Improving Educational Outcomes in High Need, Low-Income Rural and Urban Communities through a Middle School Transition and Cross-Age Peer Mentoring Model

Education Innovation and Research Program – Early-phase Grant

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A. SIGNIFICANCE. The Center for Supportive Schools (CSS) is applying for an Early-phase Grant in response to *AP1: Supporting High-Need Students* and *AP 2: Improving School Climate.* The proposed 5-year project will develop a middle school transition and cross-age peer mentoring program for 6th grade students, known as *Peer Group Connection-Middle School (PGC-MS),* into a replicable and scalable program that can serve as a prosocial approach to school discipline. The project will also investigate the efficacy of PGC-MS and equip us to provide schools across the country with tested resources to implement PGC-MS. PGC-MS is designed to improve social and emotional learning (SEL) and enhance student engagement to support academic and other school-related outcomes, including discipline. PGC-MS is the middle grades version of CSS's flagship program, Peer Group Connection-High School (PGC-HS), an evidence-based program that supports and eases students' transition into high school. PGC-HS has empirical evidence demonstrating its promise and we are confident that PGC-MS demonstrates the same promise. The proposed project will serve high-need 6th graders in 10 middle schools in low-income, rural communities in North Carolina and urban communities in Maryland, New Jersey, and New York. CSS and The Policy & Research Group (PRG) will partner to conduct an experimental study to measure program impacts on SEL (goal setting, growth mindset, decision-making) and student engagement. PRG will examine the extent to which these impacts translate into improved academic achievement and other school-related outcomes as demonstrated by decreased course failures (a critical indicator of being off-track for on-time high school graduation) and decreased discipline incidents. In each of 10 schools, incoming 6th grade students will be randomly assigned to either a treatment (PGC-MS) or control group. Approximately 150 students in each school will be assigned to these two groups, resulting in a total sample of approximately 1,500 students. See *Appx. B* for Evidence Standards.

National significance. Nationwide, 2.8 million students[1] were suspended from public schools during the 2013-2014 school year. Black students are suspended and expelled at a rate three times greater (16%) than White students (5%),[2] and Black girls are suspended at higher rates (12%) than girls of any other race or ethnicity and most boys. Students of color make up 75% of referrals to law enforcement and 79% of school-based arrests, despite comprising 39% of the nation's public school population.[3] Students with disabilities are more than twice as likely to receive an out-of-school suspension (13%) than students without disabilities (6%). Gender nonconforming youth and LGBTQ students are increasingly among those issued disciplinary exclusion and excessive criminal sanctions. Even a single suspension or referral to the juvenile court system increases the odds of low achievement and dropping out of school.[4] Higher suspension rates are closely correlated with higher dropout, and delinquency rates and loss of classroom instruction time damages student performance.[5] Well-documented disparities exist for minority, low-income, and other high-need students.[6] According to the 2016 *Building a Grad Nation Report*, the 2013-14 estimated national 4-year adjusted cohort graduation rate (ACGR) for public high school students hit a record high of 82.3%.[7] While there have been gains among Hispanic/Latino and Black students, these subgroups still fall well below the national average at 76.3 and 72.5 percent, respectively.[8] In contrast, the ACGR for White students fell above the national average at 87.2%.[9] Further, 89% of non-low-income students graduate on time compared to 74.6% of low-income students.[10] Therefore, disparities in suspensions likely will have an adverse impact on millions of historically disadvantaged children.[11]

Prosocial approaches to discipline. Effective school discipline creates a shift from a climate of punishment to one in which healthy relationships and academic success are promoted.[12] Both research and practice show that trusting, supportive relationships in schools are crucial to

preventing conflict, and a positive school climate may reduce students' levels of aggression, violence, drug use, and delinquency.[13,14] Schools can foster supportive conditions for learning and prevent punitive discipline responses by increasing students' access to caring relationships; improving relationships between educators, students, and parents; and teaching students coping strategies and SEL skills. Research has found that SEL programs improve students' skills and attitudes and have a positive impact on behavior management and discipline.[15]

Importance of middle grades. A leading researcher on improving high-poverty secondary schools, Dr. Bob Balfanz calls the first year of the middle grades (typically 6th grade), "a make-or-break year."[16] His landmark 2009 brief[17] emphasizes that in high-poverty environments, a student's middle grades experience strongly impacts the odds of graduating from high school. The transition to middle school tends to destabilize many students[18] and is often marked by declines in academic achievement,[19] competency beliefs,[20] motivation, functioning, and attitudes toward school;[21] declines in self-esteem;[22,23] increased psychological distress[24] and referrals to mental health services;[25] and the start of smoking, alcohol, drug, attendance, violence, and discipline problems.[26,27] Causes of these[28] difficulties have been explained in part by school settings not meeting the developmental needs of the young adolescent. Adolescents making the transition to middle school need a combination of skill training and SEL.[29] Successful middle schools provide a safe school climate, encourage and respect student voice, help students develop social and emotional skills, and provide strong role models.[30] A positive transition from elementary school to middle school is critical for personal and academic success.[31]

Peer mentoring as a prosocial approach to discipline. The increasing number of groups who are at-risk for school exclusion and arrest suggests that school discipline can be an unintended strategy for handling difference, including race, gender, social class, immigrant status, gender

identity, sexual orientation, language status, and disability.[32] Research suggests that to prevent unnecessary discipline and overrepresentation of particular subgroups in school discipline, schools should equitably offer all students supportive relationships and respectful school environments.[33] Peer mentoring can provide students with the safe and supportive environment they need to feel connected to school, grounded in caring relationships. This approach helps students see and understand cultural differences, and interact with other cultural groups in ways that recognize and value differences.[34] There is also compelling evidence that school-based mentoring produces a reduction in disciplinary referrals, fighting, and suspensions.[35] Peer mentoring in particular can produce positive outcomes for both older peer mentors and their younger mentees, including increased connectedness to school and peers, prosocial behavior and attitudes, empathy and moral reasoning, intrapersonal communication, and conflict resolution skills.[36] Finally, peer mentoring elevates student leadership and voice, conditions under which prosocial approaches to discipline tend to work best.[37]

Contributions to the field. The proposed project will build strong evidence for adopting a school-based, cross-age peer mentoring model as a prosocial approach to discipline that will improve school climate, promote students' SEL skill development, ensure a successful transition into middle school, and improve academic achievement for all students.

Current program status. PGC-MS is a school-based peer group mentoring program for 6th grade students designed to improve SEL skills and behaviors that support educational outcomes by immersing them in safe, supportive groups led by older peer leaders. This, in turn, helps improve school climate. In 2014-15, PGC-MS was piloted in one middle school in NYC. Over the next two years, PGC-MS was expanded to 14 additional schools; two schools in NJ and 12 in NYC. This expansion was done in response to demand for the program by individual schools and

not as part of any strategic initiative to scale or evaluate the program. In the proposed project, we will implement and evaluate PGC-MS in 10 new schools as part of a cohesive scaling and evaluation strategy. Further, we will do this across six urban and rural communities in four states to develop and streamline current practices into a package of services and materials that will allow PGC-MS to be scalable and replicable in diverse communities nationwide. At the conclusion of the grant, after our comprehensive and iterative process of improvement, we will have developed a set of resources and materials to be shared with schools and districts serving high-need youth across rural and urban communities.

Innovative strategies. PGC-MS is innovative in that it capitalizes on existing resources such as staff, students, and time in the school day. PGC-MS: *builds the capacity of existing school staff* to deploy themselves differently rather than adding to the number of paid adults in the school or relying on volunteers; *taps into older students*, an underutilized resource in school improvement efforts, especially in the middle grades; *ensures peer leaders receive rigorous training* through a credit-bearing daily leadership course; and *is fully integrated into the school day*, increasing the likelihood that it becomes institutionalized and sustained over time. PGC-MS is also a *universal intervention* designed to enhance non-cognitive skills among all students through a systems-wide approach. The PGC curriculum is grounded in strengths-promotion rather than risk-reduction, which has been found to yields larger positive effects for peer mentoring programs.[38] Unlike many other models, PGC-MS requires relatively minor changes to the way schools do business yet holds promise to leverage massive changes in students' experiences and results. Finally, PGC-MS is innovative in that is it a *group mentoring* model. Youth mentoring is typically a hierarchical relationship that provides guidance and role modeling, so group mentoring offers things that one-on-one mentoring cannot: horizontal (peer) relationships; opportunities for

cooperation and reciprocity; chances to try out social skills; increased socialization; and potential group identity and cohesion.[39] As with many innovative mentoring models, the evidence base for group mentoring is limited[40] and there is little in the way of practice documents, such as manuals or toolkits, all of which underscores the need for the present project.

New strategies that build on existing strategies. Our proposed strategies and practices have a promising track record of demonstrating improved educational outcomes for low-income high school students. For example, Rutgers University conducted a randomized, 4-year longitudinal study of the effect of PGC-HS on 4-year cohort graduation rates at one high school in an urban community serving an economically disadvantaged population. Results indicated that PGC-HS improved graduation rates of participants by 9 percentage points.[41] ***However, the proposed project represents the first time these strategies will be applied and evaluated in large scale in middle schools.*** Further, 8th grade peer leaders are trained in a daily leadership development class (i.e., 45 minutes, five times per week) and meet with younger students in 45-minute mentoring sessions held three times per month, all as part of their regular school schedule. Peer leaders meet with the same groups of 6th graders regularly throughout their entire 6th grade year. ***We are not aware of any middle school peer mentoring model with the intensity and duration of PGC-MS.*** Finally, we will incorporate into PGC-MS ongoing reviews of student discipline data to ensure that the program is contributing to a positive and equitable school climate. CSS and PRG will support the PGC-MS Stakeholder Team to review school record data, including discipline data, of program participants and non-participants as a component of continuous improvement, and identifying, understanding, and problem-solving any disparities that exist. ***We are not aware of any middle school peer mentoring program that puts into place a team of key stakeholders who regularly review discipline data to help improve outcomes for all students.***

Exceptional approach. While peer interventions like peer helping, counseling, and tutoring are common, authentic *cross-age peer mentoring* models like PGC-MS are distinct in their emphasis on the development of a mutually supportive, close relationship between different-aged peers over an extended period of time.[42] In addition, the mentor's focus is not on deficiencies but rather on facilitating youth development in domains such as interpersonal skills, connectedness to school, prosocial bonding, social skills, and self-esteem. The prevalence of true cross-age peer mentoring is difficult to determine and empirical research on these models is extremely limited.[43] Research on youth mentoring programs generally is considered in an early stage of development,[44] and according to a review by noted expert Michael Karcher no large-scale randomized studies of the effects of cross-age peer mentoring programs on mentees have been reported in the literature.[45] Experts strongly recommend robust efficacy trials of peer mentoring models to help establish a sufficient empirical base that will yield recommendations for specific practices and approaches.[46] A comprehensive search of the literature also revealed no comparable studies of the impact of peer mentoring programs on education outcomes in low-income rural LEAs. Several of Karcher's studies[47,48,49] were conducted in rural Wisconsin; however, these studies had much smaller sample sizes (73 - 120 participants), were not specific to low-income schools, and did not assess academic outcomes of peer mentoring. While no search can be assumed to identify all relevant studies, our search of the literature suggests that this may be the first large-scale study of its kind.

Strong theory. *Social and emotional learning (SEL) theory* "teaches the skills we all need to handle ourselves, our relationships, and our work, effectively and ethically."[50] A mounting body of evidence clearly indicates that, compared to students who do not participate in such programs, students who receive SEL programming academically outperform their peers, get better grades,

and graduate at higher rates.[51] Children who receive SEL interventions also behave better in school because they learn to take other's perspectives, be aware of their own thoughts and feelings, communicate, and solve problems.[52] Schools that implement SEL programs tend to be safer because socially-emotionally competent students have more positive attitudes toward themselves and others, show more positive social behaviors in school, and have fewer conduct problems.[53] The supports provided through PGC can be particularly important for students in neighborhoods of concentrated poverty, especially subgroups of students at elevated risk of exclusionary discipline practices. While data is not yet available for PGC-MS, *Table 1* depicts results of evaluations of PGC-HS by students in high-need rural and urban communities that indicate PGC-HS helped them "quite a bit" or "a great amount":

Please tell us how much PGC helped you…	**Objective(s) Measured**	**North Carolina (13 14)**	**NYC (12 13)**	**Baltimore (12 13)**
Care more about graduating from school	Aspiration for future educational plans	92.1	92.1	91.9
Make better decisions	Decision-Making Skills	82.8	82.8	84.3
Improve your ability to set and achieve goals for yourself	Goal-Setting Skills	85.2	85.2	86.8
Improve communication with your peers	Communication Skills; Competence in Peer Interactions	75.1	75.1	83.4
Be more likely to ask someone for help when you have a problem	Help-Seeking Skills; Coping Skills	75.9	75.9	76.9
Develop relationships with peers who are different from you	Competence in Peer Interactions; Peer Connectedness	84.9	84.9	81.0
Feel more like you belong at your school	School Engagement/Attachment	77.4	77.4	77.8

PGC-MS is also grounded in *social learning theory*. Diverse groups of students from different levels of risk for problem behaviors participate together in the program. Lower-risk students

receive peer and adult support to overcome obstacles that could eventually lead to more serious problems. Youth at all risk levels benefit from exposure to one another in supportive settings.[54,55]

Target population. We have targeted 10 middle schools serving low-income, rural communities in North Carolina (urban-centric district locale codes: Greene, 42; McDowell, 41), and urban communities in Maryland (Baltimore City), New Jersey (Paterson and Trenton), and New York (NYC). These schools serve large numbers of students representing subpopulations at disproportionate risk for poor academic outcomes, including exclusionary discipline practices. See *Table 2* for 2013-14 data[56] depicting disparities in school discipline practices in these communities with respect to Black students:

Baltimore City, MD	83.5	91.3	92.4	94.8	95.1
Greene County, NC	38.3	59.0	59.8	n/a	n/a
McDowell County, NC	3.0	8.0	6.2	n/a	11.1
New York City, NY	26.3	48.1	55.0	64.8	53.9
Paterson, NJ	26.5	39.9	55.4	100.0	73.3
Trenton, NJ	56.1	94.5	80.4	n/a	100.0

See *Table 3* below for profiles of partner schools:

		Students[57] [58]	**American**[59] [60]	**% Hispanic/ Latino**[61] [62]	**Average district 4 year cohort graduation rate over 5 years *All students***[63], [64], [65]			
Booker T. Washington MS [76]	Baltimore MD	96.5	99.3	0.3	68.0	68.1	62.2	32.2
Bronx Academy of Letters	Bronx, District #07	88.0	32.0	64.0	48.8	58.5	55.5	30.0
East McDowell Jr. HS	McDowell County NC	64.4	2.3	9.7	81.6	81.3	82.5	27.6

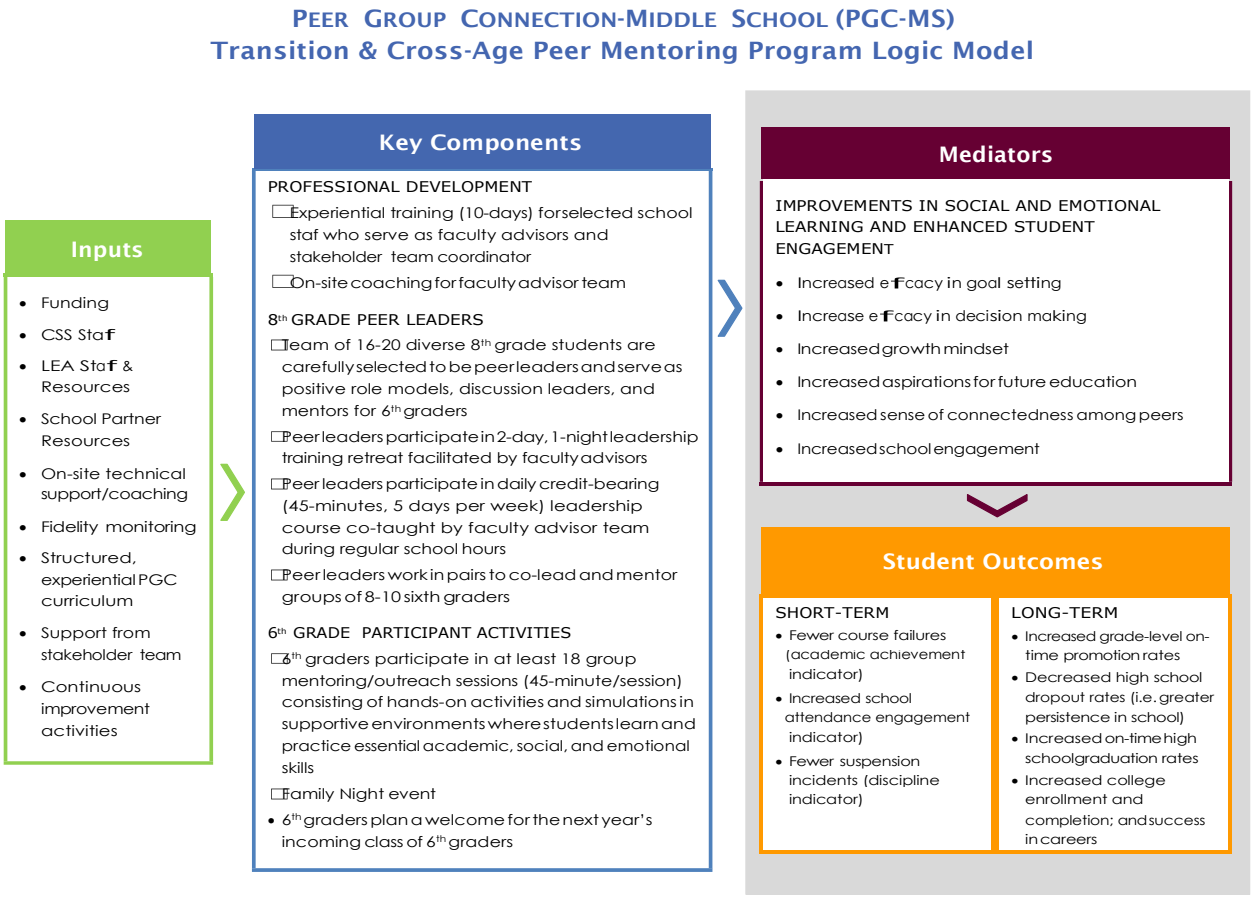
Greene County MS	Greene County NC	69.8	38.1	26.9	93.3	95.0	90.8	32.3
Hamilton MS[77]	Baltimore MD	81.3	82.1	4.5	68.0	68.1	62.2	32.2
Inwood Academy[78]	Washington Heights	57.3	7.0	90.8	78.3	80.2	77.0	69.0
Rivera Community MS[79]	Trenton, NJ	91.1	77.3	20.7	66.6	65.8	68.0	39.7
New Roberto Clemente MS[80]	Paterson NJ	1.8	15.5	82.3	78.3	80.2	77.0	41.0
Vanguard MS[81]	Baltimore MD	95.2	98.0	0.7	68.0	68.1	62.2	32.2
West McDowell Jr. HS	McDowell County NC	60.6	3.8	8.8	81.6	81.3	82.5	27.6

Replicability. Replicability of the PGC approach is evidenced by the successful track record of implementation of PGC-HS in over 200 high schools in urban, suburban, and rural communities ranging from high-poverty to more affluent across 11 states. Grounded in the same strong theories and employing the same cross-age peer mentoring model, PGC-MS has significant potential to become a highly replicable and scalable program. The initial investment to launch PGC-MS is typically a *one-time-only occurrence* that pays for CSS's training, curriculum, and technical assistance to help the program become integrated into the fabric of the school day and sustained in perpetuity without ongoing support. PGC-MS taps into the critical resources that schools already have in place (students and faculty) and results in a recurring cost to schools of only a few dollars per student per year. PGC-MS's integration into the school day provides a built-in mechanism for participation and retaining participants in contrast to extracurricular models that are vulnerable to a variety of scheduling, transportation, and commitment challenges. Because of this, PGC-MS demonstrates greater likelihood than many other approaches of becoming institutionalized and sustained over time.

B. PROJECT DESIGN AND MANAGEMENT PLAN. Goals, objectives, outcomes. Goals of the proposed project are to: 1) increase SEL and student engagement; 2) improve academic achievement as measured by fewer course failures (a critical indicator of being off-track for on-time high school graduation); 3) decrease discipline incidents; and 4) further develop and evaluate the implementation and effectiveness of key components of PGC-MS. See *Table 4*:

Project Goal #1: Increase social and emotional learning and student engagement as measured by a student survey and improved school attendance	
Objectives and Outcomes	**Sample Measures**
1.1 After one year of program participation and as compared to students in the control group, PGC participants will demonstrate a .10 *sd unit* higher score on measures of **goal setting, growth mindset, decision-making**.	Self-efficacy in goal setting (Martino, L, 1993), Growth mindset (Dweck, 2013), Decision making skills (McNeal et al, 1999). *See Appx. G-5*
1.2 After one year of program participation and as compared to students in the control group, PGC participants will demonstrate a .10 *sd unit* higher score on a measure of **future educational aspirations** (an indicator of student engagement)	Student Engagement Instrument: Future Aspirations & Goals subscale (Appleton et al. 2006), Educational Ambitions (Plucker et al., 1996) *See Appx. G-5*
1.3 After one year of program participation and as compared to students in the control group, PGC participants will demonstrate a .10 *sd unit* higher score on a measure of **sense of connectedness among peers** (an indicator of student engagement)	Student Engagement Instrument: Peer Support for Learning subscale (Appleton et al. 2006) *See Appx. G-5*
1.4 After one year of program participation and as compared to students in the control group, PGC participants will demonstrate a .10 *sd unit* higher score on a measure of **school engagement** (an indicator of student engagement)	Identification with School (Radziwon, 2003) *See Appx. G-5*
1.5 Beginning in Year 2 and each year thereafter, students in the treatment group will demonstrate an aggregate **attendance rate** that is 10% higher than the attendance rate among students in the control group.	Annual attendance data (school records)
Project Goal #2: Improve academic achievement as measured by fewer course failures	
Objectives and Outcomes	**Measure**
2.1 Beginning in Year 2 and each year thereafter, students in the treatment group will demonstrate an aggregate **course failure rate** that is 10% lower than the course failure rate among students in the control group.	Course failures among participants (school records)
Project Goal #3: Decrease discipline events as measured by suspension incidents	
Objectives and Outcomes	**Measure**
3.1 Beginning in Year 2 and each year thereafter, students in the treatment group will demonstrate an aggregate **suspension rate** that is 10% lower than the suspension rate among students in the control group.	Number of suspensions (school records)
Project Goal #4: Further develop and evaluate the implementation and effectiveness of key components of PGC-MS	
Objectives and Outcomes	**Measure**
4.1 Finalize the components of a middle school transition and cross-age peer mentoring model	Completed daily leadership course curriculum for 8th grade students and at least 18 outreach sessions for sixth grade students
4.2 Examine to what degree key components of the PGC-MS model are implemented as intended	Mixed method implementation study that includes observations, fidelity monitoring logs, peer leader and mentee feedback and rating forms
4.3 Examine the relationship between implementation fidelity and quality and student outcomes	

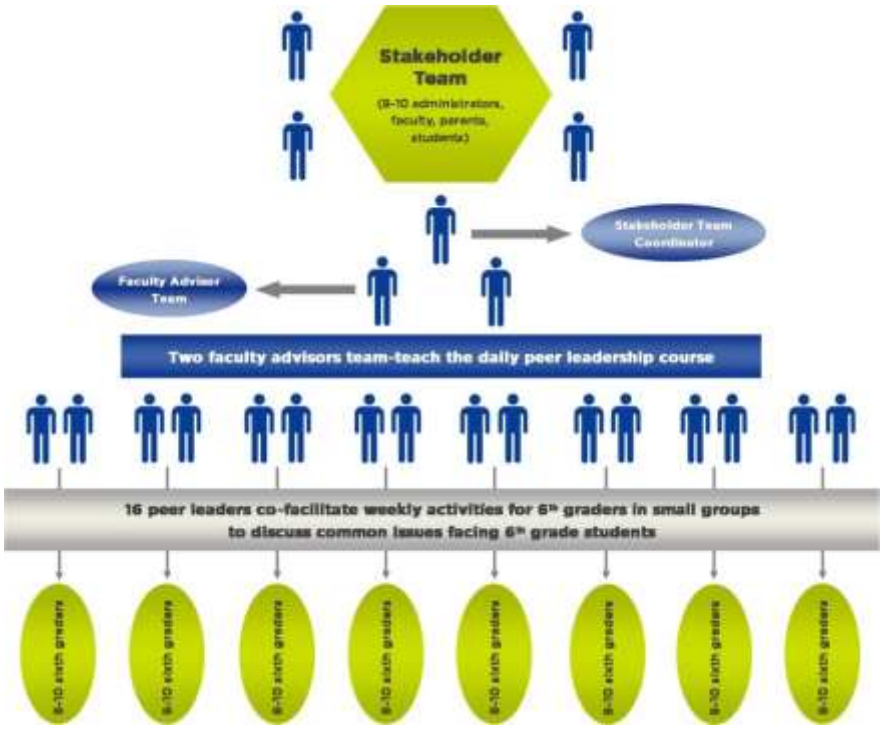
Logic model. The logic model for achieving the goals and objectives is depicted in *Figure 1*:



Project design and intervention components. PGC-MS trains select school faculty to prepare 8th graders to mentor and educate 6th graders. Prior to launching the program with students, we assemble a ***stakeholder team*** of administrators, including the school scheduler, as well as faculty, parents, and students and led by a coordinator, who receive the training, tools, and resources necessary to meet regularly to plan for implementation, troubleshoot obstacles, and ensure PGC-MS's long-term sustainability. We have strong working relationships with leadership in each of the LEAs to ensure greater impact of this initiative than could be expected by solely working with individual schools. See *Appx. D* for LOS/MOU and *Figure 2*, below.

CSS provides the stakeholder team with written protocols to select ***faculty advisors***, including the *PGC-MS Guide for Selecting Faculty Advisors* which includes resources for

assessing qualifications and fit. Prospective advisors are assessed for criteria within general categories such as attitude, character, interpersonal skills, communication skills, and experience.



Specifically, faculty advisors must demonstrate evidence of: enthusiasm for the program and peer mentoring; commitment to positive youth development; demonstrated ability to follow through on commitments; ability to work collaboratively; openness to professional development and feedback; creativity and energy; and general program management skills. Faculty advisors participate in an 11-day intensive train-the-trainer course over a 1½-year period to learn how to run the program and teach the daily leadership course. An initial 4-day immersion training is provided before the program is launched with students to prepare faculty advisors for successful implementation; the remaining training days are offered throughout the implementation period.

Eighth graders are carefully selected by faculty advisors to become ***peer leaders*** and serve as mentors for 6th graders. CSS provides the stakeholder team with guidance and written protocols to select peer leaders, including a rubric for assessing qualifications and fit. Prospective peer

leaders complete a written application, participate in a group interview, and obtain faculty recommendations. Specific criteria for selection includes a clear commitment to the role of mentor; ability to work collaboratively; friendliness; appeal to younger students as a role-model; demonstrated leadership; communication skills; willingness to participate in a group; and self-confidence. Students must also demonstrate adequate academic performance, strong attendance, and no serious discipline infractions. CSS supports faculty advisors to select a diverse group of peer leaders that reflects the racial/ethnic composition of the school community, neighborhood affiliation, socio-economic status, known cliques, and an equal number of girls and boys.

Peer leaders are trained and conduct outreach sessions as part of their regular school schedule in a ***daily, 45-minute leadership development class*** typically offered as an elective course for credit. Within the daily class, peer leaders receive approximately 6 days of training for every 1 day of mentoring they provide to 6th graders. This helps peer leaders prepare to lead their groups and debrief following each session, sharing successes, challenges, and suggestions for handling issues. As a school-based program that is integrated into the school day, PGC-MS provides a mechanism for retaining participants in contrast to extracurricular models.

CSS works closely with faculty advisors to assign students to ***peer groups***. Since PGC-MS is a universal program, all 6th graders in a participating school are eligible to participate. For the purposes of the present study, within each school, the research team will randomly assign 6th grade students to peer groups, with stratification by gender, race/ethnicity, and at-risk status (i.e. missing 20+ days and/or having 1+ suspensions the previous year). An established protocol developed by CSS is used to match peer mentors with their co-mentors, with attention to issues of diversity (e.g. boy/girl pairs, different racial/ethnic backgrounds). CSS works closely with the stakeholder team and faculty advisors to make sure that peer groups are assigned with the intent

to build strong, long-term mentoring relationships. Each pair of peer mentors meets consistently with the same group of 6th graders for 45-minute mentoring sessions during the full year. Peer leaders work in pairs to co-lead groups of 8 to 10 sixth graders in ***outreach sessions*** held three times per month during the school day in which the 6th graders participate in engaging, hands-on activities and simulations. PGC-MS typically replaces 3 days per month of physical education (PE) for 6th graders. Peer groups begin the year with activities designed to help students get to know one another, build a cohesive group, and set ground rules for working together. Peer groups also focus on ***skill development through experiential learning*** activities. PGC is grounded in strengths-promotion rather than risk-reduction, which has been found to yield larger positive effects for peer mentoring programs.[82] See *Appx. G-6* for curriculum.

Potential risks. While we expect these to be minimal, the following may occur (*Table 5*):

Potential risks	Steps to mitigate
Ability to gain access to all necessary data	CSS has obtained documentation from each partner district/school supporting this project and agreeing to provide evaluation data. Funds are budgeted to support district time in collecting the needed data. CSS has developed a formalized process for securing data sharing agreements from district partners which has been successfully executed on other grants. In the unlikely event that insurmountable challenges exist, CSS will engage local partners, such as the Baltimore Education Resource Center, which may have access to data on the district's public schools, students, and teachers.
Administrative and staff turnover	CSS will develop a stakeholder team at each school, inclusive of district representation, so that the program is supported as both a district and school initiative. The Project Director will conduct a meeting with district leadership, the principal, and the rest of the stakeholder team immediately upon substantive staff changes. CSS will train 2 stakeholders, in addition to the 2 faculty advisors and Stakeholder Team Coordinator, at each school so that there are trained individuals who can step in immediately should there be staff turnover.

Management plan; Roles and responsibilities of partners. ***CSS*** will oversee all aspects of the project, and will: recruit, confirm, and retain LEA and school partners; provide stakeholder development at each school; train school-based faculty advisor teams; provide on-site technical assistance and coaching; fidelity monitoring; continuous improvement; implementation-related performance measures (see p.19); and work closely with the evaluation team at PRG. ***PRG*** will conduct the independent, RCT evaluation and will obtain IRB approvals and parent consent; conduct random assignment procedures; finalize and administer the student survey; obtain

student record data; analyze all data; submit progress reports; and collaborate with CSS to develop articles and conference presentations to disseminate study results. ***School staff*** will implement PGC, manage day-to-day project activities, and provide all requested data per the evaluation requirements. CSS has a successful track record of securing significant grants from private foundations, including the Einhorn Family Charitable Trust (which provided the 15% private sector match for our 2015 i3 grant), Open Society Foundations, and The Duke Endowment. We will leverage our strong relationships with funders to obtain the required match. **Project staff.** ***Sherry Barr, Psy.D.,*** VP of Operations and Evaluation at CSS, will serve as Project Director (PD). Dr. Barr has been on staff at CSS for 17 years and has extensive expertise directing federally and state-funded studies. She is the current PD for a 2015 i3 project to study the impact of PGC for high schools in rural North Carolina, among other large-scale research projects. She has a successful track record of recruiting and partnering with high-need schools in rural and urban communities. ***Eric Jenner, Ph.D., Lead Evaluator, PRG,*** will serve as Principal Investigator (PI). He directs research projects relating to the evaluation and study of regional, state and federal social, education and economic welfare programs. Dr. Jenner is the PI for three current i3 Development grants, and several other ongoing RCTs, quasi-experimental, and observational studies. Dr. Jenner serves as a peer reviewer for the *Journal of Education for Students Placed At Risk* and received his What Works Clearinghouse Certification for group design standards from the Institute of Education Sciences (IES) in June 2014**. CSS and PRG staff** have successful track records working with the target population on similar interventions and conducting similar types of evaluation projects. See *Table 6* for staff/roles; also see *Appx. C* for résumés and *Appx. G-2* for personnel.

CSS Key Personnel	
Dr. Sherry Barr, *Vice President,*	Serve as PD. Oversee all aspects of the project; facilitate team meetings;

Operations and Evaluation & Project Director	liaison with PRG, USED, superintendents; recruit and ensure partner schools uphold commitments; address implementation obstacles; train/supervise project staff; develop and coordinate external communications; and prepare required progress reports.
Dr. Abby Attias, *Vice President, New Product Development*	Oversee all aspects of development and implementation of PGC-MS
***Regional Executive Directors:* Dr. Beshon Smith (MD); Catherine Nti (NJ); Erin O'Leary (NYC); Joyce Loveless, (NC)**	Oversee programming, interface with district leadership, ensure partner schools uphold program commitments; address implementation obstacles; train/supervise project staff.
Morgan Silk, *National Curriculum & Training Director*	Coordinate trainings; oversee all updates and revisions to the PGC curriculum & training manuals, informed by continuous improvement
Scott Albert, *Senior National Trainer*	Lead trainer at all trainings
***Project Managers:* Jon Englebrecht (MD); Pamela Taylor (NJ); Alison Fedyna (NYC); Jack Bates (NC)**	Provide on-site stakeholder development, training to faculty advisors, on-site coaching and technical assistance, on-site fidelity monitoring, assist schools with scheduling students according to outcome of randomization, collect feedback and performance measures data.
Lindsay Shouldis, *National Evaluation Coordinator*	Track continuous improvement and implementation data, monitor/manage implementation data databases, summarize implementation data, and provide feedback to project team
Nadia Carofalo, Director of Curriculum	Support curriculum design for PGC-MS
Lauren Wainczak, *Director of Finance*	Oversee all fiscal and budgetary management of the project.
***Administrative & Research Associates:* Christine Compo-Martin, Johanna Pisecky, Maiya Preston**	Provide administrative support to project
PRG Key Personnel	
Dr. Eric Jenner, *Lead Evaluator*	Oversee development of the impact evaluation/analysis plan, including: instrumentation (questionnaire content), research design, analytic sample, research questions, RCT methods, analytic methods.
Dr. Susannah Anderson, *Senior Research Analyst*	Under the supervision of the Lead Evaluator, prepare initial drafts of the impact and implementation evaluation/analysis plan, including: instrumentation (questionnaire content), research design, analytic sample, research questions, RCT methods, analytic methods.
Teresa Smith, *Research Analyst*	Day-to-day management of the evaluation, from conducting literature reviews, to developing the evaluation plan to working with each site to operationalize how the study will work at their school, to training staff at each site, to setting up datasets for data collection

The **management plan** involves *(Table 7):*

Project Team	Led by PD, the project team (CSS staff) will meet monthly to develop and implement effective strategies related to program implementation, evaluation, networking and publicity, replication, and sustainability. The team will articulate a common vision for the project, define partners' roles and responsibilities, monitor implementation, respond to challenges, manage financial and other resources, support data collection and analysis, and promote the sustainability of PGC-MS in each school. The Project Team will have the lead responsibility for executing the project according to the timeline and ensuring progress metrics and annual performance targets are met.
Workgroups	Two workgroups will meet monthly in the first year and then quarterly to address aspects of program implementation and evaluation including: (a) *Technical Assistance, Coaching, & Training Workgroup* to oversee on-site coaching and training for stakeholders and faculty advisors; and (b) *Continuous Improvement, Fidelity Monitoring, & Evaluation Workgroup* to oversee fidelity monitoring and evaluation activities, make recommendations for enhancements, and disseminate results.
Site-based stakeholder teams	Each school will have a stakeholder team coordinator responsible for leading the stakeholder team, managing project activities, providing all requested data, and serving as the key point of contact for CSS. The Project Manager will work closely with site-based coordinators to: convene bimonthly stakeholder team meetings to discuss action plans, accomplishments and challenges; conduct biweekly telephone meetings (following a carefully designed protocol) with each site-based coordinator as a supplement to biweekly written reports; and coordinate monthly on-site observations and TA visits.

Project timelines and milestones. Key project activities, milestones, and timeline *(Table 8):*

PHASE ONE: Milestones and Timeline (January 2018 March 2019)			
Project Category	*Key Milestone*	*Date Due*	*Responsible*
Evaluation	Finalize evaluation design; USED approval	Mar 2018	PRG
Implementation	Finalize management plan; USED approval	Mar 2018	CSS (PD)
Development	Build out the already in-development daily leadership course curriculum and sixth grade outreach sessions	May 2018	CSS
Evaluation	Adapt Outcome Questionnaire for middle school population and pilot with 6th grade students	Aug 2018	PRG
Development	Pilot key components of the intervention	Dec 2018	CSS
Development	Conduct focus groups with program participants	Dec 2018	CSS
Evaluation	Obtain necessary IRB approvals	Dec 2018	PRG
Implementation	Identify and finalize 5 cohort 1 (C1) and 5 cohort 2 (C2) partner schools	Dec 2018	CSS (PD)
Evaluation	Finalize Outcome Questionnaire	Dec 2018	PRG
Implementation	Finalize continuous improvement tools	Dec 2018	CSS; PRG
Development	Finalize the intervention	Mar 2019	CSS
PHASE ONE: PERFORMANCE TARGET	**Finalized PGC-MS intervention; Finalized evaluation instruments; IRB approvals obtained**	**Mar 2019**	**CSS; PRG**
PHASE TWO: Milestones and Timeline (April 2019 September 2019)			
Project Category	*Key Milestone*	*Date Due*	*Responsible*
Implementation	Select faculty advisors and stakeholder team coordinator (STC) at each C1 partner school	Apr 2019	CSS; SBST
Implementation	Select 16-20 peer leaders at each C1 partner school; schedule into daily leadership course	May 2019	CSS; SBST
Implementation	Conduct at least 6 annual on-site planning meetings with C1 school-based stakeholder teams (SBST)	Aug 2019	CSS; SBST
Implementation	Conduct initial 4-day residential training for project staff at each C1 partner school to prepare them to implement PGC-MS	Aug 2019	CSS
Evaluation	Obtain parental consent for study participation (C1)	Aug 2019	PRG; CSS
Evaluation	Randomly assign study participants (C1) to participate in PGC-MS or participate in a control group	Aug 2019	PRG
Evaluation	Ensure students are scheduled into the program according to the outcome of random assignment	Aug 2019	CSS
Evaluation	Administer baseline surveys to study participants	Sep 2019	PRG
Implementation	Launch PGC-MS with at least 75 6th graders at each C1 partner school (minimum 18 outreach sessions with 6th graders)	Sep 2019-May 2020	CSS; SBST
PHASE TWO: PERFORMANCE TARGET	**Launch PGC-MS in 5 selected C1 schools with at least 375 students; Enroll 750 total students in the study**	**Sep 2019**	**CSS; PRG**
PHASES THREE AND FOUR: Milestones and Timeline (October 2019 December 2022)			
Project Category	*Key Milestone*	*Date Due*	*Responsible*
Implementation	Conduct 1-day follow-up training and 3-day residential training for project staff at each C1 partner school	Dec 2019	CSS
Evaluation	Administer post-program student surveys	May 2020/21/22	PRG
Implementation	Conduct at least 6 annual on-site planning meetings with C1 and C2 school-based stakeholder teams	May 2020/21/22	CSS; SBST
Implementation	Select faculty advisors and stakeholder team coordinator (STC) at each C2 partner school	Mar 2020	CSS; SBST
Implementation	Select 16-20 peer leaders at each C1 and C2 partner school; schedule into daily leadership course	June 2020/21/22	CSS; SBST
Implementation	Conduct initial 4-day residential training for project staff at each C2 partner school to prepare them to implement PGC-MS-MS	Aug 2020	CSS
Evaluation	Obtain parental consent for study participation in each C2 partner schools	Aug 2020	PRG; CSS

Project Category	*Key Milestone*	*Date Due*	*Responsible*
Evaluation	Ensure students in C2 schools are scheduled into the program according to the outcome of random assignment	Aug 2020	CSS
Evaluation	Administer baseline surveys to C2 study participants	Aug 2020	PRG
Implementation	Launch PGC-MS with at least 75 6th graders at each C1 & C2 partner school (minimum 18 sessions with 6th graders)	Sep 2020-May 2021; annually	CSS; SBST
Implementation	Conduct 1-day follow-up training and 3-day residential training for project staff at each C2 partner school	Dec 2020	CSS
Implementation	Conduct Annual Advisor Summit with advisors from C1 and C2 study schools	Nov 2020/21/22	CSS
Evaluation	Complete analysis of annual results	August 2020/21/22	PRG
Dissemination	Disseminate project lessons learned and findings through at least one professional conference and one publication	August 2020/21/22	CSS; PRG
PHASE THREE: PERFORMANCE TARGET	**Launch PGC-MS in 5 selected C2 schools with at least 375 students; Enroll additional 750 total students in the study**	**Sep 2020**	**CSS; PRG**
PHASE FOUR: ANNUAL PERFORMANCE TARGET	**1. Deliver PGC-MS to at least 375 students per school year** **2. SBST demonstrate commitment to continue the program for the following school year** **3. 6th graders report PGC-MS is positively impacting engagement, connectedness, and non-cognitive skills** **4. SBST report observation of positive changes in PGC-MS participants**	**Aug 2021/22**	**CSS; PRG**
Project scalability	Assess PGC-MS expansion in each partner school and to additional middle schools	Dec 2021	CSS; SBST
Dissemination	Submit at least one manuscript on project results/lessons learned to a peer-reviewed journal	Dec 2021	CSS; PRG
Project evaluation	Complete full evaluation & summarize lessons learned	Aug 2022	PRG
PHASE FOUR: PERFORMANCE TARGET	**Refine plan to sustain program beyond EIR grant; expand program in each partner school; and, if applicable, expand program to additional middle schools**	**Dec 2022**	**CSS**

Ensuring feedback and continuous improvement. To understand variations in how PGC-MS works in practice, collect and evaluate data to assess progress against interim and longer-term goals, make mid-course corrections, interpret the efficacy of the intervention, and identify features and conditions necessary for sustainability and effective replication, the evaluation design will include comprehensive fidelity of implementation (FOI) measures. Measures include program dosage, regular observations by trained observers of the intervention in action, fidelity monitoring logs, faculty advisor and student feedback forms and focus groups, and assessments of relationship quality completed by 6th graders about their peer leaders. *Table 9* outlines strategies to ensure active communication, accountability, and continuous improvement:

Project Team Meetings (Monthly)	Project team reviews project progress toward milestones and goals at each partner site and identifies and problem-solve challenges.
Site-based Stakeholder Team Meetings (Monthly)	Held at each implementation school. Include the CSS Project Manager, principal, district-level representative, stakeholder team coordinator, and other site-based stakeholder team members to prepare for launch and evaluation of PGC, ensure program operations are running smoothly, the program is well resourced, and school staff is well supported.
Advisor Team Check-Ins, Observations, & Fidelity Monitoring (Every Other Week)	CSS Project Manager will check in with the PGC-MS advisor team regarding progress on implementation and to troubleshoot obstacles. Check-ins will include a review of program attendance tracking, observations of the peer leadership training class and the outreach sessions, feedback to advisors, and fidelity monitoring logs as described in greater detail the Project Evaluation Plan (Section D).
District and School Leadership Check Ins (Quarterly)	CSS PD will meet with district and school leadership to review progress toward major milestones, assess any areas that require modifications, and, if necessary, develop an action plan for modification. This meeting will include at least one check-in to review student survey forms to see if students are reporting changes in key SEL areas and level of engagement at school as well as a review of student record data to examine course failures and discipline incidents among program and non-program participants, identify any disparities across student populations, explore factors contributing to the disparities, and identify targeted solutions to address disparities.
Implementation Feedback (Ongoing)	Gathered from administrators, other stakeholders, faculty advisors, peer leaders, and 6th graders at each LEA, including quarterly feedback forms and annual focus groups regarding the perception of the intervention's value and impact.
Annual Advisor Summit	Offered annually for faculty advisors/stakeholders across sites to review the previous academic year's program, share successes and challenges, receive mentorship from other successful implementation sites, review data, prepare for integration of any program enhancements, prioritize areas of improvement for the following school year.

Dissemination. Dr. Jenner will take the lead on writing journal articles in close collaboration with CSS. Journals of focus include: *American Journal of Education, Educational Researcher, ENGAGE,* and *The Journal of Educational Research.* CSS and PRG will apply to present at professional conferences such as IES, American Educational Research Association, National Mentoring Summit, and Society for Research on Educational Effectiveness. We will also provide a report of lessons learned and evaluation results to administrators and stakeholders at each of the participating LEAs/schools and will host information sessions and webinars for other schools to learn about the project. Study results will be disseminated through popular media so that parents and public can learn about the impact of PGC-MS. Research results will be posted on the CSS website and sent to the 14,000+ national stakeholders who receive the CSS e-newsletter.

C. EVALUATION PLAN. Overview. CSS has engaged The Policy & Research Group (PRG) as the independent evaluator (see MOU in *Appx. D*). The logic model (p. 12) hypothesizes how a year-long, school-based, cross-age peer mentoring model grounded in theories of SEL will promote

and improve 6th grade students' social and emotional learning (goal setting, growth mindset, decision-making) and school engagement, thereby improving their achievement and other school-related outcomes, including discipline. The evaluation will test these hypotheses using: 1) an individual-level (student-level) randomized controlled trial (RCT) to draw causal inferences about the effects (impact) of PGC-MS and 2) an implementation evaluation to understand how PGC-MS works in practice, interpret the efficacy of the intervention, provide feedback for program improvement, and identify features and conditions necessary for sustainability and replication. The impact evaluation investigates whether offering PGC-MS to participants' impacts their school engagement, school achievement and other school-related outcomes such as discipline. If effects are observed, the proposed impact evaluation will produce evidence that will have the potential to meet the What Works Clearinghouse (WWC) Evidence Standards without reservations. The exploratory analyses will examine how identified mediators influence the hypothesized outcomes. We will do this within an intent-to-treat (ITT) framework so the contrast we are investigating is the effect of the offer to participate in the treatment program relative to the offer to participate in the control program.

Research questions. We are proposing to answer three ***primary research questions***: 12 months after the end of treatment, what is the impact of the offer to participate in PGC-MS (treatment) relative to the offer to participate in the control (business as usual) on participants':**1)** engagement (operationally defined as attendance, Obj. 1.5); **2)** disciplinary events (operationalized as number of suspensions); and **3)** academic achievement (as measured by reduced course failures, Obj. 2.1). These research questions reflect Project Goals 1, 2, and 3 as specified on p. 11). In addition, we propose to investigate the following ***exploratory (secondary) research questions:*** What are the short-term (immediate post-program) impacts of the offer to

participate in PGC-MS (treatment) relative to the offer to participate in the control (business as usual) on participants' reported: competence in goal setting (Obj. 1.1); growth mindset (Obj. 1.1); decision-making (Obj. 1.1); future educational aspirations (Obj. 1.2); perceived connectedness among peers (Obj. 1.3); and school engagement (Obj. 1.4). Finally: to what extent do components of fidelity of implementation (i.e., adherence, quality, experiences of control group, and context) impact the effect of PGC-MS on students' educational outcomes as indicated by course failures (Goal 2, Obj. 2.1) and discipline (Goal 3, Obj. 3.1)? The exploratory research will go beyond the impact findings to help determine not just whether the program is effective at improving identified primary outcomes, but if the program works, whom it works for and under what circumstances it is most/least effective. These additional questions have value for the future development of the program and will help provide guide and inform future replication efforts.

What Works Clearinghouse (WWC). The impact study design and methods will meet **WWC evidence standards *without reservations*.**

Sample identification/selection, sample size, and minimal detectable effect size. The target population is all students enrolled in the 6th grade at the 10 partner schools during SY2019-20 and 2020-21. Students in each school will be recruited and individually randomized into study conditions each year for two successive cohort years (5 schools per cohort). The projected total annual 6th grade enrollment across all 10 schools is approximately 2,000 students. We estimate a 75% consent rate for the study, resulting in a total sample of approximately 750 students enrolled in the study per year, or 1,500 total students. As prior research does not provide estimates, we will use an effect size of .25 as a benchmark, which WWC identifies as the point at which impacts become substantively important. The evaluation as currently proposed, with 1,500 students randomly assigned to treatment and control conditions, will be adequately powered to

detect an effect of this size. Based on a number of standard assumptions and reasonable expectations this study should yield a Minimal Detectable Effect Size (MDES) of approximately .24 after two years of data collection.[83] Because we propose to estimate impacts while controlling for theoretically relevant covariates, we expect to have even more statistical power.

PRG will implement and monitor all random assignment procedures. In September of each study school year, PRG will: obtain final student rosters of all 6th grade students enrolled and attending each partner school; identify all students eligible for the study (those who have attended one week, provided parent consent/youth assent for the evaluation, and not previously participated in PGC-MS); and randomly assign eligible youths at the individual level to either the treatment (PGC-MS) or control condition (business as usual). CSS site managers at each school will ensure that treatment condition-assigned students' schedules are adjusted to reflect their participation in their PGC-MS peer group outreach sessions. Assignment procedures will occur *prior to* the provision of any programming or collection of baseline data. For 6th graders assigned to the treatment condition, PGC-MS peer group sessions will replace one day of physical education (PE) or health class 3X per month. There will be no alternative program or additional activities offered to the control group, other than attending regularly scheduled PE/health class.

Outcome measures and data collection. To measure the impact of the intervention, PRG will collect outcome data from two sources: 1) student-level administrative data from each partner LEA for the three primary research questions, and 2) *Outcome Questionnaire* to collect self-reported data directly from study participants for the exploratory research questions. See *Appx. G-6* for a draft of the items to include in the *Outcome Questionnaire* (to be adapted for 6th graders). All items and scales used for outcome measurement will be composed of measures that have been used and validated in published research. The same questionnaire will be administered

by PRG at baseline, immediately after the program ends, and 12 months after the program ends. Data collection procedures will be identical for both treatment and control conditions. Educational outcome data will be requested by PRG from all schools in the fall of each grant year; data-sharing agreements with all LEAs will be formalized. We summarize data sources, collection methods, timelines, and analytic approaches by research question in *Appx. G-3.*

Analytic approach. For all primary research questions, the proposed analytic approach will be to regress outcome measures on a treatment/comparison indicator and relevant individual-level covariates variables using a multi-level model. While a comparison of means should produce un-biased estimate of impact, we propose a modeling approach to increase the precision of our impact estimates. Statistical significance will be inferred at $p < .05$, using a two-tailed test. To monitor the quality of the random assignment and data collection procedures, senior analysts at PRG will conduct **baseline equivalence** testing on demographic and outcome data gathered at baseline. Diagnostics on the complete baseline sample will be a useful monitoring tool for the verification of randomization procedures; baseline diagnostics on the analytic samples (those who have provided follow-up data) will monitor for imbalance (**differential attrition**) between study groups. **Overall attrition** will be closely monitored and analyzed routinely; PRG will execute a comprehensive follow-up plan to retain participants in the study based on the evidence-based Engagement, Verification, Maintenance, and Confirmation Model;[84] PRG staff have achieved extremely low overall and differential attrition on a number of individual-level RCTs using such strategies, and have authored a paper on the model.[85] Because the design involves random assignment at the individual (student) level and not the cluster level, **joiners** are not a concern as they would be in a cluster random assignment design (group assignment, such as at the classroom or school level) as per the Revised Cluster Design Standards.[86]

Methods for implementation study. PRG will design and conduct an implementation study to understand variation in how PGC-MS works in practice, interpret the efficacy of the intervention, provide feedback for program improvement, and identify features and conditions necessary for sustainability and replication. The implementation evaluation will assess and report on adherence, quality, control group experiences, and contextual factors. Implementation data will be analyzed and reported to CSS semi-annually as formative feedback and to encourage modifications to improve program effectiveness. Annual thresholds will be set for each key component depicted in the logic model. Fidelity measures will include: program dosage, observations by trained observers of the intervention, fidelity monitoring logs, faculty advisor and student feedback forms, focus groups, and assessments of relationship quality completed by 6th graders about their peer leaders. See *Appx. G-4* for each implementation element, data used to assess each element, frequency of data collection, and responsible party. Quantitative data, such as dosage data and close-ended questions from the survey, will be analyzed descriptively. To analyze qualitative data from interviews and open-ended survey questions, we will use a grounded theory approach. CSS and schools will complete *Implementation Summary Forms* to report the input and output data such as training and planning activities with school stakeholders.

Qualifications of independent evaluator. PRG has led over 40 federally-funded evaluations, including six RCTs. Dr. Eric Jenner, PI, received his *What Works Clearinghouse Certification* for group design standards in June 2014 from IES. He has over 10 years' experience in supervising rigorous evaluations and serves as a peer reviewer for the *Journal of Education for Students Placed at Risk*. He will be assisted by Dr. Susannah Anderson and Teresa Smith, MPH. Please see their CVs in *Appx. C*.