Results

An Evaluation of the Teen Leadership Course

Final Evaluation Report

May 2019

Prepared by:

Tracy Waters, Ph.D.
David Fleming, Ph.D.
Kelly Gregory, M.A.T.
Katherine Stevens
Peyton Roth
Furman University

Jay Feldman, Ph.D.
Nitya Venkateswaran, Ph.D.
Talia Shalev
RTI International

This report is funded by the United Way of Greenville County's Social Innovation Fund grant to support its OnTrack Greenville partnership. The Social Innovation Fund (SIF) was a program that received funding from 2010 to 2016 from the Corporation for National and Community Service (CNCS), a federal agency that engages millions of Americans in service through its AmeriCorps, Senior Corps, and Volunteer Generation Fund programs, and leads the nation's volunteer and service efforts. Using public and private resources to find and grow community-based nonprofits with evidence of results, SIF intermediaries received funding to award subgrants that focus on overcoming challenges in economic opportunity, healthy futures, and youth development. Although CNCS made its last SIF intermediary awards in fiscal year 2016, SIF intermediaries will continue to administer their subgrant programs until their federal funding is exhausted.

United Way of Greenville County's OnTrack Greenville partnership includes support from CNCS and the following investors: Hollingsworth Funds, Community Foundation of Greenville, the Daniel-Mickel Foundation, Fluor Foundation, Gilreath Family Fund, the Graham Foundation, John I. Smith Charities, Jolley Foundation, Lockheed Martin, Piedmont Health Foundation, ScanSource Charitable Foundation, F.W. Symmes Foundation, Wells Fargo, JHM Hotels, Sisters of Charity Foundation of South Carolina, Priester Family Foundation, and SunTrust Foundation.

Suggested citation: Waters, T., Fleming, D., Feldman, J., Venkateswaran, N., Gregory, K., Shalev, T., Roth, P., & Stevens, K. (2019). *An Evaluation of the Teen Leadership Course: Final Evaluation Report*. Greenville, SC: Furman University.

Leadership, Knowledge, Impact.

The Riley Institute at Furman broadens student and community perspectives about issues critical to South Carolina's progress. It builds and engages present and future leaders, creates and shares data-supported information about the state's core challenges, and links the leadership body to those data to drive sustainable solutions.

Launched in 1999, the Institute is named for former South Carolina governor and former United States Secretary of Education Richard W. (Dick) Riley. It is committed to nonpartisanship in all it does and to a rhetoric-free, facts-based approach to change.

The Riley Institute's research group promotes evidence-informed education practices and supports organizations that serve children and families across South Carolina. Part of the Institute's Center for Education Policy and Leadership, the group conducts in-depth research and evaluation studies to support organizational decision-making and practice. It also builds internal evaluation capacity among organizations serving children and families to maximize outcomes for citizens across the state.

For more information, please visit riley.furman.edu.

Table of Contents

List of Tables vi
List of Figures ix
Executive Summary 1
I. Introduction 7
A. Program Background and Problem Definition 7
B. Overview of Prior Research 12
C. Overview of Impact Study 13
D. Research Questions 14
1. Impact Research Questions 14
2. Implementation Research Questions 15
E. Contribution of the Study 16
1. Level of Evidence Generated by the Study 16
2. Strengths and Limitations of the Study 16
3. Connection of this Study to Future Research 18
4. Changes to Sub-Grantee Evaluation Plan 18
II. Study Approach and Methods 22
A. Impact Evaluation Design 22
B. Sampling, Measures, and Data Collection 25
1. Sampling 25
2. Measures and Instruments 29
3. Data Collection Activities 34
III. Implementation Study Results 39
A. Implementation Study Design and Measures 39
B. Fidelity of Program Activities and Outputs 40
C. Impact on Students' Skills and Development 50
D. Impact on school-wide culture and practice 53
IV. Statistical Analysis of Impacts 55
A. Unit of Assignment and Analysis 55
B. Analysis Approach 55
C. Formation of Matched Groups 55
1. Characteristics of Teen Leadership Students: Pre-Matching 57
2. Effectiveness of the Matching Procedure 60

3. Characteristics of Teen Leadership Students: Post-Matching 62
D. Impact Study Results 65
1. Estimates of Effect Size 66
2. Confirmatory Impact Analyses 67
3. Exploratory Impact Analyses 71
4. Exploratory Secondary Outcome Analyses 74
5. Additional Exploratory Outcome Analyses 76
6. Adjustment for Multiple Outcomes 79
V. Findings, Lessons Learned, and Next Steps 81
A. Summary of Implementation Study Findings 81
B. Summary of Impact Study Findings 83
C. Lessons Learned 89
D. Study Limitations 91
E. Next Steps 92
Appendix A. Study Logistics Updates 95
A. Institutional Review Board 95
B. Project Timeline 95
C. Project Personnel 96
D. Project Budget 96
Appendix B. Program Logic Model 97
Appendix C. Additional Matching Results 98
Appendix D. OnTrack Greenville Student Survey 118
Appendix E. Teen Leadership Student Survey 130
Appendix F. Student Focus Group Protocol 140
Appendix G. Student Evaluation of Course Leader Form 142
Appendix H. Unmatched Regressions 143
References 151

List of Tables

Table 1. Final Sample Size Numbers of Treatment and Comparison Groups 2
Table 2. School Enrollment by Gender, Race or Ethnicity AY 2017-18, 180th Day 8
Table 3. Percentage of Students who Met or Exceeded State Standards in ELA and Math AY 2017-18 9
Table 4. Summary of Treatment and Comparison Groups 23
Table 5. Teen Leadership Participant Flow Chart at Treatment Schools AY 2016-17 (Administrative Data) 27
Table 6. Response Rate of OnTrack Greenville Student Survey AY 2016-17 36
Table 7. Response Rate of OnTrack Greenville Student Survey AY 2017-18 37
Table 8. Response Rate of Teen Leadership Student Survey AY 2016-17 38
Table 9. Response Rate of Teen Leadership Student Survey AY 2017-18 38
Table 10. New Teen Leadership Courses 43
Table 11. New Teen Leadership Course Implementation 43
Table 12. Teacher Reported Number of Student Engagement Opportunities, by Chapter 44
Table 13. Average Changes Each Teacher Made to Curriculum 45
Table 14. Teachers' Perceptions of Whether Different Chapters Resonated with Students 46
Table 15. Teachers' Perceptions about Resources to Teach the Course 49
Table 16. Student Ratings of Favorite Classes 52
Table 17. Student Ratings of Favorite Aspects of the Teen Leadership Course 52
Table 18. Pre-Matching Demographic Characteristics AY 2016-17 57
Table 19. Pre-Matching Demographic Characteristics AY 2017-18 58
Table 20. Pre-Matching Prior Year Academic Outcomes AY 2016-17 59
Table 21. Pre-Matching Prior Year Academic Outcomes AY 2017-18 60
Table 22. Teen Leadership Participants vs. Student Matches 2016-17 (Administrative Data Match) 63
Table 23. Number and Percent of Fall 2016 Teen Leadership Students Matched 64
Table 24. Number and Percent of Fall 2017 Teen Leadership Students Matched 64
Table 25. Which Teen Leadership Students Were Matched? Post-Match Demographics, AY 2016-17 Treatment School (Administrative Data Match) 65
Table 26. Confirmatory Impact Results for Student Behavior AY 2016-17 (Treatment Schools) 68
Table 27. Confirmatory Impact Results for Student Behavior AY 2017–18 (Treatment Schools) 68
Table 28. Confirmatory Impact Results for Student Behavior AY 2016-17 (District Schools) 69
Table 29. Confirmatory Impact Results for Student Behavior AY 2017–18 (District Schools) 70
Table 30. Confirmatory Impact Results for Student Behavior AY 2016-17 (State Schools) 71
Table 31. Exploratory Impact Results for Course Performance AY 2016–17 72

Table 32. Exploratory Impact Results for Course Performance AY 2017-18 72
Table 33. Exploratory Impact Results for Attendance AY 2016-17 73
Table 34. Exploratory Impact Results for Attendance AY 2017-18 73
Table 35. Exploratory Secondary Outcome Results AY 2016–17 74
Table 36. Exploratory Secondary Outcome Results AY 2017–18 75
Table 37. Exploratory Secondary Outcome Results for Relationships with Adults AY 2016–17 76
Table 38. Exploratory Secondary Outcome Results for Relationships with Adults AY 2017–18 76
Table 39. Exploratory Outcome Results for Student Self-Confidence AY 2016-17 77
Table 40. Exploratory Outcome Results for Student Self-Confidence AY 2017-18 77
Table 41. Exploratory Outcome Results for School Engagement AY 2016-17 78
Table 42. Exploratory Outcome Results for School Engagement AY 2017-18 78
Table 43. Exploratory Outcome Results for Student Attitude toward Learning AY 2016-17 79
Table 44. Exploratory Outcome Results for Student Attitude toward Learning AY 2017-18 79
Table 45. Adjustment for Multiple Outcomes 80
Table 46. Teen Leadership Participant Flow Chart at District Schools AY 2016-17 (Administrative Data). 99
Table 47. Which Teen Leadership Students Were Matched? Post-Match Demographics, AY 2016-17 District Schools (Administrative Data Match) 99
Table 48. Teen Leadership Participant Flow Chart at State Schools AY 2016-17 (Administrative Data).. 101
Table 49. Which Teen Leadership Students Were Matched? Post-Match Demographics, AY 2016-17 State Schools (Administrative Data Match) 101
Table 50. Teen Leadership Participant Flow Chart at Treatment Schools AY 2016-17 (Survey Data)..... 103
Table 51. Which Teen Leadership Students Were Matched? Post-Match Demographics, AY 2016-17 Treatment Schools (Survey Data Match) 103
Table 52. Teen Leadership Participant Flow Chart at District Schools AY 2016-17 (Survey Data) 105
Table 53. Which Teen Leadership Students Were Matched? Post-Match Demographics, AY 2016-17 District Schools (Survey Data Match) 105
Table 54. Teen Leadership Participant Flow Chart at Treatment Schools AY 2017-18 (Administrative Data) 107
Table 55. Which Teen Leadership Students Were Matched? Post-Match Demographics, AY 2017-18 Treatment Schools (Administrative Data Match) 107
Table 56. Teen Leadership Participant Flow Chart at District Schools AY 2017-18 (Administrative Data) 109
Table 57. Which Teen Leadership Students Were Matched? Post-Match Demographics, AY 2017-18 District Schools (Administrative Data Match) 109
Table 58. Teen Leadership Participant Flow Chart at Treatment Schools AY 2017-18 (Survey Data)..... 111
Table 59. Which Teen Leadership Students Were Matched? Post-Match Demographics, AY 2017-18 Treatment Schools (Survey Data Match) 111

Table 60. Teen Leadership Participant Flow Chart at District Schools AY 2017-18 (Survey Data) 113
Table 61. Which Teen Leadership Students Were Matched? Post-Match Demographics, AY 2017-18 District Schools (Survey Data Match) 113
Table 62. Teen Leadership Participants vs. Student Matches AY 2017–18 (Administrative Data Match) 115
Table 63. Teen Leadership Participants vs. Comparison Student Matches AY 2016–17 (Survey Data Match) 116
Table 64. Teen Leadership Participants vs. Comparison Student Matches AY 2017–18 (Survey Data Match) 117
Table 65. Confirmatory Impact Unmatched Regression Results for Student Behavior 2016-17 143
Table 66. Confirmatory Impact Unmatched Regression Results for Student Behavior 2016-17 144
Table 67. Exploratory Impact Results Unmatched Regression for Course Performance AY 2016-17 145
Table 68. Exploratory Impact Unmatched Regression Results for Course Performance AY 2017-18 145
Table 69. Exploratory Impact Unmatched Regression Results for Attendance AY 2016-17 146
Table 70. Exploratory Impact Unmatched Regression Results for Attendance AY 2017-18 146
Table 71. Exploratory Secondary Outcome Unmatched Regression Results for Relationships with Adults AY 2016-17 147
Table 72. Exploratory Secondary Outcome Unmatched Relationships with Adults AY 2017-18 147
Table 73. Exploratory Outcome Unmatched Results for Student Self-Confidence AY 2016-17 148
Table 74. Exploratory Outcome Unmatched Results for Student Self-Confidence AY 2017-18 148
Table 76. Exploratory Outcome Unmatched Results for School Engagement AY 2017-18 149
Table 77. Exploratory Outcome Unmatched Results for Student Attitude toward Learning AY 2016-17 150
Table 78. Exploratory Outcome Unmatched Results for Student Attitude toward Learning AY 2017-18 150

List of Figures

Figure 1. AY 2016-17 Treatment School Comparison Matches (Administrative Data): Standardized Differences 61
Figure 2. AY 2016-17 Treatment School Comparison Matches (Administrative Data): Variances 61
Figure 3. 2016-17 Treatment School Comparison Matches (Administrative Data): Overlap 62
Figure 4. AY 2016-17 District School Comparison Matches (Administrative Data): Overlap 100
Figure 5. AY 2016-17 District School Comparison Matches (Administrative Data): Standardized Differences and Variance Ratios 100
Figure 6. AY 2016-17 State School Comparison Matches (Administrative Data): Overlap 102
Figure 7. AY 2016-17 State School Comparison Matches (Administrative Data): Standardized Differences and Variance Ratios 102
Figure 8. AY 2016-17 Treatment School Comparison Matches (Survey Data): Overlap 104
Figure 9. AY 2016-17 Treatment School Comparison Matches (Survey Data): Standardized Differences and Variance Ratios 104
Figure 10. AY 2016-17 District School Comparison Matches (Survey Data): Overlap 106
Figure 11. AY 2016-17 District School Comparison Matches (Survey Data): Standardized Differences and Variance Ratios 106
Figure 12. AY 2017-18 Treatment School Comparison Matches (Administrative Data): Overlap 108
Figure 13. AY 2017-18 Treatment School Comparison Matches (Administrative Data): Standardized Differences and Variance Ratios 108
Figure 14. AY 2017-18 District School Comparison Matches (Administrative Data): Overlap 110
Figure 15. AY 2017-18 District School Comparison Matches (Administrative Data): Standardized Differences and Variance Ratios 110
Figure 16. AY 2017-18 Treatment School Comparison Matches (Survey Data): Overlap 112
Figure 17. AY 2017-18 Treatment School Comparison Matches (Survey Data): Standardized Differences and Variance Ratios 112
Figure 18. AY 2017-18 District School Comparison Matches (Survey Data): Overlap 114
Figure 19. AY 2017-18 District School Comparison Matches (Survey Data): Standardized Differences and Variance Ratios 114

Executive Summary

The United Way of Greenville County (UWGC) received an award in the 2014 Social Innovation Fund (SIF) grant competition to support its OnTrack Greenville initiative, a collective impact dropout-prevention program for middle grades students. Greenville County Schools, a Sub-Grantee, implemented Teen Leadership, an evidence-based character development course that aimed to help students develop social skills, emotional intelligence, and relationships with others in order to improve student behavior between 2015 and 2018. The Riley Institute at Furman University served as the third-party evaluation contractor for the SIF-funded evaluation of OnTrack Greenville, including the Teen Leadership course. Greenville County Schools offered Teen Leadership at four middle schools in the White Horse Community of Greenville County, South Carolina.

The semester-long Teen Leadership course provided instruction in social functioning, communication, self-efficacy, self-esteem, and other character building and leadership skills topics. In addition to providing classroom instruction, each Teen Leadership teacher collaborated with school staff members to schedule college and career experiences, such as field trips to local colleges and presentations by guest speakers from local business. The primary intended impact of the Teen Leadership course was improved student behavior. The intended secondary outcomes of the course were improved self-concept, improved social competence, healthier relationships with peers and adults at school, and improved skills in public speaking.

Greenville County Schools offered the Teen Leadership course at the four OnTrack Greenville treatment schools, aiming to serve approximately 620 middle school students annually. In academic years 2016-17 and 2017-18, 639 and 513 students completed the Teen Leadership course, respectively. Per the Teen Leadership curriculum, each class of students should be representative of the school's demographics in order to create a microcosm of the school. In large part, school leaders accomplished this goal, though special education students were over-represented and ESL and Hispanic students were under-represented when comparing the demographics of Teen Leadership students to the OnTrack Greenville population of students.

While the body of prior research on the Teen Leadership course was not robust, the research that did exist was promising. Danaher (2006) found that, when compared with a control group, students who participated in Teen Leadership had a decrease in problem behavior. In addition, Cirillo-Teverbaugh and Colwell (1993) found that students who participated in the Teen Leadership course experienced improvements in personal development, attitudes toward group work, and higher self-esteem when compared with a control group.

The Teen Leadership course's incoming level of evidence was preliminary and this study targeted a moderate level of evidence. A broad research base for the course, promising results from two-small scale studies, and the Sub-Grantee's intent to implement the model with fidelity set a solid foundation for targeting a moderate level of evidence. Further, with the availability of administrative data to measure student academic impacts in attendance, behavior, and course performance for students across the district and state, researchers were confident that a quasi-experimental design would provide robust and technically sound results to expand the evidence base for the course. Due to the limited geographic scope of the initiative and the inability to randomly assign students to treatment and control conditions, researchers were not able to design a study to target a strong level of evidence. The impact

evaluation will build additional evidence for the model's impact on behavior and will examine other exploratory impact variables, such as attendance and course performance.

In order to achieve a moderate level of evidence, this study utilized a single-site non-randomized group design with groups formed by propensity score matching. For confirmatory impact research questions, there were three comparison groups. Treatment students were matched to (1) other students in the *treatment schools* who did not participate in the intervention; (2) other students in the *same school district* attending district schools; and (3) other students attending *Title I schools across the state* of South Carolina. The use of multiple comparison groups improved the overall internal and external validity of the study, as each comparison group presented different threats to validity. Researchers matched students using a propensity score model that included race, gender, grade level, English proficiency, special education status, free and reduced meal eligibility, and baseline outcome variables. Researchers conducted separate matching procedures for each data source, administrative data and survey data. At the conclusion of the matching process, researchers ensured that there were no significant differences between the treatment and comparison groups on pre-treatment covariates.

To assess the impact of the Teen Leadership course on student behavior and student social-emotional outcomes, researchers created nine matched comparison groups. It was necessary to create nine distinct, matched comparison groups due to (1) the three different comparison school populations (treatment schools, district schools, and state schools), (2) the two different sources of outcome data (administrative data and student survey data), and (3) two years of analysis (2016-17 and 2017-18). Table 1 below shows the final sample size numbers of all treatment and comparison groups.

Table 1. Final Sample Size Numbers of Treatment and Comparison Groups

Semester	Type of School Comparison Group	Group	Administrative Data	Survey Data
Fall 2016	Treatment Schools	Treatment Students	264	160
		Comparison Students	708	409
	District Schools	Treatment Students	261	166
		Comparison Students	828	559
	State Schools	Treatment Students	120	---
		Comparison Students	584	---
Fall 2017	Treatment Schools	Treatment Students	177	123
		Comparison Students	555	378
	District Schools	Treatment Students	178	119
		Comparison Students	675	493

Note: This table shows the number of unique students matched for each comparison.

The study drew on administrative data and survey data to measure impacts and secondary outcomes. Through data-sharing agreements with Greenville County Schools and the South Carolina State Department of Education (SCDE), researchers received access to student administrative and test data to measure academic impacts. The primary intended impact of the Teen Leadership course was to improve student behavior. Drawing on quantitative administrative data, researchers used the following measures of student behavior: *any behavioral referral*, *number of behavioral referrals*, *any in-school suspension*, *number of hours of in-school suspension*, *any out-of-school suspension*, and *number of days of out-of-school suspension*. There were two sources of survey data: (1) a school-wide pre- and post-survey administered at treatment and within-district comparison schools; and (2) a pre- and post-survey

administered only to Teen Leadership treatment students. To measure the course's secondary outcomes, two validated measures of student relationships, *relationships with caring adults* and *relationships with teachers*, were included on the school-wide survey. Additional course-specific outcomes of improved *relationships with peers*, *social competence*, *self-concept*, and *public speaking skills* were measured using validated survey scales on the Teen Leadership pre- and post-survey.

To answer confirmatory research questions, researchers compared the treatment and control groups on outcomes of interest to provide an estimate of the causal effect of completing the Teen Leadership course. Researchers conducted multivariate regressions with the matched groups to allow for the inclusion of covariates to increase precision. Effect sizes and significance tests are presented for these results.

The ***confirmatory impact research question*** for the study was: *Did students who participated in the Teen Leadership course have fewer behavioral incidences when compared to matched comparison students?* While results varied by academic year and type of behavioral incident, researchers confirmed the hypothesis that Teen Leadership students would have fewer behavioral incidences than matched comparison students. Key findings included:

- Fall Teen Leadership students were less likely to have received any in-school suspension in the following spring semester than matched comparison students at district schools. This was true for academic year 2016-17 ($p < 0.01$) and academic year 2017-18 ($p < 0.01$).
- Fall Teen Leadership students received fewer hours of in-school suspension than matched comparison students. Fall 2016 Teen Leadership students received 1.87 fewer hours of in-school suspension than matched comparison students at district schools ($p < 0.001$) the following spring. Fall 2017 Teen Leadership students received 0.70 fewer hours of in-school suspension than matched students at treatment schools ($p < 0.05$) and 2.61 fewer hours of in-school suspension than matched students at district schools ($p < 0.01$) the following spring.
- Fall 2016 Teen Leadership students received 0.36 fewer days of out-of-school suspension than matched comparison students at district schools in the spring semester of 2017 ($p < 0.01$).
- There were a small number of significant behavior results in the wrong direction. Fall 2016 Teen Leadership students were more likely to have received any behavioral referral than matched students at treatment schools the following spring semester ($p < 0.05$). These Fall 2016 Teen Leadership students had 0.22 more behavioral referrals than their matched counterparts in spring semester of 2017 ($p < 0.1$).
- There were 54 total tests assessing student behavior (6 full year outcomes and 6 spring outcomes for treatment and district comparison groups in 2016-17 and 2017-18, and 6 full year outcomes for the 2016-17 state analysis). These tests yielded 13 positive significant behavior outcomes for Teen Leadership students, primarily when compared to matched students attending district schools. When adjusting for multiple comparisons, nine of these results remained significant ($p < 0.1$).

The ***exploratory impact research questions*** were: *Following participation in the Teen Leadership course, were students more likely to report improved academic performance in math and ELA? Following participation in the Teen Leadership course, were students more likely to have improved school attendance?* In general, the differences in attendance and course performance between treatment and comparison students were not significant. Key findings included:

- Overall, the differences in course performance between Teen Leadership students and matched comparison students were not significant. Researchers did find, however, that Fall 2016 Teen

Leadership students had higher scores on the SC READY ELA assessment than matched comparison students at districts school in academic year 2016-17 ($p < 0.05$).

- Overall, the differences in attendance between Teen Leadership and matched comparison students were not significant. Only one analysis revealed statistically significant results. Fall 2017 Teen Leadership students had higher average daily attendance than matched comparison students at district schools ($p < 0.05$).

The ***exploratory research questions related to secondary outcomes*** were: *Following participation in the Teen Leadership course, were students more likely to report having healthy relationships with peers and adults at school, an improved self-concept, an improved sense of personal responsibility, improved social competence, and improved confidence in their public speaking skills?* Again, results varied by outcome and academic year. Key findings included:

- Fall Teen Leadership students reported having stronger relationships with teachers than their matched counterparts at district schools in academic year 2016-17 ($p < 0.01$) and academic year 2017-18 ($p < 0.05$). There were no significant differences in relationships with teachers between treatment and comparison students and matched comparison students attending treatment schools.
- There were no significant differences in reported relationships with caring adults between Teen Leadership students and matched comparison students for either academic year or school group.
- After completing the Fall 2016 Teen Leadership course, a comparison of pre- and post-survey responses showed that students' relationships with peers had improved ($p < 0.1$), they had greater social competence ($p < 0.01$), and their confidence in their public speaking skills had improved ($p < 0.01$).
- Fall 2016 Teen Leadership students' perceptions of their self-concept and sense of personal responsibility did not improve significantly after taking the course when comparing pre- and post-survey responses.

The ***additional exploratory research questions*** were: *Following participation in the Teen Leadership course, were students more likely to report improved self-confidence, improved school engagement, and an improved attitude toward learning?* Again, results varied by outcome and academic year. Key findings included:

- There were no significant differences in academic self-confidence and academic perseverance between Teen Leadership students and matched comparison students in either academic year or school group.
- Fall 2016 Teen Leadership students reported higher levels of school engagement ($p < 0.05$) and school belonging ($p < 0.05$) than matched comparison students at district schools in academic year 2016-17. Levels of school engagement and school belonging did not vary significantly between Teen Leadership students and matched comparison students at treatment or district schools in academic year 2017-18.
- Teen Leadership students showed an improved attitude toward learning when compared with matched comparison students at district schools in academic year 2016-17 ($p < 0.05$) and academic year 2017-18 ($p < 0.05$). There were no significant differences between Teen Leadership students and matched students at treatment schools either academic year.

The ***implementation research questions related to program activities and outcomes*** were: *How did implementation of the Teen leadership course at each school compare with the intended design? Which aspects of the design were modified at each school, if any?* Key findings included:

- The evaluation found that Greenville County Schools implemented the Teen Leadership course structure with a high degree of fidelity, following critical guidelines identified by the curriculum developers.
- Teen Leadership teachers modified parts of the curriculum to be more culturally sensitive. By doing this, teachers meant to make the curriculum more engaging and applicable to students' lives outside of the classroom.

The ***implementation research questions related to student perceptions of Teen Leadership*** were: *What positive youth development behaviors did students attribute to the Teen Leadership course overall?* W*hat aspects of the program did students prefer over others?* Student perceptions varied by site and academic year. Key findings included:

- In academic year 2016-17, students who participated in Teen Leadership saw statistically significant increases from pre-test to post-test in their ability to feel relaxed when giving a speech.
- Across the two years of implementation, data were mixed about whether students were developing closer relationships with their peers and others outside of their school.

The ***implementation research question related to impact on school-wide culture*** was: *To what extent did this course affect changes in school-wide culture and/or practice?*

- Teachers reported that the implementation of Teen Leadership did not appear to affect school culture immediately, as it may take time for these changes to manifest.

This study generated a moderate level of evidence for the Teen Leadership course. Across both years of the study and multiple comparison groups, students who completed the Teen Leadership course in fall semester of the academic year generally had better behavior outcomes the following spring semester than did matched comparison students. While researchers must continue to tease apart the influence of individual OnTrack Greenville interventions and the broader school-wide policy changes engendered by the initiative, these positive results for secondary outcome and confirmatory impact analyses are noteworthy and expand the evidence base of the course. Future research will examine the impact of long-term participation in the Teen Leadership course, as Greenville County Schools now offers three distinct levels of Teen Leadership, allowing students more opportunities to develop and practice important social skills at school, at home, and within the community.

There were few key updates to the evaluation timeline, budget, program, or research team. The major update was the change in evaluation timeline due to the lack of Social Innovation Fund continuation funds to complete the final two years of program implementation and evaluation. As such, researchers executed a contingency plan to end the study after Year 3 (AY 2017-18). Members of the research teams at the Riley Institute at Furman University and RTI International remained constant, as did staff members on the Greenville County Schools district team. There was some turnover among Teen Leadership teachers at program sites, which was not unexpected. Researchers did not encounter any challenges related to key timeline elements or dates.

This final report satisfies evaluation requirements for United Way of Greenville County's Social Innovation Fund grant award. Local leaders have committed to funding the initiative and evaluation for the final two years of the project in the absence of Social Innovation Fund continuation funding;

therefore, evaluation next steps include the continuation of data collection and analysis as planned for academic years 2018-19 and 2019-20. Researchers will begin to disseminate preliminary results as early as 2019, but expect final results and more robust dissemination plan to be available in March 2021.

I. Introduction

This report describes the implementation and impact evaluation of the Teen Leadership course, a Sub-Grantee intervention within United Way of Greenville County's SIF-funded OnTrack Greenville initiative. This is a final report submitted to the Social Innovation Fund to satisfy grant evaluation requirements and it addresses all implementation and impact research questions from the SEP. The intended audience of this report is the Social Innovation Fund as well as Grantee and Sub-Grantee stakeholders.

Leaders from nonprofits, the school district, and the community implemented OnTrack Greenville, a collective impact approach that includes the implementation of an Early Warning and Response System (EWRS) in four target middle schools. The EWRS uses real-time data to identify and flag students at-risk of disengaging from school. An EWRS team, also known as an OnTrack Team, meets weekly and includes a team of educators and student support specialists who discuss the unique needs of identified students and match them with appropriate response interventions, tracking each student's progress over time. OnTrack Greenville's federally supported Social Innovation Fund (SIF) portfolio funded five Sub-Grantee interventions to ensure students have access to evidence-based interventions and supports. These five interventions include (1) a summer learning program for rising sixth grade students; (2) integrated student support services; (3) a semester-long character development course; (4) school-based health centers; and (5) literacy coaching for teachers. This report examines one of these subgrantee interventions: Greenville County Schools' Teen Leadership course.

A. Program Background and Problem Definition

1. Description of Community and Program Need

Since United Way of Greenville County applied for this Social Innovation Fund grant in 2014, the local community has continued to experience significant growth and development. After the biennial census in 2010, the population of Greenville County grew by 12.7% to more than 500,000 people.[1] With a blossoming downtown, the city of Greenville has appeared on several national lists of best cities to live in or visit (Walker, 2018). The unemployment rate in the county dropped from 5.6% in February of 2014 to 2.5% in May of 2018.[2] At the same time, the county-wide poverty rate has decreased from 15.2% in 2014 to 12.4% in 2018.[3] A broad look at community indicators suggests many county residents are experiencing improved economic conditions.

A closer look reveals that not all residents have shared in this growth, especially in the White Horse Community, the geographic area targeted by OnTrack Greenville. As community developers have worked to revitalize neighborhoods close to the city center, low-income residents have continued to relocate to the White Horse Community, which straddles the edge of the city of Greenville. A recent assessment of neighborhood needs and assets revealed that many neighborhoods located in the White Horse Community, despite their wealth of community assets, continue to face challenges with

[1] U.S. Census Bureau 2018 Population Estimates
[2] U.S. Department of Labor 2018 Labor Force Statistics
[3] U.S. Census Bureau 2018 Small Area Income and Poverty Estimates (SAIPE)

unemployment, family poverty, income inequality, housing, and access to healthcare and childcare, among others (Cohen et al., 2017).

Public schools in the White Horse Community are part of Greenville County Schools. The largest district in the state of South Carolina and 45th largest district in the nation, Greenville County Schools consists of 101 schools and centers serving 76,900 students with 6,000 teachers. Approximately half of Greenville County Schools students are living in poverty (52%) and/or eligible for free or reduced price meals (52%).

OnTrack Greenville serves four middle schools located in the White Horse Community. These middle schools serve a higher proportion of low-income and minority students than other schools in the district. In academic year 2017-18, each of these OnTrack Greenville sites had at least 79% of students living in poverty and 100% of students eligible for free or reduced-price meals.[4] Three of the four treatment middle schools receive Title I funds, while the fourth site is technically a school program and ineligible for Title I funds despite a high proportion of students living in poverty. Across these three sites, the Title I funds have been used for items such as: teacher salaries, instructional technology, instructional materials, social workers, nurses, parent and family engagement coordinators, translators, tutoring, and other student services. The Title I funding can also enable schools to reduce the size of some classes by providing additional support staff.

The demographic characteristics of OnTrack Greenville treatment school student populations varied from the characteristics of the entire district[5]. In academic year 2017-18, OnTrack Greenville treatment schools were home to a high percentage of Hispanic or Latino students. The percentage of Hispanic students attending OnTrack Greenville treatment schools ranged from 27% to 55%, higher than the district average of 18%. In addition, OnTrack Greenville schools generally had a higher percentage of Black or African American students (23% to 55%) than the district average of 23%. OnTrack Greenville schools also had a higher poverty index than the overall district poverty index. The percentages of male and female students attending OnTrack Greenville treatment schools were reflective of the district average.

Table 2. School Enrollment by Gender, Race or Ethnicity AY 2017-18, 180th Day

Site	Enrollment (2017-18)	Gender		Race/Ethnicity				Poverty Index
		F	M	Black	White	Hispanic	Other	
District	75,220	49%	51%	23%	54%	18%	8%	53
Treatment School - Maximum	746	55%	57%	55%	26%	55%	9%	88
Treatment School - Minimum	109	43%	45%	23%	16%	27%	1%	79

[4] Data from SC School Report Card School Comparison 2017-2018
https://screportcards.com/overview/school-environment/financial-data/?q=eT0yMDE4JnQ9TSZzaWQ9MjMwMTA0MiwyMzAxMDY2LDIzMDEwODgmaXNDb21wYXJlU2Nob29sPXRydWU

[5] Greenville County Schools Population Statistics 2017-18 180th Day Enrollment Summary
https://www.greenville.k12.sc.us/About/main.asp?titleid=statistics1718

One key academic indicator for predicting early disengagement among middle school students is course performance (Balfanz & Fox, 2011). Overall, students attending OnTrack Greenville middle schools placed well behind their peers on the South Carolina standardized assessment in ELA and math (SC READY) in academic year 2017-18. As shown below in Table 3, the percentage of students who met or exceeded state standards in ELA ranged from 6.3% to 25.7% at OnTrack Greenville schools, while the percentage of students who met or exceeded state standards in math ranged from 3.6% to 25.7%.[6] These ranges of scores were well below the district and state averages in both subject areas.

Table 3. Percentage of Students who Met or Exceeded State Standards in ELA and Math AY 2017-18

	Number of students	SC READY ELA	SC READY Math
State of South Carolina	340,478	41.7%	44.6%
District	34,220	48.9%	52.5%
Treatment School - Maximum	654	25.7%	25.7%
Treatment School - Minimum	112	6.3%	3.6%

Source: SC School Report Cards, 2019

Early adolescence is a time period that is marked by significant physical, intellectual, and emotional change (Caskey & Anfara, 2007). It is a time for students to begin exploring their strengths and thinking about their future. It is also a time when too many students fall off track and lose the momentum needed to complete high school, causing them to be unprepared for post-secondary success. Research shows that an individual's educational attainment is one of the most important determinants of his or her opportunities in terms of employment, income, and housing status (Levin, Belfield, Muennig, & Rouse, 2007). In addition, high school dropouts are more likely to be arrested, become teenage parents, and suffer from adverse health conditions, incurring major costs to society (Alliance for Excellent Education, 2011).

In order to help students stay on track toward on-time graduation, Greenville County Schools offered the Teen Leadership course. A full description of the program model follows.

2. Description of Program Model

Teen Leadership is a semester-long course developed by the Flippen Group, an educational training and team development organization based in Texas. Teen Leadership builds on an existing Flippen Group school-level model that already had been in place at the target middle schools: Capturing Kids' Hearts (CKH). Capturing Kids' Hearts facilitates a "learning experience that provides tools for administrators, faculty and staff to build positive, productive, trusting relationships – among themselves and with their students." This program, a prerequisite to the Teen Leadership course, encourages teachers and other school staff members to create a school environment in which students feel valued and respected.

Building on Capturing Kids' Hearts, the Teen Leadership course seeks to help students take responsibility for themselves, while also equipping them with the skills needed to handle difficult situations when they arise. The Teen Leadership course focuses on helping students learn appropriate social skills, as well as develop important personal attributes and behaviors, such as self-confidence and public speaking. The

[6] South Carolina Department of Education 2018 South Carolina College- and Career-Ready Assessments (SC READY) Test Scores https://ed.sc.gov/data/test-scores/state-assessments/sc-ready/2018/

goal of the class is to enable students to develop the skills that will set them up for success, both in school and later in life.

As explained by the developers of the Teen Leadership curriculum on their website and in course materials, the Teen Leadership curriculum targets middle and high school students to support leadership development and character education. This course could be implemented either in one semester or in a yearlong course depending on the needs of each school. Through this course, students should develop awareness of themselves, healthy relationships, and personal responsibility, as well as specific leadership skills, such as public speaking and community service. The curriculum consists of nine chapters that touch on various aspects of these topics. The curriculum is intended to be experiential and teachers are expected to support students in applying what is learned in the course to their own lives by engaging students in projects, discussions, role plays, group activities, and speeches. The program unit is the class period. A full description of the Teen Leadership program model follows.

Inputs

As shown in the Teen Leadership logic model (Appendix B), the implementation of the Teen Leadership course involved six primary inputs: (1) Teen Leadership program staff, knowledge, and experience; (2) school and staff support; (3) existing community and school resources; (4) financial resources from the United Way of Greenville County Social Innovation Fund subgrant, Greenville Partnership for Philanthropy, and other match sources; (5) Early Warning and Response System and internal data system to identify eligible students, track students' progress, and provide ongoing feedback; and (6) OnTrack Greenville collective impact resources and support.

(1) As part of the implementation of the Teen Leadership course, each of the targeted middle schools hired one additional staff member who taught the semester-long course to students in all three grade levels from academic year 2015-16 to academic year 2017-18. These staff members, as well as the schools' principals, completed the required training provided by the Flippen Group.

(2) School and district staff supported the implementation of Teen Leadership. Administrators and guidance staff at each treatment school were responsible for creating the schedule of Teen Leadership classes and assigning students to the class following course implementation guidelines. A district-level project coordinator supported the Teen Leadership teachers. Support activities included ordering and distributing student workbooks; creating a shared pacing calendar for all teachers to follow; conducting professional development workshops for teachers; and assisting teachers with implementation issues, such as classroom management and technology challenges.

(3) Existing community and school resources also supported the implementation of Teen Leadership. For example, community leaders visited Teen Leadership classes to give guest lectures on relevant topics. OnTrack Greenville stakeholders also helped arrange class field trips to community organizations, such as a well-received field trip to the courthouse to experience "a day in court." In addition, community groups donated yoga mats and other materials to allow Teen Leadership students to engage in mindfulness activities related to the curriculum. These existing community and school resources allowed Teen Leadership teachers to provide deeper learning experiences to students.

(4) The implementation of the Teen Leadership model required $486,212 per fiscal year. These monies were used to hire the Teen Leadership teachers for each class, as well as to cover any costs associated with acquiring the Teen Leadership curriculum from The Flippen Group. Funds from Greenville County Schools' subgrant also supported the placement of Mental Health Specialists at the four treatment middle schools, so not all of these funds supported Teen Leadership implementation.

(5) The Early Warning and Response System (EWRS) allows schools to quickly and regularly identify students who are at risk of, or who already are, sliding off track. Using a color-coded dashboard, the EWRS helps school staff members easily recognize early warning signals for their students, such as a decrease in attendance or increase in disciplinary referrals. In addition, the data provided by the EWRS can be aggregated to show trends across the school, across grade levels, and across student subgroups. By giving teachers and other school staff members access to real-time data related to attendance, behavior, and course performance, the EWRS is an essential tool for assessing individual students' strengths and needs, and then using that information to provide students with the appropriate interventions.

(6) OnTrack Greenville is a community-wide initiative to ensure middle school students stay on track toward high school graduation. The initiative works with schools, implementation partners, nonprofits, community members, government officials, funders, and other stakeholders to achieve the common goal of keeping students on track towards high school graduation and future success. OnTrack Greenville consistently convenes school leadership, implementation partners, and funders to coordinate and implement key aspects of the initiative for the coming school year, while also building a shared vision, governance, and accountability for OnTrack Greenville. Engaging with the community, families, students, other nonprofits, and grassroots organizations contributes to the overall collective impact of the initiative. Teen Leadership is one part of a larger, holistic effort at the OnTrack Greenville middle schools.

Activities and Outputs

Activities for the implementation of the Teen Leadership course included (1) training for teachers and (2) participation in the semester-long Teen Leadership course.

(1) Teen Leadership teachers received ongoing training and professional development for the Teen Leadership curriculum. Each Teen Leadership teacher participated in an online training in course instruction through the Flippen Group and received a training completion certificate.

(2) Teen Leadership teachers provided classroom instruction following the Teen Leadership curriculum, including social functioning, communication, self-efficacy, self-esteem and other character building and leadership skills topics. Greenville County Schools opted to make the course a semester-long offering that covered the first four chapters of the Teen Leadership curriculum. In addition to providing classroom instruction, the Teen Leadership teachers were responsible for collaborating with school staff members to identify and schedule college and career experiences, such as field trips to local colleges and the opportunity to hear outside speakers, like local business leaders. Students completed the Teen Leadership course as a semester-long related arts course and received an elective credit upon completion.

The outputs for the Teen Leadership class included (1) four teachers certified in the Teen Leadership curriculum, and (2) approximately 320 students completing the Teen Leadership course per academic year.

Outcomes and Impacts

Students who completed the Teen Leadership curriculum should have shown increases in the following outcomes: (1) improved self-concept, (2) improved relationships with peers and adults at schools, (3) improved sense of personal responsibility, (4) improved social competence, and (5) improved public speaking and communication skills. Through achieving these student outcomes, the primary intended impact of the Teen Leadership course was improved student behavior.

B. Overview of Prior Research

A review of prior research suggests that participation in a character development course like Teen Leadership can affect outcomes in academic performance and behavior. One of the primary objectives of character development courses is to improve student self-concept. A prior study of seventh grade students found that self-concept was positively related to grade point average, even after controlling for intelligence (Brookover, Thomas, & Paterson, 1964). Similarly, a study that compared students with high self-concept to students with low self-concept found that students who had a higher self-concept also had higher achievement scores and were perceived by teachers as more popular, persistent in class, and in possession of greater leadership skills than students with lower self-concept (Hay, Ashman, & Van Kraayenoord, 1998).

An additional goal of the Teen Leadership course is to create a safe and trusting classroom environment that fosters teacher-student relationships. These relationships are important to youth development, as research has shown that strong teacher-student relationships contribute to students' positive sense of self and emotional well-being (Meece & Eccles, 2010). Additionally, frequent out-of-class communication between teachers and students has resulted in stronger interpersonal relationships between teachers and students and self-reported increases in student learning (Dobransky & Frymier, 2004). These studies demonstrate the importance of healthy teacher-student relationships in relation to overall academic performance.

Character development courses like Teen Leadership place a large emphasis on social and emotional learning. Research has shown the many benefits of focusing on social and emotional learning (SEL) and emotional intelligence early in childhood. For example, students who learned emotional intelligence at a young age increased their ability to be self-aware, to be in-tune to their own emotions and the emotions of others, and to manage relationships (Lantieri & Goleman, 2014). Other research has found that social responsibility is integral to the development of cognitive abilities and knowledge (Wentzel, 1991). Additionally, a meta-analysis of over 100 studies that compared students who received SEL instruction to those who did not showed that students who received SEL learned more effectively, got along with classmates better, had improved grades, and performed better on academic achievement tests than students who did not receive SEL instruction (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011)

Another key component of the Teen Leadership course is the development of public speaking skills. While there is little research examining the effects of incorporating public speaking within school

curriculum and character development courses, there is evidence that participation in public speaking courses is associated with improved student self-perceived competence and confidence and decreased apprehension around public speaking (Hancock, Stone, Brundage, & Zeigler, 2010).

Finally, a handful of prior studies have evaluated the impact of the Teen Leadership course on student behavior and social and emotional outcomes. While the body of prior research is not robust, the research that does exist is promising. Dahner (2006) found that, when compared with a control group, students who participated in Teen Leadership had a decrease in problem behavior. In addition, Cirillo-Teverbaugh and Colwell (1993) found that students who participated in Teen Leadership experienced improvements in personal development, attitudes toward group work, and higher self-esteem when compared with a control group. Similarly, Castro, Johnson, and Smith (2008) found that students who were enrolled in an emotional intelligence course had a reduction in office behavioral referrals for disciplinary reasons and an increase in pro-social behaviors. These findings demonstrate a preliminary level of evidence supporting the impact of the Teen Leadership course.

C. Overview of Impact Study

The Teen Leadership course entered the OnTrack Greenville SIF portfolio with a preliminary level of evidence. A broad body of literature coupled with two small-scale studies linked to improved academic outcomes substantiated a preliminary level of evidence assuming implementation of the model with fidelity. This study targeted a moderate level of evidence by utilizing a single-site non-randomized group design with groups formed by propensity score matching. The impact evaluation aimed to build additional evidence for the course's impact on student behavior and examine other exploratory impact variables, such as attendance, course performance, and other social-emotional outcomes related to character development and school success.

Researchers were not able to target a strong level of evidence for several reasons. First, the geographic scope of OnTrack Greenville was not large enough to support a national- or state-wide multi-site research design that typically is required to achieve a strong level of evidence. Second, the Early Warning and Response System (EWRS) used to identify and match students to interventions did not lend itself to conditions in which randomization was feasible. The EWRS uses a wrap-around approach in which educators match a student to an intervention given the student's unique early warning indicators and needs. The identification and matching process is time intensive and intended to provide the best array of services to students. Initiative stakeholders expressed ethical concerns about withholding treatment to identified students in order to support random assignment, as the collective portfolio-level goals of the initiative were to improve academic achievement and engagement for all identified students at the target schools. Further, the number of students potentially identified for treatment through the EWRS was relatively small. Randomly assigning identified students to treatment and control groups would have decreased the sample size and threatened the study's statistical power.

For confirmatory impact research questions, there were three comparison groups. Treatment students were matched to (1) other students in the *treatment schools* who did not participate in the intervention; (2) other students in the *same school district* attending non-treatment district schools; and (3) other students attending *Title I schools across the state* of South Carolina. The use of multiple comparison groups improved the internal and external validity of the study, as each comparison group presented different threats to validity. Researchers matched students using a propensity score model that included

race, gender, grade level, English proficiency, special education status, free and reduced meal eligibility, and baseline outcome variables. Researchers conducted separate matching procedures for each data source, administrative data and survey data. At the conclusion of the matching process, researchers ensured that there were no significant differences between the treatment and comparison groups on pre-treatment covariates.

Researchers assessed exploratory secondary outcome research questions using two pre/post-student surveys: (1) a pre/post school-wide survey at treatment and district comparison schools, with data collection occurring in October and May of each academic year; and (2) a pre/post Teen Leadership survey only for students enrolled in Teen Leadership, with data collection occurring in October and January during fall semester and February and May during spring semester. The school-wide survey included two measures of student relationships, relationships with teachers and relationships with caring adults. The Teen Leadership survey included measures of student social competence, confidence in public speaking, and relationships with friends.

D. Research Questions

1. Impact Research Questions

Researchers designed this study around the following types of research questions: (1) confirmatory impact research questions, (2) exploratory impact research questions, (3) exploratory research questions related to secondary outcomes, and (4) additional exploratory research questions.

a. Confirmatory Impact Research Questions

The question below is the *confirmatory impact research question*:

> **RQ1**. *Did students who participated in the Teen Leadership course have fewer behavioral incidences when compared to matched comparison students?*

b. Exploratory Impact Questions

The questions below are *exploratory research questions* related to the impacts:

> **RQ2**. *Did students who participated in the Teen Leadership course demonstrate improved course performance in math and ELA than matched comparison students?*

> **RQ3**. *Did students who participated in the Teen Leadership course have higher attendance rates than matched comparison students?*

c. Exploratory Outcome Research Questions

The next set of questions are *exploratory research questions* related to the *secondary outcomes*:

> **RQ4**. *Following participation in the Teen Leadership course, were students more likely to report an improved self-concept?*

RQ5. *Following participation in the Teen Leadership course, were students more likely to report having healthy relationships with their peers?*

RQ6. *Following participation in the Teen Leadership course, were students more likely to report having healthy relationships with adults at their school?*

RQ7. *Following participation in the Teen Leadership course, were students more likely to report an improved sense of personal responsibility?*

RQ8. *Following participation in the Teen Leadership course, were students more likely to report improved social competence?*

RQ9. *Following participation in the Teen Leadership course, were students more likely to report improved confidence in their public speaking skills?*

d. Additional Exploratory Research Questions

RQ10. *Following participation in the Teen Leadership course, were students more likely to report improved academic self-perception?*

RQ11. *Following participation in the Teen Leadership course, were students more likely to report improved school engagement?*

RQ12. *Following participation in the Teen Leadership course, were students more likely to report an improved attitude toward learning?*

2. Implementation Research Questions

a. Program Activities and Outcomes

RQ13. *What was the intended design of the Teen Leadership course in the four middle schools?*

RQ14. *How did implementation of the Teen leadership course at each school compare with the intended design?*

RQ15. *What factors in the school context explained why implementation of Teen Leadership did or did not follow the intended design?*

RQ16. *To what extent did teachers implement the Teen Leadership course as intended? Which aspects of the design were modified at each school, if any? Why were those aspects modified? What challenges emerged as teachers implemented the curriculum?*

RQ17. *To what extent did the certification training provide teachers with the necessary skills and knowledge they needed to implement the program?*

a. *What additional knowledge or skills did teachers require, if any?*
b. *To what extent were teachers able to find support to fill in knowledge or skill gaps?*

b. Student Perceptions of Teen Leadership

RQ18. *What positive youth development behaviors did students attribute to the Teen Leadership course overall?*

RQ19. W*hat aspects of the program did students prefer over others?*

c. Impact on School-wide Impact and Culture

RQ20. *To what extent did this course affect changes in school-wide culture and/or practice?*

E. Contribution of the Study

1. Level of Evidence Generated by the Study

This study generated a moderate level of evidence for the Teen Leadership course. Through the use of its quasi-experimental design with groups formed by propensity score matching, this study examined the impact of the course on six measures of student behavior: (1) any behavioral referral, (2) number of behavioral referrals, (3) any in-school suspension, (4) number of hours of in-school suspension, (5) any out-of-school suspension, and (6) number of days of out-of-school suspension. The study included two academic years of implementation and created matched samples of comparison students from three types of schools: (1) treatment schools, (2) district schools, and (3) state schools. There were 54 total tests (6 full year outcomes and 6 spring outcomes for treatment and district comparison groups in 2016-17 and 2017-18, and 6 full year outcomes for the 2016-17 state analysis). These tests yielded 13 positive significant behavior outcomes for Teen Leadership students, primarily when compared to matched students attending district schools. When adjusting for multiple comparisons, nine of these results remained significant ($p < 0.1$). Given the use of multiple comparison groups to reduce threats to internal and external validity and a successful matching process that yielded balanced treatment and comparison groups, this study's methodological rigor and positive significant results merit a moderate level of evidence for the Teen Leadership course.

2. Strengths and Limitations of the Study

There were many strengths to this study. The use of multiple comparison groups improved the overall internal and external validity of the study, as each comparison group addressed different threats to validity. The majority of positive significant findings were detected with the matched students attending district comparison schools. One strength is that these schools shared the same district and community context. Moreover, students in this comparison group were likely to have participated in Teen Leadership course if it had been available to them at their school. These schools did not share the same school or neighborhood contexts, though, presenting a threat to internal validity.

In addition, a thorough implementation study strengthened the implementation of the course and allowed researchers to confirm a sufficient degree of model fidelity. The lessons learned through the implementation study were valuable to project stakeholders and helped shine a light on program strengths and possible areas of improvement.

However, there were several limitations to the study. First, researchers were not able to identify a subset of state Title I middle schools with student population demographics similar to the treatment schools. The Sub-Grantee Evaluation Plan called for including only state comparison schools with a poverty index of 85% or higher and Hispanic students representing 10% of the student body. Only 13 schools met these inclusion criteria to be considered as state comparison schools—many were charter schools or special designation schools serving exceptional learners and were substantially different from the treatment schools. Researchers opted to loosen the inclusion criteria and include all Title I middle schools in South Carolina in the state school comparison group.

Another limitation of the study is that researchers did not have the ability to assess if comparison students at district and state schools had received similar program services, such as other character education programs or interventions. Similarly, researchers could not confirm that state comparison schools did not offer the Teen Leadership course. Attempts to obtain a roster from the course publisher of other middle schools in the South Carolina with trained Teen Leadership instructors were unsuccessful and resources were not available to contact the approximately 300 Title I middle schools to inquire if they formally offered the Teen Leadership course. However, Greenville County Schools stakeholders, through their networking with other educators throughout the state, did not believe that Teen Leadership was widely offered at other school districts. While it is possible that a number of schools in the state comparison group offered Teen Leadership, the number of matched students who attended these schools likely was very small and the inclusion of these students as matches would not have influenced the results of the study significantly.

In addition, the treatment schools simultaneously were implementing formal and informal school-wide initiatives to improve student behavior. These school-wide efforts were confounding factors that may explain the lack of significant effects when comparing Teen Leadership students to in-school matched comparison students. These school-wide efforts also increased the likelihood that the positive significant effects of the program identified when examining district school matches may not be fully attributable to the Teen Leadership program.

Further, the absence of positive significant findings for in-school matches may be related to missing data on student participation in other OnTrack Greenville interventions. Apart from the school-wide models discussed above, OnTrack Greenville includes four other formal implementation partners and several informal partners, some of whom are working to improve the same student outcomes as the Teen Leadership course. It is possible that some of the in-school matches selected for the present study participated in other OnTrack Greenville support programs that influenced student behavior. This study originally intended to control for participation in other OnTrack Greenville support programs to address this limitation; therefore, this represents a deviation from the Sub-Grantee Evaluation Plan.

3. Connection of this Study to Future Research

While this is a final report to the Social Innovation Fund to satisfy grant requirements, the impact study of Teen Leadership will continue for two additional years. Researchers intend to conduct additional analyses to assess if long-term participation in Teen Leadership leads to improved student outcomes in behavior over time. With the addition of two higher-level Teen Leadership courses, Responsible Teen Leadership and Visionary Teen Leadership, researchers have a unique opportunity to examine student outcomes at different levels of exposure to the curriculum. In academic year 2018-19, researchers are planning to conduct student interviews with students taking Visionary Teen Leadership to gain a deeper understanding of students' rationale for taking multiple levels of Teen Leadership and the impact of the course on students' relationships, self-control, and plans for the future.

Researchers also intend to conduct a higher-level impact analysis of the comprehensive OnTrack Greenville initiative to attempt to tease out which significant findings are attributable to individual interventions and which are related more to broader school-wide policy and culture change at treatment schools. Teen Leadership surely is an important component of the OnTrack Greenville initiative and future research should consider how Teen Leadership, other response interventions, and a broader collective impact framework work together to support student academic and social-emotional learning.

If time and funding allow, future research also might examine outcomes among students who attend schools that are implementing Capturing Kids' Hearts when compared to students who attend schools that are implementing Capturing Kids' Hearts and Teen Leadership. Because Capturing Kids' Hearts training is a prerequisite for schools that implement Teen Leadership, it may be beneficial to examine the extent to which Teen Leadership impacts students and schools beyond the school-wide Capturing Kids' Hearts model.

4. Changes to Sub-Grantee Evaluation Plan

The primary change to the SEP was the loss of an exploratory impact measure of course performance, MAP assessment scores in ELA and math. Prior to academic year 2017-18, the local school district administered the MAP assessment in grades 3 through 8 at least two times per year, in the fall and spring. Some schools opted to administer the assessment a third time, in winter. The district opted to end its contract with MAP and began administering Mastery Connect in fall of 2017. At present time, researchers do not have access to Mastery Connect data and remain uncertain if data from this assessment will serve as an acceptable outcome measure in the study. Researchers only were able to examine end-of-year SC READY assessment scores in math and ELA for academic year 2017-18.

One modification was made to the treatment definition for the study. Previously, researchers proposed that students would need to be enrolled at least 51% of the academic year at the treatment schools in order to be included in the treatment group. It proved challenging to measure this given the structure of the attendance data; therefore, researchers removed these inclusion criteria from the treatment definition. Further, the SEP stated that all Teen Leadership students would be included in the analysis. This report focuses on those students who attended Teen Leadership classes in the fall semester. The fall 2017 sample was further limited to those students enrolled in the Foundational Teen Leadership course. This approach was used because many of the outcomes corresponded to the entire academic

year. Therefore, analyses that included spring Teen Leadership students could not isolate the post-Teen Leadership effect on outcomes.

The outcome measures for the behavior variables were modified slightly. Originally in the SEP, researchers proposed including continuous behavior variables: number of behavioral referrals, number of hours of in-school suspension, and number of days of out-of-school suspension. In addition to these continuous measures of student behavior, researchers also added dichotomous categorical variables: any behavioral referral, any in-school suspension, and any out-of-school suspension.

Researchers modified the student survey outcome measure for the exploratory outcome of student attitude toward learning. Researchers originally proposed using a four-item scale *Valuing School* that measured a student's beliefs about the importance of school (Rockman et al, 2013). Researchers also included a similar scale on the student survey from a prior evaluation of an integrated student supports program (Corrin, Parise, Cerna, Haider, & Somers, 2015). After the first wave of data collection, researchers assessed the psychometric properties of both scales and ultimately opted to retain the entire latter scale with the addition of one item from the former scale. Researchers conducted exploratory factor analysis to examine the factor structure of the new scale, discussed later in this report in Section II.B.2.

There was a change in the timeline for receiving administrative data from the South Carolina Department of Education for the state comparison group analyses. Researchers anticipated receiving the state dataset in October or November for the prior academic year. However, the dataset for academic year 2016-17 was not available until February 2018 and researchers still do not have access to data from academic year 2017-18. This delay in receiving state data prohibited researchers from conducting the state comparison group analyses for this report.

Researchers also had to alter the inclusion criteria for state comparison schools. In the SEP, researchers originally proposed to select state schools with a poverty index of 85 or higher and a Hispanic student population of at least 10%. At the time of writing the SEP, South Carolina calculated the poverty index based on the number of students eligible for free or reduced price meals. After the introduction of the community provision for free and reduced meals, state officials introduced a new measure of poverty that included students who met any of the criteria: homeless or migrant during the academic year; Medicaid enrollment at any time during a three-year period; SNAP enrollment at any time during a three year period; TANF enrollment at any time during a three year period; or foster care enrollment at any time during a three year period. This change in the poverty index affected and, in general, reduced the reported poverty levels of treatment schools and all schools across the state. When researchers searched for state comparison schools using these two criteria, only 13 schools appeared as possible comparison schools from which to draw matched comparison students. Of these schools, several were charter schools or schools serving exceptional learners and were not appropriate to serve as comparison schools. As such, researchers relaxed the inclusion criteria for state comparison schools and included all Title I middle schools in the state of South Carolina outside of the local district.

In addition, researchers were not certain if they would be able to administer the OnTrack Greenville Student Survey outside of the treatment schools when preparing the SEP. The local district allowed researchers to administer this pre- and post-survey at the four district comparison schools, allowing researchers to analyze student survey outcomes using matched comparison students at district schools. This change to the SEP strengthened the study's design for the analysis of secondary research questions. Survey administration proceeded as described in the SEP, though it was not possible to administer the

pre-survey in September of each academic year due to the testing schedule and the amount of time needed to distribute parent opt-out letters before preparing survey materials. Instead, the student survey administration window occurred typically during the first two weeks of October each academic year of the study.

In academic year 2017-18, researchers modified the Teen Leadership Student Survey to make it more manageable for students to complete. Based on feedback received from teachers and the poor psychometric properties of some survey scales, researchers removed the scales measuring student self-concept and personal sense of responsibility from the pre- and post-surveys.

To examine possible attrition from the study, researchers proposed in the SEP assessing how students who attrited from the study through leaving the state dataset differed from students who remain in the study. Students were to be compared based on demographics, pre-treatment outcomes measures, and post-treatment outcome measures when possible. Evaluators proposed examining the possibility of differential attrition between treatment and control groups based on these factors as well. Researchers did not conduct these comparisons as proposed, as the structure of the data files and the matching procedure meant there were very few students for whom attrition occurred after students were matched. A comparison of the number of students matched and the number of students in each regression with the matched sample demonstrated that attrition of this type was not a widespread challenge for this study.

There were some additional modifications to the matching procedure. The SEP noted that researchers would trim observations with propensities less than 0.1 and greater than 0.9, if sample size permitted. This was not done to ensure larger sample sizes. In order to increase balance and overlap, researchers used matching with replacement, rather than matching without replacement which was specified in the SEP. This necessitated the use of frequency weights in the matched analyses.

Further changes were made to the impact analysis plan. While the SEP stated that the main analyses would focus on the "treatment-on-the-treated" (TOT) effect, the researchers also suggested an "intent-to-treat" (ITT) analysis might also be performed if data were available. The evaluation team did not have access to the EWRS data in a form that would allow the researchers to compare those who were identified to enroll in a Teen Leadership course, as opposed to those who actually enrolled. Therefore, an ITT analysis was not possible. In addition, there were some challenges in estimating the proper standard errors in the regression analyses post-match. Researchers used a bootstrapping method, rather than clustered standard errors. The bootstrap standard errors were very similar to robust standard errors. Other modifications were implemented to maximize the number of observations to be included in the analyses. The proposed final regression model in the SEP included pre-treatment, or baseline, measures of the outcome as a covariate. The analyses presented here used that approach for the attendance, behavior, and test score analyses. Researchers did not control for a pretreatment measure of the outcome for the survey analyses. Doing so would have required students to have complete "pre" and "post" survey data. Given the response rates for the surveys, this would have limited severely the sample size. Therefore, pretreatment outcome measures were not controlled for in the survey outcome analyses.

In the SEP, researchers stated that they would use one-tailed tests with a significance level of $\alpha \leq .05$ to determine statistical significance. In this evaluation, researchers also considered the possibility that completing the Teen Leadership course could decrease student behavior. Therefore, researchers used a

two-tailed, 0.10 alpha level. In terms of identifying a positive Teen Leadership effect to support a moderate level of evidence, the two approaches are equivalent.

This evaluation was complicated by the presence of multiple, simultaneous interventions occurring in the OnTrack Greenville schools. In the SEP, researchers suggested that participation in the other student-level interventions could be controlled for in the final regression models. Data on the timing of participation in the various interventions was not detailed enough to ensure that participation in these other programs occurred before enrolling in a Teen Leadership course. Given that controlling for post-treatment covariates can bias estimates of causal impacts (Montgomery, Nyhan, & Torres, 2018), researchers did not adjust for participation in the other OnTrack programs. A full analysis of the effects of participating in different intervention combinations is better suited for the cumulative impact study, rather than this evaluation.

II. Study Approach and Methods

A. Impact Evaluation Design

This study used quasi-experimental methods to examine the effect of participation in the Teen Leadership course. While a randomized control trial (RCT) would have been ideal, it was not feasible for this study. Instead, researchers used nearest neighbor propensity score matching to estimate the effect of the Teen Leadership course on students at the three treatment schools. Matching techniques are popular in observational education research when a RCT is not feasible, and previous research has found that the results from matching can replicate RCT results if a number of assumptions are met (Bifulco, 2012; Cook, Shadish, & Wong, 2008; Fortson, Verbitsky-Savitz, Kopa, & Gleason, 2012).

This analysis compares Teen Leadership students to three different comparison groups. First, Teen Leadership students were matched to other students attending OnTrack Greenville middle schools who did not participate in the program. This is the "treatment school" comparison group. A second matching procedure compared the Teen Leadership students to students in four other Greenville County public schools that were not part of the OnTrack Greenville initiative. This is the "district school" comparison group. Lastly, a third matching procedure compared the Teen Leadership students to public school students who attended Title I schools across the state of South Carolina. This is the "state school" comparison group. Table 4 presents a summary of these groups and the threats to internal validity posed by each group.

At the first stage of the matching process, the "treatment" was defined. First, though OnTrack Greenville schools offered the Teen Leadership course in both fall and spring semesters of academic year 2016-17, researchers limited inclusion in the treatment group to students who completed the course in fall semester 2016. Access to similar post-program data is needed in order to assess the impact of the course. These similar post-program data were not available to researchers at the time of data analysis for students who participated in the course in spring semester 2017[7].

Next, researchers created a dosage threshold by examining student roster data. In academic year 2016-17, Greenville County Schools did not track attendance for each individual class period, therefore it was not possible to assess average daily attendance for the Teen Leadership course in order to set a threshold. Instead, researchers had access to student rosters two times in the semester in order to administer the pre- and post-student surveys. Pre-survey class rosters were from September 22, 2016 and post-surveys class rosters were from November 14, 2016. If students appeared on both the pre- and post-survey rosters provided by the school district, researchers considered the student to have "completed" a sufficient portion of the treatment condition to be included in the treatment group. After completing this step, researchers estimated a model to predict who participated in the program and who did not for each treatment and each comparison group (treatment school and district school).

[7] During fall semester 2016, one treatment school experienced a staffing change mid-semester, compromising implementation fidelity at this site. Initial exploratory analyses indicated that this issue with implementation did not influence the impact results, so researchers retained students from this site in the sample.

Table 4. Summary of Treatment and Comparison Groups

	Inclusion	**Schools**	**Similarity to Treatment Group**	**Threats to Internal Validity**
Treatment Group	Participates in Teen Leadership	Four Title I OnTrack Greenville treatment schools		
Within-school Comparison Group	Matched to treatment student Does not participate in Teen Leadership	Four Title I OnTrack Greenville treatment schools	Share same school context From similar neighborhoods Equal access to participate in Teen Leadership Access to all outcome measures	Possibility that selection bias is exacerbated by having few high propensity students in comparison group EWRS may encourage all high propensity students to participate in Teen Leadership, leaving few good matches in comparison group Possibility of spillover effects
Within-district Comparison Group	Matched to treatment student	Four schools identified by the district to serve as comparison schools Schools do not offer the Teen Leadership course	Share same district and community context Students who would have participated in Teen Leadership if it was available to them would be in the control group	Do not share the same school or neighborhood contexts
State Comparison Group	Matched to treatment student	Any Title I middle school in the state	Students who would have participated in Teen Leadership if it was available to them would be in the control group	Do not share the same school or neighborhood contexts Did not have access to some outcome measures

In order to estimate the true effect of the Teen Leadership course, researchers considered the observed and unobserved factors that may have affected participation in the program and the outcomes of interest. This "first-stage" regression model included race, gender, free and reduced meal status, special education status, English proficiency, grade, average daily attendance, student behavior measures (i.e., if the student had an in-school suspension, out-of-school suspension, or any other type of discipline incident), and a variety of standardized test scores, covering multiple subjects. Researchers pulled data for each of these variables from the academic year prior to student participation in the Teen Leadership course to ensure that the data were not affected by course participation.

Researchers estimated a logistic regression using these covariates to produce a predicted probability of receiving treatment for each student separately for the treatment, district, and state school groups. After creating propensity scores, treatment students were matched to comparison students. Like the estimation of the propensity scores, the matching of students occurred independently for each comparison group. Each Teen Leadership treatment student was matched to five comparison students.

Once the propensity scores were estimated and student matches made, researchers examined the strength of the matches. Ideally, the samples of treatment and district students should be similar to each other, or *balanced*, in terms of the variables used to estimate the propensity score. When samples were not similar, the researchers estimated a new propensity score model using interactions and higher order terms, continuing this process until proper balance was achieved.

At the conclusion of the matching process, researchers ensured that there were no significant differences between the treatment and comparison groups on pre-treatment covariates. Importantly, researchers examined the standardized difference in means and variance ratios between the treatment and comparison groups. Researchers then performed multivariate analyses to provide an estimate of the causal effect of completing the Teen Leadership course.

As detailed below, the matched analyses examined outcomes from both administrative and survey databases. Because of survey nonresponse, the populations of students with complete data were different for the analyses of the outcomes from administrative data and those from the survey data. Therefore, researchers performed separate matching procedures for the outcomes from these different sources. In total, this evaluation included nine matched comparisons: (1) 2016-17 Teen Leadership students vs. treatment school comparison students on administrative data outcomes, (2) 2016-17 Teen Leadership students vs. treatment school comparison students on survey data outcomes, (3) 2016-17 Teen Leadership students vs. district school comparison students on a administrative data outcomes, (4) 2016-17 Teen Leadership students vs. district school comparison students on survey data outcomes, (5) 2016-17 Teen Leadership students vs. state comparison students on administrative data outcomes, (6) 2017-18 Teen Leadership students vs. treatment school comparison students on administrative data outcomes, (7) 2017-18 Teen Leadership students vs. treatment school comparison students on survey data outcomes, (8) 2017-18 Teen Leadership students vs. district school comparison students on administrative data outcomes, and (9) 2017-19 Teen Leadership students vs. district school comparison students on survey data outcomes.

B. Sampling, Measures, and Data Collection

1. Sampling

Sampling Plan

This evaluation of Teen Leadership was an analysis of a semester-long course to improve student behavior in high-poverty middle schools with a significant population of Hispanic students. The average poverty index for the treatment schools was 83 in academic year 2017-18.[8] The results of this study are generalizable to similar high-poverty schools. The inclusion of two external comparison groups, which consisted of students in moderate-poverty schools in the same school district and high-poverty schools across the state of South Carolina, increased the external validity of this study. Further, this evaluation focused on middle school students, so the results of the evaluation may not apply to the introduction of the Teen Leadership class in elementary or high schools.[9]

Researchers first defined the "treatment" for this study. First, though OnTrack Greenville schools offered the Teen Leadership course in both fall and spring semesters, researchers limited inclusion in the treatment group to students who completed the course in fall semester 2016 or 2017[10]. Access to similar post-program data was necessary in order to assess the impact of the course. Researchers decided to include only fall semester students and treat data from spring semester as post-program data.

Next, researchers created a dosage threshold by examining student roster data. In academic year 2016-17, Greenville County Schools did not track attendance for each individual class period; therefore, it was not possible to assess average daily attendance for the Teen Leadership course in order to set a threshold. Instead, researchers had access to student rosters two times in the semester in order to administer the pre- and post-student surveys. In academic year 2016-17, pre-survey class rosters were from September 22, 2016 and post-surveys class rosters were from November 14, 2016. In academic year 2017-18, pre-survey class rosters were from September 18, 2017 and post-surveys class rosters were from December 6, 2017. If students appeared on both the pre- and post-survey rosters provided by the school district, researchers considered the student to have "completed" a sufficient portion of the treatment condition to be included in the treatment group.

Therefore, the treatment group consisted of all students in the four treatment schools who met the following parameters: (1) the students' parents agreed to their child participating in the study, and (2)

[8] The SC State Department of Education poverty index is based on Medicaid Enrollment, TANF Enrollment, SNAP Enrollment or Foster Care Services within three years (February 2014 to January 2018) or flagged as migrant or homeless in PowerSchool for academic year 2017-18 (135 Day Census Count).

[9] It is important to note that only students in the treatment and comparison groups with similar propensity scores were included in the analysis. This analysis examines the effect of the Teen Leadership class for students in which there is overlap in the propensities of participating in the Teen Leadership class. The estimate of the effect may be different than the overall effect of the Teen Leadership class for the full sample. This may limit somewhat the external validity of the results, but the comparison between students with similar propensity scores increases the internal validity of the study design.

[10] During fall semester 2016, one treatment school experienced a staffing change mid-semester, compromising implementation fidelity at this site. Initial exploratory analyses indicated that this issue with implementation did not influence the impact results, so researchers retained students from this site in the sample.

the student "completed" the Teen Leadership class in fall semester of academic year 2016-17 or 2017-18.

The Teen Leadership program served approximately 310 students per semester or 620 students annually across the four schools. Since some students changed courses or schools, not all students remained in the Teen Leadership class the entire semester and thus were not included in this study.

Students in the within-school comparison group also were enrolled in the four treatment schools and these students also had parental permission to participate in the study. If a student ever participated in a Teen Leadership class, they were excluded from the within-school comparison group. Final inclusion in the within-school comparison group was determined by the matching process described above.

The population of potential external comparison group students consisted of students in: 1) four other Greenville County Schools middle schools and 2) Title I schools throughout the state of South Carolina. In partnership with researchers, district leaders at Greenville County Schools selected the four within-district schools to serve as comparison schools for the evaluation. There were 19 middle schools in the district during project implementation and the only Title I schools in the district were participating in OnTrack Greenville. Absent other high-poverty middle schools, Greenville County Schools selected the four middle schools with student demographics most similar to OnTrack Greenville schools and a moderate level of student poverty. In academic year 2016-17, 3,398 middle school students attended the district comparison schools, while in academic year 2017-18, 3,568 students attended these schools.[11]

The state comparison students attended Title I schools in districts across South Carolina. Students in Greenville County Schools were excluded from the population of potential state matches, as the presence of OnTrack Greenville programs in the district did not create a "business as usual" comparison and non-treatment Greenville County Schools were included in the first external comparison group. In academic year 2016-17, 45,013 middle school students attended a Title I school in South Carolina.

The population of possible external comparison group students included those students did not have missing data on the variables used in estimating the propensity score. Following the matching procedure described above, external comparison students were matched with treatment students. It is important to remember that this evaluation was a student-level, not a school-level, analysis. However, as a means to increase the internal validity of the study, schools were selected such that external comparison students attended somewhat similar schools as the treatment students attended.

For each year of the study, comparison group, and data source, study participants flowed through several stages in which they either were included or excluded from the study. First, researchers received the roster data for the entire treatment school population and the district comparison schools. Then, researchers received the roster of students who participated in the intervention from the Sub-Grantee. Researchers only included program students moving forward who met the treatment definition used in the study. The resulting treatment roster was merged with the school population roster. In rare occasions, treatment students did not appear on the school roster and were excluded from the study. Researchers then checked to see which remaining treatment students had complete data for the variables used in propensity score matching. Not all students were successfully matched, as discussed

[11] Greenville Count Schools Population Statistics for 180th day of attendance, https://www.greenville.k12.sc.us/About/main.asp?titleid=statsarchives

later in this report. Finally, each regression analysis only included students who had data for the outcome variable. Table 5 presents the flow in study participants in academic year 2016-17 for students matched to comparison students in treatment schools using administrative data. Given missing data on the dependent variable, the total number of students included in the final analyses varied somewhat. The values in Table 5 and the other flow charts for the number of students included the final analyses pertain to the most common sample size for the confirmatory analyses. The sample sizes for the other outcomes can be seen in the individual results tables. Similar flow charts for other years, comparison groups, and data sources appear in Appendix C.

Table 5. Teen Leadership Participant Flow Chart at Treatment Schools AY 2016-17 (Administrative Data)

Study Time-point	Total number students	Number students included	Number students not included	Notes
Treatment Students				
1. Program Roster	639	---	---	Fall & Spring Teen Leadership Students
2. Appeared on School Roster	639	620	19	
3. Met Treatment Inclusion Criteria	620	329	291	Participated in Fall Teen Leadership
4. Had Full Matching Data	329	269	60	
5. Matched	269	264	5	
6. Included in Analysis	264	264	0	
Comparison Students				
1. School Rosters	5,267	---	---	
2. Met Treatment Inclusion Criteria	5,267	1,301	3,966	Treatment School, Didn't participate in Teen Leadership in fall or spring
3. Had Full Matching Data	1,301	1,084	217	
4. Matched	1,084	708	376	Unique students (note: matching was done with replacement)
5. Included in Analysis	708	708	0	

Researchers performed a power analysis to assess the relationship between sample size and the minimum detectable effect size (MDES), given a number of assumptions, as part of the Sub-Grantee Evaluation Plan. In the evaluation presented here, the smallest number of Teen Leadership students included in the main confirmatory impact analyses was 120 for the state administrative data analyses.[12] The minimum sample size value included in the SEP power analysis was 310 students. A major reason for the smaller than anticipated sample sizes was the focus on fall semester Teen Leadership students. This cut the sample size in half. Post hoc power analyses are uninformative, but one can perform sensitivity analyses that provide the minimum effect size a study could detect given the actual study sample size and a number of assumptions (Perugini, Gallucci, & Costantini, 2018). Using G*Power, a power analysis software program, researchers produced two sensitivity analyses (Faul, Erdfelder, Buchner, & Lang,

[12] It should be noted that the number of Teen Leadership students included in analyses was significantly larger for the treatment and district administrative matched results, as seen in Table 1.

2009; Faul, Erdfelder, Lang, & Buchner, 2007). Researchers assumed a one-tailed test with an alpha level of 0.05 and power of 0.80. First, researchers assumed a sample size of 240, which would entail a one-to-one control to treatment ratio. Using this value, researchers estimated that the MDES is d = 0.32. Second, researchers adjusted for the fact that five comparison students were matched to each Teen Leadership student in this study. Using this five-to-one control to treatment sample size ratio, researchers estimated that the MDES for the study design is 0.19.

Recruitment and Retention

GCS staff utilized two primary methods of identifying students who would benefit from participation in the Teen Leadership class. First, GCS utilized various indicators from the Early Warning and Response System (EWRS) to alert OnTrack Teams to students who were struggling. Second, school principals, teachers, and other appropriate staff worked together to identify students who were good candidates for the Teen Leadership class. Teen Leadership is considered a Related Arts course and students complete two Related Arts courses per semester. The creation of student schedules occurs in February for the upcoming school year. Thus, school staff automatically enrolled identified students into the Teen Leadership class. This automatic enrollment helped ensure that the majority of identified students participated in the Teen Leadership class. If a parent had questions about his or her student's placement in Teen Leadership, school staff explained to the parent the course content and the potential benefits of completing the course. Participation in Teen Leadership was not compulsory and parents were able to modify a student's schedule, so not all identified students enrolled in the course.

Most students remained in the Teen Leadership class for the entire semester. However, if the student moved outside of the attendance zones of any of the three target middle schools, they were no longer receiving the intervention of the Teen Leadership course, and thus were not retained in the study sample. If they moved within one of the three treatment schools, they remained in the sample.

In order to maximize participation in the study, the research team employed an opt-out approach to parent consent for the OnTrack Greenville Student Survey administered at treatment and district schools and the Teen Leadership Student Survey administered just to treatment students. Parental consent was not needed for the use of student outcome data housed in district and state administrative datasets, as the data were accessed through formal data-sharing agreements.

Attrition and Missing Data

Attrition is a challenge for all longitudinal evaluations. This evaluation used a number of means to minimize the effect of attrition. The evaluation team was able to track students who transferred to any other public school in the state. Therefore, these students continued in the study as treatment or comparison students. Further, since the main outcomes of interest were available in PowerSchool, the state's data system, regardless of the school a student was attending, there were few cases of attrition within comparison groups due to students transferring schools. If study participants were no longer in the state dataset, however, they were considered attrited from the study. Given that consent was a precondition for participating in the treatment group, the evaluators found that consent had little effect on attrition. Parental consent was not needed for the external comparison students, and consent from parents of the within-school comparison group was an opt-out consent, which maximized the number of students participating in this study.

Missing data poses a challenge in every evaluation. The goal of the evaluation team was to limit the amount of missing data, as all adjustments for missing data are suboptimal and impose tradeoffs. Missing data could have occurred in three ways for this study.

First, some data could be missing on the receipt of the Teen Leadership treatment. The GCS staff was trained on how to correctly record the participation of students in the Teen Leadership course to minimize this effect. Completion of the Teen Leadership class was determined by receipt of course credit for the class. Therefore, students had to be in the course for an entire semester and earn a passing grade to be included in the "treatment" group. The GCS staff worked to limit attrition in the program.

Second, data could be missing on the main independent variables, including those used for the propensity score analysis. The covariates used in this study, including race, gender, low-income status, and baseline test scores, were all available to the evaluation team in the statewide database for all public school students. Using unique student identification numbers, the evaluation team was able to find the vast majority of students in their dataset regardless of what school(s) a student had previously attended. The state dataset had a few missing cases on the demographic variables, and the evaluators were able to "backfill" any missing data for the permanent demographic variables with datasets from subsequent years. Analyses of some of the secondary outcomes required students to fill out a "baseline" questionnaire. School staff ensured that students completed these questionnaires.

Third, incomplete data could exist on the dependent variable. The evaluators encountered few instances of missing data on the dependent variable when using the administrative database. Incomplete data was a greater issue when examining the survey outcomes. When such cases occurred, the observations were dropped from the analysis (i.e., listwise deletion). Using U.S. Department of Education's What Works Clearinghouse standards, Puma et al. (2009) recommends case deletion in instances in which post-test or outcome data are missing.

2. Measures and Instruments

Socio-Demographic Variables and Covariates

The following socio-demographic variables were used for propensity score matching and as covariates in impact and outcome analyses: (1) poverty status, (2) race, (3) gender, (4) English proficiency, and (5) disability status.

Poverty status. Student poverty status was measured through free and reduced meal eligibility. As determined by the National Free Lunch Program, students with a family income at or below 130% of the poverty threshold are eligible for free meals, while students with a family income between 130% and 185% of the poverty threshold are eligible for reduced meals (United States Department of Agriculture, 2015). Despite the known limitations for using free and reduced meal eligibility as a proxy for poverty status (Harwell & LeBeau, 2010), this measure could be tracked easily by Greenville County Schools and was readily available for use. Using free and reduced meal eligibility, researchers categorized students as "eligible for free meals or reduced meals" or "not eligible for free or reduced meals." Data on student free and reduced meal eligibility was accessed through district and state administrative records.

Race. Researchers used four categories of student race: "African American," "Caucasian," "Hispanic," and "Other." Student race was accessed through district and state administrative records.

Gender. Student gender was split into two groups, "male" and "female." Student gender was captured in district administrative and state records.

English proficiency. Measures of English proficiency consisted of two primary categories, "English language learners" and "non-English language learners." Student English proficiency was accessed through district and state administrative records.

Disability status. The South Carolina Department of Education (SCDE) defines child disability status in accordance with the Individuals with Disabilities Education Act (IDEA) as "having an intellectual disability, a hearing impairment (including deafness), a speech or language impairment, a visual impairment (including blindness), a serious emotional disturbance (referred to in this part as ''emotional disturbance''), an orthopedic impairment, autism, traumatic brain injury, other health impairment, a specific learning disability, deaf-blindness, or multiple disabilities, and who, by reason thereof, needs special education and related services." In the present study, students were categorized as having "no identified disability" or having at least one "identified disability." Student disability status was accessed through district administrative and state records.

Independent Variables

Treatment. The treatment group consisted of all students in the treatment schools who met the following parameters: 1) the students' parents/guardians agreed to their child participating in the study, and 2) the student completed the Teen Leadership course in fall semester 2016 or completed the Teen Leadership Foundational class in fall semester 2017.[13] As described above, researchers defined "completion" by appearance on both pre- and post-survey rosters provided by Greenville County Schools. This categorical measure consisted of two groups, "student received treatment" and "student did not receive treatment."

Researchers altered the definition of the treatment variable from the original SEP measures. While researchers originally planned to assign students into treatment groups on the criteria of (1) enrollment in a treatment school for at least 51% of the school year and (2) completion of an entire semester of the Teen Leadership course, researchers needed a more concrete way of defining course completion. Researchers determined that a student completed Teen Leadership if he or she appeared on both the pre- and post-survey rosters provided by Greenville County Schools.

[13] The Teen Leadership curriculum includes nine chapters. As this is too much material to cover in one semester, Teen Leadership teachers created a pacing calendar in academic 2016-17 that covered the first four chapters of the curriculum. Since many students expressed interested in taking Teen Leadership multiple semesters, Greenville County Schools decided to create two additional courses of Teen Leadership prior to academic year 2017-18. The "original" Teen Leadership course that covered the first four chapters was renamed "Foundational Teen Leadership" and served as a prerequisite for the upper level classes. "Responsible Teen Leadership" covered chapters five, six, and seven and "Visionary Teen Leadership" covered chapters eight and nine. All classes offered in academic year 2016-17 technically were "Foundational Teen Leadership" classes. This evaluation included all Teen Leadership classes in academic year 2016-17 and their equivalent "Foundational Teen Leadership" classes offered in academic year 2017-18. Future years of the study will examine the impact of taking multiple levels of the Teen Leadership class on student behavior and related social-emotional outcomes.

Primary Impact Variables: Confirmatory

Behavioral referrals. The primary measure of student behavior was the total *number of behavioral referrals* per student. The number of behavioral referrals was available in the district dataset. The state dataset included the number of discipline incidents, so that is the outcome used for the state analyses. Previous research has found office behavioral referrals to be a meaningful source of data for designing and evaluating behavior interventions (Putnam, Luiselli, Handler, & Jefferson, 2003; Sugai, Sprague, Horner, & Walker, 2000). Gottfredson & Gottfredson (1999) found that the test-retest reliability of office discipline referrals ($r = 0.56$, $p < 0.01$) exceeded that of teacher reports using a behavior checklist ($r = 0.36$, $p < 0.01$). In addition to a student's total number of behavioral referrals, researchers used a dichotomous categorical variable for student behavioral referrals, with students either having "no behavioral referrals" or "one or more (any) behavioral referral(s)." The present study examined these measures over two overlapping periods of time, (1) each academic year; and, (2) the spring semester of each year. Greenville County Schools tracks disciplinary referrals in an online Incident Management System (IMS). Researchers accessed student behavioral data through this system. Researchers were not able to isolate spring semester outcomes in the state database, so only academic year outcomes were used for the state comparison analyses.

In-school suspensions. This measure included the total *number of hours of in-school suspension* served by the student within the academic year. The number of hours of in-school suspension was available in the district dataset. The state dataset included the number of in-school suspensions, so that is the outcome used for the state analyses. In addition, researchers slightly modified the SEP to use a dichotomous categorical variable for student in-school suspension in the analysis, with students either having "no in-school suspensions" or "one or more in-school suspensions." Given that the treatment occurred during the fall semester, the present study examined these measures over two periods of time, (1) each academic year, and (2) the spring semester of each year. Researchers were not able to isolate spring semester outcomes in the state database, so only academic year outcomes were used for the state comparison analyses.

Out-of-school suspensions. This measure included the total *number of days of out-of-school suspension* served by the student within the academic year. For the state analyses, the total number of out-of-school suspensions was used. In addition, researchers slightly modified the SEP to include a dichotomous categorical variable for student out-of-school suspension in the analysis, with students either having "no out-of-school suspensions" or "one or more out-of-school suspensions." Given that the treatment occurred during the fall semester, the present study examined these measures over two periods of time, (1) each academic year, and (2) the spring semester of each year. Researchers were not able to isolate spring semester outcomes in the state database, so only academic year outcomes were used for the state comparison analyses.

Primary Impact Variables: Exploratory

Average daily attendance. This measure of school attendance is a calculation of the number of days of school attended divided by the number of days of school enrolled. Average daily attendance was captured in district and state administrative records.

Chronic absenteeism. Chronic absenteeism occurs when a student is absent more than 10% of the academic year, including both excused and unexcused absences. At the school level, the number of chronically absent students is often more telling than the average daily attendance rate, as a school

could boast an acceptable attendance rate and still have a large number of students chronically absent given the distribution of absences (Balfanz & Byrnes, 2012). Though not commonly tracked by school districts, this measure is growing in popularity, especially due to its utility as an early warning indicator (Balfanz, Herzog, & Iver, 2007). In the present study, chronic absenteeism is a dichotomous categorical variable with students either "chronically absent" or "not chronically absent."

Math and English/language arts course performance. Data from two standardized tests measured math and ELA course performance: SC READY and Measures of Academic Progress (MAP). The SCDE began administering the SC READY to students in grades 3 through 8 in Spring 2016. This standardized test serves as the state's primary measure of proficiency in math and ELA. Scale scores are generated individually for each of the subjects. In addition, scores are classified into categories, "exceeds," "meets," "approaches," and "does not meet." Researchers accessed SC READY scores through district and state administrative records.

Northwestern Evaluation Association's (NWEA) MAP assessment is a computerized adaptive test for students in grades 2 – 10. Administered up to three times per year, the MAP assessment measures student math and reading achievement and provides immediate results to teachers on student capabilities. Both content area scale scores have shown strong marginal and test-retest reliability in the middle grades and strong concurrent validity when compared to state assessment scale scores (Northwest Evaluation Association, 2004). Further, a confirmatory factor analysis of MAP scale scores across grades and states provided additional support for the construct validity of the instrument (Wang, McCall, Jiao, & Harris, 2012). Through academic year 2016-17, Greenville County Schools administered the MAP assessment to all students in grades 6 – 8 two times per year, in September and April. However, the district stopped administering this assessment at the beginning of academic year 2017-18. MAP assessment data were available for most district treatment and comparison students.

The research team originally planned to use students' scores on the ACT Aspire Math and Reading assessments as an outcome measure. A state-mandated assessment, the SCDE ceased administering this test to students after the spring of 2015, transitioning instead to SC READY in academic year 2015-16. Thus, researchers were unable to use ACT Aspire assessment scores in the study. This represents a change to the SEP.

Secondary Outcome Variables: Exploratory

Students develop a healthy self-concept. This construct was measured by Rosenberg's Self-Esteem scale (Rosenberg, 1965). This ten-item scale measured students' attitudes about themselves, including their general perception of their skills and abilities. Sample items included "I feel that I have a number of good qualities" and "On the whole, I am satisfied with myself." Items were measured on a four-point, Likert-type scale ranging from "not at all like me" to "exactly like me." This scale has been used widely to assess self-esteem and has shown good reliability in prior studies ($\alpha = 0.77$) and in the current study ($\alpha = 0.80$) and good validity in prior studies (Rosenberg, 1965; Wylie, 1973).

Students develop healthy relationships. This construct was measured by the Positive Friendships with Peers scale (Lippman et al., 2014). This five-item scale measured the extent to which students had supportive and caring friendships and included items such as "I support my friends when they do the right thing" and "I am there when my friends need me." Items were scored on a four-point, Likert-type scale ranging from "not at all like me" to "exactly like me." This scale demonstrated strong internal

reliability in prior studies (α = 0.91) and in the current study (α = 0.79) and concurrent validity in prior studies (Lippman et al., 2014).

In addition, this construct was measured by two scales, Relationships with Caring Adults (Corrin et al., 2015) and Positive Relationships with Teachers (Corrin, Sepanik, Rosen, & Shane, 2016). The six-item Relationships with Caring Adults scale measured the extent to which students related to school personnel and included items such as "At my school there is an adult who really cares about me" and "At my school there is an adult who always wants me to do my best." Items were scored on a four-point, Likert-type scale ranging from "not true" to "true." This scale demonstrated strong internal reliability in prior studies (α = 0.89) and in the current study (α = 0.89).

The eight-item Positive Relationships with Teachers scale measured the perceived relationships of students with their teachers and classmates and included items such as "Students at my school get along well with teachers" and "My teachers really listen to what I have to say." Items were scored on a four-point, Likert-type scale ranging from "not true" to "true." This scale demonstrated strong internal reliability in prior studies (α = 0.86) and in the current study (α = 0.85).

Students develop a sense of personal responsibility. This construct was measured by a seven-item scale, the Diligence and Reliance scale (Lippman et al., 2014). Sample items included "Do you work harder than others your age?" and "Is it hard for you to finish the tasks you start?" Items were scored on a four-point, Likert-type scale ranging from "not at all like me" to "exactly like me." This scale demonstrated good internal reliability (α = 0.79) and concurrent validity in prior studies (Lippman et al., 2014). The internal reliability of this scale in the present study (α = 0.59) was lower than anticipated.

Students develop social competence. This construct was measured by the Social Competence for Adolescents Scale (Lippman et al., 2014). This nine-item scale measured skills related to emotional intelligence, such as the ability to work in groups and get along well with others. Items were measured on a four-point, Likert-type scale ranging from "not at all like me" to "exactly like me." Sample items included "I avoid making others look bad" and "When I work in groups, I do my fair share." The Social Competence for Adolescents Scale demonstrated good internal reliability in prior studies (α = 0.79) and in the current study (α = 0.80) and concurrent validity in prior studies (Lippman et al., 2014).

Students build skills in public speaking. To measure public speaking skills, this study utilized an adapted version of the Public Speaking subscale of the Personal Report of Communication Apprehension (PRCA-24) instrument (McCroskey, 1982). This six-item scale measures a student's comfort physical and emotional speaking in public. Items include "I feel comfortable when speaking in front of my class" and "Certain parts of my body feel very rigid and tense when speaking in front of my class." Items were scored on a four-point, Likert-type scale ranging from "not at all like me" to "exactly like me." In previous studies, this subscale has shown strong internal reliability (α = 0.90) and strong predictive validity (McCroskey, Beatty, Kearney, & Plax, 1985). The adapted version of the subscale demonstrated good internal reliability in the present study (α = 0.75)

Additional Exploratory Outcomes

In order to reduce data collection activities across multiple OnTrack Greenville studies, researchers included additional outcome measures not related to the Teen Leadership course on student survey instruments. The following outcomes are not part of the Teen Leadership logic model, but data were available and included in exploratory analyses.

Students increase self-confidence. This construct was measured by two scales, the Academic Perseverance scale and the Academic Self-Confidence scale (Rockman et al, 2013).

The six-item Academic Perseverance scale measured having a hopeful outlook on studying and completing schoolwork and included items such as "I keep doing schoolwork even when it is hard" and "When I study, I set goals for myself." Items were scored on a four-point Likert-type scale ranging from "not true" to "true." This scale demonstrated strong internal reliability in prior studies ($\alpha = 0.79$) and in the current study ($\alpha = 0.76$).

The six-item Academic Self-Confidence scale measured the ease with which students felt they were learning and included items such as "Homework is easy for me" and "I understand what we are learning in school as much as my friends." Items were scored on a four-point, Likert-type scale ranging from "not true" to "true." This scale demonstrated strong internal reliability in prior studies ($\alpha = 0.75$) and in the current study ($\alpha = 0.78$).

Students are more engaged at school. This construct was measured using the School Engagement scale (Rockman et al, 2013) and the School Belonging scale (Corrin et al., 2015).

The four-item School Engagement scale measured the degree to which a student felt connected to his or her school and education (Rockman et al, 2013). It included items such as "I like school" and "I participate a lot in class." Items were scored on a four-point, Likert-type scale ranging from "not true" to "true." This scale demonstrated strong internal reliability in prior studies ($\alpha = 0.68$) and in the present student ($\alpha = 0.74$).

The five-item School Belonging scale measured the extent to which a student felt accepted and supported within the school environment (Corrin et al., 2015). It included items such as "I feel close to people at my school" and "I feel like I am a part of my school." Items were scored on a four-point, Likert-type scale ranging from "not true" to "true." This scale demonstrated strong internal reliability in prior studies ($\alpha = 0.84$) and in the present student ($\alpha = 0.83$).

Students improve their attitude toward learning. This construct was measured by a modified version of the Valuing Education scale (Corrin et al., 2015). Originally, this was a six-item scale measuring a student's beliefs about the importance of school and included items such as "My education will be valuable in getting the job I want" and "Being a good student is important to me." Researchers added one additional item on the importance of attending college to make this a seven-item scale. Items were scored on a four-point, Likert-type scale ranging from "not true" to "true." The original scale demonstrated strong internal reliability in prior studies ($\alpha = 0.79$). In the present study, the modified scale was tested using exploratory factor analysis with oblimin rotation and was found to have a unidimensional factor structure, as predicted, with strong internal reliability ($\alpha = 0.84$).

3. Data Collection Activities

The measures used in the impact study for propensity score matching, covariates, independent variables, and primary impact variables were collected routinely by Greenville County Schools using the PowerSchool data management platform. The impact study drew on student data from both Greenville County Schools and the South Carolina Department of Education. Researchers collected data to explore the secondary outcomes via the administration of two electronic student surveys.

Student data from the South Carolina Department of Education. The South Carolina Department of Education (SCDE) mandates the use of PowerSchool and provides districts technical manuals and support to improve the internal reliability of data collected. The SCDE routinely collects and aggregates data from all districts and houses it in the South Carolina Education Data System (SCEDS). The Riley Institute currently has a Memorandum of Agreement with SCDE that dictates the terms and conditions of the transfer of PowerSchool data from SCDE to the Riley Institute, including provisions for maintaining, protecting, and destroying datasets. The inclusion of these data allowed researchers to examine a group of comparison students from schools across the state of South Carolina.

Student data from Greenville County Schools. A research and data sharing agreement (RDSA) with Greenville County Schools also provided administrative data for the study. This data sharing agreement describes (1) the research and information usage terms and conditions; and (2) the purpose and design of the study, including type(s) of data requested, data collection schedule, plan for reviewing and sharing results, and methods of securing and destroying data.

OnTrack Greenville Student Survey. The research team administered the OnTrack Greenville Student Survey to collect data for secondary outcome measurement. Teachers administered the survey to students electronically in October and May of academic years 2016-17 and 2017-18. The Research Team obtained passive parental permission by sending home an opt-out letter at the beginning of the academic year. Opt-out consent was sufficient, as the survey did not include any identifiable information.

In order to link the survey data to the PowerSchool dataset, researchers created a unique survey ID number for each student who was not opted-out by their parents. Researchers maintained a separate database that linked the survey ID numbers with each student's PowerSchool ID number. In preparation for survey administration, the researchers created individual notecards for each student, which included the student's name and unique survey ID. Researchers organized the notecards in packets by school and teacher and distributed the packets to the schools in-person, along with survey administration instructions, before the survey administration window opened. Teachers passed out the notecards to each student whose parents did not opt them out of the survey (teachers were provided a list of those students who had been opted out) and provided oral instructions on how to complete the survey. To begin, students navigated to the electronic survey on a computer and entered their unique survey ID to link their answers to their PowerSchool data. Students then were given permission to opt themselves out of the survey if they decided they did not want to take it. Survey completion took between 10 and 20 minutes, with an average student completion time of 12 minutes. Following administration, the teacher collected all survey ID cards and returned them to their survey packet. Researchers then destroyed all of the ID cards. The OnTrack Greenville Student Survey is located in Appendix D.

Information on the response rate of the OnTrack Greenville Student Survey appears in Tables 6 and 7. All students attending treatment and district schools within Greenville County were invited to participate in the pre- and post-survey. The parent opt-out rate was slightly higher at treatment schools than comparison schools, largely due to differences in distributing the passive parental permission form. At treatment schools in academic year 2016-17, the permission form was sent home with students at the beginning of the academic year along with other first-day-of-school forms. Many of these forms had to be returned with a parent signature, so researchers suspect that many parents signed and returned the opt-out form to decline their child's participation in the study without reading the form completely. At comparison schools, however, the passive parental permission form was sent home with students a

few weeks after the start of the academic year and fewer forms were returned. For that suspected reason, the rate of student opt-out was 5% at treatment schools and 1 – 2% at comparison schools in the 2016-17 academic year.

Students who were absent the day of survey administration did not have an opportunity to complete the survey at a later date. In addition, individual schools decided not to offer the survey to students with severe learning and/or intellectual disabilities. When cleaning the data, researchers used list-wise deletion to eliminate cases with missing data. In academic year 2016-17, after excluding these students and cases, the total percentage of valid survey responses for each treatment group at each survey administration ranged from 65 – 72% at treatment schools and was 79% at comparison schools in the 2016-17 academic year. Treatment school students took an average of 13 minutes to complete the OnTrack Greenville Student Survey, while comparison school students took an average of 11 minutes to complete the survey.

Table 6. Response Rate of OnTrack Greenville Student Survey AY 2016-17

	Pre-Survey Fall Semester 2016				Post-Survey Spring Semester 2017			
	Treatment Schools (n = 4)		Comparison Schools (n = 4)		Treatment Schools (n = 4)		Comparison Schools (n = 4)	
Total # Invited to Participate	1921	100%	3369	100%	1886	100%	3368	100%
Parent Opt-Outs	212	11%	91	3%	195	10%	208[1]	6%
Student Opt-Outs	89	5%	47	1%	90	5%	65	2%
Excluded Cases[2]	238	12%	560	16%	384	20%	445	13%
Total # Valid Survey Responses	1382	72%	2671	79%	1217	65%	2650	79%
Average Completion Time	13 minutes		11 minutes		13 minutes		11 minutes	

[1]Mid-year transfer students who never received a parental permission form were treated as parent opt-outs at comparison schools.
[2]Excluded Cases includes students who were absent the day of the survey, duplicate survey starts, incomplete survey responses, etc.

For the 2017-18 OnTrack Greenville Student Survey, the total percentage of valid survey responses for each treatment group at each survey administration ranged from 70 – 75% at treatment schools and from 71 – 81% at comparison schools in the 2017-18 academic year. Treatment students took an average of 12 minutes to complete the OnTrack Greenville Student Survey in the 2017-18 academic year, while comparison students took an average of 10 minutes.

Table 7. Response Rate of OnTrack Greenville Student Survey AY 2017-18

	Pre-Survey Fall Semester 2017				Post-Survey Spring Semester 2018			
	Treatment Schools (n = 4)		Comparison Schools (n = 4)		Treatment Schools (n = 4)		Comparison Schools (n = 4)	
Total # Invited to Participate	2040	100%	3692	100%	2069	100%	3498	100%
Parent Opt-Outs	45	2.2%	82	2.2%	43	2.1%	292[1]	8.3%
Student Opt-Outs	127	6.2%	91	2.5%	168	8.1%	117	3.3%
Excluded Cases[2]	348	17.0%	536	14.5%	397	19.2%	599	17.1%
Total # Valid Survey Responses	1520	74.5%	2983	80.8%	1461	70.1%	2490	71.1%
Average Completion Time	11m 45s		10m 45s		12m 15s		9m 30s	

[1]Mid-year transfer students who never received a parental permission form were treated as parent opt-outs at comparison schools.
[2]Excluded Cases includes students who were absent the day of the survey, duplicate survey starts, incomplete survey responses, etc.

Teen Leadership Student Survey. Following the same protocol described above for the OnTrack Greenville Student Survey, researchers administered a pre- and post-student survey to all students who participated in the Teen Leadership course to measure both implementation activities and secondary outcomes. Teen Leadership teachers administered the electronic survey in their classes at the beginning and end of each semester. The survey required about 10 – 20 minutes for students to complete, with an average completion time of 14 minutes and 30 seconds in the 2016-17 academic year. The completion rates for this survey ranged from 78 – 90% for pre-surveys and 78 – 83% for post-surveys. See Table 8. A copy of the Teen Leadership Student Survey for both the 2016-17 and 2017-18 academic years is included in Appendix E.

For the 2017-18 Teen Leadership Survey, the total percentage of valid survey responses for each treatment group at each survey administration ranged from 75 – 87% for the pre-surveys and from 69 – 78% for post-surveys in the 2017-18 academic year. Teen Leadership students took an average of 9 minutes to complete the pre-surveys and 11 minutes to complete the post-surveys. Refer to Table 9.

Table 8. Response Rate of Teen Leadership Student Survey AY 2016-17

	Fall Semester 2016				Spring Semester 2017			
	Pre-Survey		Post-Survey		Pre-Survey		Post-Survey	
Total # Invited to Participate	347	100%	347	100%	350	100%	350	100%
Parent Opt-Outs	2	<1%	2	<1%	14	<1%	14	<1%
Student Opt-Outs	6	<1%	2	<1%	10	<1%	4	<1%
Excluded Cases[1]	25	7%	56	16%	51	15%	58	17%
Total # Valid Survey Responses	314	90%	287	83%	275	78%	274	78%
Average Completion Time	16 minutes		16 minutes		12 minutes		14 minutes	

[1]Excluded Cases includes students who were absent the day of the survey, duplicate survey starts, incomplete survey responses, etc.

Table 9. Response Rate of Teen Leadership Student Survey AY 2017-18

	Fall Semester 2017				Spring Semester 2018			
	Pre-Survey		Post-Survey		Pre-Survey		Post-Survey	
Total # Invited to Participate	314	100%	318	100%	343	100%	327	100%
Parent Opt-Outs	9	2.9%	6	1.9%	13	3.8%	12	3.7%
Student Opt-Outs	9	2.9%	16	5.0%	10	2.9%	8	2.4%
Excluded Cases[1]	22	7.0%	49	15.4%	63	18.4%	81	24.8%
Total # Valid Survey Responses	274	87.3%	247	77.7%	257	74.9%	226	69.1%
Average Completion Time	10m 15s		11m 45s		8m 15s		10m 05s	

[1]Excluded Cases includes students who were absent the day of the survey, duplicate survey starts, incomplete survey responses, etc.

III. Implementation Study Results

A. Implementation Study Design and Measures

The Riley Institute contracted with RTI International to complete an implementation study of the Teen Leadership course in academic years 2016-17 and 2017-18. RTI's evaluation assessed fidelity to the proposed implementation model and assessed exploratory outcomes, as well as provided formative feedback to schools and the district to improve program delivery. In the 2017-18 school year, RTI's evaluation had two main foci: (a) understanding the implementation of the new Responsible Teen Leadership and Visionary Teen Leadership courses and (b) capturing implementation changes and lessons learned to inform effective implementation in additional schools in the coming years.

RTI gathered both quantitative and qualitative data to assess the implementation of the Teen Leadership curriculum. The research team conducted interviews and focus groups with teachers, principals, and students; administered surveys and questionnaires to teachers and students; and collected and analyzed the course leader evaluation survey completed by students. Interview questions focused on the successes and challenges of teaching the curriculum; modifications made to the curriculum; support provided to teachers; and perceived impact on students, teachers, and schools. The student survey and focus group assessed student perceptions of their personal growth and provided a space for reflection.

Interviews and Focus Groups

The research team conducted 30-minute phone interviews with Teen Leadership teachers and principals of the schools where Teen Leadership was being implemented. The research team interviewed each Teen Leadership teacher at the end of the fall (four teachers) and spring semesters (three teachers). In the fall, interview questions focused on the successes and challenges in teaching the curriculum, modifications made to the curriculum, and perceived impact on students and teachers. In the spring semester, interviews focused on implementation lessons learned on specific aspects of the curriculum to inform the implementation guide. Three of the four school principals were interviewed once during the school year, at the end of either the fall or the spring semester of the 2017-18 school year. In the fall, interview questions focused on the principal's perceived strengths of the course, the support provided to teachers, and the perceived impact on students and school. In the spring, questions focused on school-wide sustainability and lessons learned.

Researchers conducted student focus groups at the end of the fall and spring semesters at two treatment schools. In fall and spring, one member of the Riley Institute team conducted six focus groups with 34 students from two schools. Focus group questions asked students about the impact of the Teen Leadership course on their skills, relationships, and future goals, as well as how the course was different than other courses at their school. See Appendix F for the student focus group data-collection instrument.

Surveys

Teacher log: RTI administered a teacher implementation log throughout the year. Teachers completed this log after completing each of the chapters. These brief logs asked teachers about the changes they

made to the curriculum, whether they felt prepared to teach that particular unit, and how often they were able to engage students in different activities prescribed by the curriculum.

Student impact survey: The Riley Institute administered a pre- and post-survey to all Teen Leadership students enrolled in the fall and spring semesters. Students took a survey at the beginning of the semester and again at the end of the semester. The Teen Leadership Student Survey appears in Appendix E.

Student evaluation of instructor: Teen Leadership teachers were asked to administer the Flippen Group's student evaluation of course leader form. Using this form, students evaluate teacher and course characteristics by indicating whether they agree or disagree with nine statements. Two hundred and thirteen students from three schools completed the form in spring 2017. Across the four schools, 247 students completed the course leader evaluations at the end of the fall 2017 semester. In spring 2018, 180 students at three of the schools completed the form. The Student Evaluation of Course Instructor Form is located in Appendix G.

B. Fidelity of Program Activities and Outputs

RQ13. *What was the intended design of the Teen Leadership course in the four middle schools?*

RQ14. *How did implementation of the leadership program at each school compare with the intended design?*

Greenville County Schools implemented the Teen Leadership course structure with a high degree of fidelity, following critical guidelines identified by the curriculum developers. The following section compares course implementation guidelines with district implementation, identifying project- and school-level adaptations to and deviations from the curriculum that occurred which may have affected the intended benefits for students and schools. Teachers and principals reported few barriers to implementing the Teen Leadership course at their school. As such, schools largely adhered to the overall design of the Teen Leadership course curriculum. Comparison of these guidelines to district implementation appear below.

Required Skills and Experiences of Staff

1. Teen Leadership teachers should have completed the Capturing Kids' Hearts training and should have attended the Teen Leadership certification course.

- ✓ All Teen Leadership teachers attended the Teen Leadership certification training and Capturing Kids' Hearts training before teaching the course. All but one of the schools that implemented the Teen Leadership course had training in Capturing Kids' Hearts within the past 5 years.

2. Principals and at least one counselor at the schools with Teen Leadership should to attend Capturing Kids' Hearts training in order to understand the potential impact of Teen Leadership at their school.

- ✓ All but one of the schools implementing the Teen Leadership course had training in Capturing Kids' Hearts within the past 5 years.

School Level Guidelines

1. Schools should purchase the student manuals for Teen Leadership.

- ✓ Schools purchased and used the student manuals for Teen Leadership.

2. Teen Leadership courses should be conducted like other courses at the school depending on the school schedule. This is because the Teen Leadership developers do not consider the course effective if taught only once a week.

- ✓ All schools implemented the course as a semester course, as opposed to a year-long course. In the 2017-18 school year, the district created three semester-long Teen Leadership courses: Foundational Teen Leadership, Responsible Teen Leadership, and Visionary Teen leadership.

3. In order to develop strong relationships between the students and course leader, teachers are recommended to not mix Teen Leadership with other curriculum but to follow the processes outlined in the curriculum.

- ✓ Teachers reported that they did not mix the curriculum with other curricula but instead used different or more relevant examples that were culturally relevant to the students. Modifications are explained in more detail later in this section.

4. The Teen Leadership courses should represent the demographics of the school.

- ✓ In academic year 2016-17, the Teen Leadership class generally represented the diversity of the school. The class enrolled a higher percentage of Black students and lower percentage of White students, as well as a higher percentage of students eligible for free and reduced meals. Students at one school were more likely to be male than female. There was no difference in the grade, or English Language proficiency of students in the class compared to the schools as a whole. In fall 2018, the class enrolled a higher percentage of Hispanic students, a higher percentage of English Language Learners, and a lower percentage of special education students than were represented in the demographics of the school.

5. Teen Leadership courses should have between 15 and 25 students, and periods should be 50 to 90 minutes.

- ✓ The schools followed a standard schedule in which each course was taught every day. Teen Leadership was an elective course that was taught during the Related Arts instructional period. Teen Leadership courses were taught every day for at least 45 minutes, depending on the school's bell schedule. Courses also were limited to 15–25 students. Teachers reported that they appreciated having smaller courses, which allowed for building stronger relationships and a safe community.

6. The course should be graded similar to other courses and have tests, required assignments, etc.

- ✓ The course was a graded course and students had assignments, graded speeches, and an end-of-semester portfolio.

7. Because establishing trust among the students and teacher is considered a critical component of the course, the developers do not recommend enrolling students in the course more than two weeks into the semester.

- ✗ During the academic year 2016 - 2017, school placement policies were not aligned with this guideline. During both semesters, teachers reported that students were placed in the course after the two week cutoff date because these students transferred into the school during the middle of the semester. These data were not collected in the 2017-18 academic year.

Classroom Level Guidelines

1. Speeches are required.

- ✓ Teachers implemented the speech requirement. Students reported that the public-speaking component of the Teen Leadership curriculum was a particularly successful part of the course.

2. Chapters 1–4 should be implemented in order. Other chapters can be implemented according to the teacher's discretion and needs of the students.

- ✗ District implementation plans followed recommendations to teach the curriculum in order of the chapters through Chapter 4. Schools planned to implement different versions of the Teen Leadership curriculum during the 2017-18 school year that delved into Chapters 5–9. Foundational Teen Leadership covered Chapters 1 through 4 in depth. Advanced versions of the course (Responsible and Visionary) included a review of Chapters 1–4 before advancing to additional chapters and required Foundational Teen Leadership as a prerequisite. Schools did not implement as planned. See later in this section for details.

Program Exposure

The OnTrack schools created these class structures based on recommendations from the curriculum developers. These recommendations included the amount of time and how often students should participate in the Teen Leadership class in order to receive the proper program exposure.

During academic year 2016-17, some students were exposed to the Teen Leadership class more than once. In the fall 2016 semester, teachers reported that students were placed in their class who had taken the class before. In the spring 2017 semester, principals and teachers reported that they had less students repeating the class than the previous semester. One principal reported that he/she instructed counselors in the spring 2017 semester to not place students in the class who had previously taken the course. However, 34% percent of the students in spring 2017 were still course repeaters.

Principals did not report any struggles with recruiting students to participate in Teen Leadership. At one school, the class was offered to all students. At the other three schools, students either could opt into

the class or school staff place students into the course. Researchers were unable to access student attendance data by semester and therefore were unable to determine the extent to which students attended the class regularly.

Implementation of new courses

During the 2017-18 academic year, the district created two new Teen Leadership courses, Responsible Teen Leadership and Visionary Teen Leadership, to provide opportunities for students who had taken Teen Leadership previously to advance to the later chapters (Table 10). Full implementation of Chapters 1–4 of the curriculum was renamed Foundational Teen Leadership. The district intended for Foundational Teen Leadership to serve as a prerequisite for Responsible Teen Leadership and Visionary Teen Leadership. Responsible Teen Leadership focused on Chapters 5 through 7, and Visionary Teen Leadership focused on Chapters 8 and 9.

Table 10. New Teen Leadership Courses

Course	Curriculum	Prerequisite
Foundational Teen Leadership	Chapters 1 through 4	None
Responsible Teen Leadership	Review of Chapters 1 through 4; Chapters 5 through 7	Foundational Teen Leadership
Visionary Teen Leadership	Review of Chapters 1 through 4; Chapters 8 and 9	Foundational Teen Leadership

In the 2017-18 school year, two of the middle schools offered the new courses to students. However, implementation at one school did not align with district plans (Table 11).

Table 11. New Teen Leadership Course Implementation

School	Fall Semester Plan	Fall Semester Implementation	Spring Semester Plan	Spring Semester Implementation
School 1	Four Foundational classes Two Responsible classes	Course content and structure were implemented as planned.	Four Foundational classes Two Visionary classes	Course content and structure were implemented as planned.
School 2	Two Foundational classes Two Responsible classes Two Visionary classes	Students in Responsible and Visionary received some content beyond Chapters 1 through 4 but not according to the course guide.	Two Foundational classes Two Responsible classes Two Visionary classes	Course content was taught as planned. Students were placed in different courses by grade level. Sixth-graders were enrolled in Foundational, seventh-graders were enrolled in Responsible, and eighth-graders were enrolled in Visionary. Prerequisite guidelines were not followed.

At School 1, a teacher taught the new version of the Teen Leadership course for two sections each semester. In the fall semester, the teacher taught two classes of Responsible Teen Leadership and, in the spring semester, two classes of Visionary Teen Leadership. All students that enrolled in either Responsible or Visionary Teen Leadership had completed Foundational Teen Leadership previously. At School 2, the instructor was new to teaching Teen Leadership in the fall semester and did not implement the new courses as planned but instead taught the Foundational Teen Leadership course with some modifications for the upper grade students. In the spring semester, the new teacher reported teaching all three classes but noted that not all students had the required prerequisite to enter the course. In addition, this teacher explained that the classes were separated by grade level. This does not align with the district guidelines. The school's policy of enrolling only sixth-graders into Foundational Teen Leadership did not allow for seventh- or eighth-graders who were new to the school to participate in that course, limiting the potential for increased dosage. For example, an eighth-grader new to the school would have been placed into the Visionary Teen Leadership course without taking Foundational Teen Leadership.

Student Engagement

The Teen Leadership curriculum aims to "build personal responsibility and leadership skills" through engaging students in various activities that help them understand themselves and their world. Teacher feedback from the survey suggested that teachers were providing students with such opportunities. When asked whether students had opportunities during each chapter to engage in discussions or activities that would lead to the intended outcomes of the Teen Leadership course, teachers reported that they engaged students in such opportunities often (Table 12).

Table 12. Teacher Reported Number of Student Engagement Opportunities, by Chapter

Dimension 1: Students have opportunities to share feelings and perspectives	**Chapter 1**	**Chapter 2**	**Chapter 3**	**Chapter 4**
Fall 2016	5	4.3	4.6	4.4
Spring 2017	5	4.5	4.5	4.5
Fall 2017	5	4.8	4.8	5
Spring 2018	4.8	4.8	4.5	N/A
Dimension 2: Students have opportunities to ask questions and explore emotional needs	Chapter 1	Chapter 2	Chapter 3	Chapter 4
Fall 2016	3.7	4.3	3.7	4
Spring 2017	4.8	4	4.8	4.4
Fall 2017	5	4.8	4.8	5
Spring 2018	4.5	4.8	4.3	N/A
Dimension 3: Students have opportunities to apply what they learn to their own lives	Chapter 1	Chapter 2	Chapter 3	Chapter 4
Fall 2016	3.3	3	3.3	4.3
Spring 2017	4.3	3.8	4.3	4.3
Fall 2017	4.7	4.3	4.8	4.5
Spring 2018	3.8	4.3	4.3	N/A

Scale: Very often = 5; Often = 4; Occasionally = 3; Not often = 2; Never = 1.

Student feedback aligned with these findings. Students at three of the schools that provided end-of-year course evaluation forms reported that teachers provided opportunities during the course periods for them to talk about topics that were meaningful to them. On average across all schools, students agreed that their teacher gave students time to discuss issues that were important to the student and disagreed with the statement that the teacher talked too much about things that were important to the teacher but not important to students.

RQ15. *What factors in the school context explained why implementation of Teen Leadership did or did not follow the intended design?*

One factor that did not align to the Teen Leadership guidelines was the schools' placement policy. The developers recommend that students not enroll in the course two weeks after the semester starts specifically because the success of the course is based on strong relationships between the teacher and students. During both semesters, teachers reported students being placed in the class after the recommended cutoff timeframe because these students transferred into the school during the middle of the semester. Schools also continued to place students in the course who had taken the course a previous semester. This happened in the 2015-2016 school year as well as the first semester of the 2016-17 school year. This posed challenges because the teachers had to develop new curriculum or activities for those students on the spot. Lack of communication between the enrollment staff and the administration were named as the reason for this issue. However, according to teachers, this problem was resolved to some extent in the second semester of the 2016-17 school year.

RQ16. *To what extent did teachers implement the Teen Leadership course as intended? Which aspects of the design were modified at each school, if any? Why were those aspects modified?*

Teachers reported following the lessons and structure of the curriculum and making only minor changes to make the existing curriculum more relevant and engaging for students. Overall, teachers made fewer changes to the curriculum in the spring semesters than in the fall semesters (Table 13). Teachers reported not making more changes in the spring than in the fall because many of the changes they made had worked well. Teachers also reported that the chapters generally resonated with students, which may be another reason teachers did not make major changes to the curriculum (Table 14).

Both teachers who taught the new Responsible Teen Leadership course indicated that Chapter 8 was not culturally sensitive because it assumed that students had a nuclear family when discussing the concept of family dynamics, and not all students in their classes had this "ideal" family. Teachers suggested that drastic changes be made to this chapter. One teacher recommended that the chapter be removed completely from the course because students did not want to talk about the concepts in the chapter. This teacher had to "pull back" on much of the content when teaching this chapter.

Table 13. Average Changes Each Teacher Made to Curriculum

	Chapter 1	Chapter 2	Chapter 3	Chapter 4
Fall 2016	2	2.6	2.2	1.7
Spring 2017	1.4	2	2	2.3
Fall 2017	2	2.4	2.1	2.5
Spring 2018	1.9	1.7	1.9	N/A

Scale: A great deal = 4; Some = 3; A little = 2; No change = 1.

Table 14. Teachers' Perceptions of Whether Different Chapters Resonated with Students

My students resonated with this chapter…	**Chapter 1**	**Chapter 2**	**Chapter 3**	**Chapter 4**
Fall 2016	3.9	4.1	4	4.2
Spring 2017	4.6	4.5	4.7	3.8
Fall 2017	4.3	4.8	4.6	4.3
Spring 2018	4	4.7	4.4	N/A

Scale: Strongly agree = 5; Agree = 4; Neither agree nor disagree = 3; Disagree = 2; Strongly disagree = 1.

Making Curriculum More Culturally Relevant

When teachers did make changes to the chapter, it was because teachers sensed that students were not engaged or connecting with an activity because the examples in the curriculum did not reflect the students' real life experiences. Another teacher commented on the lack of diversity in the examples used in the Flippen curriculum, "There is a need for more diversity in the clips included in the curriculum- way too many white people. The clips were too different from the students lived realities".

Teachers are substituting the examples in the curriculum with ones that reflect the culture and realities of middle school students of color. For example, the curriculum asks teachers to engage students in role plays but one teacher did not think the topics of the role were relatable. This teacher explained, "Our students have a very different home lives from other schools who have a more favorable home life so if students were going to get up and do a role play I wanted to make sure they were things that related to their home life. Their experiences are different so I tried to remain sensitive to that." According to this teacher, the speech topics could also be connected to real-life situations in ways that the current topics do not, especially for middle school students. This teacher explained that students would be able to talk about their goals before high school but that there would be additional ways to connect this for students who had not thought about goals.

The curriculum also asks teachers to use videos to demonstrate the lessons. Two teachers reported making changes in the first semester to the reframing lesson in Chapter 3 because "they [the students] had a hard time really understanding reframing" and "afterwards I noticed a disconnect with the kids." Both of these teachers found alternative material that they felt resonated better with their students than the suggested Nick Vujicic video, which was a video of a 40 year old man born without arms and legs who focused on the positives and worked to make a difference in the world. One teacher explained that the students did not identify with the experience of a much older person and instead found two TED talks by younger individuals. Not only were the ages more similar, the teacher thought the topics in the talks resonated more with students' real life challenges.

One teacher also drew connections for students to the lessons and current technology. For example, one minor change a teacher made in Chapter 4 was rather than having students listen to a sad story read out loud, the teacher showed sad commercials to students. The teacher thought this would be more engaging for students. Similarly, instead of having students draw their own faces, this teacher also had students take selfies and alter their photo image, make the pictures into masks, and then alter those. The purpose of this assignment was to help students understand the different masks they wear when they are with different groups of people. This lesson was part of getting to students to understand what image they project to others.

Teachers Changed Pacing

Other changes were made to chapters in regards to pacing, or increasing the amount of time teachers spent on certain lessons in order to better engage students. Two teachers explained that they had to increase the time spent on certain lessons because students did not have prior knowledge or experience with the concept presented in the curriculum. For example, one teacher expressed that they had to take additional time on the concept of reframing, turning something negative into something positive. Two teachers also expressed that they took additional time on certain activities because they reported students deeply engaged in those activities and teachers considered those activities opportunities for students to grow. For example, one teacher spent additional time on the community service activities at the beginning of the semester.

Enhancing Real World Applicability with Additional Activities

Teachers are adding additional activities to the curriculum in order to generate real world applicability. In particular, teachers are taking students outside of the school in order to generate a greater awareness of themselves and the world to ensure the lessons have meaning to students. Teachers reported that students do not have many opportunities to explore the world outside of their immediate neighborhood and see the possibilities that are available to them outside of middle school. Teachers considered these activities critical to achieving the aims of the Teen Leadership program because many of the lessons taught in the Teen Leadership class, such as setting goals, may not be ones that students have prior knowledge or experience. One activity the teachers added was taking their students to watch court proceedings to reinforce the ideas about personal responsibility taught in the course. Both the teachers that participated and the school principals thought this was a powerful experience that they would like to continue. Two other teachers also took students on a college tour of a local university. One principal recalled that students expressed how much they learned from the university tour and now want to attend the university. Students in middle school do not have opportunities to visit local colleges unless they are part of an advanced program. One teacher expressed her rationale for why these experiences were important, “The more we can do things outside of the classroom, the more real world it will be to these kids.”

In addition to the out of school experiences, teachers report that the community service activities have potential for students to also apply their learning. For example, one teacher had students volunteer at a Children’s Hospital and also serve as tutors to 6th grade students. Another teachers’ classes created a school-wide campaign that acknowledged positive behaviors. Some eighth grade students also went to the Special Olympics at a local university and partnered with the special needs class at the school. All but one of the teachers implemented the community service portion of the class highlighted in Chapter 4 of the curriculum and teachers highlighted the impact these service projects had on their students. One principal commented that these project allow for students to think outside of themselves and start to give back to their community. (We elaborate more on the impact in Chapter 3). The teacher who did not implement the community service portion of the class reported that students at her school engage in community service through other classes and therefore did not want to repeat those experiences in her class, but rather spend time on other activities.

Based on feedback from teachers during Year 2 of implementation of the Teen Leadership curriculum, the district worked with teachers during the summer before the 2017-18 school year to create a new rubric to assess students’ performance on the required speeches. Teachers’ feedback indicated that the existing Flippen Group rubric did not sufficiently assess student growth nor allow for teachers to identify

and provide students feedback on the specific areas for growth. Teachers needed a rubric with more detailed skills and attributes and more guidance on how to grade students. Central office staff developed a new rubric with input from teachers. When implementing this new tool, teachers reported that the new speech rubric worked well.

Implementation of end-of-year portfolios to encourage student reflection

Portfolios were not outlined in the original Flippen curriculum but are a pedagogical practice that district administrators and teachers thought would be useful as a way to track and assess student growth in the Teen Leadership course. District administrators believed that both the instructor and the student would be able to reflect on the growth over the course of the semester. They also intended the portfolios to be an artifact that students could take with them after the course ended.

Teachers reported that the portfolios were a critical way to assess student growth because students are asked to include written reflections on activities as well as comparisons of beginning- and end-of-semester knowledge and skills.

One teacher also mentioned that portfolios were important because they allowed students to share their reflections in a nonverbal way. Because students may feel uncomfortable sharing personal thoughts out loud in course, either in small- or large-group discussions, written reflections in portfolios allow teachers to understand what students are learning. This teacher concluded, "[Students'] reflections in the portfolio tell me and show me how they are changing and growing as a person even if they aren't as articulate one-on-one."

RQ17. *To what extent did the certification training provide teachers with the necessary skills and knowledge they needed to implement the program? What additional knowledge or skills did teachers require, if any? To what extent were teachers able to find support to fill in knowledge or skill gaps?*

Overall, the teachers reported that teaching Teen Leadership required a different approach to instruction than core academic classes and therefore called for a specific skill set. Teachers and principals explained in interviews that the class requires teachers to create relationships with students. Principals reported selecting teachers that they thought would have the skills and personality needed to connect with students and teach this course. For example, one teacher was a former guidance counselor and the principal explained that she thought this teacher would be able to engage students more deeply in conversations about their personal lives because of this background. One teacher, in interviews, explained the difference between teaching Teen Leadership and other courses:

> *People have asked me if it [teaching* Teen Leadership*] is easier or harder and I say it is a different kind of hard. You have to be personable with the kids and allow them to understand that even me, as a teacher, works on these things. Teaching about how to reframe your circumstances, be an optimist and persevere. Understanding that it is a constant struggle and you will walk away from the class not without problems but better know how to deal with them.*

On average, teachers reported having the resources to implement each of the chapters (Table 15). In interviews, teachers mentioned that resources for field trips and outside activities seemed available but that they would appreciate additional resources to make those experiences available to all students, not just one grade level or course period.

Teachers reported a few challenges with the course materials during the fall semester. For two teachers, lack of availability of Chromebooks posed a challenge for students to complete their portfolios (see the implementation guide also). One teacher also mentioned that many of the web links in the course leader guide did not work. This teacher did not indicate whether this issue was resolved in the spring semester.

Table 15. Teachers' Perceptions about Resources to Teach the Course

	I have the resources I need to teach the chapter	
	Fall 2017	Spring 2018
Chapter 1	4	4.3
Chapter 2	3.5	4.5
Chapter 3	3.5	3.5
Chapter 4	4	N/A

Scale: Strongly agree = 5; Agree = 4; Neither agree nor disagree = 3; Disagree = 2; Strongly disagree = 1.

On average, teachers reported feeling supported and prepared to teach the Foundational Teen Leadership course. Teachers reported that the district office staff were critical for teachers feeling supported. The district office facilitated two collaboration sessions for teachers during the school year. Teachers considered the collaboration opportunities coordinated by the district to be critical because they otherwise do not have opportunities to collaborate with teachers at their school given the unique nature of the course. One teacher mentioned how this support seemed to have increased: "I feel like we've had more communication as teachers—meeting in early summer, made a calendar, and did it again last week. That is a very helpful thing to do."

In addition, teachers reported that the district administrator in charge of monitoring and facilitating implementation provided individual support when needed. One teacher commented, "If I ever needed anything or had a question, [district administrator] would always answer or connect us with a teacher who could help." However, one teacher reported needing more support from the administrator at the beginning of the year.

All teachers mentioned that the collaboration sessions facilitated by the central office were critical to implementation because teachers were able to plan together and get ideas for implementation. This venue filled teachers' needs for a deeper understanding of how to implement Teen Leadership in their classrooms. For example, one teacher explained how she obtained numerous ideas from another teacher that she used when implementing the course this school year.

Teachers reported that opportunities to share ideas and strategies could increase. First, they suggested that meeting more often could facilitate increased sharing; one teacher requested that they meet quarterly. Second, teachers suggested that the use of the online classroom created by the district administrator to share resources could improve. Because the face-to-face meetings are very productive, teachers did not recommend that the online classroom become a substitute for the in-person meetings. However, they suggested that the classroom become a repository for some of the strategies discussed during the face-to-face collaboration sessions. More encouragement to upload resources and

documents could also be beneficial. Finally, teachers sought additional opportunities to learn from each other, such as observing other Teen Leadership teachers.

C. Impact on Students' Skills and Development

RQ18. *What positive youth development behaviors did students attribute to the Teen Leadership course overall?*

RTI explored the impact of Teen Leadership on students on the desired exploratory outcomes elaborated in the Teen Leadership Implementation Logic Model: (a) students develop a healthy self-concept, (b) students develop healthy relationships, (c) students develop a sense of personal responsibility, (d) students develop social competence, and (e) students build public-speaking and communication skills. Data sources include analysis of student pre- and post- surveys, student course leader evaluations, student focus groups, and teacher and principal interviews. Student survey questions on self-esteem, diligence and reliability, and initiative taking were removed from the 2017-18 survey. Therefore, not all outcomes included in the logic model were assessed using the student survey.

Public-Speaking Skills

In 2016-17, students who participated in Teen Leadership saw statistically significant increases from pre-test to post-test in their ability to feel relaxed when giving a speech. Students in the spring semester also saw statistically significant increases from pre-test to post-test in the area of self-confidence. Students mentioned growth in these areas in the student focus groups and portfolio reflections as well. Almost half of the students from data collected during focus groups noted learning specific skills such as speaking loudly and making eye contact, which was suggested in the grading rubric for speech 4. In regards to the skill of messaging, researchers considered "messaging" as those skills relating to how students conveyed their ideas. This included using speeches to "change people's minds about bad stuff into good stuff" and "let people know who are" in addition to using public speaking as a way to show respect and "perform social skills." Other students discussed feeling more confident and developing tools to overcome nervousness, like taking deep breaths.

In analysis of the 2017-18 student survey, RTI found that students who took the Teen Leadership course for the first time demonstrated the most improvement in decreasing their public speaking apprehension than students who repeated the course. However, feedback from student focus groups noted growth on specific speech-giving skills, such as having good posture, looking at people, and overcoming shyness or nervousness. In analysis of the student survey, RTI found that students who took the Foundational Teen Leadership course reported a statistically significant decrease in their public speaking apprehension. However, students who completed the Responsible or Visionary did not report a statistically significant decrease public speaking apprehension.

Developing Healthy Relationships

In both the student focus groups and survey feedback, students noted that their relationships with their classmates had improved. For example, one student wrote, "I feel like I have a closer bond to my classmates now." A few also noted improved relationships with their family members. For example, another student wrote, "My relationship with my mom has improved with the skills I was taught." Some

students credited the Teen Leadership course with improving their relationships with peers and family. In the student survey, students reported that the Teen Leadership course provided "a lot" of help to improve relationships with their family (50%) and friends (41%). In addition, some students discussed more general feelings like "be more respectful" and "nice, help me open up to people" which indicates the absorption of knowledge related to social skill development that is necessary for maintaining healthy relationships. Teachers also noted a positive improvement in students' shyness and in their ability to come together as a team over the course of the semester.

Across the two years of implementation, data were mixed about whether students were developing closer relationships with their peers and others outside of their school. In 2016-17, two out of the six survey items examining changes in students' relationships with their peers reported statically significant increases from pre-test to post-test: "I encourage my friends to be the best they can be" and "I stand up for my friends if other kids are causing trouble for them." However, the student post-surveys in 2017-18 did not show any positive changes in the construct of positive friendships with peers. This makes sense for Foundational students because those students did not complete Chapter 7, which focuses on "Interactions with Others", during the Foundational course. Chapter 7 is taught during Responsible Teen Leadership. However, survey results indicated a negative change for Responsible Teen Leadership students on one of the survey items: "I am there when my friends need me." These findings suggest that: (a) friendship behaviors are the toughest of the behaviors listed to change, and/or: (b) students overrated their ability on the pre-test and as a result of taking the course learned that they could improve their friendship behaviors. Therefore, additional support is needed to develop friendship and relationship skills across all courses.

Developing Social Competence and Sense of Personal Responsibility

Across both years of implementation, students in Teen Leadership showed a statistically significant increase in at least one item measuring social competence. Both teacher and student anecdotal feedback across all courses suggest a few areas of growth for students taking all levels of the course. In particular, teachers and students noted that students improved their ability to handle anger as a result of the course. Eighty percent of students who took the spring survey indicated that what they learned in the Teen Leadership course helped them handle situations that angered them. Students and teachers also noted personal growth and more self-awareness as a result of participating in Teen Leadership. Students reported that they were better able to communicate their feelings and open up to others.

Students and teachers also reported development of leadership skills. As they have in previous years, teachers reported that, through the Teen Leadership course, students had opportunities to develop leadership skills by engaging in hands-on activities at their school. In addition, teachers noted that some students from the course have begun taking on leadership roles in the school. For example, two Teen Leadership students wanted to hold a school dance and approached the principal with a detailed proposal outlining plans to hold the event. Other students are leading other activities at the school. The principal at that school showed a deep awareness of the Teen Leadership course and provided support to ensure the teacher had resources to implement these activities.

RQ19. W*hat aspects of the program did students prefer over others?*

Across both academic years of the implementation study, students in Teen Leadership expressed positive feelings about the class. Teen Leadership overwhelmingly was students' favorite class across both years of implementation (see Table 16 below). Students from three schools rated Teen Leadership

as their favorite class out of all classes in the student survey. Across the two semesters an average of 87% of the students who completed the student survey felt like all students should take the Teen Leadership class. Students seemed to connect with the application of Teen Leadership material to their lives outside of school. According to the student survey, an average of 91% of students across the two semesters felt like the material learned was meaningful to them outside of school. As measured in the student course evaluation sheets, students reported that they considered the course content helpful and that they generally were enjoying the class getting something out of it.

Table 16. Student Ratings of Favorite Classes

	Academic Year 2016-17		Academic Year 2017-18		Total	
Teen Leadership	222	56.6%	234	58.1%	456	57.4%
Math	119	30.4%	118	29.3%	237	29.8%
PE/Gym	99	25.3%	96	23.8%	195	24.5%
Social Studies	82	20.9%	83	20.6%	165	20.8%
Science	76	19.4%	65	16.1%	141	17.7%
English/Language Arts	41	10.4%	47	11.7%	88	11.1%
Band/Chorus	29	7.4%	47	11.7%	76	9.6%
Art	15	3.8%	31	7.7%	46	5.8%
Other	13	3.3%	23	5.7%	36	4.5%
Technology	29	7.4%	17	4.2%	46	5.8%
None of the above	7	1.8%	6	1.5%	13	1.6%
Student N	392		403		795	

Note: Students selected up to two of their favorite classes. Percentages are out of total number of students, not responses.

Across both years of implementation, students reported that their favorite parts of Teen Leadership were applying what they learned to real life situations and building friendships with classmates, as shown in Table 17. Students also appreciated being able to learn about themselves and their classmates. In student focus groups, students discussed the smaller class size, opportunities for social learning, and the applicability of class material to their life and their future among other aspects of this class that they particularly enjoy.

Table 17. Student Ratings of Favorite Aspects of the Teen Leadership Course

	Academic Year 2016-17		Academic Year 2017-18		Total	
Building relationships with my classmates	158	39.8%	142	35.4%	300	37.8%
Applying what I learned to real-life situations	160	40.3%	129	32.2%	289	36.4%
Giving speeches	134	33.8%	101	25.1%	235	29.6%
Going to new places outside of school	127	32.0%	97	24.2%	224	28.2%
Listening to speakers from outside of school	102	25.7%	48	12.0%	150	18.9%
Writing in my journal	61	15.4%	50	12.5%	111	14.0%
None	48	12.1%	43	10.7%	91	11.5%
Participating in community service projects	---	---	59	14.6%	59	7.4%
Other	23	5.8%	15	3.7%	38	4.8%
Student N	392		401		795	

Note: Students selected up to two of their favorite classes. Percentages are out of total number of students, not responses.
Note: The category for "participating in community service projects" did not appear on the post-surveys in academic year 216-17.

Students' Overall Perceptions of the Class

Students' reported appreciating the different structure and content of the Teen Leadership class because they did not have similar opportunities in other classes. Students reported things like this class "feels like home" and "I learn new things about myself each and every day in this class." These responses confirmed teachers' and principals' perceptions that the Teen Leadership class was filling an important gap in school curriculum and school culture. Multiple teachers reported that the students commented how the class felt like a "family" or a team where students could share their stories. One teacher elaborated, "This course gives the students more of a voice" and that her students, through the course of the semester, developed the trust with the teacher to be able open up to her. Two teachers explained that students might not have had opportunities to share their experiences in other classes or in their home lives. One teacher explained, "I try not to let them go too far, but if they had a bad experience, they feel a safe and comfort level to vent about how they are feeling. I don't think these kids get that as much as they should."

Two teachers explained how students from the fall 2017 semester continued to return to their class during the spring semester to connect with the teacher and/or see what the students were doing. For example, one teacher reported that even though a student was not in her class during the spring, this student continued to stand in line to shake the teacher's hand. Teachers considered this not only a testament to the unique class culture that was created during Teen Leadership, but also a testament to the impact that the class had on the students. Another teacher explained how students continued to talk about content that they learned in class the following semester.

D. Impact on school-wide culture and practice

RQ20. *To what extent did this course affect changes in school-wide culture and/or practice?*

Although teachers reported seeing changes in individual students' behavior, school-wide changes in behavior still were not apparent. Teachers reported that it may be difficult to see immediate changes in many students' behavior and that it may take time for these changes to manifest, which may delay seeing impact on students. Teachers and principals still considered the course critical because it approaches relationships and students' social-emotional needs in a systematic way and has great potential to impact students.

Several reasons help explain why it may take a longer time-period for changes in school-wide culture to manifest. First, a limited number of students in the entire school enrolled in the semester-long Teen Leadership course. Each Teen Leadership course enrolled only approximately 15–20 students, while a total of 550–650 students are enrolled at each school every year. Two schools implemented the new, higher level Teen Leadership courses to increase students' exposure to the curriculum beyond one semester; however, schools have not ensured that students have completed the required prerequisite before enrolling in these upper level courses. Teachers and principals still considered it "essential" that this class be sustained because of the potential they see to change students and school-wide culture. While teachers and principals did not perceive any immediate impact on school-wide culture or practices, they suggested that ongoing implementation of Teen Leadership may fulfill that potential in the future.

Further, within the last three years, there have been three new Teen Leadership teachers across the four schools. Two course leaders teaching the course in the 2017-18 school year did not plan to return in academic year 2018-19. In addition, two new principals and one new assistant principal began working at Teen Leadership schools in the 2017-18 school year. Because new teachers reported that they had a learning curve the first semester and/or year teaching Teen Leadership, continued turnover may influence the level of impact.

Lastly, schools have not created a formal plan that outlines how to grow Teen Leadership to impact school-wide culture. Schools may not want to rely solely on Teen Leadership to create school-wide changes in culture. Just as schools are only witnessing some changes in a students who take the course and not behavior changes across the entire school, schools may be more likely to see school-wide change if more teachers know how to engage students using the practices from the Teen Leadership course across the school.

Potential for greater impact

Although teachers and principals did not perceive any immediate impact on school-wide culture or practices, they suggest that ongoing implementation of Teen Leadership may fulfill that potential in the future. They posited that, if schools continue to implement the three versions of Teen Leadership course and all students take the course during middle school, then schools may realize school-wide impact in student behaviors. They also recognized that scaling of practices across the school may enhance potential of Teen Leadership to make a school-wide impact. Since the Teen Leadership course accounts for a limited amount of time in students' overall experience, implementing aspects of Teen Leadership in other courses (including teachers' pedagogical practices) may result in changes in school-wide impact.

All principals recognized the potential to expand aspects of the course across the school, such as implementing a school-wide project that incorporates the Teen Leadership course or implementing a common structure for all courses mirroring the structures in the course. They had various suggestions to make this happen. One principal recognized that there are no structures to share Teen Leadership with other teachers, but suggested that some sort of professional development session for staff at the beginning of the year could expand the practices. The principal also suggested that the Teen Leadership teacher could share practices with other teachers during common planning times throughout the year. Another principal suggested that the Teen Leadership principals should have structured discussions, facilitated by the district, to discuss how to further enhance this course.

IV. Statistical Analysis of Impacts

A. Unit of Assignment and Analysis

The unit of assignment for this study was the individual student. Some students were identified and selected for participation in the Teen Leadership course intervention through each OnTrack Greenville school's guidance department. Other students self-selected into the course. Researchers adjusted their analysis on the effects of the Teen Leadership course to match the unit of assignment by using propensity matching at the student-level. For each student participating in the Teen Leadership course, up to five "match" students were selected from each comparison group based on several covariates and background conditions. Thus, comparison and treatment groups were comprised of individual matches, and the unit of analysis reached the student-level.

B. Analysis Approach

The analysis described here followed a Treatment on Treated (TOT) framework, as completion of the Teen Leadership class defines the treatment. It compared those who completed the Teen Leadership class to students in the within-school, within-district, and state comparison groups. This study examined whether students who completed the Teen Leadership class exhibited improved behavior compared students who did not participate in the program. Evaluators also examined the relationship between the Teen Leadership class and student achievement and attendance. Differences between the treatment and the within-school comparison group were estimated separately from the treatment and the external comparison groups.

C. Formation of Matched Groups

In order for matching techniques to approximate a random experiment, important assumptions have to be met. The first was strongly ignorable treatment assignment. This means that conditional on observed covariates (*X*) the treatment (*W*) was independent of the outcomes (Y_0, Y_1), or $(Y_0, Y_1) \perp W|X$ (Rosenbaum and Rubin 1983; Guo and Fraser 2014, 209). For this assumption to hold, the selection process had to be derived from covariates used in the model. Previous research indicates that results from matching designs only reflect randomized control trial results when the covariates in the propensity score model accurately predict treatment assignment (Bifulco, 2012; Cook et al., 2008; Fortson et al., 2012). Matching methods work the best when pretreatment outcome measures are used in estimating the propensity score. For this analysis, the propensity score (*P(X)*) was equivalent to:

$$P(X) = \Pr(T_i = 1|\boldsymbol{X}_i),$$

where T_i = 1 if the student, *i,* completes the Teen Leadership class and $\boldsymbol{X}_i$ is a vector of covariates that predict participation in Teen Leadership. Evaluators selected the covariates that best predicted treatment assignment and imbalance between treatment and control groups. Given the importance of pretreatment outcome measures, attendance (percentage of days attended), behavior (in school and out of school suspensions), and academic performance (math, ELA, social studies, and science test

scores) from the previous academic year were used.[14] In addition to these factors, the propensity score model included students' race, gender, English-language learner status, disability status, low-income indicator, and grade. Previous research indicates that these variables are related to student attainment and student achievement (e.g., Goldschmidt & Wang, 1999; Laird, Kienzi, DeBell, & Chapman, 2007; Reardon & Robinson, 2007; Reschly & Christenson, 2006; Rumberger & Lim, 2008; Stetser & Stillwell, 2014). Therefore, these factors were included in the propensity model, as they could have been predictive of the likelihood of students being identified by the EWRS, the likelihood of completing the Teen Leadership class, and the outcomes of interest.

Researchers estimated a logistic regression using these covariates to produce a predicted probability of receiving treatment for each student separately for the within-school comparison group and the external comparison groups. The model used by evaluators was:

$$\Pr(T_i = 1|X) = \exp(\beta \boldsymbol{X}_i)/(1 + \exp(\beta \boldsymbol{X}_i)),$$

where $\boldsymbol{X}_i$ is a vector of covariates discussed above.

After creating propensity scores, treatment students were matched to comparison students. Like the estimation of the propensity scores, the matching between treatment and within-school comparison students and between treatment and external comparison students occurred independently. Evaluators used nearest neighbor matching, which is a form of greedy matching. Treatment students were matched to the comparison students with the closest absolute propensity score, as long as the distance between the propensity scores fell within a caliper of $.25\sigma_p$, where σ_p is the standard deviation of the propensity scores (Guo and Fraser 2014, 147). This was done to ensure good matches between treatment and comparison students.

Ideally, each Teen Leadership treatment student was matched to five comparison students to boost sample size. Matching was done with replacement. However, there were instances in which treatment students could not be matched. First, if a student had missing data for any of the variables included in the first stage regression, the student was excluded from the analysis. Second, Teen Leadership students who did not have any potential matches within the caliper described above were not included in the analyses presented in this report, as researchers were not able to identify suitable matches.

Another assumption of the matching methods is that there is proper overlap in the propensity scores between the treatment and control group (Rosenbaum & Rubin, 1983; Stuart & Rubin, 2008). In order to ensure that this assumption is met, evaluators performed bivariate tests, such as a *t*-tests or chi-square tests, before and after matching. If these tests revealed a significant level of imbalance or a lack of overlap, then evaluators, following Rosenbaum and Rubin (1984, 1985), re-estimated the propensity model using higher-order polynomial terms and interactions between the covariates. When considering the balance of the matches, researchers examined the statistical significance of the bivariate differences in the post-matching covariates between the treatment and control groups, the standardized differences between the two groups, and the variance ratio. The goal was to have no statistically significant differences, standardized mean differences below 0.1, and variance ratios near 1.0 (Steiner & Cook, 2013).

[14] When available, test scores were from both MAP and SC READY exams were used. Collinearity between predictors is generally not a threat when estimating the propensity score (Stuart, 2010).

The pre-matching differences between Teen Leadership students and the comparison students are presented below, followed by data on the effectiveness of the matching procedure.

1. Characteristics of Teen Leadership Students: Pre-Matching

This study examines students who completed the Teen Leadership class in fall semester 2016 and fall semester 2017. Table 18 below examines the demographic characteristics of the 329 students who completed the Teen Leadership class in fall 2016, as well as the overall student population of treatment, district, and state schools. These data include all fall semester non-Teen Leadership students in the comparison group populations, allowing for a comparison of demographic characteristics before the matching process. The standardized mean differences between the Teen Leadership students and population of each comparison group are presented in parentheses below the percentages.

Table 18. Pre-Matching Demographic Characteristics AY 2016-17

	Fall 2016 Teen Leadership Participants (N = 329)	Student Population: Treatment Schools (N = 1,295)	Student Population: District Schools (N = 3,346)	Student Population: State Schools (N = 45,010)
Black	32.6%	29.2% (-0.07)	28.8% (-0.08)	**48.8%***** (0.34)
Hispanic	35.1%	**42.4%*** **(0.15)**	**16.3%***** (-0.44)	**9.6%***** (-0.66)
White	26.5%	22.5% (-0.09)	**48.3%***** (0.46)	**37.3%***** (0.24)
Other Race	5.8%	5.9% (0.01)	6.6% (0.03)	4.3% (-0.06)
Free/Reduced Meals	78.1%	76.3% (-0.04)	**54.0%***** (-0.53)	**74.9%**** (-0.24)
Female	47.2%	46.4% (-0.02)	47.7% (0.01)	48.6% (0.03)
Special Education	23.1%	**18.4%†** (-0.12)	**13.1%***** (-0.26)	**15.1%**** (-0.14)
ESL	25.9%	**34.4%**** (0.19)	**11.8%***** (-0.37)	**6.6%***** (-0.53)
6th grade	35.9%	36.7% (0.02)	35.0% (-0.02)	36.8% (0.01)
7th grade	35.6%	33.1% (-0.05)	33.6% (-0.04)	31.5% (-0.07)
8th grade	28.6%	30.1% (0.34)	31.4% (0.06)	31.7% (0.06)

† $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

*Note: Standardized mean differences are reported in parentheses. Significance tests are in comparison to the Teen Leadership group.

As shown in Table 18, 33% of Teen Leadership students were Black, 35% were Hispanic, 27% were White, and 6% were some other race in academic year 2016-17. Teen Leadership students were more

likely to be Hispanic than students in the district schools ($p < 0.001$) and state schools ($p < 0.001$), and less likely to be Hispanic than students in the treatment schools ($p < 0.05$). In addition, Teen Leadership students were less likely to be White than students in district schools ($p < 0.001$) and state schools ($p < 0.001$). Over 75% of both the Teen Leadership students and the treatment school students were low-income students, as measured by free and reduced price meals, while only 54% of students in the district schools were low-income ($p < 0.001$). More Teen Leadership students were designated as special education than the general student population of treatment schools ($p < 0.1$), district schools, ($p < 0.001$), and state schools ($p < 0.001$). Teen Leadership students were less likely to be designated as ESL than students in treatment schools ($p < 0.01$), but more likely to be ESL than students in district schools ($p < 0.001$) and state schools ($p < 0.001$).

Table 19. Pre-Matching Demographic Characteristics AY 2017-18

	Fall 2017 Teen Leadership Participants (n = 184)	Student Population: Treatment Schools (n = 1,412)	Student Population: District Schools (n = 3,335)
Black	33.2%	28.3% (0.10)	28.7% (0.10)
Hispanic	32.6%	**46.2%***** (0.28)	**16.7%***** **(0.37)**
White	27.7%	**19.5%***** **(0.19)**	**47.3%***** **(0.41)**
Other Race	6.5%	5.9% (0.02)	7.3% (0.03)
Free/Reduced Meals	83.7%	81.8% (0.05)	**57.5%***** **(0.60)**
Female	46.7%	46.6% (0.00)	47.5% (0.02)
Special Education	15.2%	15.3% (0.00)	**10.1%**** **(0.15)**
ESL	20.1%	**33.9%***** **(0.31)**	**9.9%***** **(0.29)**
6th grade	56.8%	**31.8%***** **(0.52)**	**34.0%***** **(0.47)**
7th grade	20.3%	**32.9%***** **(0.29)**	**32.3%***** **(0.28)**
8th grade	20.8%	**32.7%***** **(0.27)**	**31.7%**** **(0.25)**

† $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

*Note: Standardized mean differences are reported in parentheses. Significance tests are in comparison to the Teen Leadership group.

Table 19 displays the pre-matching demographic characteristics for academic year 2017-18. In general, the same pre-matching demographic differences between treatment students and comparison group populations that existed in academic year 2016-17 persisted into academic year 2017-18. In addition to these differences, Teen Leadership students were more likely to be White than the general student population at treatment schools ($p < 0.001$). In academic year 2017-18, Teen Leadership students and

treatment school students had a very similar portion of students designated as special education. Lastly, there were differences in pre-matching grade level between treatment and comparison students at both treatment and district schools. Since this evaluation only examines the impact of what the district now calls Foundational Teen Leadership, these grade level differences were expected, as 6th grade students only could take Foundational Teen Leadership in the fall semester.

Researchers used prior year academic outcomes in the matching process and as covariates in regression models; therefore, it is important to examine the pre-matching prior year academic outcomes of treatment students and comparison school populations. Table 20 presents a selection of the academic year 2016-17 pre-matching outcomes for Teen Leadership students and comparison group populations. Fall 2016 Teen Leadership students had 2015-16 behavior, attendance, and course performance outcomes that were very similar to students attending treatment and state schools. The only exception is that more Teen Leadership students had received any in-school suspension than students at treatment schools ($p < 0.10$). On the other hand, Teen Leadership students' prior year behavior, attendance, and course performance outcomes were significantly different from the overall student population of district schools. Teen Leadership students were more likely to have had any behavioral referral ($p < 0.001$), any in-school suspension ($p < 0.001$), and any out-of-school suspension ($p < 0.001$) than students attending district schools. Teen Leadership students also had lower average MAP math and reading percentiles than students attending district schools ($p < 0.001$). Lastly, Teen Leadership students had a lower average daily attendance ($p < 0.001$) and were more often chronically absent than students attending district schools ($p < 0.001$).

Table 20. Pre-Matching Prior Year Academic Outcomes AY 2016-17

	Fall 2016 Teen Leadership Participants (n = 324)	Student Population: Treatment Schools (n = 1,267)	Student Population: District Schools (n = 3,302)	Student Population: State Schools (n = 42,630)
Any Behavioral Referral	38.5%	39.7% (0.02)	**27.8%*****	38.3% (0.07)
Any ISS	19.1%	**15.6%†** (0.02)	**13.1%***** (0.02)	---
Any OSS	17.1%	16.4% (0.02)	**10.8%***** (0.02)	---
MAP-Math Fall 2015	34.9th	35.0th (1.31)	**50.1th***** (1.30)	---
MAP-Reading Fall 2015	30.8th	32.1th (1.24)	**47.1th***** (1.25)	---
Average Daily Attendance	95.6%	95.6% (0.24)	**96.5%***** (0.17)	95.6% (-0.04)
Chronic Absenteeism	9.0%	9.0% (0.01)	**5.0%***** (0.01)	11.0% (0.05)

† $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

*Note: Standardized mean differences are reported in parentheses. Significance tests are in comparison to the Teen Leadership group.

The prior year academic outcomes for academic year 2017-18 analyses appear in Table 21. As shown below, Fall 2017 Teen Leadership students had prior year outcomes that were similar to those of the

student population at treatment schools. Teen Leadership students did have lower scores on the SC READY math assessment ($p < 0.001$) and ELA assessment ($p < 0.001$) than students at treatment schools. When compared to the student population at district schools, Fall 2017 Teen Leadership students were more likely to have had any behavioral referral ($p < 0.05$) and had lower scores on the SC READY math assessment ($p < 0.001$) and ELA assessment ($p < 0.001$).

Table 21. Pre-Matching Prior Year Academic Outcomes AY 2017-18

	Fall 2017 Teen Leadership Participants (n = 184)	Student Population: Treatment Schools (n = 1,412)	Student Population: District Schools (n = 3,335)
Any Behavioral Referral	35.4%	36.4% (0.02)	**28.5%*** (0.15)
Any ISS	15.6%	12.3% (0.09)	14.2% (0.04)
Any OSS	12.5%	14.8% (0.07)	11.4% (0.04)
SC READY – Math	1601	**1625***** (0.30)	**1644***** (0.54)
SC READY – ELA	1597	**1621***** (0.29)	**1640***** (0.54)
Average Daily Attendance	94.9%	95.0% (0.01)	95.4% (0.10)
Chronic Absenteeism	9.8%	11.5% (0.06)	8.9% (0.03)

† $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

*Note: Standardized mean differences are reported in parentheses. Significance tests are in comparison to the Teen Leadership group.

2. Effectiveness of the Matching Procedure

To assess the impact of the Teen Leadership course on student behavior and student social-emotional outcomes, researchers created nine matched comparison groups. It was necessary to create nine distinct, matched comparison groups due to (1) the three different comparison school populations (treatment school, district school, and state), (2) the two different sources of outcome data (administrative data and student survey data), and 3) two years of analysis (2016-17 and 2017-18).

Researchers re-estimated the propensity model until balance was achieved between the treatment and comparison groups. Balance was determined by examining the statistical significance of the bivariate differences, the magnitude of the standardized mean differences, the variance ratios, and the distribution of the propensity scores between the two groups. Below are the results for the 2016-17 match between Fall Leadership students and the within-school treatment school comparison students using administrative data.

Figure 1 demonstrates that the matching process produced two similar groups in terms of standardized differences. For all the 23 variables in the analysis, none had a standardized mean differences larger than 0.1. Figure 2 provides evidence that the two groups are also similar in terms of the variance of the

variables. Further, there was substantial overlap between the Teen Leadership students and the treatment school matches in terms of their propensities to participate in Teen Leadership, shown in Figure 3. Given these results, researchers are confident that the two groups are similar on these observable characteristics.

Figure 1. AY 2016-17 Treatment School Comparison Matches (Administrative Data): Standardized Differences

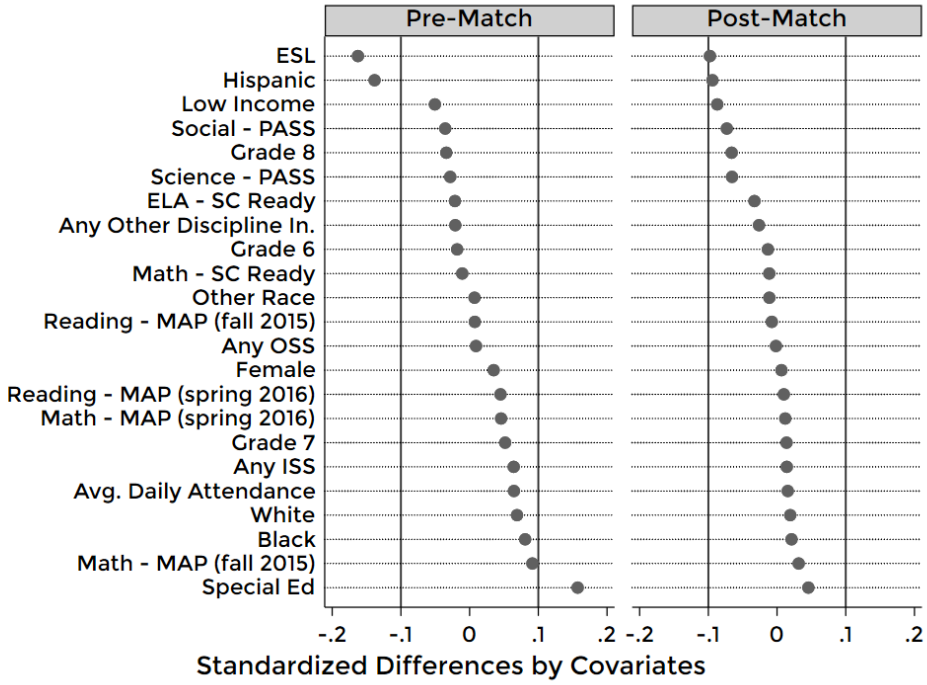


Figure 2. AY 2016-17 Treatment School Comparison Matches (Administrative Data): Variances

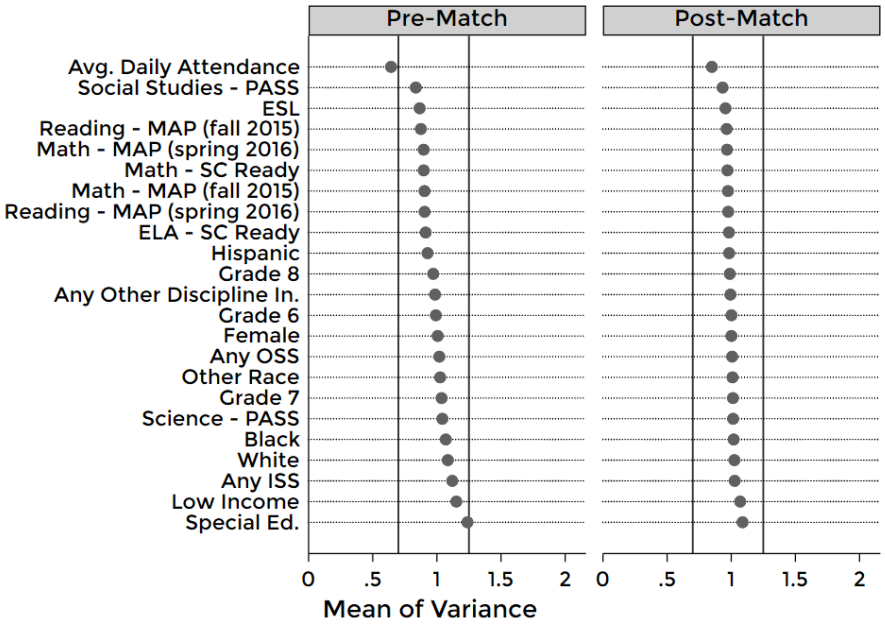
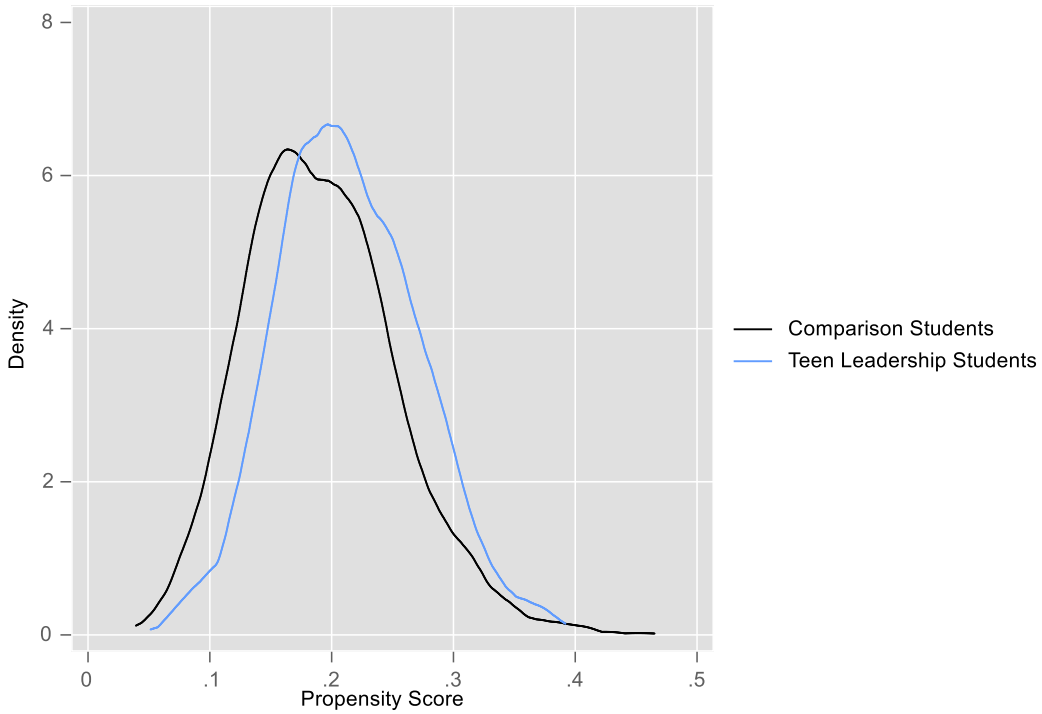


Figure 3. 2016-17 Treatment School Comparison Matches (Administrative Data): Overlap



A similar method was used for the eight other matching procedures. In the instances in which ideal matches were not possible, the differences were often marginal. For the results of the other matches, see the Appendix C.

3. Characteristics of Teen Leadership Students: Post-Matching

The following series of tables presents the demographic characteristics of Teen Leadership students and their matched counterparts for each school (treatment, district, or state) and each data source (administrative or survey).

As noted below in Table 22, no significant differences were present between treatment students and matched comparison students on demographic factors in academic year 2016-17 for the administrative data match. The lack of significant differences here indicates that the propensity score matching process resulted in balanced samples on these factors. More sophisticated analyses of standardized differences and variance ratios between the treatment and comparison students confirmed that the samples were balanced when examining demographic factors, as well as the baseline attendance, behavior, and achievement outcomes used in the propensity score model. For more information on the effectiveness of matches for other data sources and academic years, see the Appendix C.

Table 22. Teen Leadership Participants vs. Student Matches 2016-17 (Administrative Data Match)

	Fall 2016 Teen Leadership Participants (n = 264)	Student Matches: Treatment Schools (n = 1320)	Fall 2016 Teen Leadership Participants (n = 261)	Student Matches: District Schools (n = 1305)	Fall 2016 Teen Leadership Participants (n = 114)	Student Matches: State Schools (n =570)
Black	31.8%	32.3% (-0.01)	32.1%	32.2% (0.00)	44.7%	47.2% (0.05)
Hispanic	35.2%	35.3% (0.00)	35.9%	34.5% (-0.03)	26.3%	25.1% (0.03)
White	25.4%	24.5% (0.02)	25.4%	26.4% (0.02)	23.7%	21.6% (0.05)
Other Race	7.6%	7.9% (-0.01)	6.5%	6.9% (0.02)	5.3%	6.1% (-0.01)
Free/Red. Meals	92.0%	92.7% (-0.02)	91.3%	91.6% (0.01)	91.2%	91.6% (-0.01)
Female	46.6%	47.0% (-0.00)	44.2%	47.1% (0.06)	32.5%	31.9% (0.01)
Special Ed.	21.6%	19.8% (0.05)	21.8%	21.5% (-0.01)	19.3%	18.3% (0.02)
ESL	27.7%	27.1% (0.01)	27.5%	26.8% (-0.02)	13.7%	15.8% (0.06)
6th grade	35.6%	37.2% (-0.03)	37.2%	38.3% (-0.03)	22.6%	21.9% (-0.02)
7th grade	38.6%	37.9% (0.02)	38.2%	38.3% (0.00)	40.7%	38.6% (-0.04)
8th grade	25.8%	24.9% (0.02)	24.5%	25.7% (0.03)	36.7%	39.5% (0.05)

† $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

*Note: Standardized mean differences are reported in parentheses. Significance tests are in comparison to the Teen Leadership group. Frequency weights were used to account for matching with replacement.

Researchers were not able to identify suitable matches for some Teen Leadership students due to the parameters of the propensity score matching process. This means that not all Teen Leadership students were included in the analyses presented in this report. Tables 23 and 24 describe how many Teen Leadership students were matched for each comparison group and each set of outcome data. The total number of students listed in the table includes all Teen Leadership students who met the inclusion criteria and have full matching data.

When looking at the 269 Teen Leadership students with complete administrative data in academic year 2016-17, 98% of Teen Leadership students were matched to comparison students at treatment schools and 97% were matched to comparison students at district schools. Only 41% were matched to comparison students at state schools. When looking at the 171 Teen Leadership students with complete pre- and post- OnTrack Greenville Student Survey data, 94% of Teen Leadership students were matched to comparison students at treatment schools and 97% were matched to comparison students at district schools.

Table 23. Number and Percent of Fall 2016 Teen Leadership Students Matched

	Administrative Data						Survey Data			
	Treatment Schools		District Schools		State Schools		Treatment Schools		District Schools	
Matched	264	98%	261	97%	120	41%	160	94%	166	97%
Not Matched	5	2%	8	3%	171	59%	11	6%	5	3%
Total	269	100%	269	100%	291	100%	171	100%	171	100%

There were 181 Teen Leadership students with complete administrative data in academic year 2017-18 and 98% of these Teen Leadership students were matched to comparison students at treatment schools and 98% were matched to comparison students at district schools. When looking at the 127 Teen Leadership students with complete pre- and post- OnTrack Greenville Student Survey data, 97% of Teen Leadership students were matched to comparison students at treatment schools and 92% were matched to comparison students at district schools.

Table 24. Number and Percent of Fall 2017 Teen Leadership Students Matched

	Administrative Data				Survey Data			
	Treatment Schools		District Schools		Treatment Schools		District Schools	
Matched	177	98%	178	98%	123	97%	119	92%
Not Matched	4	2%	3	2%	4	3%	8	8%
Total	181	100%	181	100%	127	100%	127	100%

It is important to note that the estimated effects of the program only pertain to those students included in the analyses. It is possible that participating in the Teen Leadership course had different effects on those students who were not matched. However, the research team was able to match the majority of Teen Leadership students to lessen this problem. To examine how representative the matched set of Teen Leadership students is, researchers compared the student demographics between the matched Teen Leadership students and those Teen Leadership students who could not be matched because they did not have full matching data or did not have a proper match within the given caliper. The results for the 2016-17 administrative data match with the treatment school comparison group is in Table 25.

One can see that Hispanic students and students who received free and reduced priced meals were overrepresented in the matched data. There was a greater proportion of students with a special education designation in the non-matched group than the Teen Leadership matched student group. Similar analyses were performed for the other matches. Appendix C provides information on the demographic differences between those Teen Leadership students who were matched and those who were not.

Table 25. Which Teen Leadership Students Were Matched? Post-Match Demographics, AY 2016-17 Treatment School (Administrative Data Match)

	Teen Leadership Not Matched - Mean	Teen Leadership Matched - Mean	Difference	S.E. of Diff.
Black	0.40	0.32	0.09	0.08
Hispanic	0.21	0.35	**-0.14**$^{+}$	0.08
White	0.31	0.25	0.06	0.07
Other Race	0.07	0.08	-0.00	0.04
Free/Reduced Meals	0.79	0.92	**-0.13****	0.05
Female	0.57	0.47	0.11	0.08
Special Ed.	0.40	0.22	**0.19****	0.07
ESL	0.17	0.28	-0.10	0.07
Grade 6	0.37	0.36	0.01	0.07
Grade 7	0.23	0.39	**-0.16***	0.07
Grade 8	0.40	0.26	**0.14***	0.06

$^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

D. Impact Study Results

There are many competing matching procedures. Researchers for this study employed greedy matching. While other approaches, such as optimal matching, have their strengths, greedy matching allowed researchers to perform multivariate analyses on the samples after matching. This feature is one of the reasons why greedy matching is so popular across many disciplines (Guo & Fraser, 2014, p. 148). When propensity scores are used with a regression adjustment, the estimates are "doubly robust," which helps with robustness against misspecification in the propensity score model or the regression model (Imbens & Wooldridge, 2009).

As specified above, researchers ensured that there were no significant differences between the treatment and comparison groups on pre-treatment covariates. For each outcome, the basic model to estimate the impact effects of the Teen Leadership class was as follows:

$$Y_{t,i} = \beta_0 + \beta_1 T_i + \beta_2 Y_{Baseline,i} + \beta_3 G_i + \beta_4 R_i + \beta_5 F_i + \beta_6 I_i + \beta_7 D_i + \beta_8 E_i + e_i$$

In this equation, $Y_{t,i}$ is the outcome for student *i* at time *t*. β_1 represents the impact of completing the Teen Leadership class (T = 1). A statistically significant estimate of β_1 indicates that participating in the Teen Leadership class is related the outcome of interest. When estimating impact effects using a quasi-experimental design, inclusion of a pretreatment outcome measure decreases selection bias and

increases precision (e.g, Bifulco, 2012). β_2 is the impact of the pretreatment, or baseline outcome.[15] For example, the regression model predicting 2017-18 math SC READY test scores will include the 2016-17 math SC READY score as a covariate. β_3 represents a vector of grade (7^{th} and 8^{th} with 6^{th} the omitted category) specific effects. R_i represents a set of dummy variables for race (Black, Hispanic, and other with white the omitted category). β_5 represents the difference between female and male students, and I_i is a dummy variable indicating if a student is eligible for free or reduced priced meals. Dummy indicators for disability status (D_i) and English as a second language status (E_i) were also included in the model.

The student-level random error is denoted as e_i in the above model. One assumption of a traditional OLS model is that the residuals are uncorrelated with the covariates. Since this assumption of homoscedasticity does not necessarily hold, the models were estimated with robust standard errors. Bootstrap methods were used to estimate the standard errors. This approach relies on sampling from the analysis sample and replicating the analysis. This study used 500 replications to produce the standard errors of the Teen Leadership coefficients.

The Stata software program was used to perform the matching procedure and outcome analyses (StataCorp, 2017). The above model was used for interval dependent variables, such as test scores, while a logistic regression was estimated for dichotomous dependent variables, like whether or not a student was chronically absent during a given semester or school year.

While the main impact analyses compared Teen Leadership students to matched comparison students, researchers also estimated regressions using the population of comparison students. These unmatched regression results allow one to compare the overall student populations in each comparison group to students who completed the Teen Leadership course in fall 2016 or fall 2017. These unmatched analyses provide context when assessing the impact of the matching procedure on the overall conclusions of the study. The results of these unmatched regression analyses are provided in Appendix H.

1. Estimates of Effect Size

Evaluators of education programs should consider the substantive impact of interventions in addition to their statistical significance. For the impact analyses presented below, researchers converted the multivariate regression coefficients into covariate-adjusted, standardized effect sizes (Cohen's d). This was a straightforward process for the OLS regression coefficients (Lipsey & Wilson, 2000). To convert the binary logistic regression results to Cohen's d estimates, researchers first transformed the coefficients to odds ratios. Following Borenstein, Hedges, Higgins, and Rothstein (2009), these odds ratios were then converted into estimates of Cohen's d (p. 47). A benefit of Cohen's d is that it allows for comparisons of substantive impacts across outcomes and studies. However, there is no agreed upon definition of a "meaningful" effect size. Cohen (1988) suggested that an effect size of 0.2 should be considered small, 0.5 moderate, and 0.8 large. However, effect sizes of this magnitude are quite rare in education evaluations. Perhaps, a more appropriate threshold is the What Works Clearinghouse's (2017) statement that an effect size of 0.25 or greater should be considered "substantively important."

[15] Whenever possible, the same measure was used for both the outcome and the pretreatment control variable. When that was not possible, a pretreatment or baseline measure from the same domain as the outcome variable were used. No pretreatment measures of the outcome were controlled for the analyses of the survey data.

2. Confirmatory Impact Analyses

RQ1. *Did students who participated in the Teen Leadership course have fewer behavioral incidences when compared to matched comparison students?*

In this study, confirmatory impact analyses show the effect of participation in the Teen Leadership course on various measures of student behavior. In the following tables, the outcomes of students who participated in Teen Leadership in the fall semesters of academic years 2016-17 and 2017-18 are compared to matched comparison students in the treatment schools, the district schools, and state Title I schools. Two different sets of data are presented in the following tables. The "Matched Regression" columns show the Teen Leadership regression coefficients from the post-match multivariate regression and the bootstrapped standard errors. The regression coefficients from the OLS regressions are directly interpretable. For analyses of dichotomous dependent variables, logistic regression was used, and the "Matched Regression" column presents the log odds and associated bootstrapped standard errors. The "Effect Size" column displays the Cohen's d estimate associated with the Teen Leadership regression coefficient. For the analyses examining student behavior, negative values in the table indicate that the Teen Leadership students exhibited a more desirable outcome than the matched comparison students, such as fewer behavioral referrals or fewer hours of in-school suspension. Statistically significant differences between the groups are denoted by asterisks in the tables.

Tables 26 and 27 present the differences in student behavior between students who completed Teen Leadership in the fall semester of each year and the matched comparison students at treatment schools. Given that participation in Teen Leadership occurred in the fall semester, researchers examined the behavior outcomes of students who completed the course in the fall semester for two time periods: (1) each entire academic year, and (2) the spring semester of each year.

As shown in Table 26, there were few significant differences between Teen Leadership students and matched comparison students at treatment schools in academic year 2016–17. When looking at the entire academic year, Teen Leadership students were more likely to have had any behavioral referral than matched comparison students at treatment schools ($p < 0.10$). On average, Teen Leadership students had 0.37 more behavioral referrals than matched comparison students ($p < 0.10$). When isolating just the spring semester, Teen Leadership students were more likely to have had any behavioral referral than matched comparison students at treatment schools ($p < 0.05$) and received an average of 0.22 more behavioral referrals than matched comparison students ($p < 0.05$). Though small, these differences were statistically significant and not in the predicted direction. Teen Leadership and comparison students at treatment schools did not have significant differences in the occurrence or frequency of in-school suspensions or out-of-school suspensions during either time period.

Table 26. Confirmatory Impact Results for Student Behavior AY 2016-17 (Treatment Schools)

	Fall 2016 Teen Leadership vs. Comparison Students (Academic Year 2016-17)		Fall 2016 Teen Leadership vs. Comparison Students (Spring Semester 2017)	
	Matched Regression	Effect Size	Matched Regression	Effect Size
Any Behavioral Referral	**0.30†** (0.18)	0.17	**0.40*** (0.16)	0.22
# Behavioral Referrals	**0.37†** (0.20)	0.11	**0.22†** (0.13)	0.11
Any ISS	0.24 (0.21)	0.13	0.27 (0.23)	0.15
# Hours ISS	0.22 (0.49)	0.03	0.06 (0.30)	0.01
Any OSS	0.00 (0.21)	0.00	0.02 (0.21)	0.02
# Days OSS	-0.17 (0.16)	-0.07	-0.16 (0.10)	-0.09

†$p < 0.10$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$; N = 1,584

Note: Table presents the regression coefficients of the Teen Leadership variable and bootstrap SEs in parentheses from multivariate regressions that also control for student demographics, grade, and pretreatment outcome measures. Frequency weights were used to account for matching with replacement.

Table 27. Confirmatory Impact Results for Student Behavior AY 2017–18 (Treatment Schools)

	Fall 2017 Teen Leadership vs. Comparison Students (Academic Year 2017-18)		Fall 2017 Teen Leadership vs. Comparison Students (Spring Semester 2018)	
	Matched Regression	Effect Size	Matched Regression	Effect Size
Any Behavioral Referral	0.18 (0.21)	0.10	0.18 (0.20)	0.10
# Behavioral Referrals	0.00 (0.23)	0.00	0.05 (0.16)	0.02
Any ISS	0.11 (0.28)	0.13	-0.40 (0.33)	-0.19
# Hours ISS	**-0.88† (0.46)**	**-0.13**	**-0.70* (0.29)**	**-0.17**
Any OSS	0.17 (0.25)	0.10	0.07 (0.28)	0.04
# Days OSS	-0.09 (0.21)	-0.03	-0.03 (0.17)	-0.01

†$p < 0.10$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$; N = 1,062

Note: Table presents the regression coefficients of the Teen Leadership variable and bootstrap SEs in parentheses from multivariate regressions that also control for student demographics, grade, and pretreatment outcome measures. Frequency weights were used to account for matching with replacement.

In academic year 2017-18, as shown in Table 27, there were few significant differences between Teen Leadership students and matched comparison students at treatment schools. When looking at the entire academic year, Teen Leadership students received an average of 0.88 fewer hours of in-school suspension than matched comparison students ($p < 0.10$). When isolating just the spring semester of 2018, Teen Leadership students received an average of 0.70 fewer hours of in-school suspension than matched comparison students ($p < 0.05$). These differences were statistically significant and in the predicted direction.

Tables 28 and 29 present the differences in student behavior between students who completed Teen Leadership in fall semester of academic years 2016-17 or 2017-18 and matched comparison students at district schools.

Table 28. Confirmatory Impact Results for Student Behavior AY 2016-17 (District Schools)

	Fall 2016 Teen Leadership vs. Comparison Students (Academic Year 2016-17)		Fall 2016 Teen Leadership vs. Comparison Students: (Spring Semester 2017)	
	Matched Regression	Effect Size	Matched Regression	Effect Size
Any Behavioral Referral	0.13 (0.17)	0.07	0.14 (0.18)	0.08
# Behavioral Referrals	-0.02 (0.21)	-0.01	-0.14 (0.14)	-0.06
Any ISS	**-0.45*** (0.20)	-0.25	**-0.57**** (0.22)	-0.32
# Hours ISS	**-2.92**** (0.68)	-0.24	**-1.87***** (0.43)	-0.24
Any OSS	-0.19 (0.19)	-0.10	-0.22 (0.22)	-0.12
# Days OSS	**-0.48**** (0.17)	-0.14	**-0.36**** (0.11)	-0.16

$^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$; N = 1,566

Note: Table presents the regression coefficients of the Teen Leadership variable and bootstrap SEs in parentheses from multivariate regressions that also control for student demographics, grade, and pretreatment outcome measures. Frequency weights were used to account for matching with replacement.

There were several significant differences between Teen Leadership students and matched comparison students at district schools in academic year 2016-17. See Table 28. When looking at the entire academic year, Teen Leadership students were less likely to receive any in-school suspension than matched comparison students ($p < 0.05$). Further, Teen Leadership students served 2.92 fewer hours of in-school suspensions than did matched comparison students ($p < 0.01$). In addition, Teen Leadership students received 0.48 fewer days of out-of-school suspension than matched comparison students ($p < 0.01$).

The results for the spring semester outcomes were quite similar to the full academic year analyses. When looking at only the spring semester of 2017, Fall 2016 Teen Leadership students received 0.36 fewer days of out-of-school suspension than matched comparison students at district schools ($p < 0.01$). Further, Teen Leadership students were less likely to have received any out-of-school suspension than

their matched counterparts ($p < 0.01$) and had 1.87 fewer hours of in-school suspension in the spring semester of 2018.

Teen Leadership students in academic year 2017-18 showed several differences in behavioral outcomes when compared to matched comparison students at district schools. See Table 29. When examining the entire academic year, Fall 2017 Teen Leadership students were more likely to have received any behavioral referral than matched comparison students ($p < 0.10$). During this same time period, Teen Leadership students were less likely to have received any in-school suspension ($p < 0.10$) and received 4.18 fewer hours of in-school suspension than their district school matches ($p < 0.01$). When looking only at behavioral outcomes in the spring semester of 2018, many of the results were similar. Fall 2017 Teen Leadership students were less likely to have received any in-school suspension ($p < 0.01$) and received 2.61 fewer hours of in-school suspension ($p < 0.01$) in the following spring semester when compared to matched comparison students at district schools.

Table 29. Confirmatory Impact Results for Student Behavior AY 2017–18 (District Schools)

	Fall 2017 Teen Leadership vs. Comparison Students (Academic Year 2017-18)		Fall 2017 Teen Leadership vs. Comparison Students: (Spring Semester 2018)	
	Matched Regression	Effect Size	Matched Regression	Effect Size
Any Behavioral Referral	**0.37**† (0.20)	0.20	0.32 (0.20)	0.17
# Behavioral Referrals	-0.11 (0.22)	-0.03	-0.04 (0.15)	-0.01
Any ISS	**-0.51*** (0.26)	-0.26	**-0.88**** (0.34)	-0.47
# Hours ISS	**-4.18**** (0.74)	-0.28	**-2.61**** (0.52)	-0.28
Any OSS	0.15 (0.24)	0.09	-0.11 (0.30)	-0.06
# Days OSS	-0.25 (0.21)	-0.07	-0.13 (0.18)	-0.06

†$p < 0.10$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$; N = 1,014

Note: Table presents the regression coefficients of the Teen Leadership variable and bootstrap SEs in parentheses from multivariate regressions that also control for student demographics, grade, and pretreatment outcome measures. Frequency weights were used to account for matching with replacement.

Researchers also compared Fall 2016 Teen Leadership students to matched comparison students attending state schools. As noted previously in this report, some of the behavior outcome variables from the state dataset varied slightly from the variables in the district dataset. Also, researchers were not able to isolate spring 2018 behavioral incidents, so Table 30 below only presents results for the entire academic year of 2016-17. As shown below, there were no statistically significant differences in behavior outcomes between Fall 2016 Teen Leadership students and matched comparison students from state schools.

Table 30. Confirmatory Impact Results for Student Behavior AY 2016-17 (State Schools)

	Fall 2016 Teen Leadership vs. Comparison Students (Academic Year 2016-17)	
	Matched Regression	Effect Size
Any Discipline Incident	0.12 (0.27)	0.07
# Discipline Incidents	0.09 (0.40)	0.02
Any ISS	0.16 (0.22)	0.09
# of ISS	0.13 (0.21)	0.06
Any OSS	0.18 (0.23)	0.10
# of OSS	-0.02 (0.13)	-0.01

$^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$; N = 720

Note: Table presents the regression coefficients of the Teen Leadership variable and bootstrap SEs in parentheses from multivariate regressions that also control for student demographics, grade, and pretreatment outcome measures. Frequency weights were used to account for matching with replacement.

3. Exploratory Impact Analyses

RQ2. *Did students who participated in the Teen Leadership course demonstrate better course performance in math and ELA than matched comparison students?*

In addition to confirmatory impacts, researchers also analyzed other exploratory impacts of the Teen Leadership course, including impacts on academic performance. Tables 31 and 32 present the differences in the ELA and math course performance of Teen Leadership students and matched comparison students at treatment, district, and state schools. Positive regression coefficients indicate higher standardized test scores among Teen Leadership students than matched comparison students, and thus a more desirable outcome.

In academic year 2016-17, there only was one statistically significant difference in course performance between groups. Fall 2016 Teen Leadership students scored slightly higher on the SC READY ELA assessment than matched comparison students at district schools in academic year 2016-17 ($p < 0.05$). Overall, however, the results indicate that Teen Leadership students did not perform significantly better or worse than matched comparison students on the spring 2017 MAP reading and math assessments or the spring 2017 SC READY math and ELA assessments after adjusting for previous achievement and other factors. Similarly, in academic year 2017-18, there were no statistically significant differences between Teen Leadership students and matched comparison students. See Table 31.

Table 31. Exploratory Impact Results for Course Performance AY 2016–17

	Fall 2016 Teen Leadership vs. Comparison Students: Treatment Schools		Fall 2016 Teen Leadership vs. Comparison Students: District Schools		Fall 2016 Teen Leadership vs. Comparison Students: State Schools	
	Matched Regression	Effect Size	Matched Regression	Effect Size	Matched Regression	Effect Size
SC READY - ELA	-0.04 (0.75)	-0.00	**1.80*** (0.77)	0.02	0.30 (1.27)	0.00
SC READY - Math	0.40 (0.76)	0.01	0.82 (0.67)	0.01	-0.88 (1.29)	-0.01
Spring MAP RIT - Reading	0.78 (0.65)	0.05	0.71 (0.64)	0.04	---	---
Spring MAP RIT - Math	0.07 (0.55)	0.00	0.29 (0.58)	0.02	---	---

$^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$; Teen Leadership vs. Treatment School N= 1,548; Teen Leadership vs. District N= 1,542; Teen Leadership vs. State N=684

Note: Table presents the regression coefficients of the Teen Leadership variable and bootstrap SEs in parentheses from multivariate regressions that also control for student demographics, grade, and pretreatment outcome measures. Frequency weights were used to account for matching with replacement.

Table 32. Exploratory Impact Results for Course Performance AY 2017-18

	Fall 2017 Teen Leadership vs. Comparison Students: Treatment Schools		Fall 2017 Teen Leadership vs. Comparison Students: District Schools	
	Matched Regression	Effect Size	Matched Regression	Effect Size
SC READY - ELA	-0.01 (0.04)	-0.01	-0.03 (0.04)	-0.03
SC READY - Math	-0.01 (0.05)	-0.02	-0.01 (0.04)	-0.01

$^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$. Teen Leadership vs. Treatment School N= 990; Teen Leadership vs. District N= 984

Note: Table presents the regression coefficients of the Teen Leadership variable and bootstrap SEs in parentheses from multivariate regressions that also control for student demographics, grade, and pretreatment outcome measures. Frequency weights were used to account for matching with replacement.

RQ3. *Did students who participated in the Teen Leadership course demonstrate improved levels of school attendance than matched comparison students?*

Researchers examined the impact of taking the Teen Leadership course on student attendance. Tables 33 and 34 present the differences in average daily attendance and chronic absenteeism between Teen Leadership students and matched comparison students at treatment, district, and state schools. For the analyses examining average daily attendance, positive values in the table indicate that Teen Leadership students exhibited a more desirable outcome than matched comparison students. For the analyses examining chronic absenteeism, negative values in the table indicate that Teen Leadership students exhibited a more desirable outcome (e.g., less likely to be chronically absent) than matched comparison students.

In academic year 2016-17, there were no statistically significant differences in student attendance between Teen Leadership students and matched comparison students at treatment, district, or state schools. See Table 33. In academic year 2017-18, there was one statistically significant difference in student attendance between students participating in the Teen Leadership course and matched comparison students at treatment and district schools, shown in Table 34. Teen Leadership students had significantly higher average daily attendance in 2017-18 when compared to district school matched comparison students. These results indicate that participation in the Teen Leadership class did have a significant impact on students' attendance patterns.

Table 33. Exploratory Impact Results for Attendance AY 2016-17

	Fall 2016 Teen Leadership vs. Comparison Students: Treatment Schools		Fall 2016 Teen Leadership vs. Comparison Students: District Schools		Fall 2016 Teen Leadership vs. Comparison Students: State Schools	
	Matched Regression	Effect Size	Matched Regression	Effect Size	Matched Regression	Effect Size
Average Daily Attendance	0.25 (0.24)	0.05	0.21 (0.28)	0.04	0.18 (0.49)	0.03
Chronically Absent	-0.15 (0.25)	-0.08	-0.20 (0.27)	-0.11	-0.08 (0.26)	-0.05

$^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$; Teen Leadership vs. Treatment School N= 1,584; Teen Leadership vs. District N= 1,566; Teen Leadership vs. State N=720

Note: Table presents the regression coefficients of the Teen Leadership variable and bootstrap SEs in parentheses from multivariate regressions that also control for student demographics, grade, and pretreatment outcome measures. Frequency weights were used to account for matching with replacement.

Table 34. Exploratory Impact Results for Attendance AY 2017-18

	Fall 2017 Teen Leadership vs. Comparison Students: Treatment Schools		Fall 2017 Teen Leadership vs. Comparison Students: District Schools	
	Matched Regression	Effect Size	Matched Regression	Effect Size
Average Daily Attendance	0.27 (0.29)	0.06	**0.65*** (0.31)	0.13
Chronically Absent	0.39 (0.36)	0.22	0.12 (0.32)	0.07

$^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$; Teen Leadership vs. Treatment School N= 1,062; Teen Leadership vs. District N= 1,068

Note: Table presents the regression coefficients of the Teen Leadership variable and bootstrap SEs in parentheses from multivariate regressions that also control for student demographics, grade, and pretreatment outcome measures. Frequency weights were used to account for matching with replacement.

4. Exploratory Secondary Outcome Analyses

RQ4. *Following participation in the Teen Leadership course, were students more likely to report an improved self-concept?*

RQ5. *Following participation in the Teen Leadership course, were students more likely to report healthy relationships with their peers?*

RQ7. *Following participation in the Teen Leadership course, were students more likely to report an improved sense of personal responsibility?*

RQ8. *Following participation in the teen Leadership course, were students more likely to report improved Social Competence?*

RQ9. *Following participation in the Teen Leadership Course, were students more likely to report an improved confidence in their public speaking skills?*

The majority of exploratory secondary outcomes for the Teen Leadership course were measured using a student pre- and post-survey administered at the beginning and end of each semester. Comparison data were not available for these outcomes. For these paired T-test analyses, positive values indicate that student post-survey responses were higher and therefore more desirable than pre-survey responses. These analyses compare students' attitudes at the beginning of the semester to their views at the end of their semester-long Teen Leadership experience. The results of the exploratory secondary outcome analyses appear below in Tables 35 and 36. Results are available for three periods of time: (1) fall semester; (2) spring semester; and (3) both the fall and spring semesters.

Table 35. Exploratory Secondary Outcome Results AY 2016–17

	Academic Year 2016-17 (n = 456)	Fall Semester 2016 (n = 229)	Spring Semester 2017 (n = 224)
Student Self-Concept	0.03 (0.03) d = 0.05	0.02 (0.04) d = 0.04	0.04 (0.04) d =0.07
Student Relationships with Peers	**0.05**† (0.03) d =0.08	0.02 (0.04) d = 0.03	**0.08*** (0.04) d = 0.14
Student Personal Responsibility	0.01 (0.02) d =0.03	0.01 (0.03) d =0.01	0.02 (0.03) d = 0.04
Student Social Competence	**0.09**** (0.03) d = 0.16	**0.07**† (0.04) d = 0.12	**0.12**** (0.04) d = 0.21
Student Public Speaking Skills	**0.13**** (0.03) d = 0.19	**0.08**† (0.04) d = 0.11	**0.18**** (0.04) d = 0.26

†$p < 0.10$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$. Standard Errors are in parentheses.

In academic year 2016-17 and spring semester of 2017, Teen Leadership students reported stronger relationships with peers ($p < 0.10$; $p < 0.05$). In each of the three time periods, Teen Leadership students also reported improved social competence and improved public speaking skills at the end of the course ($p < 0.10$; $p < 0.01$). Students did not report improvement in their relationships with their peers in the fall semester of 2016. In addition, Teen Leadership students' perceptions of their self-concept and personal responsibility did not change significantly over the duration of the course for any of the three time periods examined.

Fewer domains were included on the 2017-18 Teen Leadership surveys. According to Table 36, Teen Leadership students reported improved public speaking skills when looking across both semesters ($p < 0.10$). This significant result is largely driven by the marked improved on this outcome for students who took Teen Leadership in spring 2018 ($p < 0.05$). There were no statistically significant changes in pre- versus post-survey outcomes for the other variables.

Table 36. Exploratory Secondary Outcome Results AY 2017–18

	Academic Year 2017-18 (n = 393)	Fall Semester 2017 (n = 213)	Spring Semester 2018 (n = 185)
Student Relationships with Peers	-0.03 (0.03) d = -0.05	-0.02 (0.04) d = -0.03	-0.06 (0.05) d = -0.09
Student Social Competence	0.00 (0.03) d =0.00	0.05 (0.04) d = 0.09	-0.03 (0.04) d = -0.05
Student Public Speaking Skills	**0.06**† (0.03) d =0.08	0.05 (0.04) d = 0.07	**0.10*** (0.05) d = 0.13

†$p < 0.10$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$. Standard Errors are in parentheses.

RQ6. *Following participation in the Teen Leadership course, were students more likely to report healthy relationships with adults at their school?*

Researchers examined the impact of the Teen Leadership course on student Relationships with Adults. Unlike other exploratory secondary outcomes for the course, measures for this outcome were included on a school-wide pre- and post-survey administered in fall and spring of each academic year; therefore, comparison data were available for these analyses. For the analyses examining Relationships with Adults, positive values in the table indicate that Teen Leadership students exhibited a more desirable outcome than the matched comparison students.

The results for Student Relationships with Adults appear in Tables 37 and 38. Students who participated in Teen Leadership reported significantly stronger Relationships with Caring Adults ($p < 0.01$) and Relationships with Teachers ($p < 0.01$) when compared to matched comparison students in district schools in academic year 2016-17. See Table 37. When compared to matched comparison students at treatment schools, however, there were no significant differences in either of these outcomes. In academic year 2017-18, Fall 2017 Teen Leadership students again reported stronger Relationships with

Teachers ($p < 0.05$) than matched comparison schools at district schools, as shown in Table 38. No other results from academic year 2017-18 were statistically significant.

Table 37. Exploratory Secondary Outcome Results for Relationships with Adults AY 2016–17

	Fall 2016 Teen Leadership vs. Comparison Students: Treatment Schools		Fall 2016 Teen Leadership vs. Comparison Students: District Schools	
	Matched Regression	Effect Size	Matched Regression	Effect Size
Relationships with Teachers	0.10 (0.07)	0.13	**0.30**** (0.07)	0.38
Relationships with Caring Adults	0.07 (0.07)	0.09	**0.17**** (0.06)	0.21

$^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$; Teen Leadership vs. Treatment School N= 960; Teen Leadership vs. District N= 996
Note: Table presents the regression coefficients of the Teen Leadership variable and bootstrap SEs in parentheses from multivariate regressions that also control for student demographics and grade. Frequency weights were used to account for matching with replacement.

Table 38. Exploratory Secondary Outcome Results for Relationships with Adults AY 2017–18

	Fall 2017 Teen Leadership vs. Comparison Students: Treatment Schools		Fall 2017 Teen Leadership vs. Comparison Students: District Schools	
	Matched Regression	Effect Size	Matched Regression	Effect Size
Relationships with Teachers	0.06 (0.07)	0.09	**0.19*** (0.08)	0.24
Relationships with Caring Adults	0.02 (0.08)	0.03	0.07 (0.09)	0.08

$^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$; Teen Leadership vs. Treatment School N= 738; Teen Leadership vs. District N= 714
Note: Table presents the regression coefficients of the Teen Leadership variable and bootstrap SEs in parentheses from multivariate regressions that also control for student demographics and grade. Frequency weights were used to account for matching with replacement.

5. Additional Exploratory Outcome Analyses

RQ10. *Following participation in the Teen Leadership course, were students more likely to report improved academic self-perception?*

Using student survey responses, researchers assessed the impact of the Teen Leadership course on two measures of student academic self-perception, Academic Self-Confidence and Academic Perseverance. Students in the treatment and district schools completed surveys in fall and spring of both academic years 2016-17 and 2017-18. For the analyses examining student Academic Self-Confidence and Academic Perseverance, positive values indicate that Teen Leadership students exhibited a more desirable outcome than the matched comparison students.

The results for Academic Self-Confidence and Academic Perseverance appear in Tables 39 and 40. Overall, students who participated in the Teen Leadership course had similar outcomes in Academic Self-Confidence and Academic Perseverance when compared to matched comparison students in both the treatment and district schools. These results were similar across both academic years.

Table 39. Exploratory Outcome Results for Student Self-Confidence AY 2016-17

	Fall 2016 Teen Leadership vs. Comparison Students: Treatment Schools		Fall 2016 Teen Leadership vs. Comparison Students: District Schools	
	Matched Regression	Effect Size	Matched Regression	Effect Size
Academic Perseverance	0.00 (0.06)	0.00	0.02 (0.06)	0.04
Academic Self-Confidence	0.05 (0.06)	0.08	0.06 (0.05)	0.09

$^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$; Teen Leadership vs. Treatment School N= 960; Teen Leadership vs. District N= 996
Note: Table presents the regression coefficients of the Teen Leadership variable and bootstrap SEs in parentheses from multivariate regressions that also control for student demographics and grade. Frequency weights were used to account for matching with replacement.

Table 40. Exploratory Outcome Results for Student Self-Confidence AY 2017-18

	Fall 2016 Teen Leadership vs. Comparison Students: Treatment Schools		Fall 2016 Teen Leadership vs. Comparison Students: District Schools	
	Matched Regression	Effect Size	Matched Regression	Effect Size
Academic Perseverance	0.04 (0.07)	0.06	0.06 (0.07)	0.08
Academic Self-Confidence	-0.07 (0.07)	-0.12	-0.04 (0.06)	-0.06

$^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$; Teen Leadership vs. Treatment School N= 738; Teen Leadership vs. District N= 714
Note: Table presents the regression coefficients of the Teen Leadership variable and bootstrap SEs in parentheses from multivariate regressions that also control for student demographics and grade. Frequency weights were used to account for matching with replacement.

RQ11. *Following participation in the Teen Leadership course, were students more likely to report improved school engagement?*

Researchers assessed the impact of the Teen Leadership course on two measures of student school engagement, School Engagement and School Belonging. For the analyses examining Student Engagement and School Belonging, positive values in the tables indicate that Teen Leadership students exhibited a more desirable outcome than the matched comparison students.

The results for Student Engagement and School Belonging appear in Tables 41 and 42. Teen Leadership students reported higher levels of School Engagement ($p < 0.05$) and School Belonging ($p < 0.05$) than matched comparison students at district schools in academic year 2016-17. Student levels of School

Engagement did not vary significantly between Teen Leadership students and matched comparison students at treatment schools in the academic year 2016-17. Further, levels of School Engagement and School Belonging did not vary significantly between Teen Leadership students and matched comparison students at both treatment and district schools in academic year 2017-18.

Table 41. Exploratory Outcome Results for School Engagement AY 2016-17

	Fall 2016 Teen Leadership vs. Comparison Students: Treatment Schools		Fall 2016 Teen Leadership vs. Comparison Students: District Schools	
	Matched Regression	Effect Size	Matched Regression	Effect Size
School Engagement	0.06 (0.07)	0.07	**0.14*** (0.07)	0.18
School Belonging	0.06 (0.08)	0.08	**0.16*** (0.07)	0.20

$^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$; Teen Leadership vs. Treatment School N= 960; Teen Leadership vs. District N= 996
Note: Table presents the regression coefficients of the Teen Leadership variable and bootstrap SEs in parentheses from multivariate regressions that also control for student demographics and grade. Frequency weights were used to account for matching with replacement.

Table 42. Exploratory Outcome Results for School Engagement AY 2017-18

	Fall 2017 Teen Leadership vs. Comparison Students: Treatment Schools		Fall 2017 Teen Leadership vs. Comparison Students: District Schools	
	Matched Regression	Effect Size	Matched Regression	Effect Size
School Engagement	0.04 (0.07)	0.06	0.09 (0.08)	0.11
School Belonging	0.02 (0.08)	0.02	0.11 (0.09)	0.12

$^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$; Teen Leadership vs. Treatment School N= 738; Teen Leadership vs. District N= 714
Note: Table presents the regression coefficients of the Teen Leadership variable and bootstrap SEs in parentheses from multivariate regressions that also control for student demographics and grade. Frequency weights were used to account for matching with replacement.

RQ12. *Following participation in the Teen Leadership course, were students more likely to report an improved attitude toward learning?*

Researchers also examined the impact of the Teen Leadership course on student attitude toward learning as measured by the Valuing Education survey scale. For the analyses examining Student Attitude toward Learning, positive values in the table indicate that Teen Leadership students exhibited a more desirable outcome than the matched comparison students.

The results for Student Attitude toward Learning appear in Tables 43 and 44. Teen Leadership students showed a significantly improved attitude toward learning than matched comparison students at district schools in academic year 2016-17 ($p < 0.05$). Student Attitude toward Learning did not vary significantly

between Teen Leadership students and matched comparison students at treatment schools in academic year 2016-17 or 2017-18.

Table 43. Exploratory Outcome Results for Student Attitude toward Learning AY 2016-17

	Fall 2016 Teen Leadership vs. Comparison Students: Treatment Schools		Fall 2016 Teen Leadership vs. Comparison Students: District Schools	
	Matched Regression	Effect Size	Matched Regression	Effect Size
Valuing Education	0.03 (0.06)	0.05	**0.12*** (0.05)	0.18

$^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$; Teen Leadership vs. Treatment School N= 960; Teen Leadership vs. District N= 996
Note: Table presents the regression coefficients of the Teen Leadership variable and bootstrap SEs in parentheses from multivariate regressions that also control for student demographics and grade. Frequency weights were used to account for matching with replacement.

Table 44. Exploratory Outcome Results for Student Attitude toward Learning AY 2017-18

	Fall 2017 Teen Leadership vs. Comparison Students: Treatment Schools		Fall 2017 Teen Leadership vs. Comparison Students: District Schools	
	Matched Regression	Effect Size	Matched Regression	Effect Size
Valuing Education	0.03 (0.06)	0.04	0.05 (0.08)	0.08

$^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$; Teen Leadership vs. Treatment School N= 738; Teen Leadership vs. District N= 714
Note: Table presents the regression coefficients of the Teen Leadership variable and bootstrap SEs in parentheses from multivariate regressions that also control for student demographics and grade. Frequency weights were used to account for matching with replacement.

6. Adjustment for Multiple Outcomes

This evaluation examined the effects of completing the Teen Leadership course on multiple outcomes. However, as the number of comparisons in a study increases, so does the possibility of committing a Type I error. There are many ways to deal with this challenge. As seen above in section II, this evaluation examined outcomes in a number of different domains. Following Schochet (2008), the impacts and outcomes of interest were classified as confirmatory or exploratory. The confirmatory analyses were the focus of this evaluation and adjustments for multiple outcomes were necessary. Within the discipline domain, the Benjamni-Hochberg adjustment was used. This method was preferred over the Bonferroni correction because the Bonferroni correction can be overly conservative and can significantly increase the possibility of Type II error, which reduces power (Gelman, Hill, & Yajima, 2012; Schochet, 2008).

Using this approach, researchers conducted separate tests for each outcome. Researchers ordered the p-values from the tests from smallest to largest and compared each to an adjusted p-value that took the number of tests in the domain into account. There were 54 total tests (6 full year outcomes and 6 spring outcomes for treatment and district comparison groups in 2016-17 and 2017-18, and 6 full year outcomes for the 2016-17 state analysis). These tests yielded 13 positive significant behavior outcomes for Teen Leadership students, primarily when compared to matched students attending district schools.

When adjusting for multiple comparisons, nine of these results remained significant ($p < 0.1$). See Table 45.

Table 45. Adjustment for Multiple Outcomes

Outcome	Year	Comparison Group	Original P-value	Significant at p < 0.10
ISS Hours	2018	District	0.00000002044	Yes
ISS Hours (Spring)	2018	District	0.0000005798	Yes
ISS Hours (Spring)	2017	District	0.00001741	Yes
ISS Hours	2017	District	0.00002046	Yes
OSS Days (Spring)	2017	District	0.00173914	Yes
OSS Days	2017	District	0.00536286	Yes
Any ISS (Spring)	2017	District	0.00801637	Yes
Any ISS (Spring)	2018	District	0.00965301	Yes
ISS Hours (Spring)	2018	Treatment	0.01471294	Yes
Any ISS	2017	District	0.02556946	No
Any Referral (Spring)	2017	Treatment	0.02830724	No
Any ISS	2018	District	0.04540156	No
ISS Hours	2018	Treatment	0.05186826	No
Any Referral	2018	District	0.06046114	No
Any Referral	2017	Treatment	0.08661902	No
# of Referrals	2017	Treatment	0.08920378	No
# of Referrals (Spring)	2017	Treatment	0.09560055	No

V. Findings, Lessons Learned, and Next Steps

A. Summary of Implementation Study Findings

Researchers found that Greenville County Schools implemented the Teen Leadership course structure with a high degree of fidelity, following critical guidelines identified by the curriculum developers. Modifications made to the program design were intended to better engage the target population. For example, Teen Leadership teachers indicated that parts of the curriculum were not ideal for the students being served. Teachers reported that they did not mix the curriculum with other curricula, but instead used different or more relevant examples that were culturally relevant to the students.

Teachers and principals reported few barriers to implementing the Teen Leadership course at their school. The district deviated from the course implementation guidelines in some areas. Many of these deviations were made at the Teen Leadership teachers' discretion and due to specific school circumstances. See Implementation Study Results for a more in-depth look at the project- and school-level adaptations to and deviations from the curriculum that occurred which may have affected the intended benefits for students and schools.

All schools implemented the course as a semester course, as opposed to a yearlong course design. The schools followed a standard schedule in which each course was taught every day for least 45 minutes, depending on the school's bell schedule. Courses also were limited to 15–25 students. During both semesters, teachers reported that new students were placed in the class throughout the semester, which did not align the course developers' recommendations. Some schools inadvertently placed students in the course who had taken the course a previous semester. This primarily happened in academic year 2015-16 as well as the first semester of academic year 2016-17. This posed challenges because the teachers had to develop new curriculum or activities for those students. Lack of communication between the enrollment staff and the administration was named as the reason for this issue. According to teachers, this problem generally was resolved in the second semester of academic year 2016-17.

Teen Leadership teachers chose to incorporate some additional activities to the curriculum in order to generate real world applicability. In particular, teachers took students outside of the school in order to generate a greater awareness of themselves and the world to ensure the lessons had meaning to students. Some examples of this included taking students on a tour of a local college and to view court proceedings.

During academic year 2017-18, the district created three semester-long Teen Leadership courses: Foundational Teen Leadership, Responsible Teen Leadership, and Visionary Teen leadership. This provided opportunities for students who had taken Teen Leadership previously to advance to the later chapters. Full implementation of Chapters 1–4 of the curriculum was renamed Foundational Teen Leadership. The district intended for Foundational Teen Leadership to serve as a prerequisite for Responsible Teen Leadership and Visionary Teen Leadership. Responsible Teen Leadership focused on Chapters 5 through 7, and Visionary Teen Leadership focused on Chapters 8 and 9. In academic year 2017-18, two of the middle schools offered the new courses to students. However, implementation of the new class schedule at two schools did not align with district recommendations. Project leaders

worked closely with individual schools and teachers to support implementation of the three levels of the course.

Teen Leadership teachers used portfolios to keep track of student growth even though they were not outlined in the original Flippen curriculum. The portfolios served as a pedagogical practice that district administrators and teachers thought would be useful as a way to track and assess student growth in the Teen Leadership course. Teachers reported that the portfolios were a critical way to assess student growth because students were asked to include written reflections on activities as well as comparisons from beginning- and end-of-semester knowledge and skills. Teen Leadership teachers also liked portfolios because they allowed students to share their reflection in a nonverbal way.

Teachers perceived that some students struggled with the advanced nature of the course. As remarked by Teen Leadership teachers, the Teen Leadership course assumed that students had prior knowledge or experience with the concepts presented in the curriculum, when that was not always the case. For this reason, teachers made changes in regards to pacing, or increasing the amount of time teachers spent on certain lessons, in order to better engage students. Some students struggled to stay engaged, either when they faced difficulty understanding a concept (i.e. reframing) or when the curriculum called for less-engaging methods of interaction (i.e. reading). Teen Leadership teachers implemented the program with modifications to better engage and connect with the target population.

On average across all schools, students agreed that their teacher gave students time to discuss issues that were important to the students and disagreed with the statement that the teacher talked too much about things that were important to the teacher but not important to the student. In both the student focus groups and survey feedback, students noted that their relationships with their classmates had improved. A few also noted improved relationships with their family members and friends. In addition, some students discussed more general feelings like “be more respectful” and “nice, help me open up to people” which indicates the absorption of knowledge related to social skill development that is necessary for maintaining healthy relationships. Teachers also noted a progression in students’ shyness and ability to come together as a team over the course of the semester. A majority of student-survey responses indicated that what students learned in Teen Leadership course helped them handle situations that angered them. Students and teachers also noted personal growth and more awareness of themselves as a result of participating in Teen Leadership. Students reported that they were better able to communicate their feelings and open up to others.

Students consistently rated Teen Leadership as their favorite class. Across multiple semesters, an average of 87% of the students who completed the student survey felt like all students should take the Teen Leadership class. Students seemed to connect with the application of Teen Leadership material to their lives outside of school. According to the student survey, an average of 91% of students across the semesters felt like the material learned was meaningful to them outside of school.

Though teachers reported seeing changes in individual students’ behavior, school-wide changes in behavior were still in nascent stages. Teachers reported that it may be difficult to see immediate changes in many students’ behavior and that it may take time for these changes to manifest, which may delay seeing impact on students. Teachers and principals still considered the course critical because it approaches relationships and students’ social-emotional needs in a systematic way and has great potential to impact students.

B. Summary of Impact Study Findings

In order to achieve a moderate level of evidence, this study utilized a single-site non-randomized group design with groups formed by propensity score matching. For confirmatory impact research questions, there were three comparison groups. Treatment students were matched to (1) other students in the *treatment schools* who did not participate in the intervention; (2) other students in the *same school district* attending district schools; and (3) other students attending *Title I schools across the state* of South Carolina. The use of multiple comparison groups improved the overall internal and external validity of the study, as each comparison group presented different threats to validity. Researchers matched students using a propensity score model that included race, gender, grade level, English proficiency, special education status, free and reduced price meal eligibility, and baseline outcome variables. Researchers conducted separate matching procedures for each data source, administrative data and survey data. At the conclusion of the matching process, researchers ensured that there were no significant differences between the treatment and comparison groups on pre-treatment covariates.

Confirmatory Impact Results – Behavior

Researchers examined the impact of participating in Teen Leadership on student behavior. Results varied greatly by academic year, comparison group, and type of behavioral incident. Overall, there were more statistically significant positive results than negative results, leading researchers primarily to accept the hypothesis that Teen Leadership students would have fewer behavioral incidences than matched comparison students.

In academic year 2016-17, Teen Leadership students were more likely to have had any behavioral referral when compared to matched comparison students at treatment schools ($p < 0.10$, $d = 0.17$). On average, Teen Leadership students had 0.37 more behavioral referrals than matched comparison students ($p < 0.10$, $d = 0.11$). When isolating just the spring semester, Teen Leadership students were more likely to have had any behavioral referral than matched comparison students at treatment schools ($p < 0.05$, $d = 0.17$) and received an average of 0.22 more behavioral referrals than matched comparison students ($p < 0.05$, $d = 0.11$). Fall 2016 Teen Leadership students were more likely to have received any behavioral referral than matched students at treatment schools ($p < 0.05$, $d = 0.11$). Though small, these differences were statistically significant and not in the predicted direction.

Despite these negative significant behavior results for comparisons with matched students at treatment schools, Teen Leadership students generally had better behavioral outcomes when compared to matched comparison students at district schools. Overall, Teen Leadership students had fewer behavioral incidences when compared to matched comparison students at district schools. For example, fall Teen Leadership students were less likely to have received any in-school suspension in the following spring semester than matched comparison students at district schools in academic years 2016-17 and 2017-18 ($p < 0.01$). Researchers found that Teen Leadership students received 1.87 fewer hours of in-school suspension than matched comparison students at district schools in spring 2017 ($p < 0.001$, $d = -0.24$).

In spring 2018, Fall 2017 Teen Leadership students received 0.70 fewer hours of in-school suspension than matched students at treatment schools ($p < 0.05$, $d = -0.17$) and 2.61 fewer hours of in-school suspension matched students at district schools ($p < 0.01$, $d = -0.28$).

As noted previously in this report, some of the behavior outcome variables from the state dataset varied slightly from the variables in the district dataset. There were no statistically significant differences in behavior outcomes between Fall 2016 Teen Leadership students and matched comparison students from state schools.

This study generated a moderate level of evidence for the Teen Leadership course. Through the use of its quasi-experimental design with groups formed by propensity score matching, this study examined the impact of the course on six measures of student behavior: (1) any behavioral referral, (2) number of behavioral referrals, (3) any in-school suspension, (4) number of hours of in-school suspension, (5) any out-of-school suspension, and (6) number of days of out-of-school suspension. The study included two academic years of implementation and created matched samples of comparison students from three types of schools: (1) treatment schools, (2) district schools, and (3) state schools. There were 54 total tests (6 full year outcomes and 6 spring outcomes for treatment and district comparison groups in 2016-17 and 2017-18, and 6 full year outcomes for the 2016-17 state analysis). These tests yielded 13 positive significant behavior outcomes for Teen Leadership students, primarily when compared to matched students attending district schools. When adjusting for multiple comparisons, nine of these results remained significant ($p < 0.10$). Given the use of multiple comparison groups to reduce threats to internal and external validity and a successful matching process that yielded balanced treatment and comparison groups, this study's methodological rigor and positive significant results merit a moderate level of evidence for the Teen Leadership course.

Exploratory Impact Results – Course Performance and Attendance

In addition to confirmatory impacts, researchers also analyzed other exploratory impacts of the Teen Leadership course, including impacts on the ELA and math course performance of Teen Leadership students and matched comparison students at treatment, district, and state schools. Overall, the differences in course performance between Teen Leadership students and matched comparison students were not significant. Researchers did find, however, that Fall 2016 Teen Leadership students had higher scores on the SC READY ELA assessment than matched comparison students at districts school in academic year 2016-17 ($p < 0.05$, $d = 0.02$).

Overall, however, the results indicate that Teen Leadership students did not perform significantly better or worse than matched comparison students on the spring 2017 MAP reading and math assessments or the spring 2017 SC READY math and ELA assessments after adjusting for previous achievement and other factors. Similarly, in academic year 2017-18, there were no statistically significant differences between Teen Leadership students and matched comparison students.

With regard to attendance, researchers examined the impact of taking the Teen Leadership course on student average daily attendance and chronic absenteeism between Teen Leadership students and matched comparison students at treatment, district, and state schools.

In academic year 2017-18, there was one statistically significant difference in student attendance between students participating in the Teen Leadership course and matched comparison students at district schools. Teen Leaderships students had significantly higher average daily attendance in academic year 2017-18 when compared to district school matched comparison students ($p < 0.05$, $d = 0.13$). These results indicate that participation in the Teen Leadership class did have a significant impact on students' attendance patterns.

Exploratory Secondary Outcome Results

The secondary goals of the Teen Leadership program were to have students be more likely to report having healthy relationships with peers and adults at school, have an improved self-concept, an improved sense of personal responsibility, improved social competence, and improved confidence in their public speaking skills. Again, results varied by outcome and academic year.

Researchers examined the impact of participation in Teen Leadership on students' relationships with peers and caring adults at school. Academic year 2016-17 and Spring 2017 Teen Leadership students reported having stronger relationships with peers ($p < 0.10$, $d = 0.05$; $p < 0.05$, $d = 0.08$).

Fall Teen Leadership students reported having stronger relationships with teachers than their matched counterparts at district schools in academic year 2016-17 ($p < 0.01$, $d = 0.38$) and academic year 2017-18 ($p < 0.05$, $d = 0.24$). There were no significant differences in relationships with teachers between treatment and comparison students and matched comparison students attending treatment schools. There was only one significant finding in reported relationships with caring adults, found between Teen Leadership students and matched comparison students at district schools ($p < 0.05$, $d = 0.24$).

A comparison of pre- and post-survey responses showed that participants from academic year 2016-17 reported that students' relationships with peers had improved ($p < 0.1$, $d = 0.08$), they had greater social competence ($p < 0.01$, $d = 0.16$), and their confidence in their public speaking skills had improved ($p < 0.01$, $d = 0.19$). Conversely, a comparison of pre- and post-survey responses showed that participants from academic year 2017-18 reported only one significant finding that students' confidence in their public speaking had improved ($p < 0.1$, $d = 0.08$).

In sum, one of the major goals of the Teen Leadership course was to help students strengthen their communication and social skills in order to improve relationships with peers and adults at school, at home, and in the community. Survey results offer preliminary support showing that Teen Leadership students were learning and applying these skills. Teen Leadership students reported having stronger relationships with teachers and caring adults than their matched counterparts.

While comparison data were not available for other exploratory secondary outcome measures, pre- and post-survey comparisons showed that Teen Leadership students reported having stronger relationships with peers, higher levels of social competence, and more confidence in their public speaking skills by the end of the semester course. Again, these are all important concepts taught throughout the course. While the strength of the findings is weakened by the lack of comparison student data for these outcome measures, the findings still suggest the likelihood of the course's positive impact.

It is worth noting that student perceptions of self-concept and sense of personal responsibility did not increase significantly throughout the course. While it is possible that the Teen Leadership course is not as effective in improving these student outcomes, it also is possible that measurement issues influenced the findings. The internal consistency of these survey measures were lower than anticipated, especially when compared to their use in prior studies. The student survey instrument was long and these measures appeared toward the end of the survey—teachers who administered the survey indicated that many students moved through the survey questions slowly and needed additional time to complete all questions. Students were not able to save their answers and return to the electronic survey in a different session, so it was necessary for them to complete it in one sitting. As such, it is possible that some students did not read these items thoroughly or simply clicked through the last pages of the

survey in order to finish it in the allotted time. Modifications to the survey instrument in future years of the study will attempt to address these measurement concerns.

Additional Exploratory Impact Results

Researched examined some additional exploratory research questions which looked at students' improved self-confidence, improved school engagement, and an improved attitude toward learning. Results varied by outcome and academic year. There were no significant differences in academic self-confidence and academic perseverance between Teen Leadership students and matched comparison students in either academic year or school group. Overall, there were no significant differences between Teen Leadership students and their in-school matches in relationships with teachers, relationships with caring adults, school engagement, school belonging, or valuing education.

Fall 2016 Teen Leadership students reported higher levels of school engagement ($p < 0.05$, $d = 0.18$) and school belonging ($p < 0.05$, $d = 0.2$) than matched comparison students at district schools in academic year 2016-17. Levels of school engagement and school belonging did not vary significantly between Teen Leadership students and matched comparison students at treatment or district schools in academic year 2017-18.

Teen Leadership students showed an improved attitude toward learning when compared with matched comparison students at district schools in academic year 2016-17 ($p < 0.05$, $d = 0.18$). There were no significant differences between Teen Leadership students and matched students at treatment schools either academic year.

Changes to the Sub-Grantee Evaluation Plan Impact Study Design

The primary change to the SEP was the loss of an exploratory impact measure of course performance, MAP assessment scores in ELA and math. Prior to academic year 2017-18, the local school district administered the MAP assessment in grades 3 through 8 at least two times per year, in the fall and spring. Some schools opted to administer the assessment a third time, in winter. The district opted to end its contract with MAP and began administering Mastery Connect in fall of 2017. At present time, researchers do not have access to Mastery Connect data and remain uncertain if data from this assessment will serve as an acceptable outcome measure in the study. Researchers only were able to examine end-of-year SC READY assessment scores in math and ELA for academic year 2017-18.

One modification was made to the treatment definition for the study. Previously, researchers proposed that students would need to be enrolled at least 51% of the academic year at the treatment schools in order to be included in the treatment group. It proved challenging to measure this given the structure of the attendance data; therefore, researchers removed these inclusion criteria from the treatment definition. Further, the SEP stated that all Teen Leadership students would be included in the analysis. This report focuses on those students who attended Teen Leadership classes in the fall semester. The fall 2017 sample was further limited to those students enrolled in the Foundational Teen Leadership course. This approach was used because many of the outcomes corresponded to the entire academic year. Therefore, analyses that included spring Teen Leadership students could not isolate the post-Teen Leadership effect on outcomes.

The outcome measures for the behavior variables were modified slightly. Originally in the SEP, researchers proposed including continuous behavior variables: number of behavioral referrals, number

of hours of in-school suspension, and number of days of out-of-school suspension. In additional to these continuous measures of student behavior, researchers also added dichotomous categorical variables: any behavioral referral, any in-school suspension, and any out-of-school suspension.

Researchers modified the student survey outcome measure for the exploratory outcome of student attitude toward learning. Researchers originally proposed using a four-item scale *Valuing School* that measured a student's beliefs about the importance of school (Rockman et al, 2013). Researchers also included a similar scale on the student survey from a prior evaluation of an integrated student supports program (Corrin, Parise, Cerna, Haider, & Somers, 2015). After the first wave of data collection, researchers assessed the psychometric properties of both scales and ultimately opted to retain the entire latter scale with the addition of one item from the former scale. Researchers conducted exploratory factor analysis to examine the factor structure of the new scale, discussed later in this report in Section II.B.2.

There was a change in the timeline for receiving administrative data from the South Carolina Department of Education for the state comparison group analyses. Researchers anticipated receiving the state dataset in October or November for the prior academic year. However, the dataset for academic year 2016-17 was not available until February 2018, and researchers still do not have access to data from academic year 2017-18. This delay in receiving state data prohibited researchers from conducting the state comparison group analyses for this report.

Researchers also had to alter the inclusion criteria for state comparison schools. In the SEP, researchers originally proposed to select state schools with a poverty index of 85 or higher and a Hispanic student population of at least 10%. At the time of writing the SEP, South Carolina calculated the poverty index based on the number of students eligible for free or reduced price meals. After the introduction of the community provision for free and reduced meals, state officials introduced a new measure of poverty that included students who met any of the criteria: homeless or migrant during the academic year; Medicaid enrollment at any time during a three-year period; SNAP enrollment at any time during a three year period; TANF enrollment at any time during a three year period; or foster care enrollment at any time during a three year period. This change in the poverty index affected and, in general, reduced the reported poverty levels of treatment schools and all schools across the state. When researchers searched for state comparison schools using these two criteria, only 13 schools appeared as possible comparison schools from which to draw matched comparison students. Of these schools, several were charter schools or schools serving exceptional learners and were not appropriate to serve as comparison schools. As such, researchers relaxed the inclusion criteria for state comparison schools and included all Title I middle schools in the state of South Carolina outside of the local district.

In addition, researchers were not certain if they would be able to administer the OnTrack Greenville Student Survey outside of the treatment schools when preparing the SEP. The local district allowed researchers to administer this pre- and post-survey at the four district comparison schools, allowing researchers to analyze student survey outcomes using matched comparison students at district schools. This change to the SEP strengthened the study's design for the analysis of secondary research questions. Survey administration proceeded as described in the SEP, though it was not possible to administer the pre-survey in September of each academic year due to the testing schedule and the amount of time needed to distribute parent opt-out letters before preparing survey materials. Instead, the student survey administration window occurred typically the first two weeks of October each academic year of the study.

In academic year 2017-18, researchers modified the Teen Leadership Student Survey to make it more manageable for students to complete. Based on feedback received from teachers and the poor psychometric properties of some survey scales, researchers removed the scales measuring student self-concept and personal sense of responsibility from the pre- and post-surveys.

To examine possible attrition from the study, researchers proposed in the SEP assessing how students who attrited from the study through leaving the state dataset differed from students who remain in the study. Students were to be compared based on demographics, pre-treatment outcomes measures, and post-treatment outcome measures when possible. Evaluators proposed examining the possibility of differential attrition between treatment and control groups based on these factors as well. Researchers did not conduct these comparisons as proposed, as the structure of the data files and the matching procedure meant there were very few students for whom attrition occurred after students were matched. A comparison of the number of students matched and the number of students in each regression with the matched sample demonstrates that attrition of this type was not a widespread challenge for this study.

There were some additional modifications to the matching procedure. The SEP noted that researchers would trim observations with propensities less than 0.1 and greater than 0.9, if sample size permitted. This was not done to ensure larger sample sizes. In order to increase balance and overlap, researchers used matching with replacement, rather than matching without replacement which was specified in the SEP. This necessitated the use of frequency weights in the matched analyses.

Further changes were made to the impact analysis plan. While the SEP stated that the main analyses would focus on the "treatment-on-the-treated" (ITT) effect, the researchers also suggested an "intent-to-treat" analysis might also be performed if data were available. The evaluation team did not have access to the EWRS data in a form that would allow the researchers to compare those who were identified to enroll in a Teen Leadership course, as opposed to those who actually enrolled. Therefore, an ITT analysis was not possible. In addition, there was some challenges in estimating the proper standard errors in the regression analyses post-match. Researchers used a bootstrapping method, rather than clustered standard errors. The bootstrap standard errors were very similar to robust standard errors. Other modifications were implemented to maximize the number of observations to be included in the analyses. The proposed final regression model in the SEP included pre-treatment, or baseline, measures of the outcome as a covariate. The analyses presented here used that approach for the attendance, behavior, and test score analyses. Researchers did not control for a pretreatment measure of the outcome for the survey analyses. Doing so would have required students to have complete "pre" and "post" survey data. Given the response rates for the surveys, this would have limited severely the sample size. Therefore, pretreatment outcome measures were not controlled for in the survey outcome analyses.

In the SEP, researchers stated that they would use one-tailed tests with a significance level of $\alpha \leq .05$ to determine statistical significance. In this evaluation, researchers also considered the possibility that completing the Teen Leadership course could decrease student behavior. Therefore, researchers used a two-tailed, 0.10 alpha level. In terms of identifying a positive Teen Leadership effect to support a moderate level of evidence, the two approaches are equivalent.

This evaluation was complicated by the presence of multiple, simultaneous interventions occurring in the OnTrack Greenville schools. In the SEP, researchers suggested that participation in the other student-level interventions could be controlled for in the final regression models. Data on the timing of

participation in the various interventions was not detailed enough to ensure that participation in these other programs occurred before enrolling in a Teen Leadership course. Given that controlling for post-treatment covariates can bias estimates of causal impacts (Montgomery, Nyhan, & Torres, 2018), researchers did not adjust for participation in the other OnTrack programs. A full analysis of the effects of participating in different intervention combinations is better suited for the cumulative impact study, rather than this evaluation.

C. Lessons Learned

During the course of implementation, several lessons emerged regarding teacher training and preparation. Participation in a professional development session at the beginning of the academic year proved useful for Teen Leadership teachers. This session gave teachers an opportunity to familiarize themselves with the curriculum and to collaborate with other teachers about specific assessment components, such as the digital portfolio. In addition, the availability of a district-level professional who was accessible throughout the school year for questions and general guidance proved essential for program success. Because individual schools did not have anyone in the building who was knowledgeable about Teen Leadership, a district representative assigned to monitor implementation of the course provided teachers with a much-needed resource for support.

Project leaders also learned valuable lessons regarding the relevancy of the Teen Leadership curriculum. After the first year of implementation, teachers expressed concern that some of the examples in the curriculum did not seem relevant for many of the Teen Leadership students. In subsequent years, teachers reported success with incorporating different, more culturally relevant examples into lessons. In the future, any instructors teaching the Teen Leadership course may want to review the examples and scenarios offered in the curriculum and then decide whether some changes are necessary to best fit the needs of their particular students.

There were several lessons learned related to the evaluation itself. First, there were lessons learned about the importance of data-sharing agreements and school-community partnerships. OnTrack Greenville is a collective impact initiative that created a culture of trust and learning with Sub-Grantee and school partners. Among the six formal guiding values of the partnership, two values helped foster a strong culture that supported the evaluation: (1) operating as an innovative learning community and (2) having a results-oriented mindset. Partners' commitment to these shared values and the ongoing efforts of United Way of Greenville County serving as the collective impact backbone helped strengthen relationships between researchers, district stakeholders, and partners. For that reason, partners over time grew more comfortable with evaluation and embraced learning opportunities rather than fearing potentially negative or unexpected findings. The helped ensure that implementation and impact study findings and recommendations more quickly translated into programmatic changes. Without the trust and shared values of the OnTrack Greenville partnership, there would have been additional challenges threatening the validity of the study.

Researchers also learned valuable lessons around fostering the early stages of a research-practice partnership with the school district. Greenville County Schools is the 45th largest school district in the nation and receives numerous requests from researchers to serve as a research site in studies. In order to protect students' time in the classroom from research activities, GCS must be very selective about the research activities it permits at its schools through formal Research and Data Sharing Agreements. Due

to the district's deep commitment to the partnership values and intended outcomes of OnTrack Greenville, the district and researchers were able to engage in thoughtful conversations around the study design and data collection activities, successfully establishing and maintaining a complex multi-party Research and Data Sharing Agreement with the Riley Institute and five distinct implementation study research teams.

At times, however, the complexity of the project presented unexpected situations. For example, the district served as the gatekeeper for research activities at schools, but it also served as a Sub-Grantee partner through the implementation of Teen Leadership. It was interesting to design a third-party evaluation for a program in which the program stakeholders also had final say in which data collection activities were permissible with students. By focusing on the shared OnTrack Greenville partnership values, establishing trust early on, and maintaining clear communication, the district and researchers continue to work together as learning partners in the evaluation of OnTrack Greenville.

Researchers also continue to learn about the challenges of accurately operationalizing and measuring social-emotional outcomes. The exploratory secondary outcomes of the Teen Leadership course relate to improving student social competence and self-concept, among others. The outcomes, as articulated in the Teen Leadership curriculum, did not always align well with some of the existing survey measures researched identified in the literature. The first version of the Teen Leadership Student Survey administered in academic year 2016-17 was too lengthy—teachers reported that many students could not finish it in one sitting or disengaged halfway through and began satisficing. The internal reliability on some of the survey measures was lower than expected, leading researchers to remove three survey scales from the survey in academic year 2017-18. As the evaluation continues in academic year 2018-19, researchers yet again have reworked the surveys to align with the three distinct levels of Teen Leadership, limiting length as much as possible. Researchers will introduce student interviews to the evaluation of Visionary Teen Leadership in spring 2019 in order to test if this form of data collection will more accurately measure the student outcomes rather than a student survey. Ultimately, researchers are learning that a mixed-methods approach to outcome measurement may best capture the learning and growth of students who take the course, especially students who progress through multiple levels of the course.

In addition, researchers have learned that it is necessary to strengthen communication with Teen Leadership teachers participating in the evaluation. Teachers were responsible for administering the student pre- and post-surveys in their classes each semester, playing an important role in data collection. Throughout the evaluation, teachers had varying degrees of understanding of the purpose and methods of the study. Further, the word "evaluation" has a different meaning in the education setting, with many teachers equating it to performance evaluation. Due to inconsistent clarity on the evaluation and a healthy dose of apprehension, researchers learned that they needed to be more intentional in communicating with teachers that the evaluation was not an evaluation of their performance as teachers, but an evaluation of the overall program model of Teen Leadership and student outcomes.

Lastly, the student survey administration process used in this study, while not innovative or revolutionary, required a great level of detail and resulted in a high response rate among students. The initial challenge was identifying a way to link survey data with administrative data housed in PowerSchool. In order to use a passive approach to parental permission for participation in the study, the study could not have students but any identifiable information on their survey, like their name or student ID number. Researchers created unique student IDs for the survey that were linked to their

PowerSchool number, allowing students to access their electronic survey easily and allowing researchers to connect the survey to attendance, behavior, and course performance data. This entailed creating more than 5,000 student ID note cards two times per year and delivering and collecting classroom-specific survey packets to eight schools just for the OnTrack Greenville Student Survey. The Teen Leadership Student Survey was administered two times each semester, adding more logistics to the process. While there was a large learning curve during the first survey administration, the process is now streamlined and efficient, serving as a quality model for data collection for other evaluations.

D. Study Limitations

In addition, a thorough implementation study strengthened the implementation of the course and allowed researchers to confirm a sufficient degree of model fidelity. The lessons learned through the implementation study were valuable to project stakeholders and helped shine a light on program strengths and possible areas of improvement.

However, there were several limitations to the study. First, researchers were not able to identify a subset of state Title I middle schools with student population demographics similar to the treatment schools. The Sub-Grantee Evaluation Plan called for including only state comparison schools with a poverty index of 85% or higher and Hispanic students representing 10% of the student body. Only 13 schools met these inclusion criteria to be considered as state comparison schools—many were charter schools or special designation schools serving students with disabilities and were substantially different from the treatment schools. Researchers opted to loosen the inclusion criteria and include all Title I middle schools in South Carolina in the state school comparison group.

Another limitation of the study is that researchers did not have the ability to assess if comparison students at district and state schools had received similar program services, such as other character education programs or interventions. Similarly, researchers could not confirm that state comparison schools did not offer the Teen Leadership course. Attempts to obtain a roster from the course publisher of other middle schools in the South Carolina with trained Teen Leadership instructors were unsuccessful and resources were not available to contact the approximately 300 Title I middle schools to inquire if they formally offered the Teen Leadership course. However, Greenville County Schools stakeholders, through their networking with other educators throughout the state, did not believe that Teen Leadership was widely offered at other school districts. While it is possible that a number of schools in the state comparison group offered Teen Leadership, the number of matched students who attended these schools likely was very small and the inclusion of these students as matches would not have influenced the results of the study significantly.

There are several possible explanations for these findings. First, OnTrack Greenville treatment schools simultaneously were implementing other school-wide policies aimed at improving student behavior. Most notably, OnTrack Greenville as a whole is a collective impact partnership that supports school leaders as they systemically examine and adjust informal school policies related to student behavior. At its core, OnTrack Greenville is a school transformation model, so the initiative intentionally aims to strengthen school climate so that schools are more student-centered in policy, practice, and behavior. Capturing Kids' Hearts, the prerequisite model for Teen Leadership implementation, is another school-wide model that may have influenced student behavior and school climate, thus weakening the strength of the in-school matching process. In addition, administrators at treatment schools have started training

related to Adverse Childhood Events (ACEs) and trauma-informed approaches to handling student behavior. These school-wide efforts to improve student behavior and implement trauma-informed approaches to addressing student behavior are confounding factors that may explain the lack of significant effects when comparing Teen Leadership students to in-school matched comparison students. These school-wide efforts also increased the likelihood that the positive significant effects of the program identified when examining district school matches may not be fully attributable to the Teen Leadership program.

Further, the absence of positive significant findings for in-school matches may be related to missing data on student participation in other OnTrack Greenville interventions. Apart from the school-wide models discussed above, OnTrack Greenville includes four other formal implementation partners and several informal partners, some of whom are working to improve the same student outcomes as the Teen Leadership course. It is possible that some of the in-school matches selected for the present study participated in other OnTrack Greenville support programs that influenced student behavior. Future analyses should include more complete data on participation in other OnTrack Greenville interventions, allowing research to control for participation during the in-school matching process. While researchers did not have access to comparable participation data for students in district schools, none of the OnTrack programs operate in comparison schools and there are few support programs similar to OnTrack available to students at these schools. Therefore, there was less concern that comparison students at district schools also were participating in potentially similar programs.

An additional limitation of the present study is the lack of Teen Leadership participation data from academic year 2015-16. Academic year 2015-16 was a pilot year for OnTrack Greenville—while all support programs, including Teen Leadership, served students at treatment schools, initiative leaders used the first year to focus on program implementation and adjustment. Program impact was not assessed during the pilot year. All four treatment schools offered the Teen Leadership course in academic year 2015-16, but researchers did not have access to class rosters from this time period when completing these initial impact analyses. It is possible that some in-school matches completed the Teen Leadership course during the pilot year. While schools likely implemented the Teen Leadership course with less fidelity to the model that pilot year, students who participated in the class during the pilot year still received some dosage of the program that should have prohibited them from serving as in-school matches. If roster data from the pilot year are available from the school district, future analyses will adjust for prior participation in the class.

E. Next Steps

While this is a final report to satisfy Social Innovation Fund grant requirements, program implementation and impact evaluation will continue for two additional academic years. Given the findings presented in this report, stakeholders and researchers have several possible next steps for implementation and research.

First, project stakeholders should continue implementing the Foundational Teen Leadership course as implemented in previous years. Teachers have been implementing the Foundational Teen Leadership course with fidelity. Positive anecdotal results from both students and teachers suggest that ongoing adherence to the Teen Leadership implementation guidelines may be critical to ensuring continued student growth, especially growth in public-speaking skills.

Researchers also recommend continuing to implement the Responsible and Visionary Teen Leadership courses as designed, but with culturally sensitive modifications when indicated. Positive anecdotal results from both students and teachers suggest that the additional opportunities to engage in the Teen Leadership curriculum through the two higher-level courses has benefited students. Students demonstrated additional leadership skills and growth in social competence and other secondary outcomes. Teachers should judge curriculum adjustments. For example, in one classroom, students did not respond well to an activity concerning nuclear families, etc. Prior to academic year 2018-19, the Flippen Group rebranded Teen Leadership, renaming it "LeadWorthy" and updating some aspects of the curriculum and suggested resources. If these revisions of the Teen Leadership curriculum have not adequately addressed the cultural mismatch, project stakeholders should continue to make teachers aware that some revisions could be beneficial and provide support to teachers to make those revisions.

Greenville County Schools also should provide support to other district middle schools that wish to implement the Teen Leadership courses. The district is home to 19 middle schools altogether and the Teen Leadership course has received school board approval, making it a permanent Related Arts course offering in the district course catalog. That means any middle school in the district could opt to offer Teen Leadership. In fact, at time of report publication, two other middle schools were offering Teen Leadership. Many students throughout the district could benefit from the course and further develop their leadership skills by taking the advanced versions of the Teen Leadership course. Especially, the district should continue to provide support and guidance to schools seeking to implement the next-level courses, such as making sure schools enroll students with the correct prerequisite and ensuring that instructors know how the three courses differ.

When possible, district staff should continue to offer collaboration activities to support Teen Leadership teachers. Teachers believed that collaboration was critical and desired more opportunities to share implementation strategies. Increased support is also necessary to ensure full implementation of the course when teachers or school leaders leave and new staff join. Both district and school leaders have a role to play in providing support for teachers, and especially for those new to the course. Project stakeholders should explore methods for increasing collaboration among teachers that are sustainable, teacher-led, and seamlessly incorporated into the teachers' workflow. Stakeholders also should continue to ensure that teachers access and utilize shared resources housed in Google Classroom. When possible, encourage Teen Leadership teachers to take an active role in communication, planning, and sharing.

In addition to increasing opportunities for Teen Leadership instructors to collaborate, project stakeholders should create opportunities for school administrators to formalize plans to scale Teen Leadership practices and activities at their school. This would allow students' growth in Teen Leadership course to continue throughout the school day and be sustained to make larger impact. Though teachers anecdotally mentioned student growth in social-emotional skills in the Teen Leadership course, it is not clear whether these students carried this learning outside of the classroom. This is perhaps because the Teen Leadership class period accounts for only a limited amount of time in a student's overall school experience and there were few opportunities for Teen Leadership teachers to share with the school community about the type of practices and relationship-building strategies used in Teen Leadership that can impact students' social-emotional growth.

Finally, project stakeholders should ensure that the service-learning component of the curriculum is fully implemented and develops leadership skills. Service learning is an important component of the

curriculum. Teachers want to expand service-learning opportunities and one school developed some relevant activities. Service learning provides opportunities for students to develop academic and personal skills and to connect lessons with life outside of the classroom. Further, service-learning activities can influence school-wide culture.

One next step for the evaluation is to examine the impact of long-term participation in the Teen Leadership course. Originally, Greenville County Schools implemented Teen Leadership as a stand-alone course. At the beginning of academic year 2017-18, OnTrack Greenville schools began offering three distinct levels of the course: Foundational Teen Leadership (I), Responsible Teen Leadership (II), and Visionary Teen Leadership (III), with Foundational Teen leadership serving as a prerequisite for participation in levels II or III of the course. With these additional course offerings, researchers will have an opportunity to examine how continued exposure to Teen Leadership impacts student outcomes over time. This report only examined the impact of Foundational Teen Leadership; therefore, future years of data analysis should include Responsible and Visionary Teen Leadership and explore how long-term participation in Teen Leadership contributes to student behavior and social-emotional outcomes.

Further, researchers and project leaders should continue to discuss and document the implementation of school-wide behavior policy changes at OnTrack Greenville treatment schools. As OnTrack Greenville schools continue to refine behavior policy, an ongoing discussion and documentation of these changes will allow stakeholders and researchers to understand better and potentially tease out the impact of individual implementation partners and the impact of broader change at a systems level.

Appendix A. Study Logistics Updates

A. Institutional Review Board

There were no issues securing Institutional Review Board approval for this study. Furman University's Institutional Review Board approved and oversaw all research activities affiliated with the impact study. Furman University's IRB reviewed this research under its Expedited review process. The original application was submitted to Furman's IRB in July 2016 and approved in August 2016. Modification requests were submitted for IRB review on an ongoing basis and continuation requests were submitted annually. The school district and school personnel informed parents and guardians of the interventions and services available to their students and secured permission to provide services when necessary. Evaluators followed all parental consent and child assent protocol, as dictated by Furman University IRB guidelines and Greenville County Schools' district research protocol. These protocols detailed precisely how researchers must protect data electronically and in hard copy, and detailed informed consent procedures for both parents (parental consent) and students (child assent).

The implementation evaluation was governed by RTI International's IRB. All new RTI projects undergo an IRB needs assessment, including reviewing any specific IRB requirements for its clients. RTI followed all parental consent and child assent protocol as outlined by Greenville County Schools' district research protocol. The RTI Office of Research Protection (ORP) maintains three IRBs, which are responsible for reviewing and approving any human subjects research in which RTI staff are engaged. ORP staff includes certified IRB professionals who have taken a qualification examination to attain this human subjects professional credential. The IRB evaluates each research protocol that involves human subjects to determine whether the physical, psychological, or social risks to study participants are reasonable in relation to the anticipated benefits. After a project is approved by the RTI IRB, the IRB continues to monitor the research process to ensure that the procedures for protecting human subjects are followed. Every study must be reviewed by the IRB at least annually.

B. Project Timeline

There were very few modifications to the evaluation timeline for data collection, analysis, and reporting. The most notable change is that data from the South Carolina Department of Education for academic year 2017-18 were not made available in November as originally planned. At present time, researchers still have not received these data; therefore, researchers were not able to conduct statistical analyses for the state comparison group for academic year 2017-18 for inclusion in this report.

Researchers intended to administer the OnTrack Greenville Student Pre-Survey in September of each academic year. For several reasons, pre-survey administration occurred in October instead. First, in academic year 2016-17, schools were administering the MAP assessment in September and standardized testing took precedent over data collection. In addition, researchers required the entire month of September to manage the parental consent process and prepare survey administration materials. Subsequently, researchers established a two-week survey administration window for schools in early October. In academic year 2016-17, schools were closed unexpectedly in early October due to Hurricane Michael, which delayed survey administration at some school sites. One comparison school

experienced additional challenges with having adequate electronic devices for survey administration and did not complete survey administration until early November 2016.

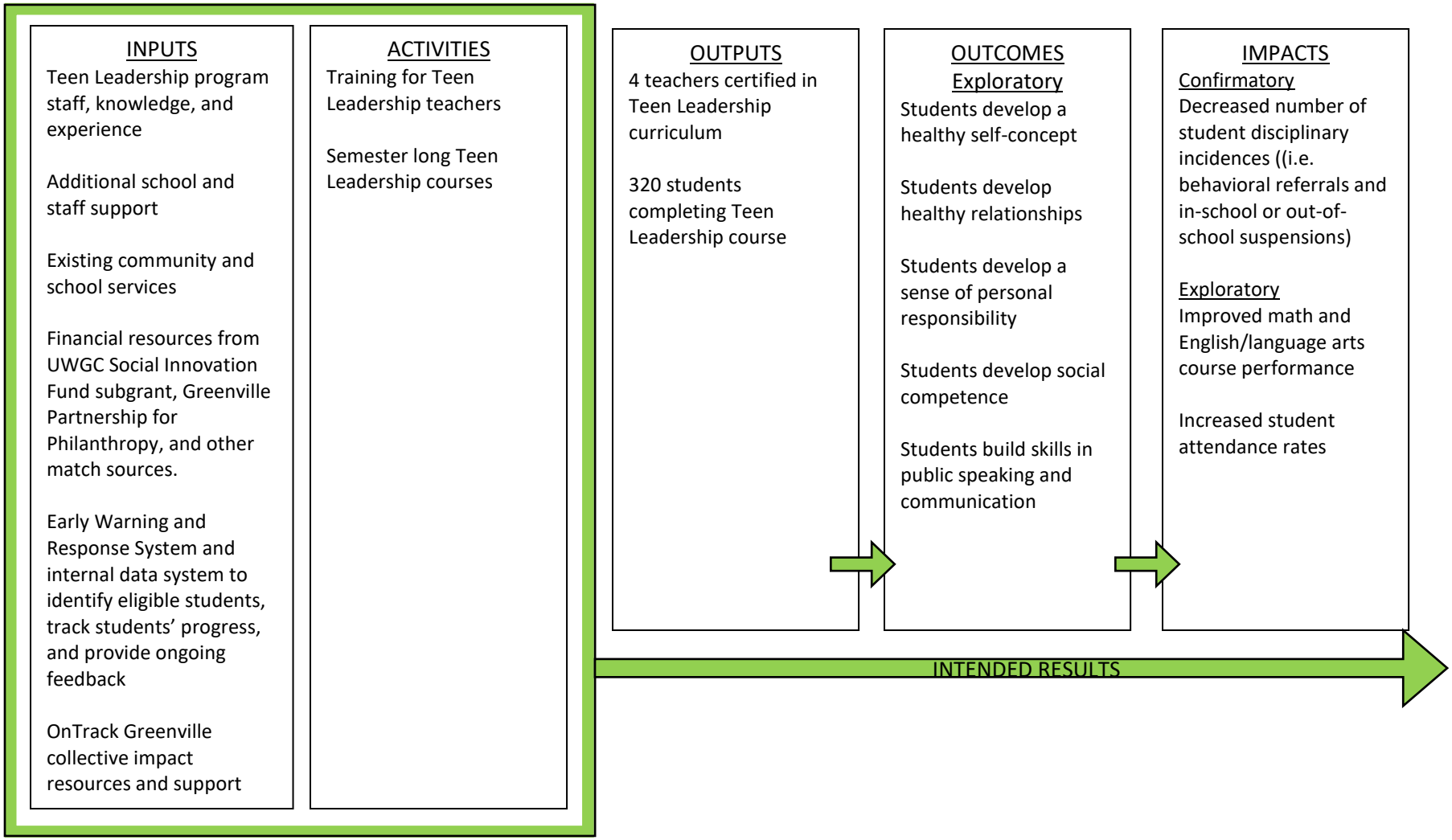
C. Project Personnel

There were no major changes to the evaluation or Teen Leadership project team. The Principal Investigators and lead project staff remained constant for all years of the study. There was some turnover among Teen Leadership teachers at project schools, but this was not unexpected and did not affect any aspects of study logistics.

D. Project Budget

Apart from the unavailability of Social Innovation Fund continuation grant monies for Year 4 and Year 5 of the project, there were no issues with or changes to the budget for this evaluation. OnTrack Greenville stakeholders have secured non-federal funding to continue the implementation and evaluation of OnTrack Greenville through academic year 2019-20.

Appendix B. Program Logic Model



Appendix C. Additional Matching Results

Appendix C provides further information on the matching process, organized by match. Each section provides: 1) additional data on the number of students matched via a participant flow chart, (2) the demographic differences between the Teen Leadership students who were matched and those who were not, (3) the overlap in propensities between the Teen Leadership and comparison students, and (4) further evidence of balance in the form of post-match standardized mean differences and variance ratios of the variables used in the matching process.

Participation Flow Chart: The Teen Leadership and comparison sample sizes are presented for each match. Given that each match was done independently, the number of students in each match varies, so a separate flow chart for each match is necessary. One will note that the sample sizes for the matches using survey data are much smaller than those using the administrative data. This is because researchers limited potential matches to those who responded to the student survey.

Demographic Differences between Matched and Unmatched Teen Leadership Students: As is evident in the participant flow charts, not all Teen Leadership students were matched. This has important implications for the generalizability for the results presented in this evaluation. The estimated effects of Teen Leadership participation are limited to those who are included in the analysis. It is possible that the effect of receiving Teen Leadership services is different for those who could not be matched. To get a better sense of the matching results, researchers compared the demographic characteristics of those Teen Leadership students who were matched to those who were not. This allows one to examine how similar the Teen Leadership sample is to the Teen Leadership population on these factors.

Overlap: One goal of the matching process is for there to be substantial overlap in the propensity scores of the Teen Leadership students and the comparison group. To get a sense of this overlap, kernel densities were estimated for the Teen Leadership and comparison samples after the matching process. Frequency weights were used to account for matching with replacement. Further, the natural log of the propensity score was used in the figures, since it is not truncated at zero and one. Substantial overlap between the distributions of the Teen Leadership and comparison groups is evidence of good balance.

Evidence of Balance: When considering the balance of the matches, researchers considered the standardized differences between the two groups and the variance ratios. The goal was to have standardized mean differences below 0.1 and variance ratios near 1.0 (Steiner & Cook, 2013). If researchers found that the initial matching process created imbalanced samples, they re-estimated the propensity model using higher-order terms and interactions between the covariates (Rosenbaum & Rubin, 1984, 1985). This iterative process lead to different combinations of variables being included in different matching procedures. Following Steiner and Cook (2013), the figures below demonstrate the improvement from the pre-match to the post-match balance in terms of standardized differences and variance ratios. The figures highlight that the matching process produced two very similar samples based on these factors. In one instance (2016-17 treatment survey match), researchers were unable to get the standardized mean differences for all the included covariates between -0.1 and 0.1. However, in this case the standardized mean difference was only marginally beyond the threshold (-0.108).

A. AY 2016-17 District Administrative Match

Table 46. Teen Leadership Participant Flow Chart at District Schools AY 2016-17 (Administrative Data)

Study Time-point	Total number students	Number students included	Number students not included	Notes
Treatment Students				
1. Program Roster	639	---	---	Fall & Spring Teen Leadership Students
2. Had Roster Data	639	620	19	
3. Met Treatment Inclusion Criteria	620	329	291	Participated in Fall Teen Leadership
4. Had Full Matching Data	329	269	60	
5. Matched	269	261	8	
6. Included in Main Analyses	261	261	0	
Comparison Students				
1. School Rosters	5,267	---	---	
2. Met Treatment Inclusion Criteria	5,267	3,346	1,921	District School
3. Had Full Matching Data	3,346	2,874	472	
4. Matched	2,874	828	2,046	Unique students (note: matching was done with replacement)
5. Included in Main Analyses	828	828	0	

Table 47. Which Teen Leadership Students Were Matched? Post-Match Demographics, AY 2016-17 District Schools (Administrative Data Match)

	Teen Leadership Not Matched - Mean	Teen Leadership Matched - Mean	Difference	S.E. of Diff.
Black	0.38	0.32	0.06	0.08
Hispanic	0.27	0.34	-0.08	0.08
White	0.24	0.26	-0.02	0.07
Other Race	0.11	0.07	0.04	0.04
Free/Reduced Meals	0.82	0.92	**-0.09†**	0.05
Female	0.53	0.47	0.06	0.08
Special Ed.	0.40	0.21	**0.19****	0.07
ESL	0.23	0.27	-0.04	0.07
Grade 6	0.35	0.36	-0.01	0.07
Grade 7	0.25	0.38	**-0.13***	0.06
Grade 8	0.40	0.26	**0.14***	0.06

† $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Figure 4. AY 2016-17 District School Comparison Matches (Administrative Data): Overlap

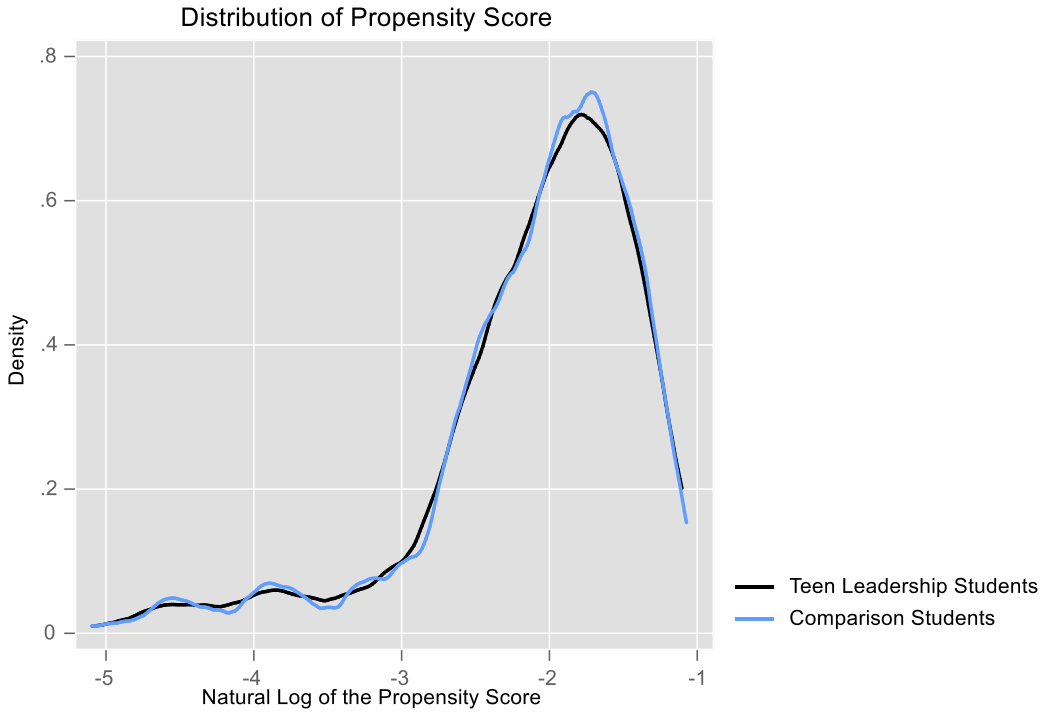
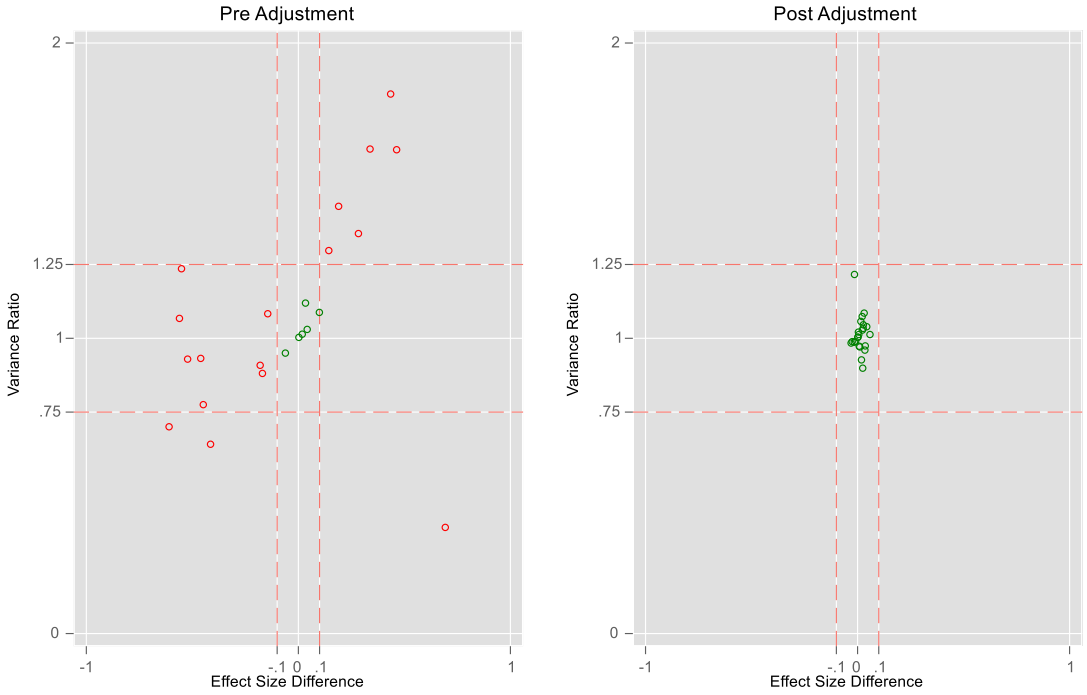


Figure 5. AY 2016-17 District School Comparison Matches (Administrative Data): Standardized Differences and Variance Ratios



B. AY 2016-17 State Administrative Match

Table 48. Teen Leadership Participant Flow Chart at State Schools AY 2016-17 (Administrative Data)

Study Time-point	Total number students	Number students included	Number students not included	Notes
Treatment Students				
1. Program Roster	639	---	---	Fall & Spring Teen Leadership Students
2. Had Roster Data	639	620	19	
3. Met Treatment Inclusion Criteria	620	329	291	Participated in Fall Teen Leadership
4. Had Full Matching Data	329	291	38	
5. Matched	291	120	171	
6. Included in Main Analyses	120	120	0	
Comparison Students				
1. School Rosters	796,876	---	---	
2. Met Treatment Inclusion Criteria	796,876	45,010	751,866	Title I School, Grades 6-8, Not in GCS district
3. Had Full Matching Data	45,010	41,026	3,984	
4. Matched	41,026	584	40,442	Unique students (note: matching was done with replacement)
5. Included in Main Analyses	584	584	0	

Table 49. Which Teen Leadership Students Were Matched? Post-Match Demographics, AY 2016-17 State Schools (Administrative Data Match)

	Teen Leadership Not Matched - Mean	Teen Leadership Matched - Mean	Difference	S.E. of Diff.
Black	0.26	0.45	**-0.19*** **	0.05
Hispanic	0.40	0.26	**0.14***	0.06
White	0.28	0.24	0.04	0.05
Other Race	0.06	0.05	0.01	0.03
Free/Reduced Meals	0.85	0.91	-0.06	0.04
Female	0.55	0.32	**0.23*** **	0.06
Special Ed.	0.20	0.19	0.00	0.05
ESL	0.28	0.16	**0.12***	0.05
Grade 6	0.44	0.22	**0.22*** **	0.05
Grade 7	0.33	0.39	-0.06	0.06
Grade 8	0.23	0.39	**-0.17****	0.05

† $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Figure 6. AY 2016-17 State School Comparison Matches (Administrative Data): Overlap

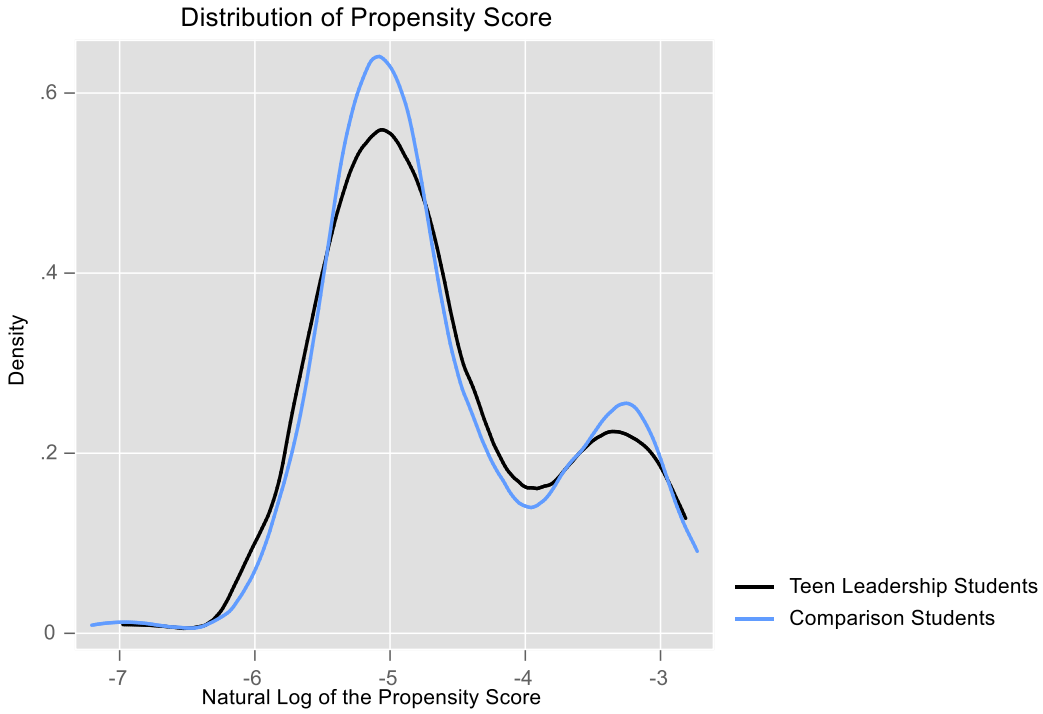
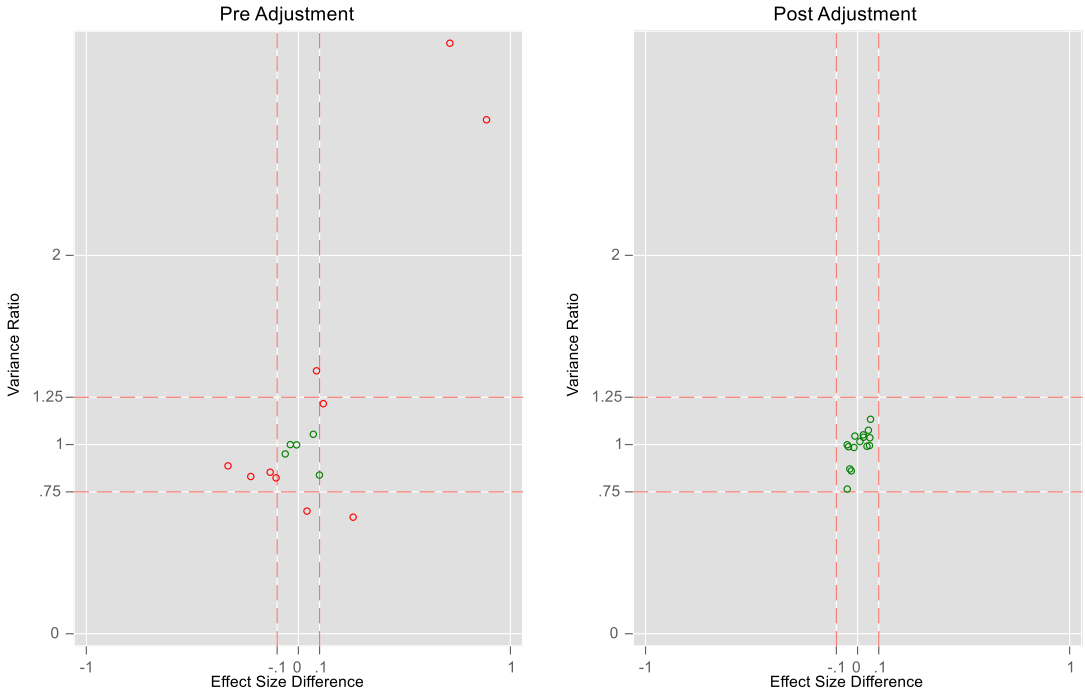


Figure 7. AY 2016-17 State School Comparison Matches (Administrative Data): Standardized Differences and Variance Ratios



C. AY 2016-17 Treatment School Survey Match

Table 50. Teen Leadership Participant Flow Chart at Treatment Schools AY 2016-17 (Survey Data)

Study Time-point	Total number students	Number students included	Number students not included	Notes
Treatment Students				
1. Program Roster	639	---	---	Fall & Spring Teen Leadership Students
2. Had School Roster Data	639	620	19	
3. Met Treatment Inclusion Criteria	620	329	291	Participated in Fall Teen Leadership
4. Had Full Matching Data	329	268	61	
5. Had Survey Outcomes	268	171	97	
6. Matched	171	160	11	
7. Included in Analysis	160	160	0	
Comparison Students				
1. School Rosters	5,267	---	---	
2. Met Treatment Inclusion Criteria	5,267	1,301	3,966	Treatment School, Didn't participate in Teen Leadership in fall or spring
3. Had Full Matching Data	1,301	1,084	217	
4. Had Survey Outcomes	1,084	690	394	
5. Matched	690	409	281	Unique students (note: matching was done with replacement)
6. Included in Analysis	409	409	0	

Table 51. Which Teen Leadership Students Were Matched? Post-Match Demographics, AY 2016-17 Treatment Schools (Survey Data Match)

	Teen Leadership Not Matched - Mean	Teen Leadership Matched - Mean	Difference	S.E. of Diff.
Black	0.59	0.29	**0.30****	0.11
Hispanic	0.09	0.39	**-0.30****	0.11
White	0.23	0.25	-0.02	0.06
Other Race	0.09	0.07	0.02	0.06
Free/Reduced Meals	0.77	0.93	**-0.16***	0.06
Female	0.45	0.47	-0.02	0.11
Special Ed.	0.55	0.19	**0.36*****	0.09
ESL	0.05	0.33	**-0.28****	0.10
Grade 6	0.34	0.37	-0.03	0.09
Grade 7	0.38	0.38	0.00	0.09
Grade 8	0.28	0.26	0.03	0.09

† $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Figure 8. AY 2016-17 Treatment School Comparison Matches (Survey Data): Overlap

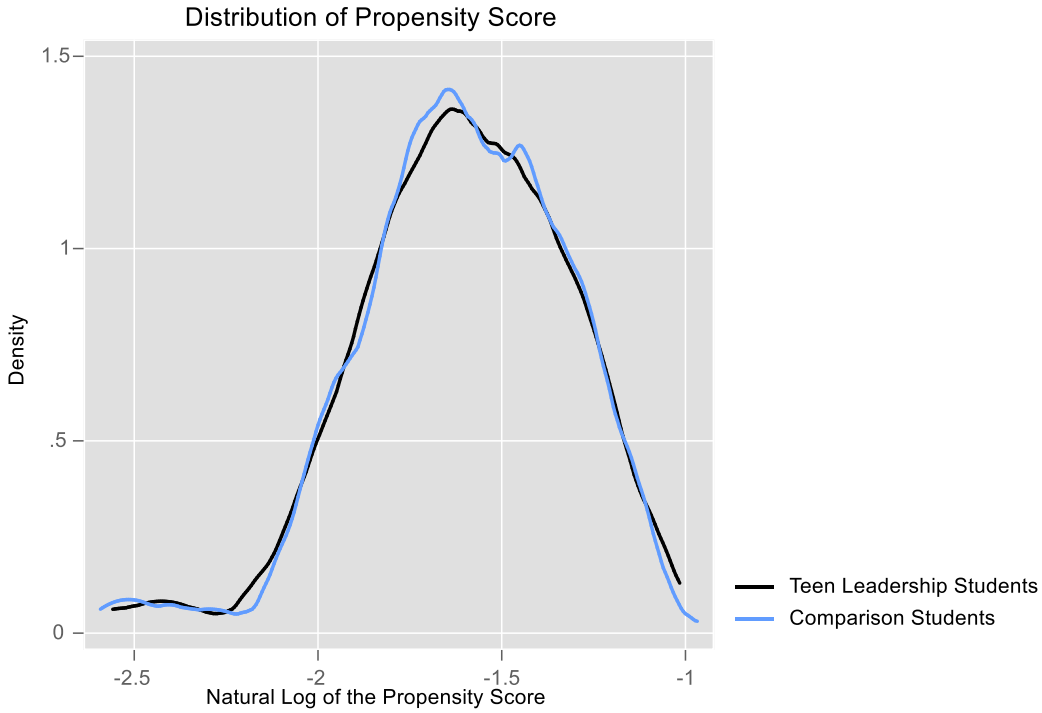
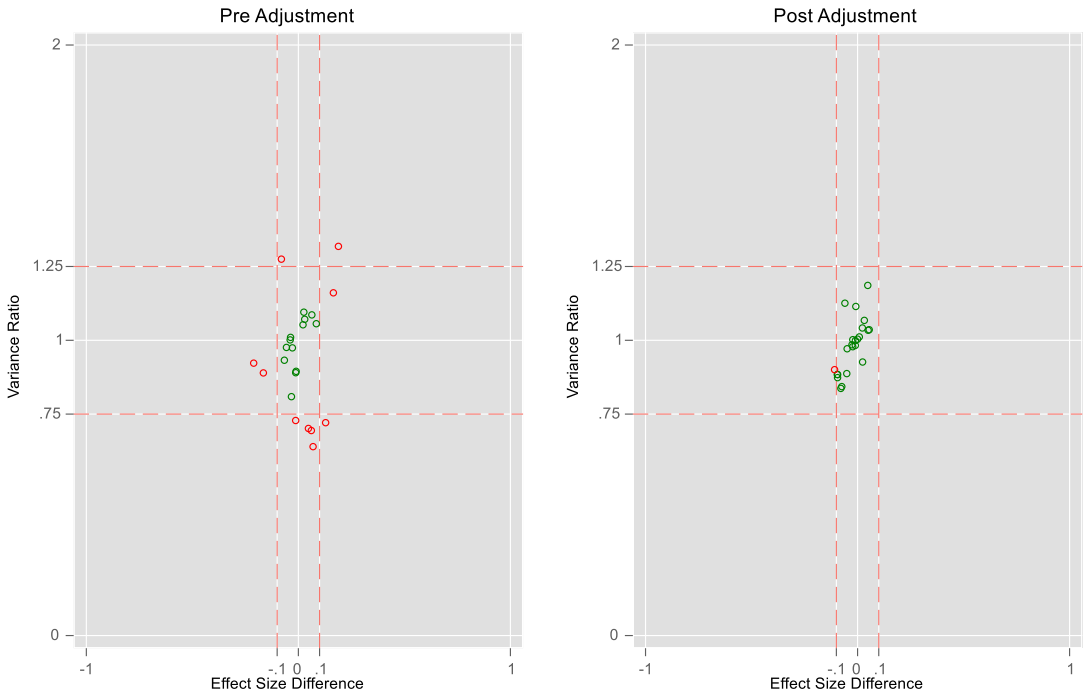


Figure 9. AY 2016-17 Treatment School Comparison Matches (Survey Data): Standardized Differences and Variance Ratios



D. AY 2016-17 District Survey Match

Table 52. Teen Leadership Participant Flow Chart at District Schools AY 2016-17 (Survey Data)

Study Time-point	Total number students	Number students included	Number students not included	Notes
Treatment Students				
1. Program Roster	639	---	---	Fall & Spring Teen Leadership Students
2. Had School Roster Data	639	620	19	
3. Met Treatment Inclusion Criteria	620	329	291	Participated in Fall Teen Leadership
4. Had Full Matching Data	329	268	61	
5. Had Survey Outcomes	268	171	97	
6. Matched	171	166	5	
7. Included in Analysis	166	166	0	
Comparison Students				
1. School Rosters	5,267	---	---	
2. Met Treatment Inclusion Criteria	5,267	3,346	1,921	District School
3. Had Full Matching Data	3,346	2,874	472	
4. Had Survey Outcomes	2,874	2,339	535	
5. Matched	2,339	559	1,780	Unique students (note: matching was done with replacement)
6. Included in Analysis	559	559	0	

Table 53. Which Teen Leadership Students Were Matched? Post-Match Demographics, AY 2016-17 District Schools (Survey Data Match)

	Teen Leadership Not Matched - Mean	Teen Leadership Matched - Mean	Difference	S.E. of Diff.
Black	0.44	0.32	0.12	0.12
Hispanic	0.38	0.35	0.03	0.13
White	0.13	0.26	-0.13	0.11
Other Race	0.06	0.07	-0.01	0.07
Free/Reduced Meals	0.94	0.91	0.03	0.07
Female	0.50	0.47	0.03	0.13
Special Ed.	0.50	0.20	**0.30****	0.11
ESL	0.33	0.29	0.04	0.12
Grade 6	0.27	0.38	-0.11	0.10
Grade 7	0.35	0.38	-0.03	0.10
Grade 8	0.38	0.24	0.14	0.09

† $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Figure 10. AY 2016-17 District School Comparison Matches (Survey Data): Overlap

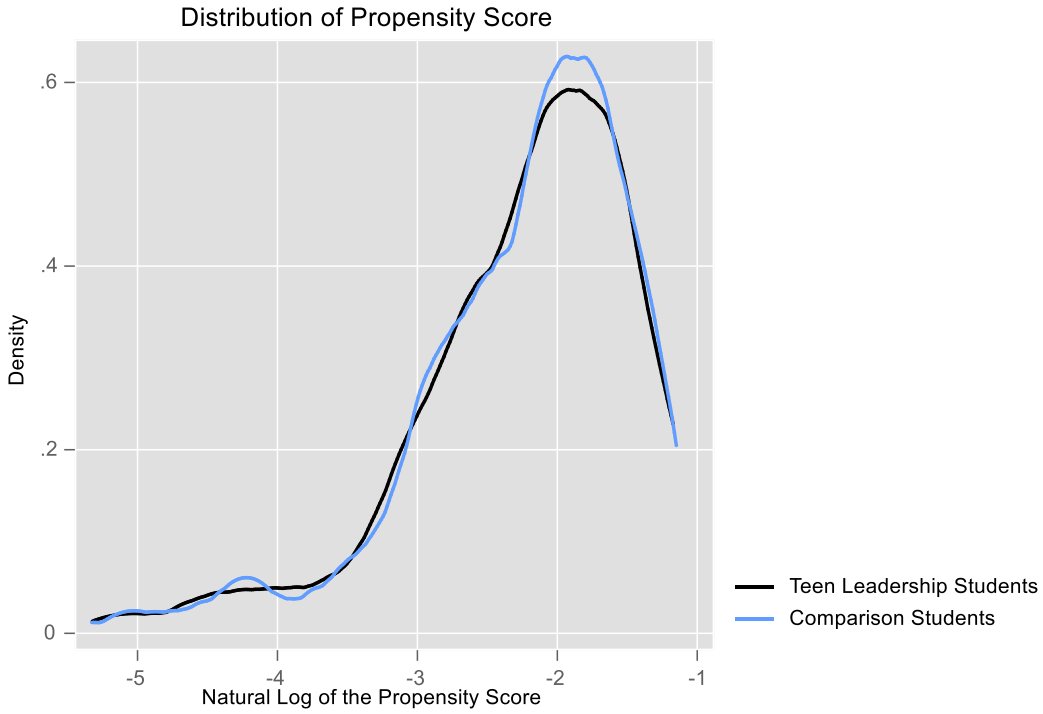
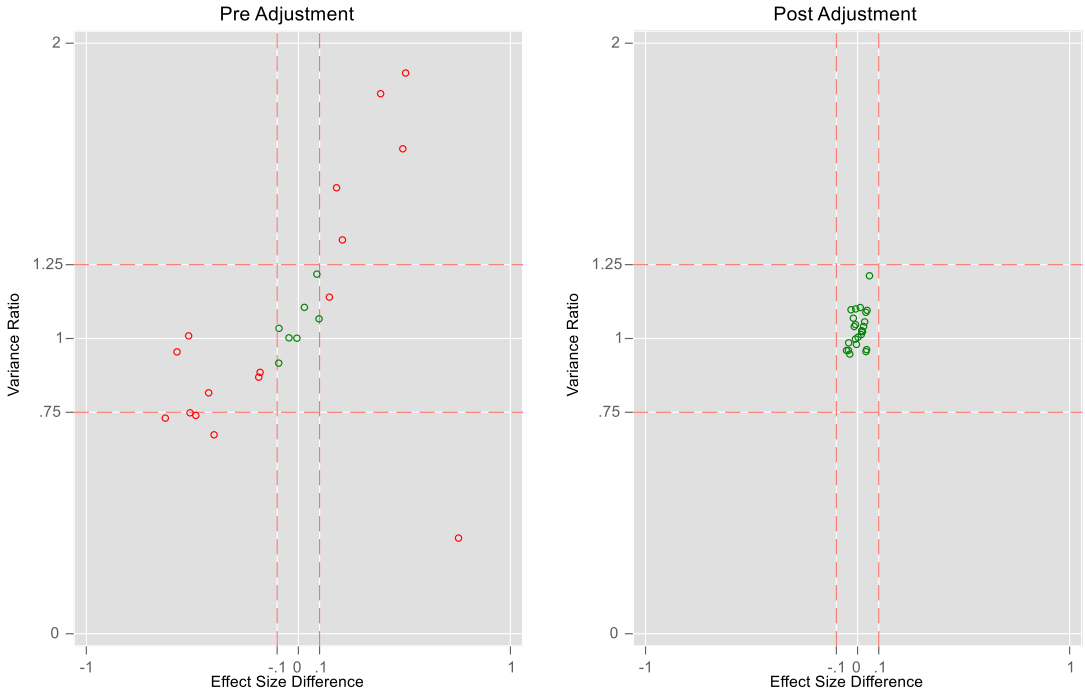


Figure 11. AY 2016-17 District School Comparison Matches (Survey Data): Standardized Differences and Variance Ratios



E. AY 2017-18 Treatment School Administrative Match

Table 54. Teen Leadership Participant Flow Chart at Treatment Schools AY 2017-18 (Administrative Data)

Study Time-point	Total number students	Number students included	Number students not included	Notes
Treatment Students				
1. Program Roster	581	---	---	Fall & Spring Teen Leadership Students
2. Had Roster Data	581	540	41	
3. Met Treatment Inclusion Criteria	540	192	348	Participated in Fall Foundational Teen Leadership
4. Had Full Matching Data	192	181	11	
5. Matched	181	177	4	
6. Included in Main Analyses	177	177	0	
Comparison Students				
1. School Rosters	5,539	---	---	
2. Met Treatment Inclusion Criteria	5,539	1,175	4,364	Treatment School, Didn't participate in Teen Leadership in fall or spring. Didn't participate in TL in 2016-17
3. Had Full Matching Data	1,175	1,035	140	
4. Matched	1,035	555	480	Unique students (note: matching was done with replacement)
5. Included in Main Analyses	555	555	0	

Table 55. Which Teen Leadership Students Were Matched? Post-Match Demographics, AY 2017-18 Treatment Schools (Administrative Data Match)

	Teen Leadership Not Matched - Mean	Teen Leadership Matched - Mean	Difference	S.E. of Diff.
Black	0.43	0.33	0.10	0.18
Hispanic	0.29	0.33	-0.04	0.18
White	0.14	0.28	-0.14	0.17
Other Race	0.14	0.06	0.08	0.10
Free/Reduced Meals	0.57	0.85	**-0.28†**	0.14
Female	0.14	0.48	**-0.34†**	0.19
Special Ed.	0.29	0.15	0.14	0.14
ESL	0.43	0.19	0.24	0.15
Grade 6	0.33	0.59	**-0.25†**	0.13
Grade 7	0.20	0.20	0.00	0.11
Grade 8	0.20	0.21	-0.01	0.11

† $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Figure 12. AY 2017-18 Treatment School Comparison Matches (Administrative Data): Overlap

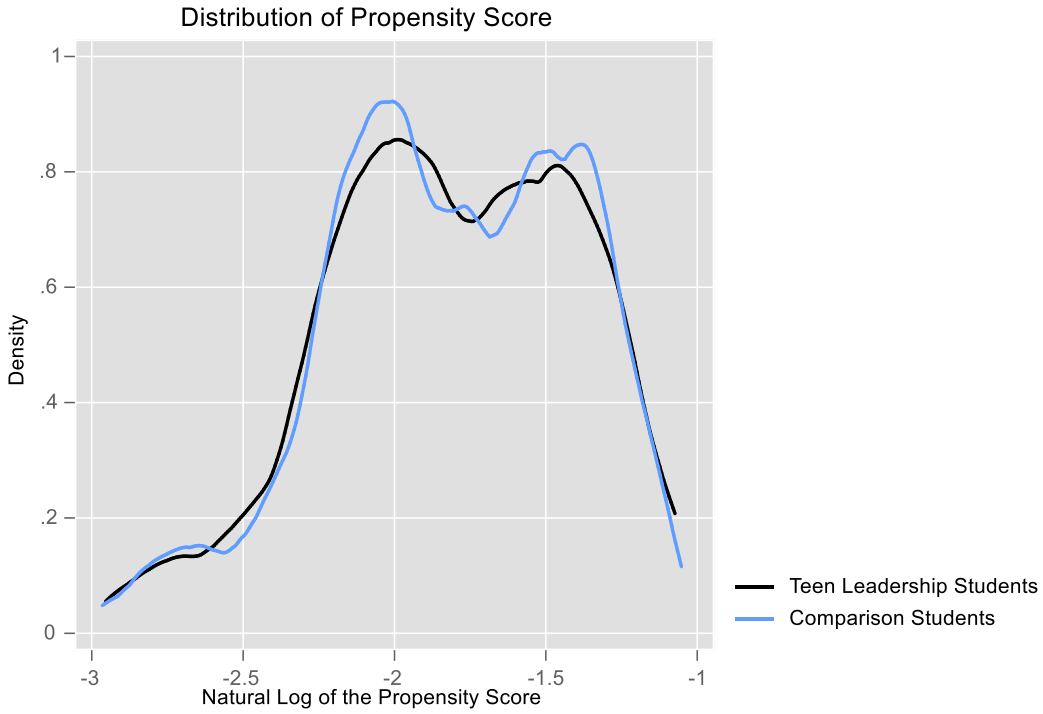
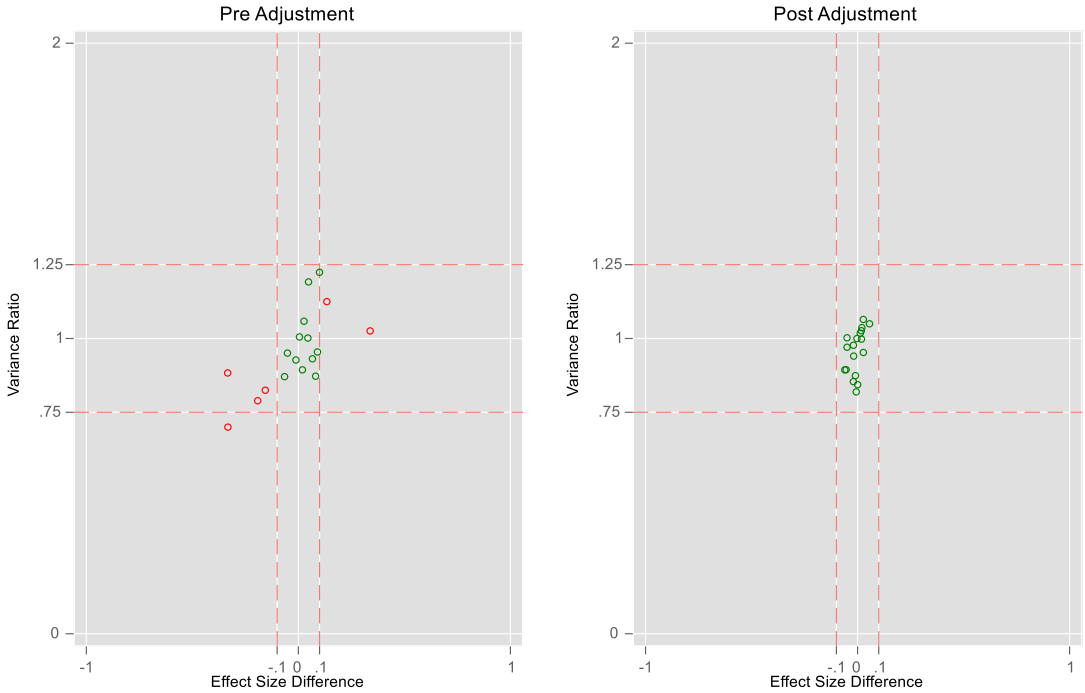


Figure 13. AY 2017-18 Treatment School Comparison Matches (Administrative Data): Standardized Differences and Variance Ratios



F. AY 2017-18 District Administrative Match

Table 56. Teen Leadership Participant Flow Chart at District Schools AY 2017-18 (Administrative Data)

Study Time-point	Total number students	Number students included	Number students not included	Notes
Treatment Students				
1. Program Roster	581	---	---	Fall & Spring Teen Leadership Students
2. Had Roster Data	581	540	41	
3. Met Treatment Inclusion Criteria	540	192	348	Participated in Fall Foundational Teen Leadership
4. Had Full Matching Data	192	181	11	
5. Matched	181	178	3	
6. Included in Main Analyses	178	178	0	
Comparison Students				
1. School Rosters	5,539			
2. Met Treatment Inclusion Criteria	5,539	3,504	2,035	District School
3. Had Full Matching Data	3,504	3,244	260	
4. Matched	3,244	675	2,569	Unique students (note: matching was done with replacement)
5. Included in Main Analyses	675	675	-	

Table 57. Which Teen Leadership Students Were Matched? Post-Match Demographics, AY 2017-18 District Schools (Administrative Data Match)

	Teen Leadership Not Matched - Mean	Teen Leadership Matched - Mean	Difference	S.E. of Diff.
Black	0.00	0.34	**-0.34†**	0.19
Hispanic	0.83	0.31	**0.52****	0.19
White	0.00	0.29	-0.29	0.19
Other Race	0.17	0.06	0.10	0.10
Free/Reduced Meals	0.67	0.84	-0.18	0.15
Female	0.33	0.47	-0.14	0.21
Special Ed.	0.33	0.15	0.19	0.15
ESL	1.00	0.17	**0.83*****	0.16
Grade 6	0.29	0.59	**-0.30***	0.14
Grade 7	0.21	0.20	0.01	0.11
Grade 8	0.21	0.21	0.01	0.11

† $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Figure 14. AY 2017-18 District School Comparison Matches (Administrative Data): Overlap

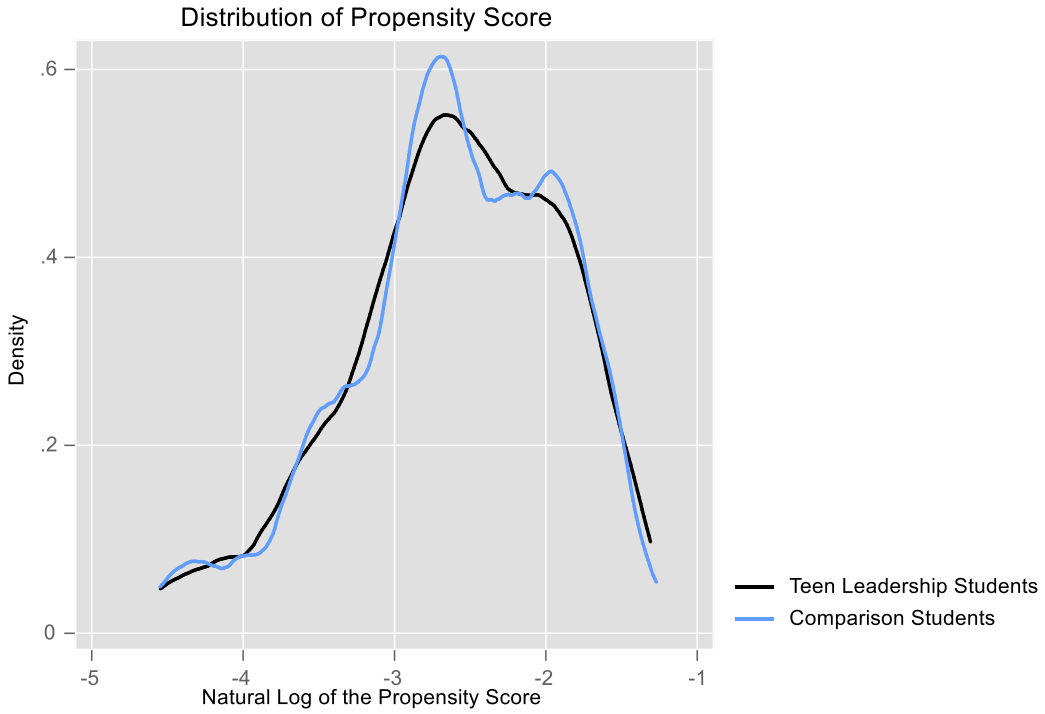
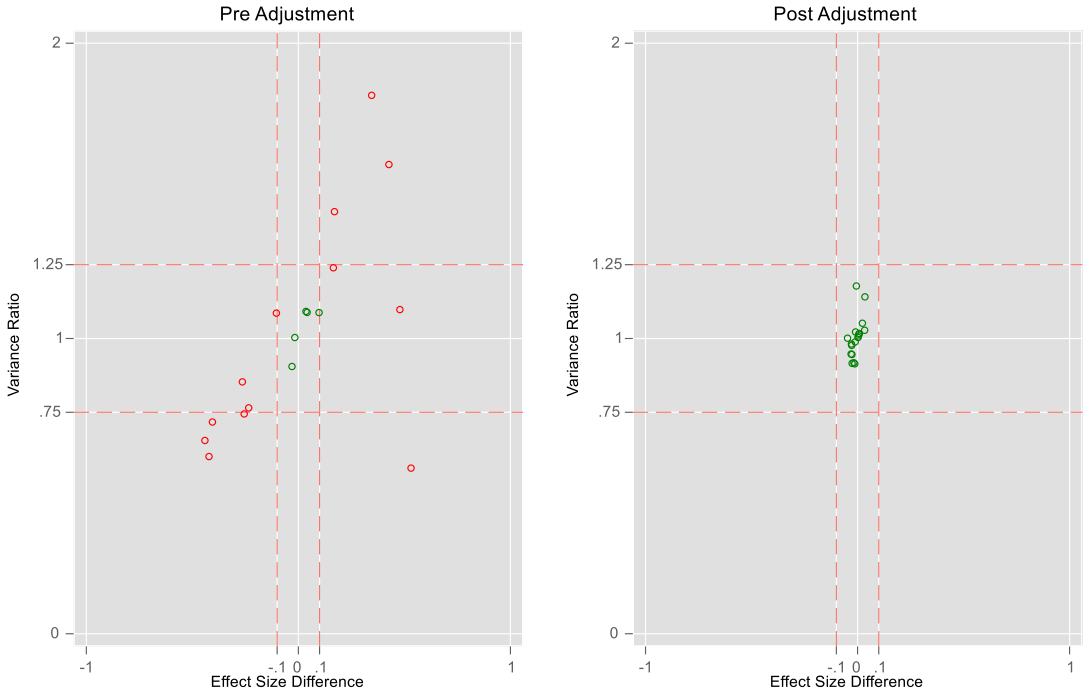


Figure 15. AY 2017-18 District School Comparison Matches (Administrative Data): Standardized Differences and Variance Ratios



G. AY 2017-18 Treatment School Survey Match

Table 58. Teen Leadership Participant Flow Chart at Treatment Schools AY 2017-18 (Survey Data)

Study Time-point	Total number students	Number students included	Number students not included	Notes
Treatment Students				
1. Program Roster	581	---	---	Fall & Spring Teen Leadership Students
2. Had School Roster Data	581	540	41	
3. Met Treatment Inclusion Criteria	540	192	348	Treatment School, Didn't participate in Teen Leadership in fall or spring.
4. Had Full Matching Data	192	181	11	
5. Had Survey Outcomes	181	127	54	
6. Matched	127	123	4	
7. Included in Analysis	123	123	0	
Comparison Students				
1. School Rosters	5,539	---	---	
2. Met Treatment Inclusion Criteria	5,539	1,175	4364	Treatment School, Didn't participate in TL in fall, spring, or 2016-17
3. Had Full Matching Data	1,175	1,035	140	
4. Had Survey Outcomes	1,035	725	310	
5. Matched	725	378	347	Unique students (note: matching was done with replacement)
6. Included in Analysis	378	378	0	

Table 59. Which Teen Leadership Students Were Matched? Post-Match Demographics, AY 2017-18 Treatment Schools (Survey Data Match)

	Teen Leadership Not Matched - Mean	Teen Leadership Matched - Mean	Difference	S.E. of Diff.
Black	0.00	0.33	**-0.33†**	0.18
Hispanic	0.57	0.33	0.24	0.19
White	0.29	0.28	0.01	0.18
Other Race	0.14	0.07	0.08	0.10
Free/Reduced Meals	0.71	0.81	-0.10	0.15
Female	0.14	0.51	**-0.37†**	0.19
Special Ed.	0.29	0.14	0.15	0.14
ESL	0.43	0.16	**0.27†**	0.15
Grade 6	0.44	0.61	-0.17	0.17
Grade 7	0.44	0.21	0.23	0.14
Grade 8	0.11	0.18	-0.07	0.13

† $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Figure 16. AY 2017-18 Treatment School Comparison Matches (Survey Data): Overlap

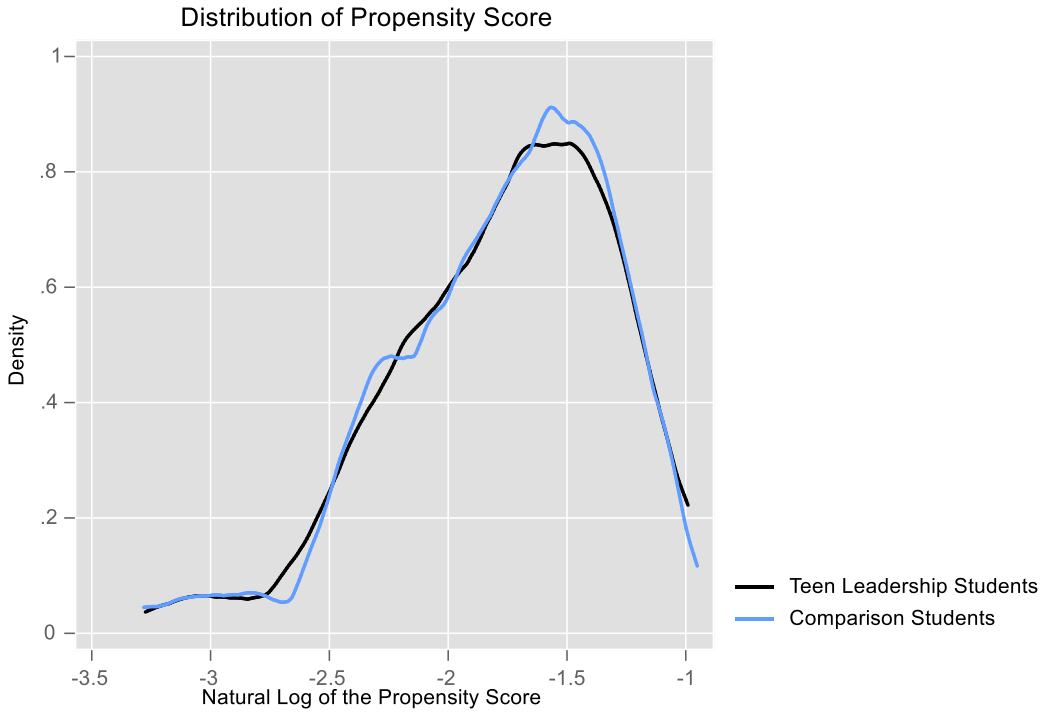
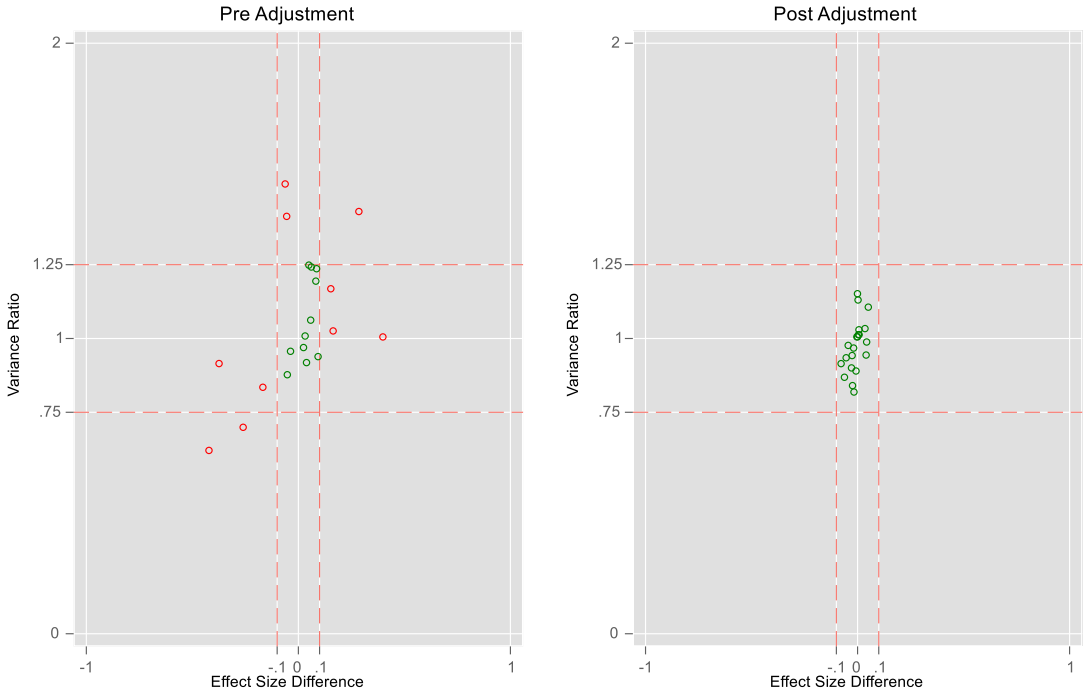


Figure 17. AY 2017-18 Treatment School Comparison Matches (Survey Data): Standardized Differences and Variance Ratios



H. AY 2017-18 District Survey Match

Table 60. Teen Leadership Participant Flow Chart at District Schools AY 2017-18 (Survey Data)

Study Time-point	Total number students	Number students included	Number students not included	Notes
Treatment Students				
1. Program Roster	581	---	---	Fall & Spring Teen Leadership Students
2. Had School Roster Data	581	540	41	
3. Met Treatment Inclusion Criteria	540	192	348	Participated in Fall Foundational Teen Leadership
4. Had Full Matching Data	192	181	11	
5. Had Survey Outcomes	181	127	54	
6. Matched	127	119	8	
7. Included in Analysis	119	119	0	
Comparison Students				
1. School Rosters	5,539	---	---	
2. Met Treatment Inclusion Criteria	5,539	3,504	2,035	District School
3. Had Full Matching Data	3,504	3,244	260	
4. Had Survey Outcomes	3,244	2,385	859	
5. Matched	2,385	493	1,892	Unique students (note: matching was done with replacement)
6. Included in Analysis	493	493	0	

Table 61. Which Teen Leadership Students Were Matched? Post-Match Demographics, AY 2017-18 District Schools (Survey Data Match)

	Teen Leadership Not Matched - Mean	Teen Leadership Matched - Mean	Difference	S.E. of Diff.
Black	0.09	0.33	-0.24	0.15
Hispanic	0.73	0.31	**0.42****	0.15
White	0.09	0.29	-0.20	0.14
Other Race	0.09	0.07	0.02	0.08
Free/Reduced Meals	0.82	0.81	0.01	0.13
Female	0.36	0.50	-0.14	0.16
Special Ed.	0.36	0.13	**0.24***	0.11
ESL	0.45	0.15	**0.30***	0.12
Grade 6	0.69	0.59	0.10	0.14
Grade 7	0.23	0.23	0.00	0.12
Grade 8	0.08	0.18	-0.11	0.11

† $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Figure 18. AY 2017-18 District School Comparison Matches (Survey Data): Overlap

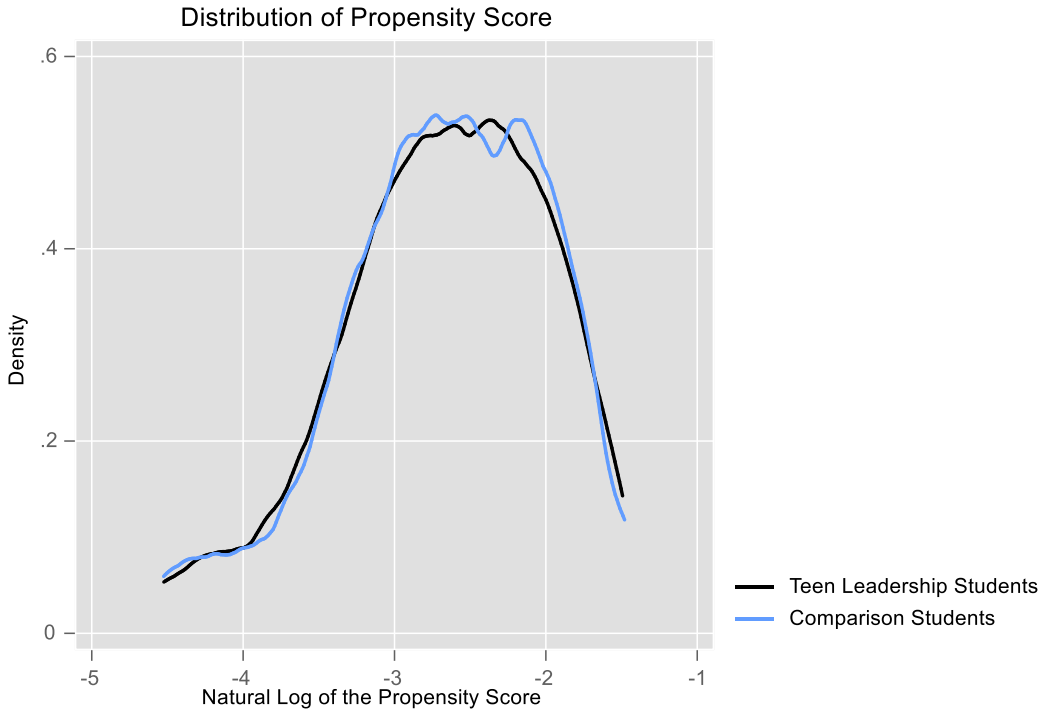
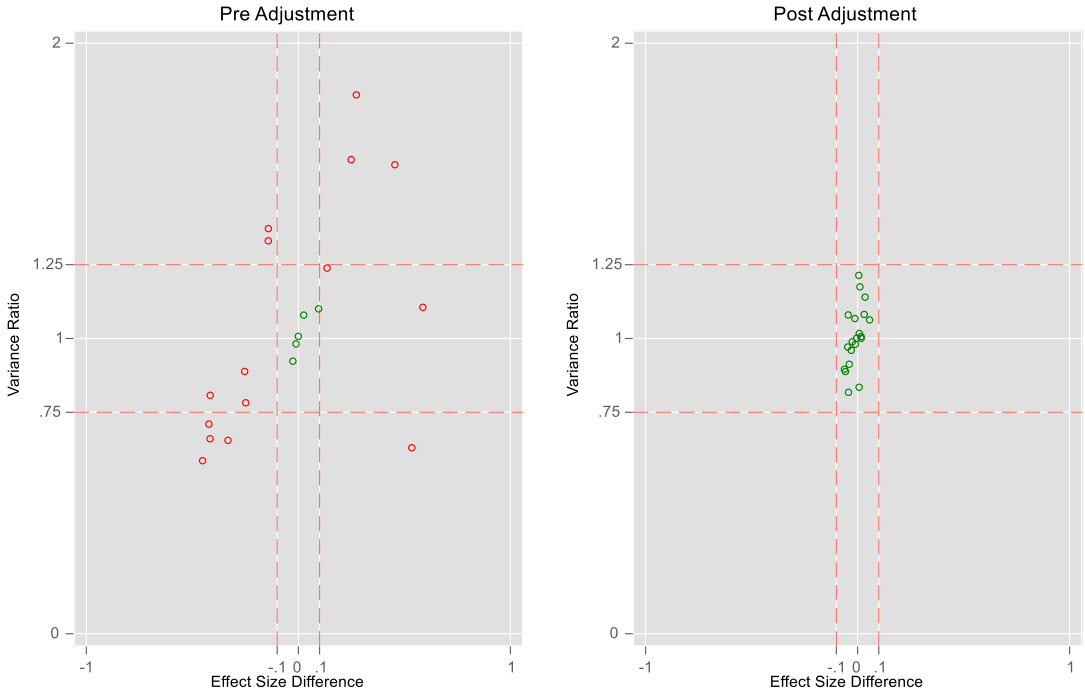


Figure 19. AY 2017-18 District School Comparison Matches (Survey Data): Standardized Differences and Variance Ratios



I. Additional Matching Results

Table 62. Teen Leadership Participants vs. Student Matches AY 2017–18 (Administrative Data Match)

	Fall 2017 Teen Leadership Participants (n = 264)	Student Matches: Treatment Schools (n = 1320)	Fall 2017 Teen Leadership Participants (n = 261)	Student Matches: District Schools (n = 1305)
Black	32.9%	32.9% (0.00)	35.6%	34.8% (-0.02)
Hispanic	30.4%	34.1% (0.08)	31.8%	31.1% (-0.02)
White	29.5%	26.2% (-0.07)	25.5%	27.4% (0.03)
Other Race	7.2%	6.7% (-0.02)	7.1%	6.7% (-0.01)
Free/Reduced Meals	84.8%	84.8% (0.00)	87.4%	84.8% (-0.08)
Female	47.4%	48.2% (0.01)	49.3%	47.0% (-0.05)
Special Ed.	13.8%	14.6% (0.02)	13.5%	14.6% (0.03)
ESL	16.2%	19.5% (0.09)	18.0%	17.7% (-0.01)
6th grade	54.4%	58.5% (0.08)	54.9%	58.5% (0.07)
7th grade	23.9%	20.7% (-0.07)	21.7%	20.7% (-0.02)
8th grade	21.7%	20.7% (-0.02)	23.4%	20.7% (-0.06)

† $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

*Note: Standardized mean differences are reported in parentheses. Significance tests are in comparison to the Teen Leadership group. Frequency weights were used to account for matching with replacement.

Table 63. Teen Leadership Participants vs. Comparison Student Matches AY 2016–17 (Survey Data Match)

	Fall 2016 Teen Leadership Participants (n = 160)	Student Matches: Treatment Schools (n = 800)	Fall 2016 Teen Leadership Participants (n = 166)	Student Matches: District Schools (n = 830)
Black	29.0%	29.4% (0.01)	30.8%	31.9% (0.02)
Hispanic	39.3%	38.8% (-0.01)	35.4%	34.9% (-0.01)
White	26.0%	25.0% (-0.02)	27.8%	25.9% (-0.04)
Other Race	5.8%	6.9% (0.05)	5.9%	7.2% (0.06)
Free/Reduced Meals	92.5%	93.1% (0.02)	91.8%	91.0% (-0.03)
Female	48.6%	47.5% (-0.02)	46.9%	47.0% (0.00)
Special Ed.	17.9%	18.8% (0.02)	19.2%	20.5% (0.03)
ESL	33.8%	32.5% (-0.03)	31.3%	28.9% (-0.05)
6th grade	34.5%	36.9% (0.05)	40.0%	38.0% (-0.04)
7th grade	34.9%	37.5% (0.06)	37.1%	38.0% (0.02)
8th grade	30.6%	25.6% (-0.10)	22.9%	24.1% (0.03)

† $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

*Note: Standardized mean differences are reported in parentheses. Significance tests are in comparison to the Teen Leadership group. Frequency weights were used to account for matching with replacement.

Table 64. Teen Leadership Participants vs. Comparison Student Matches AY 2017–18 (Survey Data Match)

	Fall 2017 Teen Leadership Participants (n = 160)	Student Matches: Treatment Schools (n = 800)	Fall 2017 Teen Leadership Participants (n = 166)	Student Matches: District Schools (n = 830)
Black	30.9%	32.5% (0.04)	33.9%	32.8% (-0.02)
Hispanic	35.4%	33.3% (-0.04)	33.3%	31.1% (-0.04)
White	27.3%	27.6% (0.01)	26.9%	29.4% (0.06)
Other Race	6.3%	6.5% (0.01)	5.9%	6.7% (0.04)
Free/Reduced Meals	79.7%	81.3% (0.04)	82.4%	80.7% (-0.04)
Female	51.4%	51.2% (0.00)	49.6%	50.4% (0.02)
Special Ed.	14.5%	13.8% (-0.02)	11.6%	12.6% (0.03)
ESL	14.5%	16.3% (0.05)	17.5%	15.1% (-0.06)
6th grade	58.9%	61.0% (0.04)	58.0%	58.8% (0.02)
7th grade	23.4%	21.1% (-0.05)	22.4%	22.7% (0.00)
8th grade	17.7%	17.9% (0.00)	19.7%	18.5% (-0.03)

† $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

*Note: Standardized mean differences are reported in parentheses. Significance tests are in comparison to the Teen Leadership group. Frequency weights were used to account for matching with replacement.

Appendix D. OnTrack Greenville Student Survey

Please enter your survey ID number: _____

Click NEXT to continue.

You may complete the survey in English or Spanish. Please select which language you prefer. Usted puede hacer la encuesta en inglés o español. Por favor marque el idioma que prefiere.

a) English / inglés
b) Spanish / español

I am Dr. Tracy Waters from Furman University. I am conducting a study to learn about the OnTrack Greenville initiative in your school district. We are asking you to take part in the study because you are learning in a school that offers this program.

For this research, we will ask you to take a short survey. We don't think that you will encounter any problems if you participate in this survey. You can feel good about helping out with this important study. Please answer all of the questions as best you can, even if they don't seem like they apply to you.

You will not put your name anywhere on this survey. We will keep all of your answers private and will not show them to your teachers or your parents. Your answers will be stored on a password protected computer file. Only people from Furman University working on this study will see the answers students provide. When we share the results of the survey, we will never share your name or the name of your school.

You should know that:

- You do not have to be in this study if you do not want to. You won't get into any trouble with your teachers, your school, or Furman University if you say no.
- You can stop being in the study at any time.
- You can ask any questions you have, now or later. If you think of a question later, you or your parents can contact me at 864-294-3803.
- Your parents/guardians have been provided information about this study and have been given the opportunity to decline your participation.

Click NEXT to continue.

Are you willing to take this survey? By choosing "Yes," below, you acknowledge that you:

- Understand what you will be doing for this study,
- Have had all your questions answered,
- Have talked to your parent(s)/legal guardian about any questions you have about the study and,
- Agree to take part in this study.

If you choose "No," the survey will end.

a. Yes
b. No

What grade are you in?

a. 6th
b. 7th
c. 8th

[Pre-Survey] We are going to ask you about the kinds of things you did during your SUMMER BREAK, June to August 2017. Please select the answer that best reflects how often you did each of the activities listed below during the summer this year.

Responses: (1) Never; (2) Not very often (1 or 2 times); (3) Sometimes (about one a week); (4) Pretty often (a couple of times a week or more); or (5) Very often

How often…

…did you go to the library?
…did you write something like an email, letter, poem, or story?
…did you play math games or solve math problems?
…did you read a book?

[Pre-Survey] How often you did each of the activities listed below during your summer break this year?

Responses: (1) Never; (2) Not very often (1 or 2 times); (3) Sometimes (about one a week); (4) Pretty often (a couple of times a week or more); or (5) Very often

How often…

…did you play on your phone, watch TV, or play video games?
…did you do activities at a community center, YMCA, church or day camp, or Boys and Girls club?
…did you play outside?

The following statements describe your experiences at your school.

How true are the following statements?

Responses: (1) Not true; (2) Somewhat true; (3) Mostly true; (4) True

When I study, I set goals for myself.
I keep doing schoolwork even if it is hard.
If I can't do something the first time, I keep trying until I can.

How true are the following statements?

Responses: (1) Not true; (2) Somewhat true; (3) Mostly true; (4) True

I keep doing schoolwork even if I am bored.
When something is hard for me to do, I usually give up.
I keep doing schoolwork even if I don't like it.

How true are the following statements?

Responses: (1) Not true; (2) Somewhat true; (3) Mostly true; (4) True

It is easy for me to get good grades in school.
I generally understand the material in my classes just as well as other students.
I am a good student.

How true are the following statements?

Responses: (1) Not true; (2) Somewhat true; (3) Mostly true; (4) True

My homework is usually pretty easy for me.
I will be able to go as far in school as I want to go.
I can learn new things if I try.

How true are the following statements?

Responses: (1) Not true; (2) Somewhat true; (3) Mostly true; (4) True

Doing well at school is important to me.
The things I am learning in school will be useful outside of school.
I think it is important to go to college.
I need to do well in school to accomplish my goals.

How true are the following statements?

Responses: (1) Not true; (2) Somewhat true; (3) Mostly true; (4) True

I like school.
I participate a lot in class.
I like learning new things in school.
I feel like I matter at my school.

The following statements describe teachers at your school.

How true are the following statements?

Responses: (1) Not true; (2) Somewhat true; (3) Mostly true; (4) True

Overall, students at my school get along well with teachers.
My teachers meet with me to talk about schoolwork and give me extra help if I need it.
My teachers really listen to what I have to say.

How true are the following statements?

Responses: (1) Not true; (2) Somewhat true; (3) Mostly true; (4) True

Teachers at this school set a positive example for students with their actions.
My teachers notice when I am doing a good job and let me know about it.
Overall, teachers at my school try to be fair.

The following statements describe adults at your school. How true are the following statements?

Responses: (1) Not true; (2) Somewhat true; (3) Mostly true; (4) True

There is at least one adult at my school who…

…really cares about me.
…tells me when I do a good job.
…notices when I am not there.

How true are the following statements?
Responses: (1) Not true; (2) Somewhat true; (3) Mostly true; (4) True

There is at least one adult at my school who…

…always wants me to do my best.
…listens to me when I have something to say.
…believes that I will be a success.

The following statements describe your experiences at your school. How true are the following statements?

Responses: (1) Not true; (2) Somewhat true; (3) Mostly true; (4) True

My education will be valuable in getting the job I want.
I would be upset if I got a low grade in one of my subjects.
What I learn in school is useful for the job I want to have as an adult.

How true are the following statements?

Responses: (1) Not true; (2) Somewhat true; (3) Mostly true; (4) True

It is important to me to get good grades.
Being a good student is important to me.
School is useful in helping me make good decisions in my life.

How true are the following statements?

Responses: (1) Not true; (2) Somewhat true; (3) Mostly true; (4) True

I feel close to people at this school.
I am happy to be at this school.
I feel like I am a part of this school.

How true are the following statements?

Responses: (1) Not true; (2) Somewhat true; (3) Mostly true; (4) True

I feel teachers at this school treat me fairly.
I feel safe in my school.

How far *would you LIKE to go* in school with your education?

a. Some high school
b. Finish high school
c. Finish two-year/technical school
d. Finish four-year college
e. Finish graduate school or professional school
f. I don't know

How far *do you think you will actually go* in school with your education?

a. Some high school
b. Finish high school
c. Finish technical school
d. Finish college
e. Finish graduate school or professional school
f. I don't know

Physical Health refers to your diet and exercise, how often you are sick or healthy, and how your body feels.

In general, how would you describe your physical health?

(a) Excellent (b) Good (c) Fair (d) Poor

Mental Health refers to how you think and feel emotionally on a daily basis.

In general, how would you describe your emotional or mental health?

(a) Excellent (b) Good (c) Fair (d) Poor

Where do you usually go when you need to see a doctor or nurse?

a. My doctor's office
b. Emergency room
c. School health room
d. Somewhere else
e. I don't know

I am…

(a) Male (b) Female (c) Prefer not to say

I would describe myself as… (Choose all that apply)

(a) Black or African American
(b) White
(c) Spanish/Hispanic/Latino
(d) Asian or Pacific Islander
(e) American Indian or Alaska Native
(f) Other: _____
(g) Prefer not to say

--- END OF SURVEY ---

[If language = Spanish]

Yo soy la Dra. Tracy Waters de la Universidad de Furman. Yo estoy haciendo un estudio para aprender sobre el programa de OnTrack Greenville en tu distrito escolar. Te invitamos a participar en este estudio porque tú estás asistiendo a una escuela que ofrece este programa.

Para este estudio, vamos a pedir que tomes una breve encuesta. No pensamos que tendrás ningún problema si tomas esta encuesta. Tú puedes sentirse bien por ayudarnos con este estudio importante. Por favor conteste todas las preguntas lo mejor que puedas, incluso si las preguntas no te aplican.

No vamos a pedir que pongas tu nombre en ninguna parte de la encuesta. Vamos a mantener tus respuestas privadas y no vamos a compartirlas con tus maestros/as ni con tus padres. Tus respuestas serán guardadas en un archivo de computadora protegido con contraseña. Solamente personas de Furman University que trabajan en este estudio van a ver las respuestas que estudiantes proveen. Cuando compartimos los resultados de la encuesta, nunca vamos a compartir tu nombre ni el nombre de tu escuela.

Tú debes saber que:

- No tienes que participar en este estudio si no quieres. Tú no te vas a meter en problemas con tus maestros/as, tu escuela, ni la Universidad de Furman si dices “No.”
- Puedes retirar del estudio en cualquier momento.
- Puedes preguntar cualquier pregunta que tienes, ahora o después. Si piensas en una pregunta después, tú o tus padres/tutores pueden llamarme al 864-294-3803.
- Tus padres/tutores han recibido información sobre este estudio y ellos han tenido la oportunidad de declinar tu participación.

Oprima PRÓXIMO para continuar.

¿Estás dispuesto/a a tomar esta encuesta? A escoger “Sí” debajo, tú reconoces que:

- Entiendes lo que vas a hacer en este estudio,
- Se han contestado todas tus preguntas,
- Has hablado con tus padres/tutores sobre las preguntas que tienes relacionadas con el estudio y
- Aceptas participar en este estudio.

Si escoges “No,” la encuesta va a acabar.

a. Sí
b. No

¿En qué grado estás?

a. 6º (sexto)
b. 7º (séptimo)
c. 8º (octavo)

Vamos a preguntarte sobre los tipos de cosas que hiciste durante LAS VACACIONES DE VERANO, junio a agosto 2017. Por favor marque la respuesta que mejor reflexione la frecuencia con que hiciste las siguientes actividades durante el verano de este año.

Respuestas: (a) Nunca; (b) No muy en seguido (1 o 2 veces); (c) A veces (como una vez a la semana); (d) Más o menos frecuente (un par de veces cada semana o más); (e) Muy frecuente (todos los días)

¿Con tanta frecuencia….?

…fuiste a la biblioteca?
…escribiste algo como un email, una carta, un poema o un cuento?
…jugaste juegos matemáticos o solucionar problemas matemáticas?
…leíste un libro?

¿Con tanta frecuencia hiciste cada una de las siguientes actividades durante las vacaciones de verano de este año.

Respuestas: (a) Nunca; (b) No muy en seguido (1 o 2 veces); (c) A veces (como una vez a la semana); (d) Más o menos frecuente (un par de veces cada semana o más) ; (e) Muy frecuente (todos los días)

¿Con tanta frecuencia….?

…jugaste en tu teléfono, viste televisión, o jugaste juegos videos?
…hiciste actividades en un centro comunitario, YMCA, iglesia o campo, o Club de Niños y Niñas?
…jugaste afuera?

Las siguientes frases describen tus experiencias en tu escuela.

Respuestas: (a) No verdad; (b) Un poco verdad; (c) En la mayor parte verdad; (d) Verdad

¿Qué tan verdad son las siguientes frases?

Cuando estudio, yo me fijo metas para mí.
Yo sigo haciendo mi trabajo escolar incluso si es difícil.
Si no puedo hacer algo la primera vez, sigo intentando hasta que pueda.

¿Qué tan verdad son las siguientes frases

Respuestas: (a) No verdad; (b) Un poco verdad; (c) En la mayor parte verdad; (d) Verdad

Sigo haciendo mi trabajo escolar incluso si estoy aburrido/a.
Cuando algo es difícil para mí, normalmente me rindo.
Sigo hacienda mi trabajo escolar incluso si no me gusta.

¿Qué tan verdad son las siguientes frases?

Respuestas: (a) No verdad; (b) Un poco verdad; (c) En la mayor parte verdad; (d) Verdad

Es fácil para mí sacar buenas notas en la escuela.
Generalmente entiendo el material en mis clases tan bien como otros estudiantes.
Soy buen/a estudiante.

¿Qué tan verdad son las siguientes frases?

Respuestas: (a) No verdad; (b) Un poco verdad; (c) En la mayor parte verdad; (d) Verdad

Mis tareas en general son fáciles para mí.
Puedo llegar tan lejos en la escuela como quiero llegar.
Puedo aprender cosas nuevas si intento.

¿Qué tan verdad son las siguientes frases?
Respuestas: (a) No verdad; (b) Un poco verdad; (c) En la mayor parte verdad; (d) Verdad

Hacer bien en la escuela es importante para mí.
Las cosas que estoy aprendiendo en la escuela serán útiles para mí afuera de escuela.
Pienso que es importante ir a la universidad.
Tengo que hacer bien en la escuela para alcanzar mis metas.

¿Qué tan verdad son las siguientes frases?

Respuestas: (a) No verdad; (b) Un poco verdad; (c) En la mayor parte verdad; (d) Verdad

Me gusta la escuela.
Participo mucho en clase.
Me gusta aprender cosas nuevas en escuela.
Siento que valgo en mi escuela.

Las siguientes frases describen a los/las maestros/as en tu escuela.

¿Qué tan verdad son las siguientes frases?

Respuestas: (a) No verdad; (b) Un poco verdad; (c) En la mayor parte verdad; (d) Verdad

En general, estudiantes en mi escuela se llevan bien con maestros/as.
Mis maestros/as se reúnen conmigo para hablar de mi trabajo escolar y darme más ayuda si la necesito.
Mis maestros/as realmente escuchan lo que tengo que decir.

¿Qué tan verdad son las siguientes frases?

Respuestas: (a) No verdad; (b) Un poco verdad; (c) En la mayor parte verdad; (d) Verdad

Maestros/as en esta escuela muestran un ejemplo positivo para estudiantes con sus acciones.
Mis maestros/as notan cuando estoy haciendo un buen trabajo y me dejan saber.
En general, maestros/as en mi escuela intentan ser justos/as.

Las siguientes frases describen a adultos en tu escuela. ¿Qué tan verdad son las siguientes frases?

Respuestas: (a) No verdad; (b) Un poco verdad; (c) En la mayor parte verdad; (d) Verdad

Hay por lo menos un adulto en mi escuela quien…

…realmente se preocupa de mí.
…me dice cuando hago un buen trabajo.
…nota cuando no estoy presente.

¿Qué tan verdad son las siguientes frases?

Respuestas: (a) No verdad; (b) Un poco verdad; (c) En la mayor parte verdad; (d) Verdad

Hay por lo menos un adulto en mi escuela quien…

…siempre quiere que yo haga mi mejor.
…escucha cuando tengo algo que decir.
…cree que voy a ser un éxito.

Las siguientes frases describen tus experiencias en tu escuela. ¿Qué tan verdad son las siguientes frases?

Respuestas: (a) No verdad; (b) Un poco verdad; (c) En la mayor parte verdad; (d) Verdad

Mi educación será valiosa en obtener el trabajo que quiero.
Me pondría bravo/a si sacara una nota baja en una de mis materias.
Lo que aprendo en la escuela es útil para el trabajo que quiero tener de adulto.

¿Qué tan verdad son las siguientes frases?

Respuestas: (a) No verdad; (b) Un poco verdad; (c) En la mayor parte verdad; (d) Verdad

Es importante para mí sacar buenas notas.
Ser buen/a estudiante es importante para mí.
La escuela es útil en ayudarme a hacer buenas decisiones en mi vida.

¿Qué tan verdad son las siguientes frases

Respuestas: (a) No verdad; (b) Un poco verdad; (c) En la mayor parte verdad; (d) Verdad

Siento cerco/a de las personas en esta escuela.
Estoy feliz estar en esta escuela.
Siento que soy parte de esta escuela.

¿Qué tan verdad son las siguientes frases?

Respuestas: (a) No verdad; (b) Un poco verdad; (c) En la mayor parte verdad; (d) Verdad

Me siento que maestros/as en esta escuela me tratan justamente.
Me siento seguro/a en mi escuela.

¿Qué tan lejos *te GUSTARIA llegar* en la escuela con tu educación?

a. Hacer una parte de la preparatorio
b. Terminar toda la preparatorio
c. Terminar la universidad de 2 años / escuela técnica
d. Terminar la universidad de 4 años / licenciatura
e. Terminar la maestría, una especialización o un doctorado
f. Yo no sé

¿Qué tan lejos *crees que actualmente vas a llegar* en la escuela con tu educación?

a. Hacer una parte de la preparatorio
b. Terminar toda la preparatorio
c. Terminar la universidad de 2 años / escuela técnica
d. Terminar la universidad de 4 años / licenciatura
e. Terminar la maestría, una especialización o un doctorado
f. Yo no sé

La salud física refiere a tu dieta y ejercicio, la frecuencia con que estás enfermo/a o saludable y como se siente tu cuerpo.

¿En general, como describes tu salud física?

(a) Excelente (b) Buena (c) Regular (d) Mala

La salud mental refiere a como piensas y te sientes emocionalmente diariamente.

¿En general, como describes tu salud emocional o mental?

(a) Excelente (b) Buena (c) Regular (d) Mala

¿Normalmente a dónde vas cuando necesitas una consulta con un/a médico/a o enfermera?

a. La oficina de mi médico/a
b. La sala de emergencias
c. La sala de salud escolar
d. Otro lado: _____
e. Yo no sé

Yo soy…

a. Varón
b. Hembra
c. Prefiero no decir

Me describo como… (Escoge todos que te describen)

a. Negro/a o Afroamericano/a
b. Caucásico/a
c. Hispano/a o Latino/a
d. Asiático/a o Isleño/a del Pacífico
e. Indio/a Americano/a o Nativo/a de Alaska
f. Otro/a: _____
g. Prefiero no decir

--- END OF SURVEY ---

Appendix E. Teen Leadership Student Survey

You may complete the survey in English or Spanish. Please select which language you prefer. Usted puede hacer la encuesta en inglés o español. Por favor marque el idioma que prefiere.

a) English / inglés
b) Spanish / español

Welcome to the Teen Leadership Student Survey.

I am Dr. Tracy Waters from Furman University. I am conducting a study to learn about the impact of the Teen Leadership class in your school district. We are asking you to take part in the study because you are taking Teen Leadership this semester.

For this research, we will ask you to take a short survey. We don't think that you will encounter any problems if you participate in this survey, and you can feel good about helping us learn more about the Teen Leadership class in your school district. You will be asked questions about how your participation in the course's activities has affected your attitude and behavior. Please answer all of the questions as best you can, even if they don't seem like they apply to you.

You will not be asked to put your name anywhere on this survey. We will keep all of your answers private and will not show them to your teachers or your parents. Your answers will be stored on a password protected computer file. Only people from Furman University working on this study will see the answers students provide. When we share the results of the survey, we will never share your name or the name of your school.

You should know that:

- You do not have to be in this study if you do not want to. You won't get into any trouble with your teachers, your school, or Furman University if you say no.
- You can stop being in the study at any time.
- You can ask any questions you have, now or later. If you think of a question later, you or your parents can contact me at 864-294-3803.
- Your parents/guardians have been provided information about this study and have been given the opportunity to decline your participation.

Click NEXT to continue.

Are you willing to take this survey? By choosing "Yes," below, you acknowledge that you:

- Understand what you will be doing for this study,
- Have had all your questions answered,
- Have talked to your parent(s)/legal guardian about any questions you have about the study and,
- Agree to take part in this study.

If you choose "No," the survey will end.

a. Yes
b. No

What grade are you in?

a. 6th
b. 7th
c. 8th

I see myself as a leader…

a. Most of the time
b. Some of the time
c. Rarely

[Post] In this class, we talked about your relationships with other people. Please indicate how much the Teen Leadership class helped you improve your relationships with the following groups of people.

Responses: (1) Not much at all; (2) A little; (3) Some; (4) A lot

The Teen Leadership class helped me improve my relationships with…

a. Friends
b. Classmates
c. Family members
d. Teachers

Please indicate how much these statements describe you.

Responses: (1) Not at all like me; (2) Somewhat like me; (3) A lot like me; (4) Exactly like me

I support my friends when they do the right thing.
I encourage my friends to be the best they can be.
I help my friends feel good about themselves.

Please indicate how much these statements describe you.

Responses: (1) Not at all like me; (2) Somewhat like me; (3) A lot like me; (4) Exactly like me

I am there when my friends need me.
I stand up for my friends if other kids are causing trouble for them.

Please indicate how much these statements describe you.

Responses: (1) Not at all like me; (2) Somewhat like me; (3) A lot like me; (4) Exactly like me

I avoid making other kids look bad.
If two of my friends are fighting, I try to find a way to work things out between them.
When I work in groups at school, I do my fair share.

Please indicate how much the following statements describe you.

Responses: (1) Not at all like me; (2) Somewhat like me; (3) A lot like me; (4) Exactly like me

I get along well with all kinds of people.
I think it is important to listen to ideas that other students share.
I am able to control my anger when I have a disagreement with a friend.

Please indicate how much the following statements describe you.

Responses: (1) Not at all like me; (2) Somewhat like me; (3) A lot like me; (4) Exactly like me

When having a problem with a friend, I can discuss the problem without making things worse.
I follow the rules when I am out in public. (for example, at the mall, park, or a restaurant)
I respect other points of view, even those that disagree with my own.

Please indicate how much these statements describe you.

Responses: (1) Not at all like me; (2) Somewhat like me; (3) A lot like me; (4) Exactly like me

I would like to have a lot more friends.
I am popular with others my age.
I am always doing things with kids my age.

Please indicate how much these statements describe you.

Responses: (1) Not at all like me; (2) Somewhat like me; (3) A lot like me; (4) Exactly like me

I wish that more people my age liked me.
I have lots of friends.
I find it hard to make friends.

Please indicate how much these statements describe you.

Responses: (1) Not at all like me; (2) Somewhat like me; (3) A lot like me; (4) Exactly like me

I have no fear of giving a speech in class.
When giving a speech, my body feels nervous (for example, sweaty palms or shaky knees).
I feel relaxed when giving a speech.

Please indicate how much these statements describe you.

Responses: (1) Not at all like me; (2) Somewhat like me; (3) A lot like me; (4) Exactly like me

My thoughts become confused and jumbled when giving a speech.
I feel confident when it is my turn to give a speech.
When giving a speech, I get so nervous that I forget facts I really know.

[Post] Please indicate how much you agree or disagree with the following statements about your Teen Leadership class.

Responses: (1) Completely disagree; (2) Disagree; (3) Agree; (4) Completely agree

All students should take this class.
All teachers should teach more like the way this class is taught.
Students in my class treat the teacher with respect.
My classmates behave the way my teacher wants them to.
My classmates behave better in this class than in other classes.

[Post] Please indicate how much you agree or disagree with the following statements about your Teen Leadership class.

Responses: (1) Completely disagree; (2) Disagree; (3) Agree; (4) Completely agree

Our class stays busy and doesn't waste time.
I put more effort in this class than other classes.
In this class, we learn from our mistakes.
What we learn in this class is meaningful to me outside of school.

[Post] What are your favorite classes this semester? (select up to two classes)

a. Math
b. English / Language Arts
c. Social Studies
d. Science
e. PE / Gym
f. Teen Leadership
g. Art
h. Band / Chorus
i. Technology
j. Other: _____

[Post] What were your favorite parts of the Teen Leadership class this semester? Check up to two things.

a. Giving speeches
b. Writing in my journal
c. Hearing outside speakers
d. Going to new places outside of the school
e. Applying what we learned to real life situations
f. Building friendships with my classmates
g. Participating in community service projects
h. None of the above
i. Other _____

[Post] What were your least favorite parts of the Teen Leadership class this semester? Check up to two things.

a. Giving speeches
b. Writing in my journal
c. Hearing outside speakers
d. Going to new places outside of the school
e. Applying what we learned to real life situations
f. Building friendships with my classmates
g. Participating in community service projects
h. None of the above
i. Other _____

I am…

a. Male
b. Female
c. I prefer not to say

I would describe myself as… (Choose all that apply)

a. Black or African American
b. White
c. Spanish/Hispanic/Latino
d. Asian or Pacific Islander
e. American Indian or Alaska Native
f. Other: _____
g. I prefer not to say

Bienvenidos/as a la Encuesta de Teen Leadership.

Yo soy la Dra. Tracy Waters de la Universidad de Furman. Yo estoy haciendo un estudio para aprender sobre el impacto de la clase de Teen Leadership en tu distrito escolar. Estamos invitándote a participar en el estudio porque estás tomando la clase de Teen Leadership este semestre.

Para este estudio, vamos a pedir que tomes una breve encuesta. No pensamos que tendrás ningún problema si tomas esta encuesta y tú puedes sentirse bien por ayudarnos a aprender más sobre la clase de Teen Leadership en tu distrito escolar. Te preguntaremos varias cosas, como si su participación en la clase ha cambiado su actitud y comportamiento. Por favor contestes todas las preguntas lo mejor que puedas, incluso si las preguntas no te aplican.

No vamos a pedir que pongas tu nombre en ninguna parte de la encuesta. Vamos a mantener tus respuestas privadas y no vamos a compartirlas con tus maestros/as ni con tus padres. Tus respuestas serán guardadas en un archivo de computadora protegido con contraseña. Solamente personas de Furman University que trabajan en este estudio van a ver las respuestas que estudiantes provienen. Cuando compartimos los resultados de la encuesta, nunca vamos a compartir tu nombre ni el nombre de tu escuela.

Tú debes saber que:

- No tienes que participar en este estudio si no quieres. Tú no te va meter en problemas con tus maestros/as, tu escuela, ni la Universidad de Furman si dices “No.”
- Puedes retirar del estudio en cualquier momento.
- Puedes preguntar cualquier pregunta que tienes, ahora o después. Si piensas en una pregunta después, tú o tus padres/tutores pueden llamarme al 864-294-3803.
- Tus padres/tutores han recibido información sobre este estudio y ellos han tenido la oportunidad de declinar tu participación.

Oprima PRÓXIMO para continuar.

¿Estás dispuesto/a a tomar esta encuesta?? A escoger “Sí” debajo, tú reconoces que:

- Entiendes lo que vas a hacer en este estudio,
- Se han contestado todas tus preguntas,
- Has hablado con tus padres/tutores sobre las preguntas que tienes relacionadas con el estudio y
- Aceptas participar en este estudio.

Si escoges “No,” la encuesta va a acabar.

a. Sí
b. No

¿En qué grado estás?

a. 6º (sexto)
b. 7º (séptimo)
c. 8º (octavo)

Yo me veo como líder…

a. Casi todo el tiempo
b. Un poco del tiempo
c. Casi nunca

En esta clase, hablamos de tus relaciones con otras personas. Por favor marque que tan la clase de Teen Leadership te ayudó a mejorar tus relaciones con los siguientes grupos de personas. La clase de Teen Leadership me ayudó a mejorar mis relaciones con…

Respuestas: (1) No mucho; (2) Un poco; (3) Más o menos; (4) Mucho

Amigos/as
Compañeros/as de clase
Parientes
Maestros

Por favor marques cuánto te describen estas frases.

Respuestas: (1) No como yo; (2) Un poco como yo; (3) Mucho como yo; (4) Exactamente como yo

Yo apoyo a mis amigos/as cuando ellos/as hacen lo correcto.
Yo animo a mis amigos/as ser los mejores que pueden ser.
Yo ayudo a mis amigos/as sentirse bien consigo mismos/as.

Por favor marques cuánto te describen estas frases.

Respuestas: (1) No como yo; (2) Un poco como yo; (3) Mucho como yo; (4) Exactamente como yo

Estoy allí cuando mis amigos/as me necesitan.
Me pongo de pie para mis amigos/as si otros niños/as están causando problemas para ellos/as.

Por favor marques cuánto te describen estas frases.

Respuestas: (1) No como yo; (2) Un poco como yo; (3) Mucho como yo; (4) Exactamente como yo

Evito hacer que otros niños/as se vean mal.
Si dos de mis amigos/as están peleando, yo trato de encontrar una manera de resolver las cosas entre ellos/as.
Cuando trabajo en grupos en la escuela, yo hago mi parte justa.

Por favor marques cuánto te describen estas frases.

Respuestas: (1) No como yo; (2) Un poco como yo; (3) Mucho como yo; (4) Exactamente como yo

Me llevo bien con todos tipos de personas.
Pienso que es importante escuchar las ideas que otros/as estudiantes comparten.
Soy capaz de controlar mi ira cuando tengo una desacuerdo con un/a amigo/a.

Por favor marques cuánto te describen estas frases.

Respuestas: (1) No como yo; (2) Un poco como yo; (3) Mucho como yo; (4) Exactamente como yo

Cuando tengo un problema con un/a amigo/a, puedo discutir el problema sin empeorar las cosas.
Yo sigo las reglas cuando estoy afuera en público. (por ejemplo en un centro comercial, parque o restaurante)
Respeto a otros puntos de vista, incluso algunos que no están de acuerdo con los míos.

Por favor marques cuánto te describen estas frases.

Respuestas: (1) No como yo; (2) Un poco como yo; (3) Mucho como yo; (4) Exactamente como yo

Me gustaría tener muchos/as más amigos/as.
Soy popular con otras personas de mi edad.
Siempre estoy haciendo cosas con niños/as de mi edad.

Por favor marques cuánto te describen estas frases.

Respuestas: (1) No como yo; (2) Un poco como yo; (3) Mucho como yo; (4) Exactamente como yo

Me gustaría que más personas de mi edad me gustaran.
Tengo muchos/as amigos/as.
Me resulta difícil hacer amigos/as.

Por favor marques cuánto te describen estas frases.

Respuestas: (1) No como yo; (2) Un poco como yo; (3) Mucho como yo; (4) Exactamente como yo

No tengo miedo de dar un discurso en clase.
Al dar un discurso, mi cuerpo se siente nervioso (por ejemplo, palmas sudorosas o rodillas temblorosas).
Me siento relajado/a cuando doy un discurso.

Por favor marques cuánto te describen estas frases.

Respuestas: (1) No como yo; (2) Un poco como yo; (3) Mucho como yo; (4) Exactamente como yo

Mis pensamientos se confunden y se mezclan cuando doy un discurso.
Me siento seguro/a cuando me toca dar un discurso.
Al dar un discurso, me pongo tan nervioso/a que me olvido de los hechos que realmente sé.

[Post] Por favor indique que tan estás de acuerdo o no estás de acuerdo con las siguientes frases que describen tu clase de Teen Leadership.

Respuestas: (1) Completamente no de acuerdo; (2) No de acuerdo; (3) De acuerdo; (4) Completamente de acuerdo

Todos los estudiantes deben tomar esta clase.
Todos/as los/las maestros/as deben enseñar como se enseña esta clase.
Estudiantes en mi clase tratan a el/la maestro/a con respeto.
Mis compañeros/as de clase se comportan como el/la maestro/a quiere que se comporten.
Mis compañeros/as de clase se comportan mejor en esta clase que en otras clases.

[Post] Por favor indique que tan estás de acuerdo o no estás de acuerdo con las siguientes frases que describen tu clase de Teen Leadership.

Respuestas: (1) Completamente no de acuerdo; (2) No de acuerdo; (3) De acuerdo; (4) Completamente de acuerdo

Nuestra clase se mantiene ocupada y no perdemos tiempo.
Hago más esfuerzo en esta clase que hago en otras clases.
En esta clase, aprendemos de nuestros errores.
Lo que aprendemos en esta clase es útil afuera de la escuela.

[Post] ¿Cuáles son tus clases favoritas esta semestre?

a. Matemáticas
b. Ingles / artes de lenguaje
c. Estudios sociales
d. Ciencia
e. Educación física (PE) / Gimnasio
f. Teen Leadership
g. Arte
h. Banda / Coro
i. Tecnología
j. Otro: _____

[Post] ¿Cuáles fueron las partes <u>más</u> favoritas de la clase de Teen Leadership este semestre? Seleccione hasta dos cosas.

a. Dar discursos
b. Escribir en mi diario
c. Escuchar a hablantes
d. Ir a lugares nuevos afuera de la escuela
e. Usar lo que aprendimos en situaciones reales
f. Hacer amistades con mis compañeros/as de clase
g. Participar en proyectos de servicio comunitario
h. Ninguna de estas opciones
i. Otro _____

[Post] ¿Cuáles fueron las partes menos favoritas de la clase de Teen Leadership este semestre? Seleccione hasta dos cosas.

a. Dar discursos
b. Escribir en mi diario
c. Escuchar a hablantes
d. Ir a lugares nuevos afuera de la escuela
e. Usar lo que aprendimos en situaciones reales
f. Hacer amistades con mis compañeros/as de clase
g. Participar en proyectos de servicio comunitario
h. Ninguna de estas opciones
i. Otro _____

Yo soy…

a. Varón
b. Hembra
c. Prefiero no decir

Me describo como… (Escojas todos que te describen)

a. Negro/a o Afroamericano/a
b. Caucásico/a
c. Hispano/a o Latino/a
d. Asiático/a o Isleño/a del Pacifico
e. Indio/a Americano/a o Nativo/a de Alaska
f. Otro/a: _____
g. Prefiero no decir

Appendix F. Student Focus Group Protocol

In this activity, youth are given a large piece of chartboard paper and asked to draw a human body. They will then be asked to respond to four questions and write/draw their responses in the corresponding section on the human body. Youth are actively engaged in this activity, which allows them to move and act, rather than being passive recipients of focus-group questions while aligned quietly around a table. The questions asked of youth are the same questions that would be asked in a focus group, but the format allows youth to be active participants in the creation of meaning. We first ask students to list some of the activities they did during the class, to help them get primed to address the next set of questions.

Think (written on the head)
What did you learn during this class (about yourself, about how to relate to others, or any other knowledge or skills that you learned)?

Feel (written on the heart)
How do you feel about yourself after taking this class?
How do you feel about your relationships with your classmates, teachers and/or family members after taking this class?

Do (written on the hands)
What can you do now that you couldn't do before the class? (right hand)
What did you do in this class that you really liked? (left hand)

Do (within on the mouth)
What did you learn about speaking in public?

Go (written on the feet)
How might you contribute to your family/school/community? (right foot)
Did the class help you change your goals for the future? In what way(s)? (left foot)

Optional questions if students have extra time
Is there anything else you want to say about this class?
If you took the first class of Teen Leadership last year, how does this new class compare to the first class?

En esta actividad, los jóvenes reciben un papel grande y se les pide que dibujan un figuro humano. Después se les pide que contesten cuatro preguntas y escriban/dibujan sus respuestas en la parte del figuro que corresponde con cada pregunta. Los jóvenes participan activamente en esta actividad, lo cual les permite moverse y actuarse en vez de ser recipientes pasivos/as de preguntas al estilo "grupo de enfoque" mientras se sientan callados/as alrededor de una mesa. Las preguntas para los jóvenes son las mismas preguntas que se les preguntaría en un grupo de enfoque, pero este formato les da la oportunidad de ser participantes activos/as en las creación del sentido. Primero pedimos que los estudiantes nombren algunas de las actividades que hicieron durante la clase para ayudarles a estar listo/as para contestar las siguientes preguntas.

Pensar (escrito en la cabeza)
¿Qué aprendiste en esta clase (de ti, de cómo relacionarte con otros/as o cualquier otra información o habilidades que aprendiste)?

Sentir (escrito en el corazón)
¿Cómo te sientes de ti mismo después de tomar esta clase?
¿Cómo te sientes de tus relaciones con tus compañeros/as de clases, maestro/as y/o parientes después de tomar esta clase?

Hacer (escrito en las manos)
¿Hay algo que puedes hacer ahora que no pudiste hacer antes de esta clase? (mano derecha)
¿Qué hiciste en esta clase que realmente te gustó? (mano izquierda)

Hacer (escrito en la boca)
¿Qué aprendiste sobre hablar en público?

Ir (escrito en los pies)
¿Cómo puedes contribuir a tu familia/escuela/comunidad? (pie derecho)
¿Te ayudó esta clase cambiar tus metas para el futuro? ¿En cuáles manera(s)? (pie izquierdo)

Preguntas opcionales si les queda tiempo a los/las estudiantes
¿Hay algo más que quieres decir de esta clase?
¿Si tomaste la primera clase de Teen Leadership el año pasado, como se compara esta nueva clase a la primera clase?

Appendix G. Student Evaluation of Course Leader Form

Do not sign your name or let me know who you are unless you really want me to know. Your feedback is very important to me. Please read the following statements carefully. After reading each statement, use the scale below to rate my performance. (Read the statements as though you were speaking to me.)

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree

_____ 1. You listen well to me and to the class.

_____ 2. You give me time to discuss the things that are important to me.

_____ 3. You talk too much or "over talk" us with things that are important to you, but not to me.

_____ 4. You give me enough feedback about the positives and the negatives of how I am doing.

_____ 5. I am enjoying the class and getting something out of it.

_____ 6. I feel that you really care about me and how I am doing.

_____ 7. You are interesting and keep my interest in class.

_____ 8. I feel that our class is coming together as a group of friends who support each other.

_____ 9. The material that we cover in the manual is helpful for me.

Additional Comments:

Please tell me whatever will be helpful for me to know and will make our class better.

Appendix H. Unmatched Regressions

In addition to running regression analysis comparing impacts and outcomes between matched comparison students and treatment students, researchers also conducted regression analyses comparing outcomes for Teen Leadership students to all students attending comparison schools. These regressions allowed researchers to assess the impact of the matching system on the overall conclusions of the study. Additionally, these unmatched regressions allowed researchers to compare the overall student populations in each comparison group to all students who completed the Teen Leadership course.

Researchers compared behavioral outcomes between students completing the Teen Leadership course and students attending treatment, district, and state comparison schools during the 2016-17 academic year. As shown in Table 65, there were no significant differences in behavioral outcomes between Teen Leadership students and students attending treatment schools during the 2016-17 academic year. When compared to students attending district schools in the 2016-17 academic year, however, there were significant differences. Teen Leadership were more likely to receive at least one behavioral referral ($p < 0.01$) and one day of OSS ($p < 0.01$). Additionally, Teen Leadership students received an average of 0.66 more behavioral referrals ($p < 0.01$) but 1.21 fewer hours of ISS ($p < 0.05$) than students attending district schools. When compared to students attending state schools in the 2016-17 academic year, Teen Leadership students were less likely to receive at least one behavioral referral ($p < 0.10$), but they were more likely to receive at least one day of OSS ($P < 0.05$).

Table 65. Confirmatory Impact Unmatched Regression Results for Student Behavior 2016-17

	Fall 2016 Teen Leadership vs. Comparison Students (Treatment Schools)		Fall 2016 Teen Leadership vs. Comparison Students (District Schools)		Fall 2016 Teen Leadership vs. Comparison Students (State Schools)	
	Unmatched Regression (n = 1,630)	Effect Size	Unmatched Regression (n = 3675)	Effect Size	Unmatched Regression (n = 45329)	Effect Size
Any Behavioral Referral	0.20 (0.12)	0.11	**0.55**** (0.12)	0.31	**-0.05*** (0.02)	0.15
# Behavioral Referrals	0.31 (0.24)	0.08	**0.67**** (0.23)	0.19	0.05 (0.19)	0.01
Any ISS	0.14 (0.15)	0.08	0.03 (0.13)	0.02	0.17 (0.13)	0.09
# Hours ISS	0.17 (0.49)	0.02	**-1.21*** (0.47)	-0.11	0.05 (0.09)	0.03
Any OSS	0.16 (0.15)	0.09	**0.44**** (0.14)	0.24	**0.22†** (0.13)	0.12
# Days OSS	-0.09 (0.15)	-0.03	-0.09 (0.14)	-0.03	-0.02 (0.06)	--0.01

†$p < 0.10$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

Note: Table presents the regression coefficient of the Teen Leadership variable and robust SE in parentheses from multivariate regressions that also control for student demographics, grade, and pretreatment outcome measure.

Researchers compared behavioral outcomes between students who completed the Teen Leadership course in the Fall of 2017 and students attending treatment and district comparison schools during the 2017-18 academic year. As shown in Table 66, when compared to students attending treatment schools, Teen Leadership students were more likely to receive at least one behavioral referral during the 2017-18 academic year ($p < 0.10$). When compared to students attending district schools in the 2017-18 academic year, Teen Leadership students were more likely to receive at least one behavioral referral ($p < 0.001$) and at least one day of OSS ($p < 0.01$), but they received fewer hours of ISS ($p < 0.01$).

Table 66. Confirmatory Impact Unmatched Regression Results for Student Behavior 2016-17

	Fall 2017 Teen Leadership vs. Comparison Students (Treatment Schools)		Fall 2017 Teen Leadership vs. Comparison Students (District Schools)	
	Unmatched Regression (n = 1367)	Effect Size	Unmatched Regression (n = 3696)	Effect Size
Any Behavioral Referral	**0.31†** (0.16)	0.17	**0.62*** ** (0.15)	0.34
# Behavioral Referrals	0.01 (0.23)	0.00	0.27 (0.21)	0.08
Any ISS	0.18 (0.19)	0.11	-0.13 (0.18)	-0.07
# Hours ISS	-0.23 (0.39)	-0.04	**-2.81** ** (0.40)	-0.47
Any OSS	0.19 (0.18)	0.11	**0.54** ** (0.17)	0.30
# Days OSS	-0.09 (0.19)	-0.03	-0.04 (0.19)	-0.01

†$p < 0.10$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

Note: Table presents the regression coefficients of the Teen Leadership variable and robust SE in parentheses from multivariate regressions that also control for student demographics, grade, and pretreatment outcome measure.

Researchers compared academic outcomes during the 2016-17 academic year for students completing the Teen Leadership course to those for all students attending Treatment schools who did not complete the Teen Leadership course. As shown in Table 67, there were no significant differences in academic performance between Teen Leadership students and treatment school students in the 2016-17 academic year. However, Teen Leadership students did have significantly lower test scores on the MAP Reading and Math assessments when compared to district students ($p < 0.001$). Additionally, Teen Leadership students received significantly lower scores on the SC Ready Math and ELA assessments than district students in the 2016-17 academic year ($p < 0.001$).

Table 67. Exploratory Impact Results Unmatched Regression for Course Performance AY 2016-17

	CIS vs. Comparison Students (Treatment Schools)		CIS vs. Comparison Students (District Schools)		CIS vs. Comparison Students (State Schools)	
	Unmatched Regression (n = 1516)	Effect Size	Unmatched Regression (n = 3516)	Effect Size	Unmatched Regression (n = 42789)	Effect Size
Spring MAP RIT - Math	0.77 (1.11)	0.04	**-8.67*** ** (1.02)	-0.55	---	---
Spring MAP RIT - Reading	1.04 (1.02)	0.05	**-8.48*** ** (0.96)	-0.48	---	---
SC READY - Math	-3.56 (5.25)	-0.04	**-17.0*** ** (4.89)	-0.20	-7.37 (4.52)	-0.09
SC READY - ELA	-1.65 (5.00)	-0.02	**-16.0*** ** (4.65)	-0.20	**-10.0*** (4.76)	-0.12

$^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

Note: Table presents the regression coefficients of the Teen Leadership variable and robust SE in parentheses from multivariate regressions that also control for student demographics, grade, and pretreatment outcome measure.

Researchers compared academic outcomes during the 2017-18 academic year for students completing the Teen Leadership course to those for all students attending Treatment schools who did not complete the Teen Leadership course. As shown in Table 68, there were no significant differences in academic performance between Teen Leadership students and treatment school students in the 2017-18 academic year. However, Teen Leadership students received significantly lower scores on the SC READY Math and ELA assessments than district students in the 2017-18 academic year ($p < 0.001$). When compared to students attending state schools in the 2016-17 academic year, Teen Leadership students received significantly lower scores on the SC Ready ELA assessment ($p < 0.05$).

Table 68. Exploratory Impact Unmatched Regression Results for Course Performance AY 2017-18

	Fall 2017 Teen Leadership vs. Comparison Students: Treatment Schools		Fall 2017 Teen Leadership vs. Comparison Students: District Schools	
	Unmatched Regression (n = 1244)	Effect Size	Unmatched Regression (n = 3456)	Effect Size
SC READY - ELA	0.10 (0.07)	0.11	**-0.39*** ** (0.07)	-0.39
SC READY - Math	0.03 (0.07)	0.04	**-0.42*** ** (0.07)	-0.40

$^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

Note: Table presents the regression coefficients of the Teen Leadership variable and robust SE in parentheses from multivariate regressions that also control for student demographics, grade, and pretreatment outcome measure.

Researchers compared attendance outcomes between Teen Leaderships students and students attending treatment and district schools in the 2016-17 academic year. As shown in Table 69, there were no significant differences in attendance outcomes between Teen Leadership students and non-Teen Leadership students attending treatment schools. However, when compared to students at district schools, Teen Leadership students had significantly lower daily attendance ($p < 0.01$), and they had significantly higher rates of chronic absenteeism ($p < 0.01$). There were no significant differences in attendance outcomes between Teen Leaderships students and students attending state schools in the 2016-17 academic year.

Table 69. Exploratory Impact Unmatched Regression Results for Attendance AY 2016-17

	CIS vs. Comparison Students (Treatment Schools)		CIS vs. Comparison Students (District schools)		CIS vs. Comparison Students (State Schools)	
	Unmatched Regression (n = 1621)	Effect Size	Unmatched Regression (n = 3674)	Effect Size	Unmatched Regression (n = 45329)	Effect Size
Average Daily Attendance	0.38 (0.36)	0.06	**-0.95**** (0.32)	-0.19	-0.23 (0.33)	-0.04
Chronically Absent	0.03 (0.17)	0.02	**0.45**** (0.16)	0.27	0.07 (0.15)	0.04

$^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

Note: Table presents the regression coefficients of the Teen Leadership variable and robust SE in parentheses from multivariate regressions that also control for student demographics, grade, and pretreatment outcome measure.

Researchers compared attendance outcomes between Teen Leaderships students and students attending treatment and district schools in the 2017-18 academic year. As shown in Table 70, there were no significant differences in attendance outcomes between Teen Leadership students and non-Teen Leadership students attending treatment schools and district schools in the 2017-18 academic year.

Table 70. Exploratory Impact Unmatched Regression Results for Attendance AY 2017-18

	Fall 2017 Teen Leadership vs. Comparison Students: Treatment Schools		Fall 2017 Teen Leadership vs. Comparison Students: District Schools	
	Unmatched Regression (n = 1328)	Effect Size	Unmatched Regression (n = 3624)	Effect Size
Average Daily Attendance	0.06 (0.33)	0.01	0.07 (0.30)	0.01
Chronically Absent	0.23 (0.24)	0.13	0.24 (0.22)	0.13

$^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

Note: Table presents the regression coefficients of the Teen Leadership variable and robust SE in parentheses from multivariate regressions that also control for student demographics, grade, and pretreatment outcome measure.

Researchers compared outcomes on students' relationships with teachers and adults in their schools between Teen Leaderships students and students attending treatment and district schools in the 2016-17 academic year. As shown in Table 71 there were no significant differences in student-reported relationships with teachers and adults between Teen Leadership students and students attending treatment schools and district schools in the 2016-17 academic year.

Table 71. Exploratory Secondary Outcome Unmatched Regression Results for Relationships with Adults AY 2016-17

	Fall 2016 Teen Leadership vs. Comparison Students: Treatment Schools		Fall 2016 Teen Leadership vs. Comparison Students: District Schools	
	Unmatched Regression (n = 1175)	Effect Size	Unmatched Regression (n = 2907)	Effect Size
Relationships with Teachers	-0.04 (0.05)	-0.05	0.07 (0.05)	0.09
Relationships with Caring Adults	0.02 (0.05)	0.03	0.03 (0.05)	0.04

$^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

Note: Table presents the regression coefficients of the Teen Leadership variable and robust SE in parentheses from multivariate regressions that also control for student demographics, grade, and pretreatment outcome measure.

Researchers compared outcomes on students' relationships with teachers and adults in their schools between Teen Leaderships students and students attending treatment and district schools in the 2017-18 academic year. As shown in Table 72, there were no significant differences in student-reported relationships with teachers and adults between Teen Leadership students and students attending treatment schools in the 2016-17 academic year. However, when compared to students at district schools, Teen Leadership students reported significantly better relationships with teachers ($p < 0.01$).

Table 72. Exploratory Secondary Outcome Unmatched Relationships with Adults AY 2017-18

	Fall 2017 Teen Leadership vs. Comparison Students: Treatment Schools		Fall 2017 Teen Leadership vs. Comparison Students: District Schools	
	Unmatched Regression (n = 914)	Effect Size	Unmatched Regression (n = 2,622)	Effect Size
Relationships with Teachers	0.07 (0.07)	0.09	**0.20**** (0.07)	0.25
Relationships with Caring Adults	0.08 (0.08)	0.10	0.05 (0.07)	0.06

$^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

Note: Table presents the regression coefficients of the Teen Leadership variable and robust SE in parentheses from multivariate regressions that also control for student demographics, grade, and pretreatment outcome measure.

Researchers compared outcomes on student self-confidence between Teen Leaderships students and students attending treatment and district schools in the 2016-17 academic year. As shown in Table 73, there were no significant differences in student-reported self-confidence between Teen Leadership students and students attending treatment schools in the 2016-17 academic year. However, when compared to students at district schools, Teen Leadership students reported significantly lower levels of academic perseverance ($p < 0.01$) and academic self-confidence ($p < 0.001$).

Table 73. Exploratory Outcome Unmatched Results for Student Self-Confidence AY 2016-17

	Fall 2016 Teen Leadership vs. Comparison Students: Treatment Schools		Fall 2016 Teen Leadership vs. Comparison Students: District Schools	
	Unmatched Regression (n = 1,175)	Effect Size	Unmatched Regression (n = 2,907)	Effect Size
Academic Perseverance	-0.03 (0.05)	-0.05	**-0.11**** (0.04)	-0.17
Academic Self-Confidence	0.01 (0.04)	0.02	**-0.15***** (0.04)	-0.25

$^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

Note: Table presents the regression coefficients of the Teen Leadership variable and robust SE in parentheses from multivariate regressions that also control for student demographics, grade, and pretreatment outcome measure.

Researchers compared outcomes on student self-confidence between Teen Leaderships students and students attending treatment and district schools in the 2017-18 academic year. As shown in Table 74, there were no significant differences in student-reported self-confidence between Teen Leadership students and students attending treatment schools in the 2017-18 academic year. However, when compared to students at district schools, Teen Leadership students reported significantly lower levels of academic self-confidence ($p < 0.01$).

Table 74. Exploratory Outcome Unmatched Results for Student Self-Confidence AY 2017-18

	Fall 2016 Teen Leadership vs. Comparison Students: Treatment Schools		Fall 2016 Teen Leadership vs. Comparison Students: District Schools	
	Unmatched Regression (n = 914)	Effect Size	Unmatched Regression (n = 2,622)	Effect Size
Academic Perseverance	0.07 (0.06)	0.11	-0.07 (0.06)	-0.11
Academic Self-Confidence	-0.01 (0.06)	-0.02	**-0.19**** (0.06)	-0.30

$^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

Note: Table presents the regression coefficients of the Teen Leadership variable and robust SE in parentheses from multivariate regressions that also control for student demographics, grade, and pretreatment outcome measure.

Researchers compared outcomes on school engagement between Teen Leadership students and students attending treatment and district schools in the 2016-17 academic year. As shown in Table 75, there were no significant differences between Teen Leadership students and students at treatment and district schools on either school engagement outcome in the 2016-17 academic year.

Table 75. Exploratory Outcome Unmatched Results for School Engagement AY 2016-17

	Fall 2016 Teen Leadership vs. Comparison Students: Treatment Schools		Fall 2016 Teen Leadership vs. Comparison Students: District Schools	
	Unmatched Regression (n = 1,175)	Effect Size	Unmatched Regression (n = 2,907)	Effect Size
School Engagement	-0.00 (0.05)	-0.00	0.03	0.04
School Belonging	-0.02 (0.06)	-0.02	0.03 (0.05)	0.05

$^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

Note: Table presents the regression coefficients of the Teen Leadership variable and robust SE in parentheses from multivariate regressions that also control for student demographics, grade, and pretreatment outcome measure.

Researchers compared outcomes on school engagement between Teen Leadership students and students attending treatment and district schools in the 2017-18 academic year. As shown in Table 76, there were no significant differences between Teen Leadership students and students at treatment and district schools on either school engagement outcome in the 2017-18 academic year.

Table 76. Exploratory Outcome Unmatched Results for School Engagement AY 2017-18

	Fall 2017 Teen Leadership vs. Comparison Students: Treatment Schools		Fall 2017 Teen Leadership vs. Comparison Students: District Schools	
	Unmatched Regression (n = 914)	Effect Size	Unmatched Regression (n = 2,622)	Effect Size
School Engagement	0.11 (0.07)	0.15	0.10 (0.07)	0.13
School Belonging	0.08 (0.08)	0.10	0.11 (0.07)	0.13

$^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

Note: Table presents the regression coefficients of the Teen Leadership variable and robust SE in parentheses from multivariate regressions that also control for student demographics, grade, and pretreatment outcome measure.

Researchers compared outcomes on student's attitude toward learning between Teen Leadership students and students attending treatment and district schools in the 2016-17 academic year. As shown in Table 77, there were no significant differences between Teen Leadership students and students at treatment and district schools in the 2016-17 academic year.

Table 77. Exploratory Outcome Unmatched Results for Student Attitude toward Learning AY 2016-17

	Fall 2016 Teen Leadership vs. Comparison Students: Treatment Schools		Fall 2016 Teen Leadership vs. Comparison Students: District Schools	
	Unmatched Regression (n = 1,175)	Effect Size	Unmatched Regression (n = 2,907)	Effect Size
Valuing Education	-0.06 (0.04)	-0.10	-0.06 (0.04)	-0.10

$^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

Note: Table presents the regression coefficients of the Teen Leadership variable and robust SE in parentheses from multivariate regressions that also control for student demographics, grade, and pretreatment outcome measure.

Researchers compared outcomes on student's attitude toward learning between Teen Leadership students and students attending treatment and district schools in the 2017-18 academic year. As shown in Table 78, there were no significant differences between Teen Leadership students and students at treatment and district schools in the 2017-18 academic year.

Table 78. Exploratory Outcome Unmatched Results for Student Attitude toward Learning AY 2017-18

	Fall 2017 Teen Leadership vs. Comparison Students: Treatment Schools		Fall 2017 Teen Leadership vs. Comparison Students: District Schools	
	Unmatched Regression (n = 914)	Effect Size	Unmatched Regression (n = 2,622)	Effect Size
Valuing Education	0.08 (0.06)	0.12	0.03 (0.06)	0.04

$^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

Note: Table presents the regression coefficients of the Teen Leadership variable and robust SE in parentheses from multivariate regressions that also control for student demographics, grade, and pretreatment outcome measure.

References

Alliance for Excellent Education. (2011). The High Cost of High School Dropouts: What the Nation Pays for Inadequate High Schools. Retrieved November 7, 2017, from https://all4ed.org/reports-factsheets/the-high-cost-of-high-school-dropouts-what-the-nation-pays-for-inadequate-high-schools/

Balfanz, R., & Byrnes, V. (2012). *The Importance of Being in School: A Report on Absenteeism in the Nation's Public Schools - SI&A - School Innovations & Achievement*. Retrieved from https://www.sia-us.com/news-and-events/sia-research-articles/the-importance-of-being-in-school-a-report-on-absenteeism-in-the-nations

Balfanz, R., Herzog, L., & Iver, D. J. M. (2007). Preventing Student Disengagement and Keeping Students on the Graduation Path in Urban Middle-Grades Schools: Early Identification and Effective Interventions. *Educational Psychologist*, *42*(4), 223–235.

Bifulco, R. (2012). Can Nonexperimental Estimates Replicate Estimates Based on Random Assignment in Evaluations of School Choice? A Within-Study Comparison. *Journal of Policy Analysis and Management*, *31*(3), 729–751. https://doi.org/10.1002/pam.20637

Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). *Introduction to Meta-Analysis*. West Sussex, UK: John Wiley & Sons.

Brookover, W. B., Thomas, S., & Paterson, A. (1964). Self-Concept of Ability and School Achievement. *Sociology of Education*, *37*(3), 271–278. https://doi.org/10.2307/2111958

Caskey, M., & Anfara, V. A. (2007). Developmental Characteristics of Young Adolescents: Research Summary. Retrieved from http://www.amle.org/BrowsebyTopic/WhatsNew/WNDet.aspx?ArtMID=888&ArticleID=455

Castro, V., Johnson, M. B., & Smith, R. (2008). Self-Reported Resilient Behaviors of Seventh and Eighth Grade Students Enrolled in an Emotional Intelligence Based Program. *Journal of School Counseling*, *6*(27). Retrieved from https://eric.ed.gov/?id=EJ894798

Cirillo-Teverbaugh, K., & Colwell, B. (1993). *Effects of a 10-week social-cognitive group intervention on selected psychosocial attributes and interpersonal effectiveness of high school students*. Unpublished manuscript, Texas A&M University, College Place, TX.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, N.J.: L. Erlbaum Associates.

Cohen, M., Halfacre, A., Kearns, S., Knouse, S., Quinn, J., & Winiski, M. (2017). *Focused Needs and Asset Assessment*. Furman University: Furman University.

Cook, T. D., Shadish, W. R., & Wong, V. C. (2008). Three conditions under which experiments and observational studies produce comparable causal estimates: New findings from within-study comparisons. *Journal of Policy Analysis and Management*, *27*(4), 724–750. https://doi.org/10.1002/pam.20375

Corrin, W., Parise, L. M., Cerna, O., Haider, Z., & Somers, M.-A. (2015). *Case Management for Students at Risk of Dropping Out: Implementation and Interim Impact Findings from the Communities in Schools Evaluation*. MDRC. Retrieved from https://eric.ed.gov/?id=ED558497

Corrin, W., Sepanik, S., Rosen, R., & Shane, A. (2016, June 20). Addressing Early Warning Indicators [Text]. Retrieved June 13, 2017, from http://www.mdrc.org/publication/addressing-early-warning-indicators

Danaher, A. C. (2006). *Character education: The impact of the Teen Leadership Program*. Unpublished manuscript, Texas A&M University, Kingsville.

Dobransky, N. D., & Frymier, A. B. (2004). Developing teacher-student relationships through out of class communication. *Communication Quarterly*, *52*(3), 211–223. https://doi.org/10.1080/01463370409370193

Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: a meta-analysis of school-based universal interventions. *Child Development*, *82*(1), 405–432. https://doi.org/10.1111/j.1467-8624.2010.01564.x

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, *41*(4), 1149–1160. https://doi.org/10.3758/BRM.41.4.1149

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, *39*(2), 175–191. https://doi.org/10.3758/BF03193146

Fortson, K., Verbitsky-Savitz, N., Kopa, E., & Gleason, P. (2012). *Using an Experimental Evaluation of Charter Schools to Test Whether Nonexperimental Comparison Group Methods Can Replicate Experimental Impact Estimates. NCEE 2012-4019*. National Center for Education Evaluation and Regional Assistance. Retrieved from https://eric.ed.gov/?id=ED531481

Gelman, A., Hill, J., & Yajima, M. (2012). Why We (Usually) Don't Have to Worry About Multiple Comparisons. *Journal of Research on Educational Effectiveness*, *5*(2), 189–211. https://doi.org/10.1080/19345747.2011.618213

Goldschmidt, P., & Wang, J. (1999). When Can Schools Affect Dropout Behavior? A Longitudinal Multilevel Analysis. *American Educational Research Journal*, *36*(4), 715–738. https://doi.org/10.3102/00028312036004715

Gottfredson, G. D., & Gottfredson, D. C. (1999). *Development and Application of Theoretical Measures for Evaluating Drug and Delinquency Prevention Programs: Technical Manual for Research Editions of What About You (WAY)*. Ellicott City, MD: Gottfredson Associates.

Guo, S., & Fraser, M. W. (2014). *Propensity Score Analysis: Statistical Methods and Applications*. Thousand Oaks, CA: Sage Publications.

Hancock, A. B., Stone, M. D., Brundage, S. B., & Zeigler, M. T. (2010). Public speaking attitudes: does curriculum make a difference? *Journal of Voice: Official Journal of the Voice Foundation*, *24*(3), 302–307. https://doi.org/10.1016/j.jvoice.2008.09.007

Harwell, M., & LeBeau, B. (2010). Student Eligibility for a Free Lunch as an SES Measure in Education ResearchEducational Researcher - Michael Harwell, Brandon LeBeau, 2010. Retrieved from http://journals.sagepub.com/doi/abs/10.3102/0013189X10362578

Hay, I., Ashman, A. F., & Van Kraayenoord, C. E. (1998). Educational characteristics of students with high or low self-concept. *Psychology in the Schools*, *35*(4), 391–400. https://doi.org/10.1002/(SICI)1520-6807(199810)35:4<391::AID-PITS10>3.0.CO;2-#

Imbens, G. W., & Wooldridge, J. M. (2009). Recent Developments in the Econometrics of Program Evaluation. *Journal of Economic Literature*, *47*(1), 5–86. https://doi.org/10.1257/jel.47.1.5

Laird, J., Kienzi, G., DeBell, M., & Chapman, C. (2007). *Dropout rates in the United States: 2005:* Washington, D.C: U.S. Department of Education.

Lantieri, L., & Goleman, D. (2014). *Building Emotional Intelligence: Practices to Cultivate Inner Resilience in Children* (1 edition). Boulder Colorado: Electronic University.

Levin, H. M., Belfield, C., Muennig, P. A., & Rouse, C. (2007). The Costs and Benefits of an Excellent Education for All of America's Children. Retrieved from https://academiccommons.columbia.edu/catalog/ac:204241

Lippman, L. H., Anderson Moore, K., Guzman, L., Ryberg, R., McIntosh, H., Ramos, M. F., … Kuhfeld, M. (2014). *Flourishing Children: Defining and Testing Indicators of Positive Development*. Dordrecht: Springer Netherlands. https://doi.org/10.1007/978-94-017-8607-2

Lipsey, M. W., & Wilson, D. (2000). *Practical Meta-Analysis*. Thousand Oaks, Calif: SAGE Publications, Inc.

McCroskey, J. C. (1982). *An introduction to rhetorical communication* (4th ed). Englewood Cliffs, N.J. : Prentice-Hall. Retrieved from https://trove.nla.gov.au/version/30591910

McCroskey, J. C., Beatty, M. J., Kearney, P., & Plax, T. G. (1985). The content validity of the PRCA-24 as a measure of communication apprehension across communication contexts. *Communication Quarterly*, *33*(3), 165–173. https://doi.org/10.1080/01463378509369595

Meece, J., & Eccles, J. (2010). Handbook of research on schools, schooling, and human development – Edited by Judith L Meece & Jacqueline S Eccles. *British Journal of Educational Technology*, *42*(2), E46–E47. https://doi.org/10.1111/j.1467-8535.2011.01173_7.x

Montgomery, J. M., Nyhan, B., & Torres, M. (2018). How conditioning on posttreatment variables can ruin your experiment and what to do about it. *American Journal of Political Science*, *62*(3), 760–775.

Northwest Evaluation Association. (2004). *Reliability and Validity Estimates: NWEA Achievement Level Tests and Measures of Academic Progress*. Lake Owesgo, OR.

Perugini, M., Gallucci, M., & Costantini, G. (2018). A Practical Primer To Power Analysis for Simple Experimental Designs. *International Review of Social Psychology*, *31*(1), 20. https://doi.org/10.5334/irsp.181

Puma, M. J., Olsen, R. B., Bell, S. H., & Price, C. (2009). *What to Do when Data Are Missing in Group Randomized Controlled Trials. NCEE 2009-0049*. National Center for Education Evaluation and Regional Assistance. Retrieved from https://eric.ed.gov/?id=ED511781

Putnam, R. F., Luiselli, J. K., Handler, M. W., & Jefferson, G. L. (2003). Evaluating Student Discipline Practices in a Public School Through Behavioral Assessment of Office Referrals. *Behavior Modification*, *27*(4), 505–523. https://doi.org/10.1177/0145445503255569

Reardon, S. F., & Robinson, J. P. (2007). Patterns and trends in racial/ethnic and socioeconomic academic achievement gaps. In H. A. Ladd & E. B. Fiske (Eds.), *Handbook of Research in Education Finance and Policy*. Lawrence Erlbaum. Retrieved from https://cepa.stanford.edu/content/patterns-and-trends-racialethnic-and-socioeconomic-academic-achievement-gaps

Reschly, A. L., & Christenson, S. L. (2006). Prediction of Dropout Among Students With Mild Disabilities: A Case for the Inclusion of Student Engagement Variables. *Remedial and Special Education*, *27*(5), 276–292. https://doi.org/10.1177/07419325060270050301

Rockman et al. (2013). *Student Outlook Survey: Attitudes Toward Learning* (p. 15).

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. https://doi.org/10.2307/2335942

Rosenbaum, P. R., & Rubin, D. B. (1984). Reducing Bias in Observational Studies Using Subclassification on the Propensity Score. *Journal of the American Statistical Association*, *79*(387), 516–524. https://doi.org/10.2307/2288398

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*(1), 33–38. https://doi.org/10.2307/2683903

Rosenberg, M. (1965). *Society and the Adolescent Self-Image*. Princeton, NJ: Princeton University Press.

Rumberger, R. W., & Lim, S. A. (2008). *Why Students Drop Out of School: A Review of 25 Years of Research* (California Dropout Research Project Report #15). Retrieved from https://www.issuelab.org/resource/why-students-drop-out-of-school-a-review-of-25-years-of-research.html

Schochet, P. Z. (2008). *Technical Methods Report: Guidelines for Multiple Testing in Impact Evaluations. NCEE 2008-4018*. National Center for Education Evaluation and Regional Assistance. Retrieved from https://eric.ed.gov/?id=ED501605

StataCorp. (2017). *Stata Statistical Software: Release 15*. College Station, TX: StataCorp LLC.

Steiner, P. M., & Cook, D. (2013). Matching and Propensity Scores. In T. D. Little (Ed.), *The Oxford Handbook of Quantitative Methods in Psychology* (Vol. 1, pp. 237–259). New York: Oxford University Press.

Stetser, M. C., & Stillwell, R. (2014). *Public High School Four-Year On-Time Graduation Rates and Event Dropout Rates: School Years 2010-11 and 2011-12. First Look. NCES 2014-391*. National Center for Education Statistics. Retrieved from https://eric.ed.gov/?id=ED544798

Stuart, E. A. (2010). Matching methods for causal inference: A review and a look forward. *Statistical Science: A Review Journal of the Institute of Mathematical Statistics*, *25*(1), 1–21. https://doi.org/10.1214/09-STS313

Stuart, E. A., & Rubin, D. B. (2008). Best Practices in Quasi–Experimental Designs: Matching Methods for Causal Inference. In J. Osborne, J. Osborne (Ed.), *Best Practices in Quantitative Methods* (pp. 155–176). 2455 Teller Road, Thousand Oaks California 91320 United States of America: SAGE Publications, Inc. https://doi.org/10.4135/9781412995627.d14

Sugai, G., Sprague, J. R., Horner, R. H., & Walker, H. M. (2000). Preventing School Violence: The Use of Office Discipline Referrals To Assess and Monitor School-Wide Discipline Interventions. *Journal of Emotional and Behavioral Disorders*, *8*(2), 94–101.

United States Department of Agriculture. (2015). Child Nutrition Programs: Income Eligibility Guidelines. *Federal Register*, *80*(61), 17026 – 17027.

Walker, D. (2018, April 29). As outsiders discover the city, Greenville has joined many top 10 and best-of lists. *Greenville News*.

Wang, S., McCall, M., Jiao, H., & Harris, G. (2012). *Construct Validity and Measurement Invariance of Computerized Adaptive Testing: Application to Measures of Academic Progress (MAP) Using Confirmatory Factor Analysis*. Retrieved from https://eric.ed.gov/?id=ED531495

Wentzel, K. R. (1991). Social Competence at School: Relation Between Social Responsibility and Academic Achievement. *Review of Educational Research*, *61*(1), 1–24. https://doi.org/10.3102/00346543061001001

What Works Clearinghouse. (2017). *Standards handbook (Version 4.0)*. Washington, D.C.: Institute of Education Sciences.

Wylie, R. C. (1973). *001: The Self-Concept: Revised Edition, Volume 1, A Review of Methodological Considerations and Measuring Instruments* (Revised edition). Lincoln: University of Nebraska Press.