National Scale Up of The Reading Edge in Struggling Middle Schools

Project Narrative

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Absolute Priority 4A: Innovations That Turn Around Persistently Low-Performing Schools

The focus of the proposed project will be on Title I middle schools that are in corrective action or restructuring, or middle schools that would be in corrective action or restructuring if they received Title I funds.

Competitive Preference Priority 8 – Innovations to Address the Unique Learning Needs of Students With Disabilities and Limited English Proficient Students.

The proposed project will focus on enhancing the reading achievement of all middle school students, including students with disabilities and limited English proficiency. The program to be scaled up includes specific provisions to meet the needs of these groups, including the use of structured cooperative learning, specific teaching of vocabulary, additional instruction for struggling students, and metacognitive strategy instruction to help students learn how to comprehend texts of increasing difficulty.

Competitive Preference 10 – Technology

The proposed project will use technology both to facilitate student learning and to facilitate high-quality implementation of proven literacy approaches. In-class technology will include use of interactive whiteboards, computers with projectors, or individual devices to enable applications of embedded multimedia to model effective cooperative learning and metacognitive skills. Technology for teachers will focus on the sharing among teachers and between teachers and coaches of video exemplars of implementation of essential program elements. Additional technology elements include an online resource center with live and recorded webinars, interactive tutorials, regularly updated supplements to program materials, and a data management system to support and extend on-site coaching.

A. Quality of the Project Design

1. *The extent to which the proposed project has a clear set of goals and an explicit strategy, with actions that are aligned with the priorities the eligible applicant is seeking to meet, and expected to result in achieving the goals, objectives, and outcomes of the proposed project.*

The low achievement of young adolescents, especially disadvantaged and minority students, remains one of the biggest problems in American education. NAEP reading and mathematics scores for eighth graders still show substantial gaps according to social class and ethnicity (NCES, 2009, 2010).

One of the most extensively evaluated and successful approaches to the education of young adolescents is cooperative learning methods in which students work in small groups to help one another learn (Slavin, 2009). Cooperative learning is a main component of The Reading

Edge (also evaluated under the names Cooperative Integrated Reading and Composition (CIRC) and Student Team Reading (STR)), a comprehensive literacy program for all middle grades students. Built into The Reading Edge are several key components that engage students in the learning process and motivate them to read and learn: cooperative learning, use of metacognitive reading strategies, and frequent assessments and feedback.

We propose to substantially scale up The Reading Edge in an effort to turn around struggling Title I middle schools. The need for the project and its potential impact for the education of hundreds of thousands of students in struggling middle schools is described in Section B of this application.

Project Goals:

1. Scale up The Reading Edge to an additional 365 Title I middle schools over a 5-year period, while maintaining quality and effectiveness.
2. Increase the effectiveness of initial training and ongoing coaching using embedded multimedia, distance education, and other technology.
3. Carry out a large-scale, third party cluster-randomized evaluation of The Reading Edge to assess its effects on the reading skills of middle school students.

Strategy

In order to substantially scale up The Reading Edge to many more high-poverty middle schools it is not enough to simply increase the number of schools using the program as it is now, using current methods of dissemination. Although the core instructional strategies must remain intact to be true to the research base, there are innovations in the classroom program and in our scale-up strategies made possible by advances in the availability of advanced technology in schools. We will work with partners in 15 diverse middle schools across the U.S. to develop,

pilot, and modify strategies to use technology to improve implementation and outcomes of The Reading Edge.

Components of The Reading Edge. The Reading Edge consists of a set of elements designed to increase young adolescents' motivation to read, metacognitive skills needed to comprehend complex texts, academic vocabularies, and familiarity with all informational and literary genres.

Grouping and Assessments. At the beginning of the program, students are pretested on a diagnostic reading measure, and then placed in reading groups according to their reading levels, regardless of their age. Formal assessments are repeated each quarter, and groupings are changed as needed. This means that a given group is likely to contain sixth, seventh, and eighth graders all reading at one level. We have created and used materials of interest to middle schoolers extending from beginning reading to 12th grade levels, so all levels can be accommodated. Every teacher in The Reading Edge middle school teaches reading, all during the same period (although some schools assign above-level readers to other subjects, such as foreign language, during the common reading period). This unites the school around the goal of reading, provides experience for content-area teachers with reading strategies, and makes it possible to advance students from level to level without having to change their whole class schedule. In fact, students tend to advance rapidly, typically gaining two grade levels each year, so it is essential to use a grouping strategy that does not hold them back.

Teams. Within each reading class, students are assigned by the teacher to 4-5 member teams. The team members choose team names, sit together, and work to help each other master reading skills. At regular intervals students are assessed on the skills or content currently being studied, and based on the performance of all team members they may earn recognition or small

privileges. We have developed video segments to show students how to work effectively in teams to help their teammates to learn and apply metacognitive reading comprehension skills.

Reading Materials. Students in The Reading Edge read level-appropriate informational and literary texts such as novels, history, science, drama, poetry, and other readings in all genres. Currently, the set of texts and media selections is being expanded and adjusted to align with the Common Core State Standards (CCSS).

Instructional Approaches. Each lesson focuses on reading books and applying a set of comprehension strategies to build generalizable capabilities for comprehension. Writing, speaking, and other expression are emphasized. For example, students learn and practice methods for clarification when they encounter unfamiliar words, for prediction, summarization, and using graphic organizers and note-taking. Students learn to assess their own understanding and set goals for themselves. They engage in team activities designed to build vocabulary and background knowledge. In each lesson, the teacher introduces strategies, often aided by brief videos humorously modeling the strategy. The students work in their teams to practice the strategy as the teacher circulates among teams, looking in particular for students who are struggling, often including students with disabilities and English learners.

Assessments and Regrouping. As noted earlier, students are formally assessed four times a year, and these common assessments are used to accelerate groupings for students who qualify and to identify children who are not making adequate progress Students who are not making sufficient progress may receive special attention from peers, teachers, or support staff or may receive tutoring, but they are never moved to a lower group.

Training and Coaching. An integrated professional development process offered by the Success for All Foundation provides reading teachers with extensive professional development

and detailed lesson guides to help them become effective implementers. The lesson guides that schools receive embed the instructional processes of cooperative learning and metacognitive strategy development into lessons built around real texts of interest to middle grade students. These materials provide a concrete scaffold that supports teachers as they begin to use the new strategies presented. Ongoing professional development support is provided on site by SFAF coaches, supplemented by frequent telephone contact, video models, onsite observations and discussions, and feedback using implementation tools for self-assessment and reflection.

Initial training from SFAF coaches provides a conceptual overview of the program and then engages teachers in simulations, in which they work in cooperative groups to learn the content and processes. Videos and study guides are used to show key components. Teachers are given opportunities to familiarize themselves with descriptive teacher's manuals, student materials, assessments, and multi-media materials, and work together to prepare lessons, evaluate practice, and solve problems.

The focus of two six-hour initial training days is:

- Essential concepts for reading instruction for adolescents, including comprehension strategies, fluency, and vocabulary development, as well as age-appropriate decoding strategies for students needing them.
- Cooperative learning strategies incorporated into the program to motivate students and provide multiple opportunities for peer feedback, coaching, and discussion
- Classroom management techniques including conflict resolution processes and information on the unique cognitive, social, and emotional needs of young adolescents.

- Assessment of progress, including the use of formative measures relating to reading comprehension, strategy use, fluency, vocabulary, phonics, and quarterly summative measures.
- Engaging students in setting their own goals for progress, monitoring progress towards goals set, and celebrating progress.
- Transferring the development of reading strategies to content area reading.
- Adapting strategies for students with disabilities and English learners.

On-site Facilitator. To provide on-site program leadership, coaching, and coordination, a staff member at each school is designated as the on-site facilitator for The Reading Edge. The facilitator is responsible for the management of grouping for reading classes, for the school-wide data summaries, and for providing implementation support and problem solving advice to teachers, as well as facilitating teachers' efforts to help each other. The facilitator leads the school's professional learning community (see below) and serves as the main point of contact for SFAF coaches. In pilot and research schools, the grant will reimburse districts for a half-time facilitator position.

Coaching and Follow-up. To provide continuous professional development and timely assistance with program strategies, bi-weekly on-site visits or telephone conferences with the SFAF coaches are made available for the facilitator and teachers to ask questions, for the coaches to model strategies, and for everyone to review student data, celebrate progress, and set new goals. In addition, professional learning communities (Calderón, 1999) within schools, structured to allow small groups of teachers to problem-solve and review progress, meet at least bi-weekly. Teacher planning, problem-solving discussion, and associated study guides, support productive teacher learning communities. Formal implementation reviews conducted quarterly by Success

for All Foundation (SFAF) coaches apply implementation benchmarks to provide feedback on both student progress and implementation quality. They include classroom process measures, cooperative learning artifacts such as team score sheets, teachers' observations of strategy use, classroom measures of progress on curriculum objectives, and quarterly summaries.

Planned Innovations. The elements above describe The Reading Edge as it has been implemented up to the present. Under i3 funding, we propose to add several elements to enhance the quality of implementation at scale and to make our dissemination more cost-effective.

Strategies to Ensure High-Quality Implementation. In our long history in developing and scaling up proven programs, we have learned that it is crucial to focus on the quality of implementation of any innovative program, by making the requirements and rationale for the innovation clear and compelling, making it as easy as possible to implement, providing excellent hands-on professional development at the outset, and following this with on-site coaching from external coaches, a building-based facilitator, and professional learning communities among implementing teachers. We propose to use new technologies to strengthen our offerings in each of these areas, described below.

Initial Training. We propose to create a dynamic, interactive two-day training model for The Reading Edge, using extensive multimedia and simulations in which teachers learn the program by experiencing it from the students' perspective.

Technology-Facilitated Professional Learning Communities. Professional learning communities (PLCs) of teachers will be convened in each partner school for the purpose of professional learning, planning, and problem solving related to implementation of The Reading Edge. The PLCs will be led by the school-based facilitator with regular support from SFAF staff. PLCs will build on the knowledge, skills, and experiences of teachers in their context, and

will provide opportunities for peer professional modeling, support, and interaction around real problems of practice. The PLCs will provide tools and protocols that encourage participants to post their own content, raise issues for group discussion, and support each other's professional learning. This type of mediated cross-fertilization of effective local adaption of proven practice contributes both to implementation fidelity and sustainability of educational reforms (Stringfield, Reynolds, & Schaffer, 2008).

Webinars. We propose to develop interactive webinars for teachers implementing The Reading Edge. These mediated discussions will enable SFAF staff to engage with widely distributed audiences on specific issues such as classroom management, effective use of teams, homework, applications of metacognitive strategies, formative assessment, content area reading, and adaptations for students with disabilities and English learners. The webinars will contain appropriate video content to illustrate key ideas. Each webinar will be offered live several times each year, to allow interaction among participants. Webinars will be followed up with facilitated, asynchronous discussion around the main topic, and transcripts, audio, and video from the webinars will be edited for length and posted to the online PLC for teachers who were unable to participate in real time.

Video Portfolios of Program Implementation. We propose to develop and deploy a system of video portfolios to help teachers share ideas with each other and communicate more effectively with SFAF coaches. Following the work of Pianta et al. (2007) and Allen et al. (2011), we will ask teachers to record parts of their reading lessons to demonstrate use of key components of The Reading Edge. The teachers will use inexpensive cameras with editing capabilities to focus on the specific lesson components they want to highlight. During meetings of professional learning communities, teachers will view each other’s videos and decide if they

think they represent effective practices in the area being discussed. If so, they will send segments forward to their SFAF coach; if not, they will arrange additional recording.

The idea is for each teacher and each middle school staff to build up a portfolio of outstanding examples of implementation of elements of The Reading Edge. Our expectation is that this process, and the discussions it evokes, will help teachers engage with each other, with their building facilitator, and with SFAF coaches around deep discussions of practice. This process will also allow SFAF to obtain regular views of what is happening in each Reading Edge school without increasing the number of on-site visits, hopefully keeping quality of implementation high without spending more than necessary for travel and coaches' time.

Classroom Videos. We propose to add numerous videos for use by teachers with their students to model cooperative learning behaviors and effective use of metacognitive strategies. These brief, humorous videos will give students (and teachers) many exposures to strategies for advanced comprehension, facilitating high-quality program implementation.

Pilot Schools. 15 diverse pilot schools in 13 districts throughout the U.S. will implement the new elements of The Reading Edge in 2013 and 2014, and will continue after the national study is under way to help solve design problems ahead of the study schools. These urban and rural schools average 66% free lunch, and serve students who are 42% White, 31% African American, 13% Hispanic, 7% American Indian, and 3% Asian.

Systems Redesign and Formative Evaluation. The proposed technology support system will incorporate a rich collection of multimedia resources and a framework of tools, protocols, and approaches that will support discussion, collaboration, and coaching for teachers implementing The Reading Edge. A systems redesign/formative evaluation process will focus on the development, implementation, and refinement of these innovative components. Staff

members from SFAF will spend significant amounts of time in partner pilot schools observing the use of program elements designed to improve implementation of The Reading Edge, especially video analysis and video conferencing, distance learning, and on-line professional learning communities. The systems redesign team will meet frequently with teachers and principals to learn their insights and ideas as the pilot tests continue, and will meet at least 4 times a year with project leaders and coaches to discuss their observations and learnings. The intent of this process is to facilitate progressive and ongoing improvement in implementation and learning from practicing educators. The systems redesign process will focus on the following questions:

Feasibility: To what extent is the technology-supported PD and online learning community well accepted and used by project participants? How satisfied are project participants that the multimedia-rich PD modules, videos, animated simulations, and online mediated discussions address relevant and useful topics? How satisfied are project leaders, staff, and discussion facilitators with the content and technology tools available to them to support project participants? To what extent do project participants generate and contribute content to the learning community? To what extent do project participants attend and actively contribute to the scheduled online webinars? To what extent is the SFAF coaching component accepted, used, and supported by school administrators?

Usability: How do project participants evaluate the online learning community user interface in terms of ease of navigate and use? What are the barriers, technical or otherwise, to the usability of the media-rich PD modules and the online learning community? What occurs during the coaching sessions and does it align with teacher needs?

Effectiveness: What do project participants believe about the impact of PD resources and learning communities on the quality of their teaching of The Reading Edge? To what extent do participants attribute quality instruction or student performance to the coaching provided in the program? How does regular participation in the technology-supported PD for The Reading Edge lead to improved teacher quality? How does regular participation in the technology-supported PD lead to improved reading performance by students at-risk of school failure, particularly ELLs and students with disabilities?

Scaling Up The Reading Edge

The main activity proposed in this application is the scaling up of the program to 365 additional Title I middle schools nationwide. We expect to start with 15 pilot schools in 2013-2014 and then add 20 (plus the 25 experimental schools in the study) in 2014-2015. We will then add 70 schools in 2015-2016, 110 in 2016-2017, and 150 in fall of 2017. Methods for scale-up are described in the Management Plan.

Carry Out a Cluster-Randomized Evaluation of The Reading Edge in High-Need Middle Schools.

MDRC, a respected independent evaluator, will carry out a cluster-randomized evaluation of The Reading Edge in 50 middle schools, using as outcome measures both state tests and standardized reading measures, such as the Gates MacGinitie or GRADE. The research design is described in Section D.

2. *The potential and planning for the incorporation of project purposes, activities, or benefits into the ongoing work of the eligible applicant and any other partners at the end of the scale-up grant.*

This project will have substantial and lasting benefits not only for the current partners, but for scale-up beyond the grant period and scale-up of any program in any subject. The models, technologies, and lessons learned from the technology-assisted scale-up design and its quantitative and qualitative evaluations will increase the capacity and efficiency of the Success for All Foundation to scale up proven effective educational models, making high quality, sustained professional development in a proven middle school reading approach available at greatly reduced cost to school districts nationally. They will also inform anyone interested in scaling up proven programs emphasizing professional development.

3. *The extent to which the costs are reasonable in relation to the objectives, design, and potential significance of the proposed project.*

This project aims to increase the reading performance of approximately 292,000 students in 365 middle schools across the United States, to dramatically increase the efficiency and capacity of one of the nation's leading providers of proven educational reform models, and to create a technology-facilitated platform for instantiating effective educational practice that can be readily adapted to other interventions or for other providers. We believe that producing an effect size in reading of at least +0.20 at a total cost of about $90 per student is important in itself, but the project will have a broader impact in creating a sustainable and scalable model beyond the initial schools and in demonstrating innovative strategies for scaling up proven models requiring extensive professional development.

4. *The applicant's estimate of the cost, including start-up and operating costs, per student per year (including indirect costs) for reaching the total students to be served by the project.*

Must include estimate of costs for the eligible applicant or others (including other partners) to reach 100,000, 500,000, and 1,000,000 students.

The grand total cost per student for this project is about $90 (total grant expenditures of $26,250,000 divided by 292,000 students served). In schools adopting the program without an outside grant, costs per student are $181 in the first year, $78 in the second, and $74 in the third. The total cost to scale up to 100,000 students over a 3-year period would be $33.2 million. For 500,000 it would be $166 million, and for one million students, $332 million.

B. Significance

1. *The extent to which the proposed project represents an exceptional approach to the priority or priorities established for the competition.*

The reading performance of adolescents in high-poverty middle schools is in crisis (Deshler, Palincsar, Biancarosa, & Nair, 2007; National Governor's Association, 2005). On the 2007 National Assessment of Educational Progress (NAEP, 2007), 43% of eighth graders who qualified for free lunch scored below the basic level, compared to only 19% of non-poor eighth graders. Among African-American eighth graders, 48% scored below basic, and among Hispanic students, 44% scored this poorly. By comparison, only 18% of white students scored below basic. This situation is not new, but by any standard, the reading scores of disadvantaged and minority students in middle schools is unacceptable (see Alvermann, 2001; National Governor's Association, 2005; Jackson & Davis, 2000). Yet there are very few replicable approaches available to improve the reading achievement of students in these grades, and fewer still that have even rudimentary evidence of effectiveness from experimental-control comparisons (see Slavin, Cheung, Groff, & Lake, 2008). The Reading Edge, a cooperative learning program also

researched under the names Cooperative Integrated Reading and Composition (CIRC) and Student Team Reading (STR), is a key exception. The Reading Edge is an intensive schoolwide reading approach based on cooperative learning and direct teaching of metacognitive skills. It has been shown to be effective in randomized and matched studies, and is currently used in about 200 middle schools nationally. This application proposes to add technology elements to The Reading Edge to facilitate scale-up without losing quality, to add 365 additional middle schools to The Reading Edge network, and to carry out a large-scale, randomized, third-party evaluation.

The Reading Edge was systematically designed based on principles of learning from cognitive and social-cognitive theories, and recent research findings regarding the needs of struggling adolescent readers. Accordingly, three main program components—cooperative learning, metacognitive skills, and assessment/grouping—operate interactively to address weaknesses in traditional reading approaches for this age group, specifically: (a) student disengagement in reading lessons (Deshler et al, 2007), (b) failure to use effective metacognitive skills (Pressley, Billman, Perry, Reffitt, & Reynolds, 2007), (c) lack of adaptation to individual differences (Tomlinson, 2003), and (d) difficulty in transferring skills from narrative to factual texts (Palincsar, 2009). Using cooperative learning as a core instructional strategy in a research-based curriculum, The Reading Edge groups students in 4-member heterogeneous teams so they may help one another learn proven metacognitive reading strategies using a wide variety of narrative and expository texts. Teammates help one another prepare for individual assessments using literature appropriate to their interests and skill levels. The program is used as a regularly scheduled core reading program for all students in a middle school.

Supportive evidence for The Reading Edge is provided by several studies. A two-year study using within-school random assignment funded by the W.T. Grant Foundation found

positive effects for The Reading Edge on the Gates MacGinitie Reading Test, in two sixth-grade cohorts (Chamberlain, Daniels, Madden, & Slavin, 2007; Slavin, Chamberlain, Daniels, & Madden, 2009). Positive effects have also been found in quasi-experiments in high-poverty middle schools (Stevens & Durkin, 1992, Studies 1 and 2; Slavin, Daniels & Madden, 2005). Positive effects of the closely related CIRC program have been found in large quasi-experiments in grades 2-6 by Stevens, Madden, Slavin & Farnish (1987, Studies 1 and 2), Stevens & Slavin (1995, a, b), Jenkins et al. (1994), and Calderón et al. (1998). The evidence base for The Reading Edge and CIRC is reviewed in more detail in Section 3, below.

This application proposes to scale up The Reading Edge to an additional 365 middle schools and to carry out a definitive third-party evaluation using a cluster-randomized design. The non-profit Success for All Foundation is uniquely experienced in scaling up effective programs; its elementary comprehensive reform model is currently used in about 1000 schools in 47 states, and under a separate i3 grant it is adding an additional 1100 elementary schools over a 5-year period.

The Reading Edge is designed to improve the reading achievement of students in Title I middle schools who are reading below grade level, using strategies derived from rigorous research on adolescent literacy. The program is implemented during a regularly scheduled reading class; students reading above grade level may participate in electives during this time, or continue in the Reading Edge program at an advanced level. The “theory of change,” the main elements of The Reading Edge, and the rationales for them are described in the following section.

2. *The extent to which the services to be provided reflect up-to-date knowledge from research and effective practice.*

There are three major components of The Reading Edge: Cooperative learning, metacognitive reading strategies, and grouping and assessment. The program uses a form of integrated professional development that emphasizes on-site coaching, professional learning communities, and supportive materials to maximize thoughtful and high-quality implementation at scale. These components, and the research bases for each, are described in the following sections.

Cooperative Learning. A key challenge for all teachers, especially those in middle and high schools, is making class time active, engaging, and academically-focused. With struggling readers, the task is compounded by the likelihood that many students have had negative experiences with reading. Cooperative learning refers to a wide variety of methods in which students work in small groups (usually four members) to help one another learn. Extensive randomized and matched experimental research on cooperative learning methods has found that these strategies generally increase student achievement if they incorporate two key conditions: a) the cooperative groups have some sort of group goal or objective, and b) the only way they can meet this goal is if all group members can individually demonstrate their mastery of the material (Slavin, 1995, 2009; Webb, 2007, 2008). That is, cooperative learning increases student achievement if the group members' roles are to help each other master academic content, not to just do activities together. Cooperative learning has been particularly effective and extensively researched in middle schools (see Slavin et al., 2003). In The Reading Edge, students read expository and narrative texts and then work in teams to prepare each other for assessments of key content and skills using proven metacognitive strategies.

Metacognitive Strategies. The Reading Edge focuses on metacognitive reading strategies that have been extensively evaluated with young adolescents and pre-adolescents. These powerful learning strategies have been found to help young adolescents comprehend difficult materials and to study and retain information (Pressley et al., 2007; Collins et al., 2003). A related body of research has identified means of teaching students strategies for self-regulation, such as monitoring their own comprehension and setting their own reading goals (Paris & Paris, 2001; Schunk & Zimmerman, 2003). Yet despite the wide acceptance of these findings among researchers, explicit metacognitive strategy instruction is far from routine in day-to-day reading instruction in high-poverty middle schools. The Reading Edge translates the findings on metacognitive strategy instruction into practical, replicable techniques for middle school teachers and uses cooperative learning methods and other design elements to make strategy instruction effective as a routine part of reading comprehension instruction in the middle grades. Specific metacognitive strategies that have been particularly well-validated include summarization, clarification, use of graphic organizers, story grammar, imagery, question generation, activating prior knowledge, and self-regulation (see Pressley et al. 2007; Schunk & Zimmerman, 2003). All of these skills are explicitly taught and are then practiced cumulatively in cooperative group activities built around reading of age-appropriate texts. Teachers also observe and chart the growth in student use of strategies during text reading.

In The Reading Edge, cooperative learning plays a central role in introducing strategy instruction to students. Cooperative learning methods have been linked with strategy instruction in a variety of peer-assisted techniques (see O'Donnell, 2000; Webb & Palincsar, 1996), and in Cooperative Integrated Reading and Composition (CIRC; Slavin, Daniels, & Madden, 2005; Stevens et al., 1987), and Success for All (Slavin, Madden, Chambers, & Haxby, 2009).

Assessment and Grouping. Accommodating individual differences in reading performance is highly challenging for teachers, particularly in middle school where ability levels may span several grades. Teaching reading to classes of students at approximately the same instructional level allows for both individualized, targeted instruction and rapid acceleration. All students in The Reading Edge, including ELLs and students with disabilities, are assessed at the beginning of the school year to determine their reading skill level. Based on their assessed reading level, students are assigned to a class for reading instruction, independent of grade level. That is, a class being instructed using text at a seventh grade reading level might be composed of sixth, seventh, and eighth graders. This grouping plan is an adaptation of the Joplin Plan, a flexible grouping strategy found to increase student achievement (Gutiérrez & Slavin, 1992). Students are continually re-assessed and accelerated to grade level instruction as quickly as possible. That is, grouping is a temporary expedient to tailor instruction to students' needs, not a lasting identification or sorting. This feature creates a powerful change in the culture of the middle school, focusing attention on student acceleration and success rather than deficits.

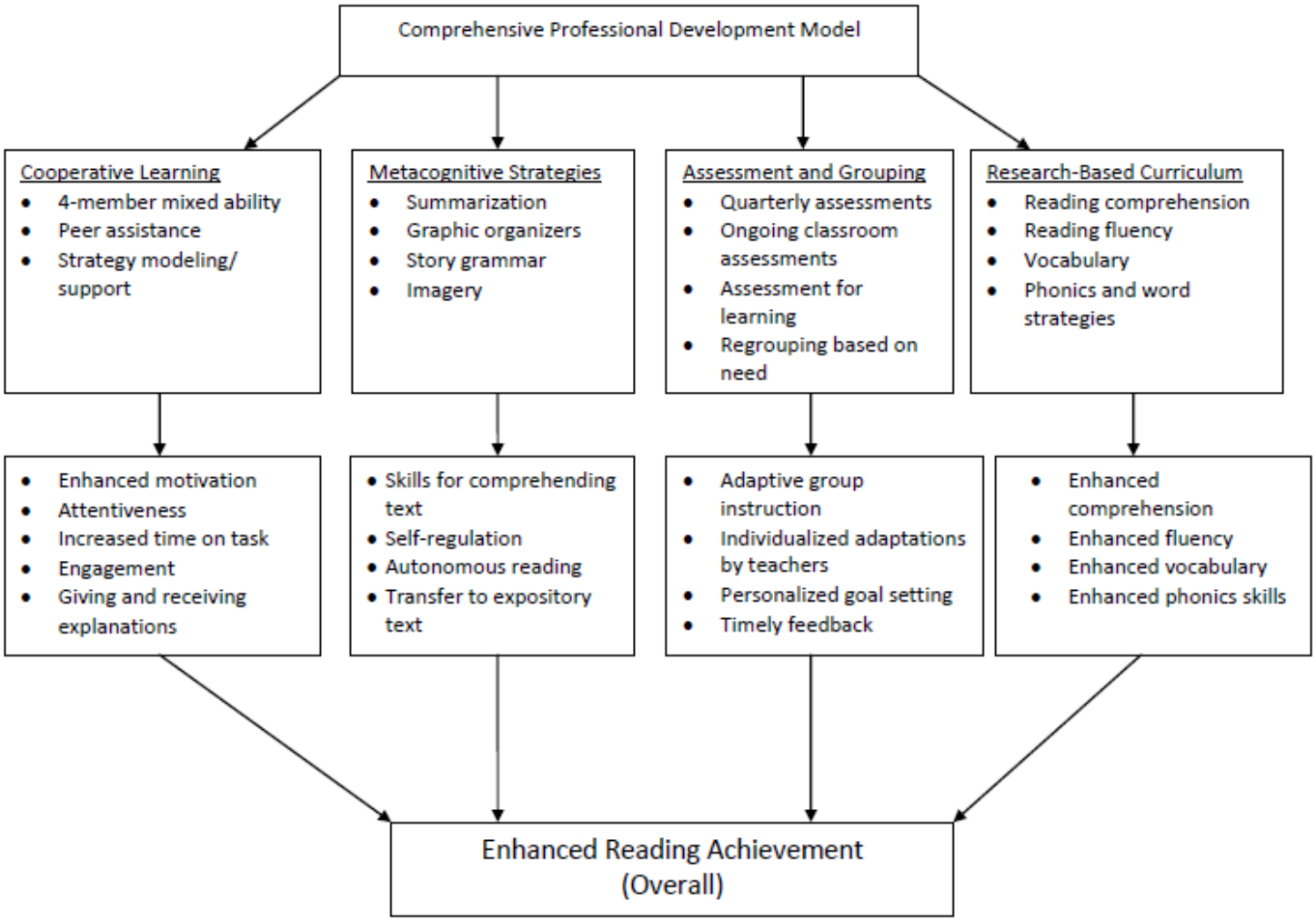
Assessment in The Reading Edge takes place continually during every lesson, using strategies adopted from Assessment for Learning (Black & Wiliam, 1998). Assessments include all-pupil responses (e.g., thumbs up, thumbs down), think-pair-share (discuss with your partner and then report out), and random reporter (one student is chosen at random to represent the team with answers to questions). Teachers use the information from these ongoing assessments to adjust the pace of instruction, provide additional scaffolding if needed, or accelerate through or skip easy material if appropriate.

Integrated Professional Development Process. The foundation for ensuring quality implementation of the above intervention components is a comprehensive, integrated professional development process. The process, described elsewhere in greater detail later in this application, draws from recent evidence supporting "practice-based" professional development for reading and literacy instruction (Neuman & Cunningham, 2009; Desimone, 2009). Specifically, it emphasizes *both* intensive initial training and ongoing "as needed" coaching and support. The latter strategies include detailed lesson guides, frequent telephone contacts by coaches/trainers, video models, onsite observations and discussions, and feedback using implementation tools for both self- and external assessment.

Theory of Change

Figure 1 depicts a *theory of change* explaining how usage of cooperative learning, metacognitive learning strategies, grouping and assessment, and integrated professional development are designed to operate interactively and dynamically to improve the reading performance of at-risk middle school readers. The model is derived from theoretical principles and research findings identifying the types of instructional strategies most likely to address the needs of these students.

Figure 1
Theory of Change: The Reading Edge



3. *The importance and magnitude of the effect expected to be obtained by the proposed project, including the extent to which it will substantially and measurably improve student achievement or student growth, close achievement gaps, decrease dropout rates, increase high school graduation rates, or increase college enrollment and completion rates. The evidence in support of the importance and magnitude of the effect would be the research-based evidence provided by the eligible applicant to support the proposed project.*

The Reading Edge has been evaluated in four major studies in Title I middle schools, one using a within-school randomized design and the others using quasi-experimental designs.

The randomized evaluation of The Reading Edge involved a within-school experiment at two middle schools located in Florida and West Virginia. Two successive cohorts of sixth graders in each school were randomly assigned to The Reading Edge or to the schools' existing reading intervention programs. Analyses of covariance found positive, significant effects on the Gates MacGinitie, pooling data across the two year cohorts (Chamberlain et al., 2007; Slavin et al., 2009). The average effect size was +0.15, which is modest, but compares favorably to effect sizes associated with findings from rigorous evaluations of commonly used textbook- and computer-based reading approaches in middle school (see review by Slavin, Cheung, Groff, & Lake, 2008).

A national quasi-experimental study of The Reading Edge involved 14 schools in 6 states (Slavin, Daniels, & Madden, 2005). Seven schools using The Reading Edge were compared to control schools prospectively matched on state test scores and demographic factors in the same state (usually the same district), in terms of gains over a three-year period on their state tests. Schools using The Reading Edge gained more than their respective controls in six of seven comparisons. On average, Reading Edge schools gained 24.6 percentage points in percent of

students passing state reading tests, whereas control schools gained only 2.2 percentage points. The schools were all high-poverty Title I schools, but were otherwise quite diverse, including schools in inner-city Indianapolis, rural Missouri and Louisiana, and an Indian reservation in Washington State. An overall 2 x 2 x 2 chi square analysis (experimental-control x pre-post x pass-fail) found that these differences were statistically significant ($p < .01$).

Two large-scale matched studies evaluated The Reading Edge in middle schools. Both were reported by Stevens & Durkin (1992). In Study 1, 3986 grade 6-8 students in 5 inner-city Baltimore schools were compared. Experimental and control schools were well matched on ethnicity (mostly African American), SES, and California Achievement Test pretests, which were used as covariates. On CAT posttests, students in the experimental group scored significantly better than controls on Reading Comprehension (ES=+0.34, $p<.001$) and Reading Vocabulary (ES=+0.46, $p<.001$). In Study 2, 1233 students in 6 Baltimore middle schools participated in a similar experiment. On CAT posttests, controlling for pretests, there were modest positive effects for Reading Comprehension (ES=+0.13, $p<.05$) but not for Reading Vocabulary (ES=-0.02, n.s.). However, for a subsample of students with disabilities, there were strong positive effects for Reading Comprehension (ES=+0.60, $p<.01$) and Reading Vocabulary (ES=+0.28, $p<.05$).

It is important to note that studies of CIRC, a similar program used in the upper-elementary grades, have also supported this strategy. Across 9 matched quasi-experiments in grades 2 to 6, the sample-size weighted mean effect size was +0.21 (Slavin, Lake, Chambers, Cheung, & Davis, 2009).

C. Quality of the Management Plan and Personnel

1. *The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks, as well as tasks related to the sustainability and scalability of the proposed project.*

Management Plan. The project will be managed in a partnership among the Success for All Foundation (SFAF), Johns Hopkins University, The National Forum to Accelerate Middle Grades Reform (NFAMGR), MDRC, and 15 middle schools in 13 districts across the U.S. Each school in a partner district will designate one person to serve as a building facilitator for The Reading Edge (half of this person's salary will be paid by the grant in the pilot and study cohorts for 3 years). SFAF coaches will provide extensive training and technology-supported professional development to ensure that these facilitators are fully prepared to provide outstanding services to their schools. Coordination between Reading Edge facilitators and their SFA coaches will be critical to the success of each school. We will have regular, technology-facilitated meetings of school-based facilitators and their SFAF counterparts approximately 6 times each year for teaching video-analysis and video-consultations on teaching practices, 3 times per year for video-coaching analysis and video-consultations on coaching practice. Each school-based facilitator will be assigned to a regional Reading Edge coach who will serve as a mentor. Facilitators and their teachers will participate in on-line learning communities, whose members will support them in reflection on their practice as coaches, share solutions to problems, and discuss common challenges. In addition, electronic communications including

email, webcasts, webinars, and conference calls, will be used to connect facilitators and coaches with SFA coaches.

SFAF leaders will maintain regular contact with district leaders, such as superintendents, directors of secondary reading, and principals. SFAF staff will meet regularly on site with these leaders, to review outcome and implementation data and plan for goal-focused continuous improvement. We will also meet with district leaders and facilitators as a group at our annual experienced sites conferences. District leaders, building facilitators, and SFAF coaches will jointly agree on annual objectives in terms of amounts and quality of coaching, program adoption, and student outcomes. We will then jointly develop a goal-focused plan and monitor progress toward agreed-upon goals, recommending changes intended to improve outcomes.

Dissemination activities. In collaboration with the National Forum to Accelerate Middle-Grades Reform (NFAMGR), we will disseminate information on the project through a variety of outlets in order to ensure the development of partnerships with high-need schools during and after the project period. The NFAMGR will disseminate information through its Schools to Watch initiative in 19 states, which currently includes 334 designated middle schools and hundreds more that are involved with NFAMGR. Project staff will present at the Schools to Watch conferences and participate in the STW network. We will also purchase advertising space in popular magazines, such as Educational Leadership and Education Week, and in on-line outlets such as ASCD SmartBrief and Google Adwords. We will attempt to take advantage of free media by talking with journalists, bloggers, and others about newsworthy developments with The Reading Edge and the scale-up project, especially research findings. We will purchase booth space at major national conferences, such as the National Middle School Association, International Reading Association, Title I, ASCD, AASA, NASSP, and NAFEPA. We will hold

local demonstrations to invite principals and teachers to visit existing Reading Edge schools, speak with their counterparts, and form their own opinions. Our district partners and NFAMGR and state department of education partners in several states will disseminate information about The Reading Edge through state superintendents' associations. We will work through state school improvement directors to encourage districts and coalitions of schools to become additional partners over time.

Timeline

Dates	Activities and Outcomes
January, 2013 to August 2013	Develop and initially pilot with 15 partner schools procedures for technology-enhanced professional development and other teacher and student materials.
September, 2013 to June, 2014	Pilot technology-enhanced professional development in partner schools. Carry out systems redesign, formative evaluations. Develop dissemination plan with NFAMGR.
January, 2014 to August, 2014	Recruit research sample of 50 schools. Randomly assign schools and prepare for evaluation. Begin dissemination.
June, 2014 to August, 2014	Revise technology-enhanced professional development and other materials and procedures in light of findings from pilots. Carry out initial training in research schools.
September, 2014 to June, 2015	Implement first year of evaluation with technology-enhanced professional development and other elements. Collect state test data and qualitative data. Continue systems redesign in partner schools. Recruit 70 schools for first

	scale-up cohort.
June, 2015 to December, 2015	Analyze data from first year of study. Prepare initial report.
September, 2015 to June, 2016	Implement second year of study. Collect state test data. Begin training and implementation in first scale-up cohort. Recruit 110 schools for second scale-up cohort.
June, 2016 to December, 2016	Analyze data from second year of study. Prepare report.
September, 2016 to June, 2017	Implement third year of study. Collect state test data and standardized test data. Carry out training and implementation in second scale-up cohort. Recruit 150 schools for third scale-up cohort.
June, 2017 to December, 2017	Analyze data from third year of study. Prepare final report. Begin implementation in 200 schools for final scale-up cohort.

2. *The qualifications, including relevant training and experience, of the project director and key project personnel, especially in managing large, complex, and rapidly growing projects.*

The proposed staff of The Reading Edge project have been working for many years on development, evaluation, dissemination, and scale-up of complex school and classroom reforms. We have designed and carried out many large-scale randomized and quasi-experimental evaluations. Our school district partners also have extensive experience in educational innovation, management, and reform. Our qualifications and roles in the project are as follows.

Nancy A. Madden (SFAF, Project Director) is the President and CEO of the Success for All Foundation, which provides the training and implementation support for over 1000 Success for All schools. Dr. Madden has been President of the Foundation since it was established in 1997. Dr. Madden is also a professor at Johns Hopkins University and the University of York's Institute for Effective Education in the UK. Dr. Madden will be responsible for overseeing the provision of all aspects of implementation support for schools in the study and recruitment of new schools. She is currently principal investigator on an i3 grant addressing technology in early literacy.

Robert E. Slavin (SFAF, **Co-Project Director**) is Chairman of the Success for All Foundation, Director of the Center for Research and Reform in Education (CRRE) at Johns Hopkins University, and Founding Director of the Institute for Effective Education at the University of York. Dr. Slavin has authored or co-authored more than 300 articles and 20 books. He received the American Educational Research Association's Raymond B. Cattell Early Career award for Programmatic Research in 1986, the Palmer O. Johnson award for the best article in an AERA journal in 1988 and again in 2009, the Charles A. Dana award in 1994, the James Bryant Conant award from the Education Commission of the States in 1998, the Outstanding Educator award from the Horace Mann League in 1999, and was named a Fellow of the American Educational Research Association in 2010. Dr. Slavin is known for his ground-breaking research and reform efforts that have reached over 2,000,000 children worldwide. He is currently principal investigator on an i3 scale-up grant addressing literacy in struggling elementary schools.

Cecelia Daniels (SFAF, Project Manager) is the Middle School Reading Director at the Success for All Foundation. She has been a middle and high school science teacher, and was a

key developer of The Reading Edge. She will work with Dr. Madden on implementation, training, coordination with districts, and program adjustments to align with state standards.

Jacqueline Nunn (JHU-CTE) has been director of CTE for nearly two decades and has been instrumental in advancing the Center's efforts in all of its core areas—early childhood initiatives, emerging technologies, and online learning. She is Associate Dean for Educational Technology in the JHU School of Education. Dr. Nunn has been the principal investigator or co-investigator on numerous federal and state grants, including Technology Innovation Challenge, Star Schools, Preparing Tomorrow's Teachers to Use Technology, and OSEP Stepping Stones grants. Before becoming the director of CTE, Dr. Nunn worked as a teacher, special educator, principal, and school district administrator. As a district administrator, she directed all preschool special education services in Fairfax County, VA. Dr. Nunn will lead the technology development and deployment team.

Deborah Kasak is the Executive Director of the National Forum to Accelerate Middle-Grades Reform, an affiliation of the country's most prominent associations, foundations, researchers and practitioners united to speak with one voice about needed improvements in the middle grades. Its signature program is the Schools to Watch initiative now in 19 states representing over 70% of the country's young adolescent students. In 2012, over 300 schools have been identified as a School to Watch (STW) in their respective states. An annual STW conference is held yearly in June in Washington, DC. Dr. Kasak leads an i3 development grant to advance its work in middle school reform.

Dr. Kasak was previously the executive director of the Association of Illinois Middle-Level Schools for eight years. She helped create the Illinois Middle Grades Network, a network of demonstration/partnership schools begun in 1989. She oversaw the operation of one of the

first regional centers for the National Turning Points Design Model. She was actively involved with the middle grades self-study process and collaborated with staff at the Center for Prevention Research and Development at the University of Illinois, Urbana-Champaign.

Deborah served as president of the National Middle School Association in 2001-02 and served on the NMSA Board for seven years.

Dr. Marie-Andrée Somers (MDRC External Evaluator) is a senior research associate in MDRC's K-12 Education Policy Area. She focuses on the impact of education programs for low income children in low performing schools, with a special focus on the impact of reading programs. Somers has led the impact analysis for two federally funded project. The Enhanced Reading Opportunities Study, done under contract with the Institute of Education Sciences, examined the implementation and impacts of a supplemental literacy program for 9th grade students who reach high school will weak reading skills. It involved a random assignment impact design that included 34 high schools across 10 districts. Dr. Somers also led the impact evaluation of the Content Literacy Continuum Study, done through the Midwest Regional Education Lab, which examined the implementation and impacts of a school wide literacy initiative in high schools. The program provided supplemental instruction for students who are behind in reading plus support for teachers in all subjects to incorporate content literacy strategies into ELA, math, science, and social studies classes. The impact evaluation rested on the random assignment of schools in nine districts. She also led the random assignment impact analysis for the second phase of the Evaluation of Enhanced Academic Instruction in After-School Programs, which focused on elementary school reading and math. Her other work at MDRC includes a methodological study on the statistical properties of quasi-experimental evaluation designs in education settings, as well as a methodological study on using state

assessments to measure student achievement in large-scale randomized experiments. She holds a doctorate in education with a concentration in research methods from Harvard University and graduate degrees in economics and applied statistics from Oxford University.

3. *The eligible applicant's capacity (e.g., in terms of qualified personnel, financial resources, or management capacity) to bring the proposed project to scale on a national, regional, or State level working directly, or through partners, either during or following the end of the grant period.*

Working with our district and state partners, we are confident that we have the capacity to bring the project to scale. We have many years of experience in scaling up proven programs, especially the Success for All turnaround model currently operating in about 1000 elementary schools nationwide. The Success for All Foundation has an experienced and capable staff of more than 200 trainers, developers, and others who have been doing national scale-up of proven programs since 1997.

After the i3 grant period is over, we are confident that the gains we expect to make in numbers of schools making effective use of The Reading Edge will be sustained, and that our network will continue to grow. The scale-up project will invest in infrastructure, as well as the development of materials and procedures to support high-quality, cost-effective implementations of The Reading Edge. Schools that have adopted The Reading Edge will, based on our past experience, be likely to continue to use it for many years without additional grant funding beyond ordinary Title I funding, and we expect to continue to scale up the program, ensuring that the investment made by i3 in the scaling up of The Reading Edge will benefit hundreds of thousands of middle school students over time.

<u>Capabilities of Project Partners</u>

Success for All Foundation (SFAF) is a nonprofit organization in Baltimore that spun off from Johns Hopkins University in 1998, but still maintains close connections with the Johns Hopkins School of Education. It has a total staff of approximately 200. SFAF develops and disseminates programs for high-poverty schools from prekindergarten to middle school, and has considerable experience with both elementary and middle school reading reform. SFAF currently manages a $50 million i3 grant to scale up its Success for All literacy model and is a $3 million development grant to add technology to its preschool and kindergarten approaches. It is also a partner with Old Dominion University on a $25 million i3 grant to scale up SFAF's middle school math program.

(1) SFAF Facilities. SFAF's headquarters in Baltimore houses the Foundation's executive management as well as administrative functions including Contracts, Accounting, Outreach, Information Systems, Human Resources, and Customer Service. The facility also contains SFAF's curriculum development groups, research staff, and several trainer support functions, including conferences, training materials, and the training institute. State-of-the-art computers and communications systems, with technical support staff, will be available for the project.

(2) Professional Development and Curriculum Development Resources. With a training staff of approximately 100, SFAF has the resources to train principals, teachers, assistants, and central administrators. Currently, Success for All schools are located in more than 400 school districts in 47 states throughout the U.S. SFAF also has a staff of about 40 curriculum developers working in reading, writing, and math, in grades pre-k to 10.

(3) Publication and Support Services. With about 1000 schools, SFAF has the publications and distribution capabilities to provide the curricular materials necessary to implement innovative

programs. There is a staff of 22 publications professionals who do project management, artwork, design and layout, printing, and inventory control.

The Center for Technology in Education (CTE) at Johns Hopkins University is a unique partnership between the Maryland State Department of Education (MSDE) and Johns Hopkins University. Since 1991, CTE has applied its expertise in five critical areas: data-driven decision-making, evidence-based instruction, assistive technology, standards-based assessment and mentoring, and online learning and communities of practice. CTE's work includes a wide array of programs, projects, and research activities designed to increase the capabilities of teachers, parents, schools, and communities, ultimately improving educational outcomes for all children. CTE is comprised of 29 full time faculty and staff, many of whom are former teachers and school administrators. As a unit of Johns Hopkins, CTE benefits from the infrastructure, facilities, faculty resources, and administrative personnel of the wider university. Its offices are housed in a JHU satellite campus in Columbia, Maryland, centrally located between Baltimore and Washington, DC. CTE has 14 years of experience creating software-based tools for educators. Products that have been developed and licensed by the JHU Office of Technology Transfer include systems for a) online learning and collaboration, b) digital portfolio development, c) data collection, reporting and decision support, and d) classroom teacher observation. CTE's iterative development process includes requirements gathering with stakeholder participation, a detailed wire-frame functional analysis, visual design prototyping, and a rigorous testing and quality assurance process. The online learning platform created by CTE, which will form the backbone of the project's online learning community, has been used by more than 15,000 educators across 50 educational organizations since 2001.

The National Forum to Accelerate Middle-Grades Reform unites key stakeholders, national associations, intermediary organizations, policymakers, researchers, practitioners and foundation officers for the purpose of promoting the vision of high-performing middle grades education for all students. The Forum's most highly visible endeavors are the National Forum's Schools to Watch (STW) initiative in 19 states and its USDE Investing in Innovation (i3) Development Grant. STW is a national scale-up effort which seeks out and identifies schools on an upward trajectory to success. These schools embody the STW criteria and are noted for their comprehensive implementation of school and classroom practices that advance academic excellence, developmentally responsive practices, and socially equitable strategies. Once identified, STW sites go through rigorous re-evaluations every three years to ensure continued improvement. To date, 334 schools have been designated as STW.

The i3 USDE Development Grant affords the Forum the opportunity to apply its STW interventions to 18 persistently low-performing schools in the states of North Carolina, Illinois and California. Continuous support, networking and professional development occur as collaborative cultures for learning are established. Strategies affect overall school and individual classroom interventions. Preliminary evaluation data is indicating that substantial improvements are occurring within these schools.

MDRC. In its 35-year history, MDRC has earned a reputation as a trusted and authoritative source of information about what works and what doesn't work in education and social policy. MDRC is known for the rigor of its research and for its commitment to building evidence and improving practice in partnership with school districts, community colleges, state and local governments, and community-based organizations. Working in fields where emotion and ideology often dominate public debates, MDRC is a source of objective and unbiased

evidence about cost-effective solutions that can be replicated and expanded to scale. With staff of more than 200 in New York and California, MDRC is engaged in close to 80 projects in five policy areas.

At a time of growing national and state interest in improving low-performing schools and better preparing students for college and work, a commitment to rigorous evaluations and demonstration programs has established MDRC as a respected voice in education research and policy. To date, MDRC has managed 20 major education studies representing a range of both structural and instructional reforms at both the secondary school and elementary school levels. At the high school level, these have included several prominent comprehensive reform interventions as well as specialized literacy programs aimed at students who enter ninth grade reading below grade level. As MDRC continues to build a body of knowledge on high school reform, it is examining school-based interventions in the elementary grades and middle school that seek to give children a strong start in developing reading and math skills as well as after-school programs that extend children's learning beyond the school day. Across the entire span of its work, MDRC has concentrated on key elements of students' instructional experiences: the skills of teachers, the content of what they teach, the duration of instruction, and the organizational setting in which teaching is done, which affects the relationship between adults and students in the schools and in the classrooms.

Central to MDRC's mission in education research is facilitating dialogue among researchers, policymakers, funder, and educators – building a shared learning community in which researchers are responsive to the needs of practitioners and practitioners are committed to taking lessons from research as they innovate.

C. Middle Schools

15 middle schools in 13 diverse districts across the U.S. have committed to work with us to help develop the new components and try out new components of our scale-up strategies. Letters from these schools committing to full participation in the piloting are enclosed in Appendix G.

Alhambra Elementary School District, Arizona. Alhambra ESD is a high-poverty district in Phoenix, AZ, serving 14,498 students. Two of its schools that serve grades 4-8 will participate in this study, for a total of 2,090 students. The population is 84% Hispanic, 5% White, 4% African-American, and 4% Asian, with 87% of students receiving free- or reduced-price lunches.

Indian Oasis-Baboquivari School District, Arizona. Indian Oasis-Baboquivari School district is a remote, rural, high-poverty district serving 886 students, most who are American Indian. Baboquivari Middle School's 217 students are all American Indian, and 69% qualify for free- or reduced-price lunches.

Garfield School District-RE2, Colorado. Garfield School District is a high-poverty district serving 4,935 students. Rifle Middle School serves 732 students, of whom 52% receive free- or reduced-price lunches, 52% are White, and 47% are Hispanic.

Georgetown Ridge Farm, Illinois. Georgetown Ridge Farm School District in Illinois is a high-poverty district that serves 1,176 students. Mary Miller Jr. High School serves 253 students. 90% are White, 10% are African-American, and 63% qualify for free- or reduced-price lunches.

Commonwealth Community Development Academy in Michigan is a Title I magnet charter school in Hamtramk, MI, a large city surrounded by Detroit. 85 of its 252 students are in grades 6-8. 100% are African American and 98% qualify for free- or reduced-price lunches.

Detroit Edison Public School Academy, Michigan, is a high-poverty charter school in Detroit, serving 1,072 students. Of these, 70% receive free- or reduced-price lunches, and 90% are African-American.

Saginaw City Schools, Michigan. Saginaw City Schools is a high-poverty district serving 8,750 students. Thompson Middle School serves 739 students, of whom 62% are African American, 19% are Hispanic, 18% are White, and 89% receive free- or reduced-price lunches.

Waverly Community Schools, Michigan. Waverly Community Schools is a high-poverty district serving 3,006 students. Waverly Middle School serves 491 students, of whom 47% receive free- or reduced-price lunches, 41% are White, 33% are AA, and 14% are Hispanic.

Alliance City School District, Ohio. Alliance City Schools is a high-poverty district that serves 3,041 students. Alliance Middle School serves 588 students, of whom 71% are White, 15% are African American, and 76% qualify for free- or reduced-price lunches.

Blanchester Local Schools, Ohio. Blanchester Local Schools is a high-poverty, rural district serving 1,694 students. Blanchester Middle School serves 413 students, 98% of whom are White, and 47% qualify for free- or reduced-price lunches.

Princeton City Schools, Ohio. Princeton City Schools is a high-poverty district near Cincinnati that serves 10,357 students. Princeton Community Middle School serves 1,098 students, of whom 51% are African-American, 35% White, and 7% Hispanic. 54% of its students qualify for free- or reduced-price lunches.

Steubenville City Schools, Ohio. Steubenville City Schools is a high-poverty district that serves 2,390 students. Harding Middle School serves 659 students, of whom 56% are White, 29% African-American, and 60% qualify for free- or reduced-price lunches.

Pulaski County Public Schools, Virginia. Pulaski County Public School District is a high-poverty district serving 4,722 students. Both of the district's middle schools will participate in this project, totaling 1,073 students. Of these, 49% receive free- or reduced-price lunches, 91% are White, and 7% are African-American.

Institutional Review Board

The Institutional Review Board (IRB) at Johns Hopkins University will review and then annually recertify all aspects of the project to ensure appropriate protections of the rights and privacy of human subjects.

Private Sector Match

The Success for All Foundation has partnerships with several organizations in the private sector that provided matching funds for our current i3 Scale Up grant for SFA-Elementary. We expect that they will also support the middle school Reading Edge grant proposed here. These organizations include:

The Annie E. Casey Foundation

The Kellogg Foundation

Bowland Trust

HBP Printing Company

Pitney-Bowes Company

We will submit final commitments for matching if we are selected as a high-scoring application. The Success for All Foundation itself will contribute matching funds to the degree that we cannot obtain outside funding.

D. Quality of Project Evaluation

1. The extent to which the methods of evaluation will include a well-designed experimental study.

An independent evaluation based on randomized control trial (RCT) will provide a definitive test of the effects of *The Reading Edge,* which will meet the highest standards of the What Works Clearinghouse. The research will provide information that is of the quality needed by practitioners, policymakers, and other researchers for decision-making.

Program impacts will be measured using a rigorous three-year longitudinal cluster Randomized Controlled Trial (RCT). A total of 50 Title I middle schools (or grades 6-8 of schools with other grade spans) will be recruited from urban, suburban, and rural districts and randomly assigned to either a treatment group implementing *The Reading Edge* or a control group continuing with business as usual. Students will be followed over three school years (2014-15, 2015-16, and 2016-17) and their reading achievement assessed each spring, using a standardized reading test and state tests in English Language Arts (ELA). The implementation research, discussed below, will assess program fidelity and the service contrast between Reading Edge and control schools.

The implementation and impact of *The Reading Edge* will be evaluated by MDRC, which is completely independent of SFAF. MDRC will be solely responsible for random assignment of schools to treatment conditions and will inform both the schools and SFAF of the final outcome. MDRC will collect all measures of student outcomes and be solely responsible for the analysis and interpretation of findings. MDRC will seek comments and suggestions from the program

developer on draft reports, but its technical review process and quality control systems will provide the final review of evaluation products.

Research Questions. To reduce concerns about multiple hypotheses testing producing statistically significant impact by chance, the evaluation will follow IES guidelines (Schochet, 2008) by pre-specifying a small number of primary (confirmatory) research questions and by conducting a composite statistical test to "qualify" or call into question multiple hypothesis tests that are statistically significant individually but that may be due to chance in the context of mixed results. The main confirmatory research question guiding the study design is: ***After three years of implementation, what is the impact of The Reading Edge on 8th grade students' reading achievement, compared to 8th grade students in the control schools?*** This question is confirmatory because by the end of the third study year, the majority of grade 8 students in *The Reading Edge* schools will have experienced the program throughout middle school.

In addition to the main confirmatory question, the evaluation will address several exploratory questions intended to deepen our understanding of the overall average impact of The Reading Edge:

1. ***Subgroup impacts (experimental)***: How do the effects of The Reading Edge vary according to students' prior reading performance ("below basic", "basic", "proficient" on elementary school state tests), English language proficiency (ESL status), ethnicity, and gender?
2. ***Impacts on non-cognitive outcomes (experimental):*** What is the impact of The Reading Edge on measures of attendance, special education assignments, and retention?
3. ***Program maturity (experimental):*** Do impacts on reading achievement differ across study years?

4. ***Dosage (non-experimental):*** Does The Reading Edge produce larger impacts for students who receive a greater amount of services: that is, a "stable sample" of students who remain in The Reading Edge middle schools for several years?
5. ***Program Implementation (non-experimental, correlational):*** Are school-level test score gains in reading achievement higher in schools with stronger implementation of The Reading Edge?

Site Recruitment and Random Assignment. In Spring 2014, the evaluation team will visit all schools identified for the project to establish working partnerships for the study. The team will make sure school staff understand the interventions and the random assignment design. The team will underscore the importance of schools' agreeing to the random assignment and implementing whichever treatments they may be assigned to for all three years of the study. School leaders will be asked to sign a formal letter committing them to participating in random assignment, providing access to data, and implementing their assigned treatments. None of the schools in the study will have implemented *The Reading Edge* in the past.

After any necessary adjustments to the sample, the final sample of 50 schools will be assigned at random to experimental or control conditions. Randomization will happen within districts. Experimental schools (n=25) will implement The Reading Edge as described above; control schools (n = 25) may use any program except The Reading Edge (a "business-as-usual" control). They will receive annual payments of $3000 for their participation in data collection. Randomization will happen in Spring 2014, and experimental and control schools will remain in their assigned treatments from September 2014 to June 2017.

Student Study Sample. The student sample for the confirmatory analysis will include all grade 8 students enrolled in the study schools in the final study year (Spring 2017). Assuming an

average of 200 students per grade per school, this will result in a study sample of about 10,000 students (5,000 in the 25 *Reading Edge* schools and 5,000 in the 25 control schools). Because the unit of randomization is schools, students who move away from the study schools during the study period will not be followed, but the sample will include "in movers" who join the study schools. Therefore, even though the majority of students in the sample will have received three years of The Reading Edge, some students will have experienced the program for less than 3 years.

The mediating effect of program "dosage" will be examined more closely as part of the exploratory analysis. The evaluation team will collect annual data on the composition of students in both the treatment and control schools to check for any unexpected effects on student mobility. If there are none, then the analysis will evaluate whether impacts are greater for the "stable subsample" of grade 8 students who remain in the study schools for three years compared to the subsample of students who receive it for one year and two years.

The role of program maturity will also be examined, by comparing impacts on students' reading achievement across study years. To disentangle the effect of implementation maturity from that of dosage, the study sample for this exploratory analysis will focus on 6th grade students in a given study year, so that the comparison is made across students who have experienced The Reading Edge for the same number of school years (one year).

Key Outcome Measures. The key confirmatory outcome will be the reading achievement of grade 8 students in the final study year, to be measured by administering a special evaluation test to 8th grade students in Spring 2017. We anticipate using a standardized, widely accepted group-administered test of reading achievement, such as the Gates-McGinitie Reading Test (MacGinitie, MacGinitie, Katherine, & Dreyer, 2000) or the Group Reading

Assessment and Diagnostic Examination (GRADE) test (American Guidance Service, 2001). Testing will be completed within a 4-5 week window to reduce growth-related differences, and the treatment and control schools in a given district will be tested concurrently to reduce the possible introduction of bias from test timing differences.

Because of the policy importance of state assessments (and the lower cost of obtaining state test scores), students' scores on state English Language Arts (ELA) tests will also be requested from school districts each spring. These test scores will be used to measure reading achievement in the first and second study year when the special reading test will not be administered (Spring 2015 and 2016) and as part of the exploratory analysis, for example to compare impacts across study years. To deal with variation in test content and scale across states, test scores will be placed on the same metric by converting them to z-scores, as recommended by May *et al.* (2009) and Somers *et al.* (2011). From the school districts, data will also be requested on individual students' attendance rates, special education assignment rates, and retention rates, which will be used to estimate impacts on these exploratory outcomes.

Impact Analysis. The basic impact estimate will be from a two-level model with students nested in schools with any blocking of random assignment by school district accounted for in the analysis. (A three level model—students nested in teachers nested in schools—is not proposed because middle school students have multiple teachers). To improve the precision of the impact estimate (statistical power), covariates in the model will include school-level ELA test scores for pre-program cohorts of students, as well as the "baseline" characteristics of sample students before they entered middle school (ELL status, special education, free/reduced price lunch, and students' scores on prior state reading/ELA assessments in grades 3 to 5). This model

will provide an intent-to-treat estimate of the impact of providing access to the intervention on students in the average school in the sample.

Power Analysis. For the confirmatory analysis, the minimum detectable effect size (the smallest true effect that can be detected for a specified level of power and significance level for any given sample size) is estimated at .15 for reading achievement impacts. These calculations are based on the following conservative estimates: a sample of 50 schools split evenly between treatment and control, 200 students grade 8 students per school, an 85% response rate at the student level, 80 percent power, a statistical significance level of .05 with a two-tailed test, between-school variation in test scores of 0.21, and covariates explaining 85 percent of between-school variation and 50 percent of within-school variation (estimates of the intraclass correlation and R^2 are from Table A19 in Bloom, Richburg-Hayes and Black, 2004). Analyses of student subgroups constituting approximately half the sample (100 students per school) would have an MDES of .154 for reading achievement. These MDESs are below the lower limits of the confidence interval for The Reading Edge effects derived from previous studies.

Exploratory Analyses. As noted earlier, an analysis of exploratory questions will be conducted to interpret the finding for the confirmatory research question. The same impact model will be used for estimating impacts on other student outcomes and for subgroups of students. These findings will be presented to help readers understand the source of findings on the confirmatory question and as a source of hypotheses about explanations.

2. *The extent to which the methods of evaluation will provide high-quality implementation data and performance feedback, and permit periodic assessment of progress toward achieving intended outcomes.*

The success of a program in raising student achievement strongly depends on the quality of its implementation (Desimone, 2002; Nunnery et al., 1996). Accordingly, the planned evaluation will address several key topics related to the implementation of The Reading Edge in the study schools: (1) How did The Reading Edge staff work with schools to implement the program? (2) What resources, training, materials, and ongoing technical assistance were needed? (3) Were the structural and instructional elements of The Reading Edge model implemented with reasonable fidelity by the study schools and their teachers? (4) What was the contrast in the education experience, especially related to reading instruction, between The Reading Edge schools and the control schools? and (5) What are the implementation lessons both as the study unfolds and for future replication efforts? The analysis will draw on various sources of information, as discussed below in the order of the questions listed above. Some of these analyses will yield quantitative ratings of fidelity, which MDRC will also use to examine whether schools with higher fidelity ratings experienced larger school-level gains in reading/ELA state test scores relative to pre-program school years (exploratory correlational analysis).

The Implementation Experience: Challenges, Supports, and School Context. The implementation experience of the 25 program schools will be evaluated using a combination of staff interviews and teacher surveys. Experienced MDRC qualitative researchers will visit all Reading Edge schools (and, as discussed below more briefly visit control schools) in Spring 2015 and 2016. During the visits to the program schools, they will interview the principal, facilitator, and teachers providing reading instruction to understand their perspectives on The Reading Edge and its implementation, the support they received, challenges that arose, and responses that were developed to address them. In addition, a teacher survey will provide

information about teachers' background and experience, knowledge of reading instruction, relationships with students, and perceptions of the school environment. MDRC staff will administer the surveys at Reading Edge schools during the course of site visits conducted during 2015 and 2016 school years and study-funded data collection liaisons in the control schools will facilitate fielding the teacher surveys. These data, in conjunction with the School Achievement Snapshots, discussed below, will provide valuable insights into the conditions under which effective and faithful implementation of the program model are most likely to occur.

Structural Fidelity (School-Level). Program schools' fidelity to the structural and procedural aspects of The Reading Edge will be assessed using the School Achievement Snapshot, a detailed rubric developed by The Reading Edge to guide ongoing technical assistance efforts. Trained SFAF coaches use the Snapshots during their regular site visits to rate each school on the extent to which it has implemented the key structures and instructional processes associated with the program. Because accurately measuring fidelity requires extensive knowledge of program elements – and because SFA has made an investment in the design and fielding of the Snapshot – MDRC intends to capitalize on this instrument to measure implementation fidelity at the school-level. MDRC staff will use Snapshot data from the three study years to identify key constructs that summarize the extent to which key structural and procedural elements of The Reading Edge were implemented with fidelity in the 25 program schools. This strategy will provide much more reliable measures of fidelity than any effort by evaluators to rate program services themselves.

Instructional Fidelity (Teacher-Level). Teachers' implementation of The Reading Edge instructional components will be assessed using several documentary sources:

- *Team Score Sheets:* Team score sheets are collected by SFAF coaches during their visits to schools. These sheets are used to assess whether the teachers have provided feedback to teams and also provide evidence on the cooperation goals selected for emphasis. The percent of lesson cycles for which team score sheets are available will provide a quantitative estimate of implementation of team rewards. The specificity and variety of cooperation goals identified on team score sheets will provide a qualitative measure of attention to the development of cooperation skills.
- *"Setting Goals and Charting Progress" summaries:* These summaries, which are collected at each visit by SFA coaches, are teacher records of students' use of the comprehension strategies taught in The Reading Edge, including clarification, summarization, prediction, and questioning.
- *Ratings by coaches:* An additional measure of implementation quality will be coaches' ratings of individual teachers' implementation of program components during the quarterly Snapshot visits. To increase validity, one-fourth of the observations at each school will be conducted by coaches who are expert in The Reading Edge program but do not have a relationship (for professional development or otherwise) with the particular schools.

Using an implementation rubric developed by the program, the independent (external) coaches will review and synthesize the above data into ratings of individual teacher performance levels in implementing The Reading Edge components as a whole, in implementing separate program components (e.g., cooperative learning, teacher observation, and tracking of strategy usage by students), and in implementing appropriate regrouping. Each teacher's implementation will be rated as "Exceptional," "Strong," "Adequate/Satisfactory," or "Weak/Inadequate." One-

tenth of the evaluations (approximately 20 teachers) will be performed by two independent raters, and Cohen's (1988) Kappa will be used to assess inter-rater reliability. The observers and the researchers settle coding disagreements by consensus. These ratings will be used by MDRC as a source of information for describing instructional fidelity in each study year.

Service Contrast between The Reading Edge and Control Schools. The service contrast produced by implementing The Reading Edge is the driver of observed impacts on student outcomes, so it is important to measure the extent and dimensions of the service difference between The Reading Edge and control schools. As part of the field research, MDRC will interview control school administrators to learn about their school improvement efforts, as a basis for understanding "business as usual" in these schools. As a quantitative measure of the key service contrast related to reading and literacy instruction, the evaluation team will field in both The Reading Edge and control schools an adaptation of the teacher instructional logs developed by Brian Rowan and his colleagues at the University of Michigan for the Study of Instructional Improvement. The log is a closed-ended instrument that has been shown in prior research to differentiate effectively between instruction in treatment schools, schools that adopted other programs, and schools where no special intervention was in place. Logs will be collected for a random sample of eight students per school in the winter and spring of 2015, 2016 and 2017, with an expected sample of approximately 24 logs per school per semester (8 logs per semester * 3 school years), which is sufficient to identity differences in instruction between the two groups of schools.

3. *The extent to which the evaluation will provide sufficient information about the key elements and approach of the project so as to facilitate replication or testing in other settings.*

The data described above will also allow us to describe in project reports the effort needed to implement the intervention and the lessons learned for successful operation. The study will be conducted in diverse contexts under conditions similar to those in which scale-up efforts will be conducted, so the findings of the evaluation will be based on a design that has both strong internal validity and strong external validity. It will be possible to document the nature of the services provided, the staffing arrangements, types of training provided staff, and the challenges encountered in implementation and promising responses.

At the end of the first two study years, MDRC will produce concise annual interim reports, which will provide SFA and the school districts with periodic updates on fielding of the evaluation, assessments of program implementation and the contrast with instruction in the control schools, as well as information on the impacts of The Reading Edge on students' reading achievement and other outcomes as data become available. These will be relatively short reports intended to examine the extent to which progress is being made, lessons learned and on-going areas of challenge. The final summative evaluation report will present all of the annual impact estimates, as well as the planned sensitivity and exploratory analyses, the analysis of the implementation fidelity data and the service contrast in instruction.

4. *The extent to which the proposed project plan includes sufficient resources to carry out the project evaluation effectively.*

Our evaluation budget of approximately $3.9 million, plus extensive support for schools randomly assigned to implement The Reading Edge, will allow us to conduct a high quality, rigorous study and share findings widely. Because the program will be offered to schools free of charge, recruitment should be relatively easy, and we can insist on clear buy-in from prospective schools and on their full participation in the evaluation, either as The Reading Edge or as control

schools. For measuring program impacts, we have budgeted for fielding a special evaluation test in the final study year and we can also rely on extant state test data when special testing is not feasible given resource constraints. Resources for The Reading Edge training and coaching will be the same in the evaluation program schools as those used in all Reading Edge schools, allowing us to study The Reading Edge as it is being more broadly scaled up under i3.

Required Evaluator Collaboration and Dissemination. The evaluation team will comply with the requirements of any program evaluation conducted by ED, participate in pertinent "Communities of Practice" activities, and accept technical assistance provided by the Department. The evaluation team will seek out venues for the dissemination of study findings both at the end of the annual impact assessments and at the end of the entire study. These will include presentations at professional conferences and meetings, and submissions to peer-reviewed journals. Finally, a restricted use file will be made available to other researchers who can conduct further analysis to verify and extend the findings.

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