

**A QUASI-EXPERIMENTAL STUDY OF THE EFFECT OF THE
LEADER IN ME SCHOOL INTERVENTION ON
DISCIPLINE INCIDENTS IN FLORIDA SCHOOLS**

A technical report prepared by Dr. Stephen Schilling

Survey Research Center
Institute for Social Research
The University of Michigan

January 16, 2018

A Quasi-Experimental Study of the Effect of the *Leader in Me* School Intervention on Discipline Incidents in Florida Schools

Effective whole-school behavioral interventions consider the school environment as well as the students (Lewis & Sugai, 1999; Smith, Pepler, & Rigby, 2004). However, even among interventions with this dual focus, the level of impact varies greatly. Traditionally, these interventions focused school-wide efforts on the elimination of negative behaviors, but this alone often provides short-term solutions with marginal impacts. Larger impacts to disciplinary referrals are seen when interventions focus instead on developing positive behaviors in students. In particular, interventions that target the social and emotional learning (SEL) of students and staff have become an increasingly utilized method for improving student behaviors and school culture. Through these interventions students learn and apply SEL knowledge and skills, which helps them improve their ability to regulate emotions, manage their actions and make responsible decisions. In a supportive and safe school environment, these foundational SEL skills develop further as students work with peers to resolve conflict, collaborate, problem solve, and effectively communicate--all essential skills for success in career and life (P21.org). Done this way, effective methods used to improve student behavior also have the ability to prepare them with the 21st Century social and emotional skills to be life-ready leaders. Evidence of this assertion is seen in the unique approach taken in the *Leader in Me* process.

Leader in Me is a whole school transformation process that was first developed in 1999 when educators hoping to turn around their failing magnet school, shifted its focus to teaching 21st Century social and emotional skills to students in an academic setting. To make this change, the educators chose to incorporate Dr. Steven Covey's *The 7 Habits of Highly Effective People* school-wide, using it as their guide in teaching 21st Century skills, practicing these habits within and outside their school (see Appendix A for more detail). Through this approach the school dramatically improved and is the only magnet school to have been honored as the #1 Magnet School in America, in 2006 and then in 2014. Their results have inspired over three-thousand schools worldwide to adopt their approach to teaching 21st Century social and emotional skills by implementing the *Leader in Me* process.

While the intention of the *Leader in Me* is to develop life-ready leaders, a more immediate impact commonly cited by schools is a decline in negative student behaviors. These anecdotes suggesting developing of life-skills as behavioral interventions are supported by small-scale research investigations of *Leader in Me* impacts that have similarly found significantly lower rates of discipline referrals (e.g. Humphries, Cobia, & Ennis, 2015; Ishola, 2016). A striking example of this connection was found in a case study analysis conducted by a doctoral researcher and her faculty advisors at Chicago's Benedictine University (Ishola, 2016). The researchers found a dramatic linear

decrease in the number of behavioral incidence at the elementary school as they implemented the *Leader in Me* over multiple years (see Figure 1).

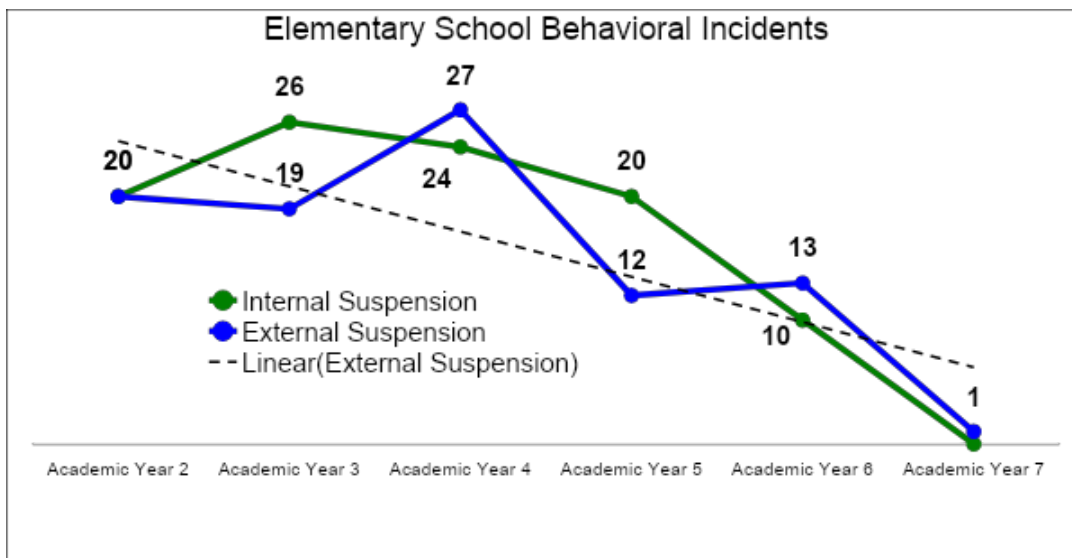


Figure 1. An archival examination of the long-term behavioral impacts of *Leader in Me* showed a dramatic linear decrease in the number of behavioral incidences in a Chicago elementary school as they started, and increasingly implemented, the *Leader in Me* process.

Beyond the immediate effects within the elementary school, the junior high, whose primary source of students was the *Leader in Me* elementary school, also had a dramatic linear decrease in behavioral incidence as the proportion of students who had been involved in *Leader in Me* in the elementary school grew (see Figure 2).

These findings are preliminary evidence that the *Leader in Me's* approach to developing students' 21st Century social and emotional skills is also an effective behavioral intervention that has long-term impacts. However, these studies, as well as others linking the *Leader in Me* to improved student discipline, are relatively small in scale. Will these impacts sustain when looking at students' behavior at a larger level? In this paper we will analyze discipline data for *Leader in Me* schools in Florida compared to control schools. Specifically we will examine data from the Florida Department of Education (FDOE) Statewide Report on School Safety and Discipline Data (<http://www.fdoe.org/schools/safe-healthy-schools/safe-schools/sesir-discipline-data/discipline-incident-data/statewide-report-on-school-safety-disc.html>).

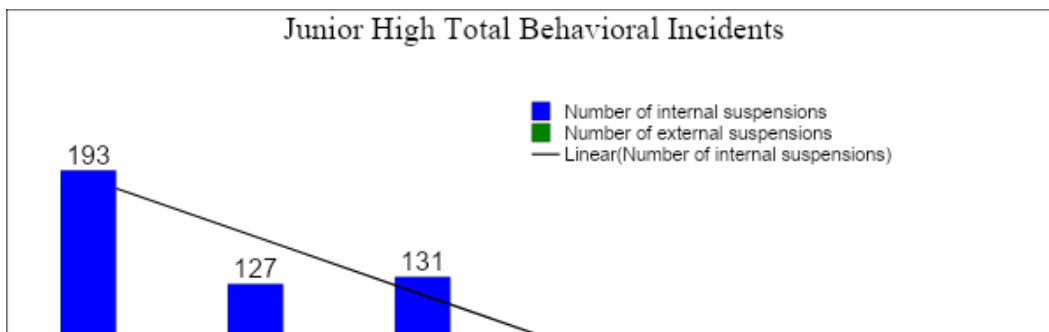


Figure 2. Additional data provided evidence that the positive changes in student behavior were long term. Leader in Me students, who showed a decline in behavioral incidence in elementary, continued to positively impact the disciplinary incidence once in junior high.

The Florida Department of Education operates a School Environmental Safety Incident Reporting (SESIR) system which collects data on 26 incidents of crime, violence, and disruptive behaviors that occur on school grounds, on school transportation, and at of campus schools sponsored events, during any 24 hour period, 365 days a year. Incidents are reported by the schools to the districts, which in turn provide the data to the FDOE. Full disciplinary incident reports are available for individual schools in Florida starting in the 2006-2007 school year through the 2015-2016 school years. Later year data is currently being compiled by the FDOE.

This paper examines discipline data for the 2015-2016 school year in comparing *Leader in Me* schools to control schools in a quasi-experimental design, controlling for school characteristics and demographic data. This is done in two ways. The first method used a generalized linear model looking at total number of 2015-2016 discipline incidents, controlling for school characteristics, school demographics, school size, and total number of 2009-2010 discipline incidents. The total number of 2009-2010 school discipline incidents serves as a pre-treatment covariate, as all Florida *Leader in Me* schools entered the *Leader in Me* program after April 2010. The second method used propensity score matching (Rosenbaum & Rubin, 1983; 1985) to create a matched set of control school that were similar to LIM schools in key school characteristics and school demographics. The propensity score matching method is a key tool in causal inference for observational data.

In what follows, we outline our methods and present the results of our analyses.

Method

Participants

Participating schools were 77 *Leader in Me* elementary schools and 1932 control elementary schools with complete 2009-2010 school characteristic and demographic data. All school characteristic and demographic data was obtained from the Common Core of Data provided by the National Center for Educational Statistics (<https://nces.ed.gov/ccd>). Key school characteristics and demographic data included locale (city, suburb, town, rural), charter school (yes, no), school level (primary, other – e.g. k through 12), percent Hispanic, percent Black, percent Asian, Percent Male, school size (number of students), and Percent Free or Reduced Lunch. All Florida *Leader in Me* schools entered the *Leader in Me* program after April 2010.

Experimental Design

The study was a quasi-experimental design in two parts. The first part consisted of the 77 *Leader in Me* schools as the experimental group and the remaining 1932 Florida elementary schools as control schools. Differences between the experimental schools and control schools on school characteristics and demographic variables were controlled for by including the school characteristic and demographic variables as covariates in a generalized linear model Poisson count regression model.

The second part consisted of creating matched groups of experimental and control schools. Matching was done on the basis of propensity scores (Rosenbaum & Rubin, 1983; 1985). Propensity score matching is a statistical technique for causal inference in the presence of quasi-experimental or observational data (Rubin, 2005). Propensity scores reduce the number of covariates needed to control for external variables. Propensity scores involve modeling selection for treatment, not the treatment outcomes. Therefore propensity score adjustments are independent of outcome variables. Propensity scores are defined as the conditional probability of assigning a unit to a particular treatment condition given a set of observed covariates.

In a study with random assignment the probability of assignment to treatment is known and typically equal to $\frac{1}{2}$ with equal sized treatment and control groups. In a quasi-experiment the probability of being assigned to treatment, the selection model, is typically unknown, but can be estimated by a logistic regression model. Treatment assignment is regressed on a set of observed covariates. The resulting estimated probability of being assigned to treatment (the propensity score) can then be used to match units in the treatment and control conditions with respect to their probability of being assigned to treatment. The matched sets are then essentially equal with respect to their probability of being assigned treatment, even if they differ with respect to specific covariates.

From a practical point of view, propensity score matching greatly simplifies the process of matching, allowing matching using a single dimensional score.

In this study a propensity score was estimated using logistic regression with the covariates locale, charter school, school level, percent Hispanic, percent Black, percent Asian, percent Male, and percent free or reduced lunch. The propensity scores were then used to separately match control schools to *Leader in Me* schools in charter schools and in public schools. There was a single matched charter school for each of 9 *Leader in Me* charter schools and a single matched public school for each of 68 *Leader in Me* public schools – a total of 77 matched pairs in all. All matches were done using optimal full matching (Hansen & Klopfer, 2006) using the R optmatch package (Hansen, et al. 2013).

Data Analysis

A generalized linear model Poisson regression analysis was used for the quasi-experimental study with 77 *Leader in Me* schools and 1932 control schools. The dependent variable was total number of disciplinary incidents for the 2015-2016 school as reported to the SESIR system of the FDOE by the districts for each school. Total number of disciplinary incidents is the sum of incidents across a wide variety of categories that includes physical attack, fighting, bullying, threat/intimidation, battery, weapons possession, drug possession, alcohol, tobacco, robbery, burglary, vandalism, harassment, trespassing, arson, and sex offenses. The most common categories were physical attack (31%) and fighting (31%), followed by bullying (7%) and threat/intimidation (7%). For further information and a full definition of the incident categories see <http://www.fldoe.org/schools/safe-healthy-schools/safe-schools/sesir-discipline-data/>.

The experimental variable of interest was *Leader in Me* status (yes, no). School size was used as an offset variable with a fixed coefficient of 1.0 in the Poisson regression; the result is that the model for the dependent variable essentially measures the rate of incidents per student for each school. Control covariates in the Poisson regression included locale, charter school, percent Hispanic, percent Black, percent Asian, Percent Male, and Percent Free or Reduced Lunch. A constructed rate of incidents per student prior to schools entering the *Leader in Me* program was created by taking the log of the total number of disciplinary incidents in the 2009-2010 school year for each school and subtracting the log of the number of students in the school. This variable was then entered as a covariate in the Poisson regression along with the school characteristics and demographic variables, allowing us to control for the pretest rate of incidents.

A generalized linear mixed model Poisson regression was used to analyze the matched pair data. Again school size was used as an offset variable with a fixed coefficient of 1.0 in the Poisson mixed model regression. Random effects and variance components were estimated for matched pairs. The experimental variable of interest was again *Leader in Me* status (yes/no). A simple model was first fit with *Leader in Me* status as the experimental effect of interest, random effects for matched sets, and the 2009-2010 school year rate of disciplinary incidents described above as a control covariate. Following this fit, another model was fit that also controlled for school characteristics and demographics along with the 2009-2010 school year rate of disciplinary incidents.

Both the total number of disciplinary incidents in the 2009-2010 school year and the total number of disciplinary incidents in the 2015-2016 school year had a moderate amount of missing data – 33% for 2009-2010 and 25% for 2015-2016. Multiple imputation (Rubin, 1987; Raghunathan, 2016) was used to account for missing data. Ten multiple imputations were generated using sequential regression multivariate imputation (SRMI) (Raghunathan et al. 2001) with the missing data software IVEware (Raghunathan et al. 2002). All school characteristic and demographic variables along with 2009-2010 and 2015-2016 total number of disciplinary incidents were used in the multiple imputation. Separate analyses were conducted for each imputed data set. The results were then combined to yield mean imputed *Leader in Me* effects along with the resulting multiple imputation sampling variance and standard error as described in Raghunathan (2016). The squared mean estimate was divided by the multiple imputation sampling variance to give a Wald chi-square test of the effect of the *Leader in Me*.

Results

Generalized Linear Model Poisson Regression Results

The results of the generalized linear model Poisson regression comparing the 77 *Leader in Me* schools to the 1932 control schools is presented in Table 1. Control variables in this regression included locale (city, suburb, town, rural), charter school (yes, no), percent Hispanic, percent Black, Percent Male, school size (number of students), and Percent Free or Reduced Lunch. School size was incorporated as an offset variable. The 2009-2010 rate of disciplinary incidents per student described above was used as a pretest control variable.

Effect	Estimate	SE	Wald Chi-SQ	<i>p</i>	% Reduction
<i>Leader in Me</i>	-0.1412	0.062	5.127	0.024	13.17%

Table 1. Generalized Linear Model Poisson Regression LIM Results

The Wald Chi-square for the *Leader in Me* effect was significant at the 0.05 level with a p -value of 0.024. Exponentiating the *Leader in Me* estimate of -0.141 and subtracting from 1 revealed that the *Leader in Me* leads to a 13.17% reduction of total disciplinary incidents compared to control schools. As the average number of disciplinary incidents per school is 13.7, this translates to a reduction of nearly 2 (1.8) disciplinary incidents per year for *Leader in Me* schools.

Matched Pair Results

Propensity Score and Balance. A logistic regression model predicting *Leader in Me* status (yes, no) was performed, using locale (city, suburb, town, rural), charter school (yes, no), school level (primary, other – e.g. k through 12), percent Hispanic, percent Black, percent Asian, Percent Male, and Percent Free or Reduced Lunch as predictor variables. The propensity score was the predicted log odds of the probability of being a *Leader in Me* school.

A key aspect of propensity score is the need for substantial overlap on the propensity score between treatment and control groups. Figure 3 presents a boxplot demonstrating the overlap between the propensity score group and the controls. There is complete overlap of the control group range with the *Leader in Me* range of propensity scores. This enabled us to have nearly exact matches of control schools to the *Leader in Me* Schools. Matches were done separately for charter schools and public schools using the R optmatch package (Hansen, et al. 2013).

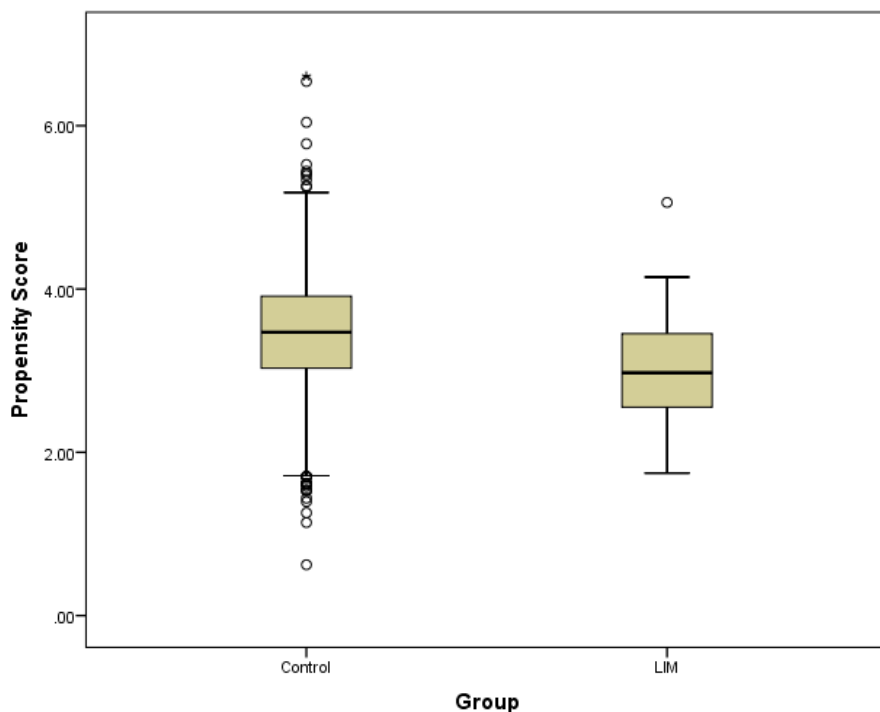


Figure 3. Boxplot of Propensity Scores by *Leader in Me* status.

After creating the matches, we examined the resulting matched pairs for balance on school characteristics and school demographic variables. Tests of balance are presented in Table 2.

Matched Pairs						
Covariates	Control	LIM	Adj Diff	Diff SE	Standard Diff	z
City	0.265	0.250	-0.015	-0.064	0.033	-0.229
Suburb	0.301	0.294	-0.007	-0.053	0.015	-0.139
Town	0.162	0.176	0.015	0.028	0.064	-0.535
%Hispanic	0.323	0.279	-0.043	-0.037	0.180	-1.167
%Black	0.151	0.172	0.021	0.022	0.079	-0.972
%FRL	0.642	0.652	0.010	0.030	0.040	-0.332
%Male	0.527	0.523	-0.004	-0.005	0.102	-0.861
ln 2009 Disc	1.756	1.744	-0.013	-0.139	0.012	-0.912
Chi-square Test of Balance						
	Chi-square	df	p-value			
Stratified	4.030	8	0.854			
Unmatched						
Covariates	Control	LIM	Adj Diff	Diff SE	Standard Diff	z
City	0.269	0.250	-0.019	0.055	-0.043	-0.346
Suburb	0.500	0.294	-0.206	0.062	-0.413	-3.330
Town	0.052	0.176	0.124	0.029	0.538	4.330
%Hispanic	0.257	0.279	0.022	0.030	0.093	0.750
%Black	0.268	0.172	-0.096	0.033	-0.356	-2.870
%FRL	0.610	0.652	0.042	0.031	0.168	1.360
%Male	0.517	0.523	0.005	0.005	0.137	1.100
ln 2009 Disc	1.840	1.740	-0.094	0.126	-0.093	-0.749
Chi-square Test of Balance						
	Chi-square	df	p-value			
Unstratified	46.600	8	0.0000			

**

Table 2: Results from the tests of balance which determine if the matched school are statistically similar enough to be considered an appropriate match. The result revealed non-significant differences, meaning the schools were statistically equal on matched variables and the comparison of schools was appropriate.

- *** Significant at 0.001
- ** Significant at 0.01
- * Significant at 0.05

The balance results indicate that matched pairs are balanced, with a non-significant chi-square and a *p*-value of 0.854. All of the *z*-values for the school characteristic and demographic variables are less than 1.4 in absolute value. In contrast, the chi-square test of balance for the unmatched covariates is 46.6 with a *p*-value of 0.0000. Three of the school characteristic and demographic

variables have statistically significant z -values; percent located in suburbs; percent located in towns; and percent black. Matching on propensity scores clearly achieves good balance between the *Leader in Me* schools and their matched control equivalents.

Generalized Linear Mixed Model Poisson Regression Results. The results of the generalized linear mixed model Poisson regression comparing the 77 *Leader in Me* schools the 77 matched control schools is presented in Table 4. The first line of Table 4 gives the results for *Leader in Me* with total number of students used as an offset and the 2009-2010 rate of disciplinary incidents per student as a pretest control variable. The second line of Table 4 give the effect of *Leader in Me* with the school characteristic variables and demographic variables serving as additional control covariates. The effect of the *Leader in Me* on total disciplinary incidents controlling for just the pretest rate of disciplinary incidents per student is statistically significant at the 0.05 level ,with a p -value 0.023. This translates to a 17.43% reduction in the number of disciplinary incidents for *Leader in Me* schools compared to matched control schools. Assuming a 13.7 base rate of disciplinary incidents, this translates to an average reduction of 2.4 disciplinary incidents per year in *Leader in Me* schools. Controlling for the additional covariates produces an even greater effect that is statistically significant at the 0.01 level with a p -value of 0.002. The reduction in disciplinary incidents is 22.84% greater for *Leader in Me* school, which is the equivalent of 3.12 fewer disciplinary incidents per school.

Effect	Estimate	SE	Wald Chi-SQ	p	% Reduction
<i>Leader in Me</i>	-0.1915	0.084	5.143	0.023	17.43%
<i>Leader in Me</i> with Covariates	-0.2593	0.082	9.943	0.002	22.84%

Table 4. Generalized Linear Mixed Model Poisson Regression LIM Results

Conclusions

The *Leader in Me* approach to developing students’ 21st Century social and emotional skills is linked to immediate and long-term reductions in student disciplinary incidence. In this paper we built on earlier small-scale studies that provided evidence of this positive disciplinary impact, by examining the effect of *Leader in Me* on a much larger scale. To do this, we looked at publically reported disciplinary incidence in Florida elementary schools by making use of Florida’s

Department of Education SESIR system along with the National Center for Educational Statistics' Common Core of Data.

To ensure a thorough examination of the data, we utilized two prominent statistical approaches common in quasi-experimental educational studies to accurately measure potential impacts. In both quasi-experimental studies, we constructed a pretest rate of disciplinary incidents per student to serve as a pretest control and used size of school as an offset variable in the Poisson regression. The results from both statistical approaches resulted in evidence that the *Leader in Me* process significantly lowers disciplinary incidence. In the first analysis, we conducted a quasi-experimental study using a generalized linear model Poisson regression analysis with *Leader in Me* status as the experimental variable and school characteristic and demographic variables as control covariates. This resulted in a 13.17% reduction in total disciplinary incidents for Leader in Me schools. Next, we conducted a quasi-experiment with propensity score matching of control schools to *Leader in Me* schools. This matched data was then analyzed using generalized linear mixed model Poisson regression analysis. Results from this analysis indicated a 22.84% reduction in total disciplinary incidents for *Leader in Me* schools compared with propensity-matched controls. Taken together, the results provide strong initial evidence that even when examined at a larger scale, the *Leader in Me* program continues to produce strong impacts on school climate through the reduction of disciplinary incidence.

References

- Hansen, B.B & Klopfer S.O. (2006). Optimal full matching and related designs via network flows. *Journal of Computational and Graphical Statistics*, 15(3), 609-627.
- Hansen, B. B., Fredrickson, M., Bertsekas, D., & Tseng, P., (2013) Package optmatch. R package version 0.8-1
- Humphries, A., Cobia, F., & Ennis, L. S. (2015). Perceptions of the *Leader in Me*© Process in Regard to Student Discipline. *Journal of Education and Human Development*, 4(3), 93-104.
- Ishola, C. M. (2016). *Key Life Lessons: Learning to Lead Self and Others in Primary School* (Doctoral dissertation, Benedictine University).
- Lewis, T. J., & Sugai, G. (1999). Effective behavior support: A systems approach to proactive schoolwide management. *Focus on Exceptional Children*, 31(6), 1.
- Raghunathan, T.E. (2016). *Missing Data Analysis in Practice*. Boca Raton, FL.: CRC Press.
- Raghunathan, T.E., Lepkowski, J.M., Von Hoewyk, J., & Solenberger, P.W. (2001). A multivariate technique for multiply imputing missing values using a sequence of regression models. *Survey Methodology*, 27, 85-95.
- Raghunathan, T.E., Solenberger, P.W. & Von Hoewyk, J. (2002). IVEware: Imputation and Variance Estimation Users Guide. Ann Arbor MI. Survey Methodology Program Survey Research Center, Institute for Social Research University of Michigan.
- Rosenbaum, P. R., & Rubin, D. B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika*, 70(1), 41-55.
- Rosenbaum, P.R., & Rubin, D.B. (1985). Constructing a control group using multivariate matched sampling methods that incorporate the propensity score. *The American Statistician*, 39, 33–38.
- Rubin, D. B. (1987). *Multiple Imputation for Nonresponse in Surveys*. New York: John Wiley and Sons.
- Rubin, D. B. (2005). Causal inference using potential outcomes: Design, modeling, decisions. *Journal of the American Statistical Association*, 100(469), 322-331.

Smith, P. K., Pepler, D., & Rigby, K. (Eds.). (2004). *Bullying in schools: How successful can interventions be?*. Cambridge University Press.

Appendix A

In this table we provide an overview of how the *7 Habits of Highly Effective People* are applied by student Leader in Me schools and the link these habits and application have with prominent educational research.

Habit	Student Application	Link to Educational Research
Habit 1: Be Proactive	Habit 1 encourages students to take responsibility for their learning and the direction of their lives through personal choice and initiative. Students are taught to set the direction of their lives regardless of individual circumstance and condition through proactive, responsible choices.	Being successful in Habit 1 is largely about choosing a proactive rather than a reactive mindset. In this way, it aligns with Carol Dweck's (2007) work on growth mindset that found students who endorse theories of malleable intelligence hold positive beliefs about initiative and proactivity, which, in turn, boosts academic achievement. Being proactive connotes internal motivation as a student approaches his or her learning in a proactive versus retroactive manner (Sullo, 2009).
Habit 2: Begin with the end in mind	Habit 2 focuses on teaching students to think about an end result. Students are encouraged to visualize what they want to achieve and are taught ways to capture that personal vision that encourages them to learn how to prioritize, plan ahead and set personally meaningful goals. Students are taught the 4 Disciplines of Execution, which are a set of goal-achievement skills.	A 2009 meta-analysis covering 26 years of data and over 50,000 students revealed three major findings on the importance of goal-setting: 1. Early adolescence is a critical period in the relationship between goal-setting and achievement; 2. Goal structures are associated with higher levels of students' competence, self-esteem, and self-efficacy; 3. Teachers' socio-emotional and instructional support in goal-setting is positively related to students' academic and personal achievement (Rolland, 2012)
Habit 3: Put first things first	Habit 3 "Put first things first" teaches students how to "organize and execute around priorities." Students are taught essential knowledge and skills to help them develop a self-disciplined approach to life and time management. For example, students are taught how to set schedules, follow a plan, and to make responsible choices centered on self-discipline and personal priorities. Covey explains that Habit 3 is about managing purpose, values, roles and priorities (Covey, 2013).	Thought leaders in education support many of the principles taught in Habit 3. For example, in his book <i>What Works in Schools</i> , Dr. Robert Marzano identifies the need to instill a sense of self-discipline and responsibility in children. Furthermore, Dr. Marzano outlines a number of educator-identified areas of "successful schools" including: providing students with motivational training; implementing a self-discipline and responsibility program; student tracking of learning goals; involving students in designing of projects programs, and training and supporting parents.
Habit 4: Think win-win	"Think win-win" focuses on teaching students skills in interpersonal relationships and human interaction. Students are taught that win-win is a frame of mind which encourages them to constantly seek mutually beneficial solutions in all human interactions. Covey explains that win-win is based on the idea that one person's success is not achieved at the expense or exclusion of the success of others." Win-win is about finding agreements and solutions that are mutually beneficial and satisfying (Covey, 2013).	In a paper published by the National Association of School Psychologists (NASP), researchers explained that while conflict is both natural and inevitable, there has been a significant increase in violent conflicts in school. The NASP further points out that "experts in the area of conflict resolution agree that schools must purposefully teach students effective conflict resolution skills because they may not acquire such skills incidentally" (Chittooran & Hoenig, 2004). A study published by the <i>Society for Research in Child Development</i> investigated the effects of conflict resolution training with young children. The study concluded that: first, trained children used significantly more constructive strategies to resolve conflict; second, untrained children can develop in unhealthy ways that are destructive to themselves, the people around them, and society as a whole; and third, integrating conflict training into an

		academic setting increases the probability that conflict programs will be adopted by the children (Stevahn, et. al., 2000).
Habit 5: Seek first to understand, then to be understood	“Seek first to understand, then to be understood” seeks to develop interdependence skills through empathetic listening. Covey explains that communication is life’s most important skill and that through empathetic listening we can really come to understand another’s perspective (Covey, 2013). Students are taught to “listen to other people’s ideas and feelings... [and to] see things from their viewpoints” (Covey, 2014). Developing good listening skills impacts students positively by helping them effectively work, understand, and cooperate with others. Students are given the opportunity to develop critical listening skills so they can empathize with others.	Covey explains that empathetic listening is more than registering words, it is about listening with the intent to understand (Covey, 2013). Studies show that effective listening improves students’ educational success. From a research study supporting effective listening, researchers at Penn State remarked that “effective listening is essential to undergraduate success.” They continued by saying “listening is the foundation of critical thinking” and understanding (Thompson & Lientz, 2004). However, students often do not receive the opportunity to fully develop listening skills in traditional school settings.
Habit 6: Synergize	“Synergize” is about teaching students to work well in groups. It implies that team members work well with others, are humble, and respect and seek out the opinions of others. Synergizing can best be described as creative cooperation. The skills for creative cooperation are achieved through cooperative learning. The habit is about educating students in cooperative learning techniques like peer mentoring, to work well with others, teamwork, be humble, respect others, and value other people’s strengths; Covey describes it as “two heads are better than one” (Covey, 2013).	In a study published by the <i>American Educational Research Association</i> , researchers Johnson and Johnson (2009) wrote that more than 1,200 studies have been conducted on the relative merits of cooperative learning. The literature communicates that cooperation “tends to promote greater long-term retention, higher intrinsic motivation and expectations for success, more creative thinking, greater transfer of learning, and more positive attitudes toward the task and school.” They go on to say that, “Although many teaching procedures have been recommended over the past 60 years, very few are still around. Almost none are as widespread and institutionalized into instructional practices as is cooperative learning” (Johnson & Johnson, 2009).
Habit 7: Sharpen the saw	“Sharpen the saw” is about exercising what Covey calls the four dimensions of our nature: physical, social/emotional, spiritual, and mental (Covey, 2013). Students are encouraged to enhance their mental, physical, personal, and social capabilities through activities such as good reading, meditation, diet and exercise, and spending time with family and friends.	Numerous studies have found a strong link between academic success and enhancing mental, physical, and social capacity. One such study performed in Sweden analyzed the statistical difference between students’ academic performance in schools that took part in a national physical exercise intervention program and those that did not. The study found that “Overall, the odds for achieving the national goals [for reading, math, and language] increased [in intervention schools compared to non-intervention schools]” the study concluded with 95% confidence that children who participated in Sweden’s national physical exercise intervention program scored statistically significantly higher than those who did not participate (Käll, et. al., 2013).