pearson.
- Zins, J. E., Bloodworth, M. R., Weissberg, R. P., & Walberg, H. J. (2004). *The scientific base linking social and emotional learning to school success*. In Zins, J. E., Weissberg, R. P., Wang, M. C., & Walberg, H. J. (Eds.) *Building Academic Success on Social and Emotional Learning: What Does the Research Say?* New York: Teachers College Press.