Building Capacity to Support Struggling Adolescent Readers

Project Narrative

Table of Contents

Building Capacity to Support Struggling Adolescent Readers

A. Significance

As the premium on education in the labor market widens, states have rallied around the critical goal of graduating students who are prepared for success in college and career (NCSL, 2016). But for the 24% of U.S. eighth graders who currently score below basic in reading (NCES, 2015), the road ahead is perilous. A national longitudinal study of the relationship between reading levels and graduation rates reported sobering results: students who were unable to read proficiently by third grade were four times more likely than proficient readers to leave school without graduating (Hernandez, 2012). Twenty-six percent of students who cannot read proficiently by third grade *and* who spend at least one year living in poverty do not graduate from high school, a number that rises to 31% for black students and 33% for Hispanic students (Hernandez, 2012).

Failure to complete high school exacts a penalty in lower wages, higher unemployment, and poorer health, consequences that ripple beyond the individual through future generations (Burrus & Roberts, 2012; Reim, 2014). Society loses as well: drop outs contribute less to the economy and are significantly more likely to rely on social services and to be incarcerated, with estimated costs in the billions of dollars annually (Burrus & Roberts, 2012). But while improving adolescent reading would be a wise investment, the problem is complex and has proven exceedingly difficult to solve.

By middle school, students are expected to read texts with complex words, academic sentence structures, and sophisticated content. But multiple barriers limit access to grade level texts for struggling readers, including slow and inaccurate decoding, weak vocabulary, poor command of sentence structure and insufficient background knowledge (Catts, Compton, Tomblin, & Bridges, 2012). Interventions must therefore target both basic *and* higher-order reading skills.

Widely used programs have demonstrated some success with basic reading skills, but often show weaker impacts on comprehension skills. A meta-analysis of ten studies of multicomponent reading interventions documented only modest skill gains, and effect sizes for comprehension averaging only .10 (Wanzek et al., 2013). Other studies show impacts for basic skills but no significant impacts for comprehension (Schiller et al., 2012; Vaughn et al., 2010). Impacts are particularly weak when teachers rather than researchers implement the interventions, but teacher implementation is required for scalability (Scammacca, Roberts, Vaughn, & Stuebing, 2015).

A New Approach to Supporting Struggling Readers

With a grant from the Institute of Education Sciences (IES) to the SERP Institute, researchers from Wheelock College and Harvard University led the development of the Strategic Adolescent Reading Intervention (STARI) to support students in grades 6-8 who read 2-4 years below grade level. STARI addresses basic reading skills, but unlike other interventions, it seamlessly integrates those skills with complex comprehension tasks. And it differs significantly in the central role it gives to student motivation, both in topic selection and in instructional practices. Given the social and emotional changes of early adolescence, engaging middle school students is difficult (Eccles, 1999), particularly for students who struggle with reading (Unrau & Schlackman, 2006). If intervention activities appear irrelevant, or if materials are oversimplified, adolescents will not put forward the effort needed to improve reading skills (Kamil et al., 2008). ***STARI is innovative in addressing the student motivation challenge that has been so significant a barrier to the success of adolescent reading interventions***.

A rigorous study of STARI provides evidence that it significantly improves not only basic reading skills, but also deep reading comprehension (Kim et al., 2016; Snow et al., 2016). Because the risks and costs associated with leaving middle school unable to read proficiently are extraordinarily high, and because STARI has demonstrated an ability to produce achievement

gains in domains where progress has heretofore been elusive, we are applying for a mid-phase grant under **absolute priority 5: evidence-driven practices**.

STARI Program

STARI is offered at two levels: Level 1 for grades 6-7, and Level 2 for grades 7-8. Each level is comprised of four units organized around an essential question such as "What does it mean to be a family?" Units have three components: (1) novels, nonfiction, and poetry, (2) project-authored fluency passages, and (3) workbooks that provide structured practice on decoding and comprehension strategies. Sample STARI materials are included in *Appendix G*. STARI's design attends to four features that prior research evidence suggests effectively address the barrier of low student motivation: ***relevance, self-efficacy***, ***integration*** of basic skills work with challenging content, and ***peer collaboration*** (Guthrie, Wigfield, & You, 2012)**.**

Units on consequential topics such as bullying and the war in Iraq and Afghanistan are chosen for their ***relevance*** to students' lives. They provide opportunities for both perspective taking and critical thinking skills that are important for deep comprehension and are put to use in unit debates that students find highly motivating. For example, in one unit, students read varied texts with various portrayals of young people's first jobs. They construct arguments in preparation for the debate "Teens working: A good idea or bad idea?"

STARI aims to build ***self-efficacy*** through the matching of unit texts to students' reading levels so that success is within reach for all STARI students. Many adolescents with reading difficulties view themselves as less competent (Wolters, Denton, York, & Francis, 2014), so novels were strategically chosen that students can read and comprehend in the context of guided reading activities. Fluency passages written at four levels of difficulty allow students to be matched to the level that will promote greatest progress. These passages are aligned to the unit theme, providing background knowledge needed for participation in discussion and debate. ***Content in-***

tegration extends beyond the fluency passages, however. Typical interventions teach component skills in isolation, while STARI embeds decoding practice into cognitively complex and engaging activities. For example, students are taught strategies for chunking words such as 'underdog' and 'backstabber' in the bullying unit and 'Saddam' and 'combat' in the unit on the Iraq War.

Finally, STARI incorporates frequent opportunities for ***peer collaboration,*** a practice grounded in past research (Fuchs et al., 2011). STARI students work daily in partners to practice reading fluently and to contrast perspectives on highly topical readings. Students also work in teams during debate activities, voicing their own perspectives to peers.

STARI Impacts

STARI's impacts were assessed in a randomized trial in four districts in a northeastern state (Kim et al., 2016). The eight study schools qualified for Title I status with 50-90% of students eligible for free or reduced price lunch. The sample was predominantly African American, Latino, and Asian. All study participants were 6^{th}-8^{th} graders who scored below proficient on the state ELA assessment, placing them in the lowest third of test-takers statewide. Eligible students were randomly assigned to STARI or their school's own intervention program. A majority of control students received an alternative literacy intervention such as Wilson Just Words. Student outcomes were measured on the RISE, an ETS computer-based assessment of components of skilled reading for adolescents (O'Reilly, Sabatini, Bruce, Pillarisetti, & McCormick, 2012). More sophisticated reading skills that reflect expectations for deep comprehension were assessed with the ETS GISA assessment (Sabatini, O'Reilly, Halderman, & Bruce, 2014).

Results indicate that ***STARI students not only made gains in component reading skills as assessed by the RISE, they also demonstrated growth on 21st century critical reading skills as assessed by the GISA***, while control students made little progress in other intervention programs. In analyses that included all students randomly assigned to STARI, regardless of curricu-

lum exposure, STARI students outperformed control students on RISE subtests of word recognition (d = .20), efficiency of basic reading comprehension (d = .21), and morphological awareness (d =.18) (Kim et al., 2016). STARI students also outperformed control students on the GISA deep comprehension measure (d = .21) (Snow et al., 2016). Students, however, had different levels of exposure to STARI. Effect sizes for basic reading skills were almost double for students who were exposed to more of the curriculum (Kim et al., 2016). Findings were submitted to the What Works Clearinghouse on April 5, 2016 (reference no. 755352265).

The modest sample size in the prior study did not allow the researchers to answer questions about STARI's comparative effectiveness in schools with different characteristics or for students in different subgroups, such as English learners. The proposed larger scale project will produce new evidence on these questions and, more broadly, will clarify whether and how STARI can be implemented with positive impacts on students in widely varying sites.

B. Strategy to Scale

Unmet demand

STARI's development began a decade ago in response to unmet demand. In the context of a SERP research-practice partnership with the Boston Public Schools (BPS), the superintendent identified his district's greatest challenge as students arriving at high school unable to comprehend their textbooks. A diagnostic reading test indicated that the challenge was not limited to comprehension; about a third of middle school students also struggled with basic reading skills such as decoding—a previously unrecognized problem. When surveyed, BPS teachers said they needed more comprehensive and engaging approaches to adolescent reading intervention.

Direct evidence of widespread demand has surfaced in requests for STARI materials from educators across the nation. While SERP has not engaged in formal marketing, more than 1,500 registrants from 46 states have sought access to STARI, with new requests received daily.

Less than a year after being released to the public, approximately 30 teachers, administrators, and state representatives attended a STARI summer institute in 2016, which was met with very positive feedback. Demand for the program is also evidenced by the needs of the district partners to this proposal (see letters of support in *Appendix D*): Baltimore City Public School System (BCPSS), New York City Department of Education (NYC), District of Columbia Public Schools (DCPS), and the Mississippi Department of Education (MSDOE) which will select one of the state's highest need districts (state data below are therefore not representative). Partner demographic characteristics reported in *Figure 1* are well-matched with the notice-defined definition of high-need students, including high-poverty and high-minority populations (**absolute priority 1**). All demonstrate a need for a reading intervention program like STARI, with 39-70% of 5th to 7th graders performing below grade level on ELA state tests (NCES, 2017).

Figure 1: Demographics for Partner Districts

	New York City	Baltimore City	District of Columbia	State of Mississippi
Racial-ethnic composition (%)				
Black	27.1	80.6	73.6	49.3
Hispanic	40.5	9.4	14.4	2.9
White	14.8	7.9	8.8	45.4
Asian	15.5	<1	1.4	1.0
Free-reduced lunch eligible (%)	76.5	83.5	76	65
English language learners (%)	12.5	5.6	11	1.1
4-year graduation rate (%)	66.7	61.2	68.5	75.4
Below grade level ELA (%)[1]	70	61	51	39

[1] Calculated using state ELA tests in 2015 (NYC used the Regents Exam; Baltimore, D.C., and Mississippi used the PARCC) for 5th-7th grade students, since eligibility for STARI is based on spring tests for the year before. The numbers are an average across grades of the sum of students at the bottom two levels (in NYC: "well below proficient" and "partially proficient"; in Baltimore, D.C., and Mississippi: "did not yet meet expectations" and "partially met expectations").

Barriers to Scale

While there is demonstrable interest in STARI, the resources currently available from the SERP website (student materials, lesson plans, and program overviews) are only adequate for individual, highly motivated teachers who have enough prior training in reading to allow for independent implementation. The need for STARI is especially strong in high-poverty schools and districts, however, where teacher content knowledge is often weaker (Foote, 2005; Useem, 2001). It has been well-documented that reading interventions show weaker impacts on average in schools with high proportions of low income students (Carlisle, Cortina, & Zeng, 2010; Tivnan & Hemphill, 2005). Environmental stressors in high poverty schools impact student behavior and work habits, placing additional demands on teachers (Tough, 2012). These teachers require more than introductory workshops to succeed; they need longer-term professional development and intensive coaching support (Amendum & Fitzgerald, 2013; Carlisle, Cortina, & Katz, 2011).

Opportunities for teachers to learn is not the only barrier. Middle school teachers must be motivated to invest in developing the skills to teach reading. And they must work in conditions that support their success. The capacity of school-level leadership to motivate and support teachers can be an additional implementation barrier (Matsumura, Ganier, & Resnick, 2010).

For STARI to address the adolescent reading challenge at scale, SERP must build capacity to provide professional learning opportunities and implementation supports tailored to teachers who have no prior expertise in literacy, and must support school and district administrators to confront the implementation challenges frequent in high-poverty schools. More robust implementation supports are especially important as the program is expanded to districts outside the high-performing state where STARI was initially tested, and as the responsibility for implementation success expands beyond the program development team.

Scaling Strategy

We propose to develop the resources to support successful implementation of STARI at scale through this mid-phase grant. The resources will be designed to build capacity among three groups: coaches, teachers, and district/school administrators. We will iteratively improve the resources across the grant years with the goals of maximizing successful implementation among new users and minimizing involvement from STARI developers.

I. Resources for Coaches. Because effective coaching is key to sustaining schools' commitment to literacy interventions (Biancarosa, Bryk, & Dexter, 2010), and because coaches need significant support both to learn and promote innovative literacy practices (Gallucci, Van Lare, Yoon, & Boatright, 2010), we will develop two resources for coach capacity development.

A 30-hour coaching workshop will provide coaches with: a) ***knowledge of the research base*** on the components of skilled reading in adolescence, traits of struggling adolescent readers, the characteristics of effective literacy coaching, and principles of effective facilitation of professional learning communities; b) ***orientation to the STARI program and practices***, including its approach to building word recognition skills and fluency, and building comprehension through guided reading and student talk about text; c) ***identification of common implementation challenges*** with each of the program components and practices by providing rich opportunities to analyze video exemplars; and d) ***in-depth training in STARI coaching strategies,*** including how to coach practices that build motivation, how to work through issues of pacing, how to improve classroom management, and how to facilitate PLC meetings for STARI teachers.

Rich new training resources will be developed such as videos of effective classroom visits by a STARI coach, videos of debriefing meetings between coaches and STARI teachers, and protocols for common coaching dilemmas. All workshop presentations will be videotaped and archived. Scalability will be supported through the development of detailed plans for coaching

workshop delivery with video resources and slides for use in new sites after the grant ends.

An online monitoring tool for coaches will be developed to allow coaches to track quality of implementation and curriculum pacing in individual teachers' classrooms, supplemented by coaching protocols for intervening where implementation and pacing are problematic. Curriculum pacing emerged as an important mediator of program impacts on students' reading growth in the prior study (Kim et al., 2016); thus, coaches will need the ability to intervene rather than simply recording progress through the curriculum.

II. Resources for Teachers. While elementary teachers are trained to teach reading, middle school teachers are not (Ivey & Broaddus, 2000). In addition to learning to implement the STARI program, most middle school teachers will need to learn about components of skilled reading and the specific challenges of teaching reading to adolescents who have yet to be successful. We will develop a set of resources for teachers who are implementing STARI.

An 18-hour web-enhanced teacher training institute will embed much of the same research base knowledge and STARI program orientation content as in the coaching workshop. To supplement face-to-face delivery of content in the teacher training institute, teachers will be able to access presenter slides and online video of exemplary classroom practices, and interviews with STARI students, teachers, and coaches. To support scaling, key institute presentations will be produced separately and embedded in a well-scripted and resourced package for future use by district-based coaches, thus allowing for local, independently hosted STARI teacher institutes in later years of the grant and beyond.

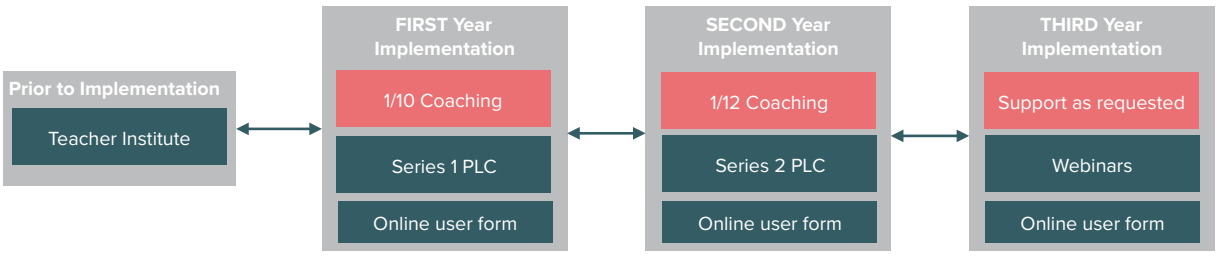
Two web-enhanced, year-long PLC series for beginner STARI teachers will be developed, and facilitated by coaches in each district. PLCs are a well-tested structure for building collegiality and commitment, focusing on student learning, and reshaping instruction (Vescio, Ross, & Adams, 2008). The year 1 series will be highly structured and resourced to create expe-

riences of high quality across sites. Monthly topics will address key STARI practices and obstacles teachers may encounter as they move through the curriculum. PLC series 1will be structured as a credit-bearing course through Wheelock College during the grant period, providing a professional advancement incentive for teachers. Each face-to-face PLC discussion will be preceded by viewing classroom video and print content on a course website and adding a teacher response (e.g., uploading a student work sample to share). PLC series 1 resources will be available as a stand-alone package beyond the grant period, but SERP will continue to structure arrangements with districts and universities to incentivize teachers' full engagement.

Monthly, coach-facilitated PLCs would continue in year 2 to address instructional components in greater depth. They will also be resourced with online components, but will be less tightly structured in order to respond to site-specific challenges and interests. We will develop initial assets for year 2 PLCs to address practices commonly requiring attention, but will expand the assets in response to observations and feedback from teachers.

A set of online resources for STARI teachers will include an online user forum (for all teachers) and a set of three webinars (targeting advanced implementation). The full sequence of supports for teachers appears in *Figure 2*. While we assume teachers will be adequately trained by the end of the second year, we will develop the webinars and online teacher forum to keep teachers actively engaged with STARI colleagues, and committed to improving their practice.

Figure 2: Sequence of Teacher Supports



The webinars will engage teachers in discussion of practices for more advanced implementation, such as strategies for fostering peer talk about text in guided reading, partner work, and debates. Webinars will be maintained as a low-cost support for districts after the grant period.

III. Resources for District and School Leaders. In order to create the organizational conditions for effective STARI implementation, we will iteratively design and user-test three supports for district and school administrators:

A STARI readiness tool will be developed to guide district administrators to assess schools' readiness to implement STARI and to take concrete steps to support effective implementation. In the prior study, district leaders sometimes selected schools for participation without considering whether they had the staffing ratios and scheduling capacity to support the intervention. A readiness tool can convey the prerequisites for implementing STARI without relying on SERP staff to guide communication between district leaders and principals.

A video-based introduction for principals and district leaders will be developed on STARI's core components and instructional practices, along with linked descriptions of the practical steps needed to implement the program (e.g., identification of students, selection of staff, scheduling, relationship of STARI to other interventions, school leadership roles, etc.).

An online tool for tracking and monitoring coaches' frequency and forms of contact (e.g. co-teaching versus brief check-in) with STARI teachers will be developed to address what are often widely varying levels of coach effectiveness when reading interventions are implemented at scale (Bean, Draper, Hall, Vandermolen, & Zigmond, 2010). Drawing on research on coaching effectiveness during STARI's initial development (Troyer, 2017) and on higher impact forms of literacy coaching (Atteberry & Bryk, 2011; Sailors & Price, 2010), the tool will help districts implement effective forms of STARI coaching after the grant period.

Feasibility of Successful Replication

How will we ensure that project completion will lead to successful replication in a variety of settings? First, the project will provide a four-year opportunity to design, pilot, gather evidence and feedback, and continuously improve the tools developed until we have an effective model for district capacity building (process described in detail below). Continuous improvement processes will be designed to identify and thoroughly address unanticipated barriers.

Second, schools in the sample will vary significantly and partner districts face varied challenges. In New York City, for example, the number of homeless students more than doubled in the past eight years to more than 100,000 students (ICPH, 2016). Baltimore has one of the lowest intergenerational mobility rates, with each childhood year spent in the city correlated with a reduction in yearly earnings of 0.7% (Chetty & Hendren, 2015). DCPS faces competition from a strong charter school network (45% of students attend charters) (Tuths, 2016). And Mississippi, in addition to finishing in the bottom five states on a ranking of school system quality, has the highest poverty rate of any state (Sauter, Comen, Stebbins, & Frohlich, 2016). Thus, we will have the opportunity to learn about and respond to implementation challenges in varied contexts, further enhancing the capacity to successfully support the scaling of STARI.

Third, STARI is owned by the SERP Institute, a non-profit organization whose mission is to bridge the worlds of research, design and practice. Unlike most university research teams that produce curricula, SERP supports districts as a core component of its mission and participates in national networks of districts focused on instructional innovation. Once capacity is built through this grant, SERP will work with states, districts and education associations such as the Council of Great City Schools and the Minority Student Achievement Network to reach a broader audience.

Lastly, MDRC, will contribute to successful replication by creating and disseminating several public deliverables: a policy brief for practitioners, a report on STARI's implementation and effects, webinars for practitioners, conference presentations, and a restricted use data file.

C. Project Design and Management Plan

The project's goal is to build the capacity needed to nationally scale STARI, an evidence-based program that addresses a key barrier to achieving college and career readiness for high-risk students in the U.S.: the ability to read and comprehend text in secondary school. Scalability requires the capacity to train large numbers of teachers and coaches to implement the program effectively, and to prepare administrators in diverse settings to support program implementation. This project's scaling strategy is to develop highly structured online resources and tools that embed expert knowledge that is otherwise difficult to scale. More immediately, the proposed project will work with teachers, coaches, and administrators in four districts, generating evidence about the conditions for effective STARI implementation in diverse settings that will inform the iterative design of the resources.

Logic Model

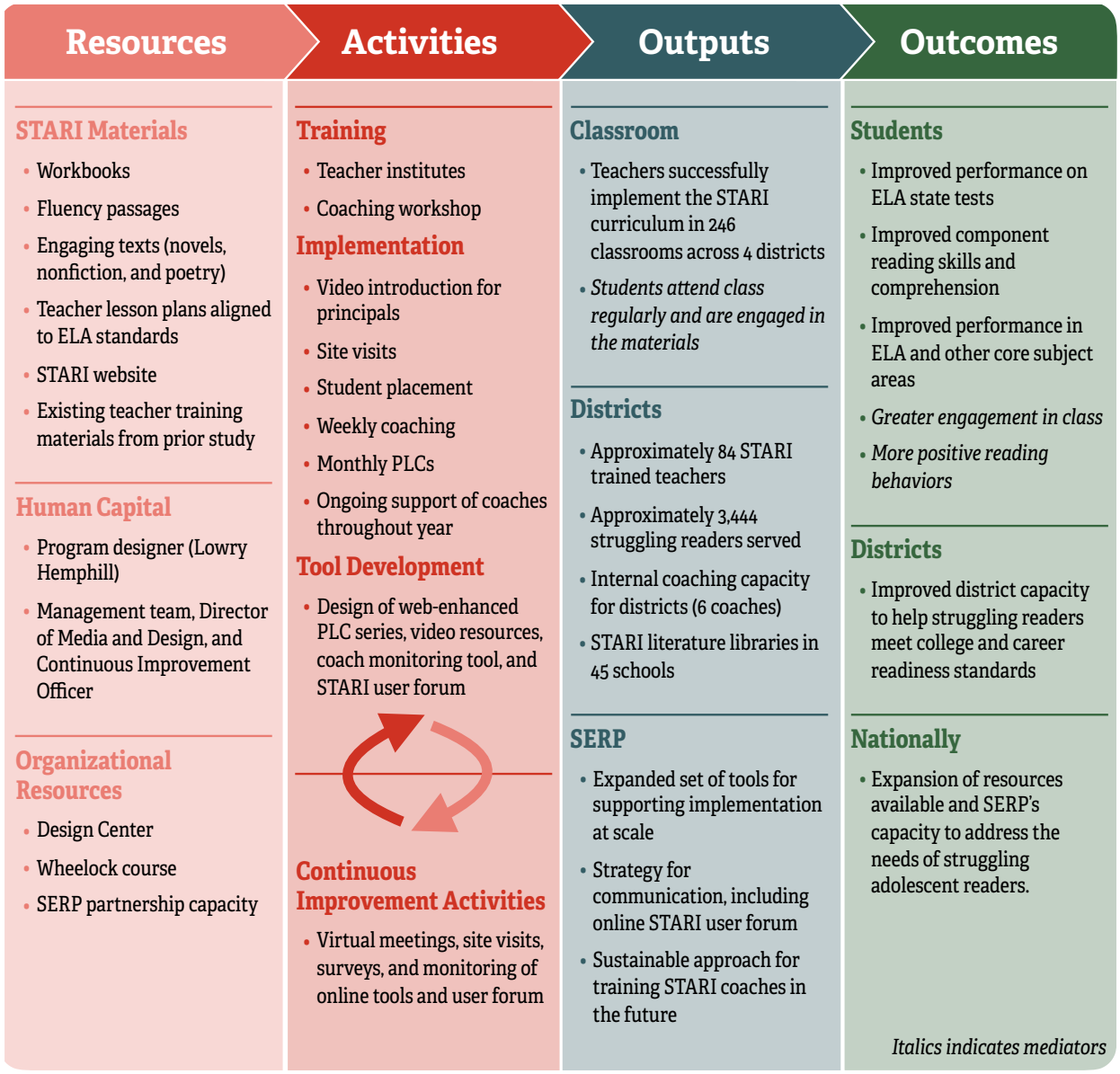
The logic model for accomplishing project goals is depicted in *Figure 3*, which specifies the resources we will bring to the project, project activities, the measurable outputs we will produce, and the ultimate outcomes we are targeting.

Resources. The most important resource for the project is the fully developed and rigorously tested STARI program, with materials for both students and teachers designed to professional standards. Existing teacher training materials used in the prior study as well as the existing STARI website (stari.serpmedia.org) are additional resources on which the project will build.

Human Capital Resources. The human capital resources for the project leverage the previously established, highly productive working relationships among members of the team that developed STARI: Suzanne Donovan (PI for the multi-faceted project that produced and tested STARI), Lowry Hemphill (lead STARI content developer), Allie Huyghe (measurement/quality control for STARI materials production), and Matt Ellinger (materials design and developer of

the STARI website).

Figure 3. Logic Model



Organizational Resources. The SERP Design Center is itself a resource for the project. Its staff bring capacity for user-centered design, illustration, video, and web design that will be essential for this project. The SERP national office has well developed approaches to establishing partnerships with school districts, and Wheelock College has provided the opportunity for teachers to receive course credits for the year 1 PLC series.

PR/Award # U411B170043
Page e38

Activities. The project will accomplish its goals by engaging in three types of activities: training, implementation, and tool development, and by engaging in a comprehensive continuous improvement process aimed at maximizing the quality of those activities and outputs.

Training. Six SERP ***coaches*** will be trained via a 30-hour coaching workshop (described previously) before the first year of implementation in 2018-19 (henceforth, years will refer to implementation years in schools and not budget years for the grant). The workshop will be delivered by program developer Lowry Hemphill, experienced STARI teachers, and experts in discussion-based teaching (Cathy O'Connor) and PLC facilitation (Michelle Forman). The workshop will be planned and operated by the Project Director and Assistant Project Director.

The coaching workshop will be repeated before the second year of implementation, this time with six district coaches who we anticipate will coach STARI half time (accompanied by other district responsibilities). The SERP coaches will play a central role in delivering this workshop, and will serve as the mentors for the district coaches. As more responsibility shifts to districts, project staff will closely monitor coaching and implementation quality, adding supports that may be needed for effective scaling.

An estimated total of 84 ***teachers*** will be trained across the grant period: 60 in year 1 and an additional 24 in year 2. In year 1 the 18-hour teacher introductory institutes in each of the four districts will be led by Hemphill and the Project Director. SERP coaches will participate in the year 1 teacher institutes in preparation for delivering the institutes independently in year 2—a role coaches will be expected to play as the program scales.

Implementation. The project will support STARI instruction in an estimated 246 classrooms spanning 45 schools across three years of implementation. The management team will use the newly developed STARI readiness tool to help district leaders identify schools with the capacity to implement the program. The Project Director will then work with school administrators

to identify teachers (preferably two per school for collegiality purposes), to identify eligible students, and to schedule STARI to maximize curriculum exposure and attendance.

The Assistant Project Director will ensure that all materials arrive at the school before the start of the academic year, and the coach will ensure on-the-ground readiness for implementation. Visits by the project director to each site will ensure that the project implementation is on track and according to plan.

The coaching ratio will be 10 teachers per coach in year 1, and approximately 12 teachers per coach in year 2. This coaching load is supported by research on effective literacy coaching and program sustainability (Atteberry & Bryk, 2011). As described in section B, STARI implementation will include coach-facilitated, structured PLCs that will standardize supports for continued teacher learning across sites and allow teachers to acquire course credits. The course description is included in *Appendix G*. Coaches will be guided to focus their individual classroom visits with the PLC topics, for example, observing teacher implementation of word study activities after the PLC on word study. New online tools will allow teachers to collect and respond to different levels of curriculum pacing and implementation quality in individual STARI classrooms. While there will be six full-time and six part-time district coaches in year 2, the experienced coaches will have responsibilities for two different PLCs (for new teachers and for second-year teachers), and for mentoring the new district coaches.

Tool Development. The key to scalability is the creation of resources that will allow training and implementation supports to be provided in the future without the direct involvement of the developers. If the project is funded, the collection and design of resources will begin immediately, including collecting video of STARI classrooms to demonstrate key instructional practices. Previously collected video will be reviewed to identify helpful segments for STARI coach training (e.g., What feedback would you give this teacher?). These video assets will be incorpo-

rated into online materials for the coaching workshop and teacher institutes.

After the initial coaching workshop and teacher institutes, Design Center staff will lead design sessions with the project team and intended product users to develop online resources to support future delivery of the content by others with less expertise. Some segments of presentations may be video recorded and embedded in an institute package, while others may be better delivered live with advance scripting for presenters.

Design Center staff will structure material for the year 1 PLC series into an online course, sequencing readings, video, and discussion topics across the year, and including online assessment activities when the course is completed for credit. They will also work with the project team to develop resources for the year 2 PLC series and webinars for advanced implementers.

User-centered design processes will be launched to develop the coach online monitoring tool and the user forum. The forum will be an online space for members to share ideas, upload new tools or student work samples, or pose questions for colleagues or experts. Members may be asked to provide feedback on materials for purposes of ongoing improvement.

Continuous Improvement. The plans for training, implementation, and tool development reflect our understanding of the drivers of successful implementation and barriers that must be addressed. However, we propose a formal continuous improvement (CI) process to identify unforeseen barriers or shortcomings in our proposed plan, and adaptations required for success in new contexts. The CI process will be modeled after the process used by the Institute of Healthcare Improvement (Langley et al., 2009) and applied to education by Bryk and colleagues (Bryk, Gomez, & Grunow, 2011).

A continuous improvement officer (CIO) who is deeply familiar with the STARI program, and who will have no responsibility for the project other than to work with the team to identify areas for improvement, will lead the effort. Formal evidence gathering will illuminate areas for

improvement in the training of coaches and teachers, the process of coaching itself, teachers' experiences with the STARI curriculum, and implementation supports. These will include:

- **Virtual meetings:** A dedicated, CIO-led monthly virtual meeting with coaches. Meetings will be separate so that the demands of operations do not override the reflective processes that fuel improvement. The CIO will also participate in other regularly scheduled meetings to identify areas of improvement and provide updates on changes made in response to feedback.
- **Visits:** The CIO will visit each participating district once in the fall as the program begins and again in the spring. The purpose will be to observe PLCs and classrooms to identify challenges, and obtain in-person feedback on program implementation from coaches and teachers.
- **Surveys:** Teachers will complete surveys after the teacher institute and at three points during the year. The surveys will include likert items asking about comfort teaching the program and open response items such as "What are your biggest challenges right now in teaching STARI?" and "How might current resources be expanded or improved?" Coaches will be asked to complete surveys after the coaching institute, after each PLC, and at year's end. Principals and district instructional leaders will complete brief surveys at the beginning and end of the school year about program satisfaction and implementation challenges. The CIO will use survey information to identify specific needs of teachers (e.g., differentiating STARI practices for ELs), coaches (e.g. guidance in getting teachers to engage students in discussion), and schools (e.g., administrator participation in PLC series).
- **Monitoring of online professional development content.** The CIO will monitor teachers' use of online resources and link this to other information from teacher surveys and coach reports about the usefulness and accessibility of these resources. As Downer, Kraft-Sayre, and Pianta (2009) report, teachers use only a modest proportion of web resources provided.
- **User forum:** An online forum will allow STARI teachers to post questions regarding all as-

pects of the program. While the management team and coaches will primarily be the ones to interact with teachers on the forum, the CIO will be responsible for monitoring this forum and ensuring that issues are addressed.

The CIO will be the hub for exchanging information from those experiencing problems to those who can address those problems. For example, suggestions related to design will be communicated to the Design Center, questions regarding implementation will be communicated to the management team and coaches, and questions related to PLC content will be relayed to the PIs. The CIO will also communicate regularly with the independent evaluator, MDRC, who will produce periodic internal feedback memos about program implementation (see Section D).

All issues will be addressed in a time frame appropriate to the problem. The CIO will follow up with the appropriate parties to ensure feedback was addressed. In addition, the project team will use findings about teachers' use of web supports to refine resources, especially as these are readied for use by districts implementing STARI on their own after the project ends.

Outputs and Outcomes. The project will produce outputs and outcomes at the student, district, and national levels.

Student Outcomes. The project will *significantly improve academic achievement for approximately **3,444 students***. This outcome will be measured by state tests in ELA and other core subjects administered by each district and the ETS-developed RISE assessment of components of skilled reading. Mediators of these outcomes will also be measured through student surveys, including students' reading engagement, reading behaviors, and self-efficacy.

District Outcomes. The project will improve districts' own capacity to prepare struggling middle school readers for success in high school and beyond. The long-term nature of this outcome prevents direct measurement during the grant period, but the *outputs* that will produce this outcome can be measured. These include the training of the 84 STARI teachers as well as dis-

tricts' own literacy leaders and coaches during the grant period. The participating schools will also be left with STARI literature libraries, reducing the cost of future implementation.

National outcomes: The project will create the capacity to support the use of STARI on a national scale. At the conclusion of the project, districts across the nation will be able to have local STARI coaches trained and fully equipped by SERP with tools to effectively support new STARI teachers in their districts. Trained coaches will have the materials and supports to host a local STARI teacher institute, to facilitate STARI PLCs, including carefully sequenced first year sessions that will systematically build the knowledge base and practices for teaching adolescent reading (leading to course or other training credits valued by teachers when feasible). District coaches will also have tools for monitoring and responding to differences in implementation quality. Webinars will continue to be hosted online to support local implementation.

While long term national impacts cannot be measured during the grant period, we expect to see an initial impact by the final year of the grant in terms of the number of districts served. Though activities and costs are not part of the grant, SERP expects to offer STARI coaching workshops to new interested districts in 2020-21, after all grant-related coach training is complete. Outputs that will contribute to this outcome are: a) an expanded set of tools to support implementation, detailed above; b) the capacity to train coaches at scale; c) scalable STARI readiness and implementation monitoring tools, and d) monitoring of the online STARI user forum.

Project Management

Management Team Responsibilities

Suzanne Donovan, SERP Executive Director, will serve as project PI, holding ultimate responsibility for all aspects of the project, supervising other members of the management team. She served as PI on a recent $19.4 million Reading for Understanding project that produced two professional quality curricular programs, and two RCTs. Donovan has established and maintained

long-term partnerships with numerous school districts, and will do so for this project.

Lowry Hemphill, Chair and Associate Professor at Wheelock College, will serve as Co-PI. She served as Co-PI on the Reading for Understanding project and led the development of STARI curriculum and training. Hemphill will train project coaches, interact with them regularly, and advise on implementation fidelity. She will oversee any needed revisions to the STARI curriculum and guide development of web-enhanced coach and teacher materials.

A full-time Project Director will manage field work in the four districts. S/he will be responsible for the day-to-day functioning of the project. In collaboration with the PIs, s/he will hire, supervise, and support the six coaches, oversee delivery of the monthly PLC series and teacher webinars, monitor coaching and implementation progress, plan summer institutes, and coordinate across the four districts, visiting each district three times each year to ensure effective communication between the project and schools.

Emily Schwartz, SERP Program Officer, will serve as Assistant Project Director, working closely with the Project Director and the PIs to ensure smooth and efficient coordination with field staff on all aspects of project management, purchasing and printing, web support, and planning for trainings. She will supervise the Administrative Assistant's work on the project, particularly with regard to quality control of materials and logistics for trainings and site visits.

Allie Huyghe, SERP Assistant Director, will serve as the Continuous Improvement Officer (CIO), interacting with all project participants in order to identify areas of improvement, and to refine processes, tools, or outputs to improve quality. She has been responsible for quality control of numerous SERP products, and currently serves as director for an IES funded project.

Matt Ellinger, SERP Director of Media and Design, will be responsible to design the project's web-based content and tools. He has led the development of digital science and math curricula with online supports for teacher learning. His 17 years of prior experience as a teacher and

principal has proven invaluable for crafting products that meet the needs of those in classrooms and schools.

Management Team Interactions

Interactions among the project team will reflect prior successful SERP cross-site collaborations. *Weekly meetings of the management team* (PI, Co-PI, Project Director, Assistant Project Director, CIO) will be held virtually in years 1-4 of the project. The design and evaluation teams will join as-needed. These meetings will cover every aspect of the project, including relationships with districts and schools, recruitment, planning for training, reports from specific school sites, financial management, and product design. The weekly schedule will ensure close attention to markers of progress and a quick response to reported challenges.

The *Project Director and Assistant Director* will work in close proximity, interacting daily. They will hold routine *weekly meetings with the six coaches* to debrief on progress and challenges in classrooms and interact more frequently as needed, especially during implementation start-up. The Project Director will also *visit each site three times per year* for an on-the-ground assessment of the project's status in each district.

Lowry Hemphill will work intensively with the coaches during the coaching workshop, and will *meet virtually with coaches monthly*. These meetings will provide an opportunity to debrief each PLC meeting, and plan for the next PLC meeting. Hemphill will also be available to mentor coaches more frequently in response to requests. Hemphill will also work with the CIO and the Director of Media and Design on the creation of resources and refinement of materials.

The CIO will participate in all regularly scheduled virtual meetings to identify areas of improvement and update on improvement progress. She will hold a separate *monthly virtual meeting with coaches to work collaboratively on areas of improvement* in addition to collecting online surveys at several points during the year. She will *visit each site twice per year* to speak

with coaches, administrators, and teachers in-person (as described previously).

Design Center staff will *consult with team members on design specifications and develop timelines* for collection of video and other artifacts, development of wireframes, layout, etc. Draft products such as the STARI readiness tool will be reviewed by other team members to assess how well the design serves the intended audience and purpose. Feedback from targeted users (coaches, teachers, or administrators) will be used by the design staff for product revision.

Timeline

The project timeline is divided into three phases: 1) launch, 2) implementation across three school years, and 3) evaluation and dissemination.

Phase 1: Launch

October 2017 – June 2018. Activities will include: hiring a Project Director and six coaches, establishing district partnership agreements and meeting IRB standards, recruitment, planning coaching workshop and teacher institutes, designing web supports for coaches and teachers, and identifying students. [*Milestones: Project Director hired, six coaches hired, 45 schools and their eligible students identified*]

Phase 2: Implementation.

Summer 2018. We will plan to recruit, train and support 60 STARI teachers to begin implementation in Fall 2018. District institutes will be held in all four districts. Materials will be purchased and shipped to implementing schools. *[six coaches trained, four district institutes held for a total of 60 new STARI teachers with voluntary attendance by district instructional leaders and principals, materials distributed]*

School year 2018-19. An estimated 60 teachers across 45 schools in four districts will implement STARI, with larger schools having two teachers. We assume teachers will teach a single intervention class while they are learning the program with an average of 14 students per

class. Teachers considered this class size optimal in the prior RCT, a conclusion corroborated by researchers' observations. Teachers will be coached weekly, and will participate in monthly coach-led, web-enhanced STARI PLCs. [*Milestone: 840 students served; 60 teachers supported*]

Summer 2019. We will plan to recruit, train, and support 24 additional teachers to account for an expected 20% attrition rate at the end of both years 1 and 2. Two teacher institutes will be held (the remaining districts will travel). Six half-time district coaches will be recruited and trained. Program evaluation will begin with students whose teachers are in their second year of teaching STARI in 2019-20; thus, STARI eligible students will be randomly assigned to the program in the summer. Materials will be purchased and shipped to implementing schools. [*Milestones: 24 teachers newly recruited and trained, 6 district coaches recruited and trained]*

School year 2019-20. An estimated 72 teachers will implement STARI across 45 schools. First-year teachers will teach a single STARI class, but we expect about half of second-year teachers will teach two sections (depending on the school's eligible population). The district coaches will work alongside the SERP coaches, visiting new teachers weekly, coaching second year teachers less frequently, and participating in the monthly coach-led, web-enhanced PLC series. [*Milestones: 1,344 additional students served; 72 teachers supported; 6 coaches mentored*]

School year 2020-21. No new project-supported teachers will be added, though districts may expand the program at their own expense. Teachers will receive coaching visits approximately biweekly, with coaching responsibility shifting primarily to district coaches. Webinars focused on advanced practices for effective classroom talk about text and strategies for teaching critical reading will be offered. The user forum will continue to be a source of support. [*Milestones: 1,260 additional students served, a minimum of 60 teachers supported*]

Phase 3: Evaluation and Dissemination

June 2021- September 2022. The MDRC evaluation team will work with districts to ob-

tain the data files for treatment and control students from each year of student participation in STARI and for the year following. They will complete all analyses and publicize results (as described previously in section B). SERP will share information with districts nationally about the STARI program and the opportunities for professional learning available. [*Milestones: all data will be obtained, cleaned, and analyses completed; dissemination plan launched; services offered to districts interested in implementing the STARI program*]

D. Project Evaluation

MDRC, a leading third-party evaluator for rigorous evaluations, will conduct an independent impact evaluation of STARI's effects using a student-level randomized control trial (RCT). The study will also examine the implementation of STARI to help inform SERP's continuous improvement and scale-up efforts and to generate lessons for future implementation.

Research Questions. The impact study will examine the effect of STARI on three key domains in its theory of change: *What is the impact of STARI on students' component reading skills, on their reading comprehension, and on their performance on state ELA assessments?* The evaluation will also explore STARI's effects in other content areas and the sustainability of effects: *What is the impact of STARI on students' performance on state tests in other core subjects (social studies, science, and math)? What is the impact of STARI on students' state test performance a year after the program?* To inform SERP's program design and scale-up efforts, the study will examine the implementation and success of the scale-up: *Can STARI be implemented with fidelity in a variety of settings? What are the drivers and inhibitors of successful implementation? To what degree were scale-up plans achieved?* Variation in STARI's effects will also be examined to generate lessons for future implementation: *Are the impacts of STARI larger for certain subgroups of students? Do the impacts of STARI vary across schools? Are contextual factors and/or specific features of the program associated with larger impacts?*

Participating Schools, Students, and Random Assignment. The impact of STARI will be evaluated using student-level random assignment in the 45 project schools. The study will be conducted in SY 2 (2019-20) and SY 3 (2020-21), so that schools can focus on startup and training in their first year of implementation. The target population for STARI and for the study will include students in grades 6-8 who are not proficient on their state's spring ELA test and who have not yet received STARI. Many more students will be eligible than can be served, so random assignment will be used to determine which students will be invited to enroll in STARI for one school year ("STARI group") or not be invited to enroll ("non-STARI group"). The non-STARI group will attend "business as usual" classes during the STARI period (another literacy intervention, a general academic support class, or a non-academic class). Random assignment will be conducted in the previous spring so that STARI classes can start on time in the fall. To ensure STARI classes are operate at capacity, random assignment will be limited to students who plan to return in the fall. A small number of students will be assigned to a non-research waitlist to fill any empty seats. Active parental consent will be obtained by MDRC prior to randomization.

Random assignment will happen at two time points. In SY 2, eligible and consenting students will be randomly assigned by school and grade level into STARI sections at their school. In SY 3, random assignment will be conducted again; the eligible pool will include students who were assigned to the non-STARI group in SY 2, as well as students newly identified as being not proficient on the ELA state test. These two consecutive rounds of random assignment will create the following experimental groups: students who were assigned to STARI in SY 2; students who were assigned to STARI in SY 3; and students who were not assigned to STARI in either year. These groups will make it possible to rigorously answer the study's impact questions.

Student Outcome Measures. Students' component reading skills and their reading comprehension will be measured using the ETS-developed Reading Inventory and Scholastic Evalua-

tion (RISE), a computer-administered assessment for students struggling with basic reading skills (Sabatini, Bruce, Steinberg, & Weeks, 2015). The test will be administered in the spring of SY 2 and SY 3. Unlike other assessments, the RISE includes subtests for the component reading skills that pose the most difficulty for struggling adolescent readers (e.g., decoding, word formation), as well as subtests for reading vocabulary and comprehension. The RISE was used in the earlier RCT study of STARI. Students' academic performance will be measured using their scores on state tests in ELA and other core content areas (math, social studies, science). To pool across districts, the key outcomes will be scaled scores transformed into z-scores and proficiency based on the test score cut-offs used by the state (May, Perez-Johnson, Haimson, Sattar, & Gleason, 2009). Students' reading behaviors, reading self-efficacy, and engagement in class will be measured using a spring student survey.

Meeting WWC Standards Without Reservations. The evaluation will meet the What Works Clearinghouse Evidence Standards without reservations. First, the study is based on a random assignment research design. Second, the study will meet the criteria for low overall and differential attrition. In prior MDRC studies (Corrin, Parise, Cerna, Haider, & Somers, 2015; Somers, Corrin, & Sepanik, 2010; Somers, Welbeck, Grossman, & Gooden, 2015), end-of-year achievement tests and surveys have been successfully administered to about 83% of students (differential attrition = 2-3%) and student records data have been available for about 92-96% of students in the program year and 80-88% a year later (differential attrition less than 1% in both years). Third, the assessments used in the study will be suitable and appropriate. Although co-developed by SERP, the RISE was designed by ETS and is not aligned with the program (it is used by non-STARI schools and districts). The subtests' reliability ranges from 0.72-0.94—exceeding the threshold of 0.64 used by the WWC for adolescent literacy programs (O'Reilly et al., 2012; Sabatini et al., 2015). State assessments also have high reliability by design and are

policy and priority-relevant. To reduce concerns about multiple hypothesis testing, a primary outcome will be pre-specified for each student domain.

Impact Analysis. The analysis will provide an intent-to-treat estimate of the impact of offering students the opportunity to enroll in STARI for one year. Impacts on a given outcome will be estimated based on all students for whom data on that outcome are available. The basic impact estimate will be from a regression model where the dependent variable is the outcome of interest, with the blocking of random assignment accounted for in the analysis. To improve the precision of impact estimates, the model will control for students' scores on ELA state tests from the spring before first-time random assignment and baseline characteristics (e.g., ELL status, IEP, and free/reduced price lunch). Because the covariates will come from administrative data, missing data rates will be low and it will be appropriate to impute missing values using a single imputation method (e.g., an EM algorithm) and to include a set of variables in the model to indicate which data points for each covariate have been imputed (Allison, 2001).

Power Analysis. The study will be able to detect effects similar in size to those in the Kim et al. (2016) evaluation of STARI. For impacts in the *program year*, the anticipated study sample is 5,124 unique students (STARI and non-STARI). State tests will be requested for all students, whereas the RISE will be administered to a random subsample of students (about 450 per SY) because effects on the RISE subtests are expected to be larger (these subtests are more proximal). The minimum detectable effect size (MDES) for impacts in the program year will be about 0.17 for RISE subtests and 0.07 for state tests. For impacts *one year after STARI*, the expected study sample is lower, 1,792 students, because the analysis will only include a subset of the students randomized in SY 2. The MDES for impacts on state tests one year after STARI is 0.13, which is still within a reasonable range. All MDES assume 80 percent power and an alpha of 0.05. Assumptions about the R^2 for the covariates (ranging from 0.20-0.32) and attrition rates (from 0.80-

0.92) are based on the prior study of STARI and other MDRC middle school studies.

Implementation Fidelity Study. The evaluation will assess how well schools are able to adhere to core program elements during the first three years of implementation. The amount of training received by STARI teachers and coaches will be measured using attendance records from institutes, monthly PLC meetings, and webinars. Teachers' engagement with the support materials will be measured using online usage statistics for the web-based resources. Data from the coach tracking tool will be used to measure the frequency and types of coaching sessions provided to teachers. Teachers' adherence to core STARI strategies and activities will be assessed using coach interviews supplemented by structured classroom observations by MDRC (observation protocol included in *Appendix G*). Daily attendance records kept by STARI teachers will be used to assess how many times each section met and the total hours of STARI that students received. MDRC will work with SERP to set *a priori* benchmark levels of acceptable implementation for each of STARI element, so that measures of overall fidelity can be assessed across schools, districts, and implementation years.

Scaling Study. The evaluation will assess the scale-up of STARI to new districts and schools by documenting SERP's plans for bringing STARI to the 45 study schools, and then reviewing the degree of success of those plans. This assessment will be based on interviews with members of the SERP team prior to scaling and at the end of the third year of implementation. MDRC will also identify the barriers and facilitators to successful implementation through coach and teacher interviews, and using data from the teacher and principal monitoring surveys administered by SERP, which will include items about implementation challenges.

Variation in Effects. To inform program design and future implementation, the evaluation will explore variation in impacts across schools and students. The study districts are diverse with respect to ethnicity, poverty, and size, making it possible to examine how STARI impacts may

vary for student subgroups, such as baseline reading proficiency, English language proficiency, IEP status, and grade level. With 45 schools, it will also be possible to examine whether STARI's effects vary across districts and schools, and to explore whether effects are correlated with school characteristics and/or with coaching or implementation quality. It will also be possible to examine whether effects differ by teachers' years of experience with the program.

Cost Analysis. A cost analysis will be conducted using the ingredients approach (Levin & McEwan, 2001). The ingredients method details the resources required to implement a program, in quantitative and qualitative terms (e.g., personnel are specified based on their qualifications, role, time commitments), and each ingredient is assigned a dollar value (market price or shadow price). Information about ingredients and costs will come from STARI and school budget documents; teacher salary schedules; the National Center for Education Statistics Fiscal Survey; and indices from the Bureau of Labor Statistics. Costs will be disaggregated by the constituent that bears them (e.g., schools, STARI) and by whether costs are annual or one-time. This exercise will be conducted for each school. Aggregating across schools, the analysis will produce an estimate of the average cost per STARI student—overall and by ingredient type (personnel, training, equipment, etc.)—by implementation year. The cost of the district reading programs offered during the grant period (and received by non-STARI students) will also be calculated using the same methods, so that relative costs can be examined.

Evaluation Resources. The $1.76 million evaluation budget includes resources for MDRC to assist SERP with site recruitment; prepare an analysis plan; develop instruments; collect and analyze data; and prepare a restricted use file. It includes time for MDRC to prepare periodic internal feedback memos for SERP and public deliverables described earlier. The researchers at MDRC who will lead the evaluation have expertise conducting large-scale random assignment evaluations of adolescent literacy interventions and with i3-funded evaluations.

References

Allison, P. D. (2001). Missing Data. *Quantitative Applications in the Social Sciences, 13*, Sage.

Amendum, S. J., & Fitzgerald, J. (2013). Does structure of content delivery or degree of professional development support matter for student reading growth in high-poverty settings? *Journal of Literacy Research, 45*(4), 465-502.

Atteberry, A., & Bryk, A. S. (2011). Analyzing teacher participation in literacy coaching activities. *Elementary School Journal, 112*(2), 365-382.

Bean, R. M., Draper, J. A., Hall, V., Vandermolen, J., & Zigmond, N. (2010). Coaches and coaching in Reading First schools. *The Elementary School Journal, 111*(1), 87-114. doi:10.1086/653471

Biancarosa, G., Bryk, A. S., & Dexter, E. R. (2010). Assessing the value-added effects of Literacy Collaborative professional development on student learning. *The Elementary School Journal, 111*(1), 7-34.

Bryk, A. S., Gomez, L., & Grunow, A. (2011). Getting ideas into action: Building networked improvement communities in education. *Carnegie Foundation for the Advancement of Teaching*.

Burrus, J., & Roberts, R. D. (2012). Dropping out of high school: Prevalence, risk factors, and remediation strategies. *R&D Connections, 18*, Princeton, NJ: Educational Testing Service.

Carlisle, J. F., Cortina, K. S., & Katz, L. A. (2011). First-grade teachers' response to three models of professional development in reading. *Reading & Writing Quarterly, 27*(3), 212-238.

Carlisle, J. F., Cortina, K. S., & Zeng, J. (2010). Reading Achievement in Reading First schools in Michigan. *Journal of Literacy Research, 42*(1), 49-70.

Catts, H. W., Compton, D., Tomblin, J. B., & Bridges, M. S. (2012). Prevalance and nature of late-emerging poor readers. *Journal of Educational Psychology, 104*(1), 166-181.

Chetty, R., & Hendren, N. (2015). The impacts of neighborhoods on intergenerational mobility: Childhood exposure effects and county-level estimates. *Harvard University and NBER*.

Corrin, W., Parise, L., Cerna, O., Haider, Z., & Somers, M.-A. (2015). *Case Management for Students at Risk of Dropping Out: Implementation and Interim Impact Findings from the Communities in Schools Evaluation*. MDRC: New York, NY.

Downer, J. T., Kraft-Sayre, M. E., & Pianta, R. C. (2009). Ongoing, Web-mediated professional development focused on teacher-child interactions: Early childhood educators' usage rates and self-reported satisfaction. *Early Education and Development, 20*(2), 321-345. doi:10.1080/10409280802595425

Eccles, J. (1999). The development of children ages 6 to 14. *The Future of Children, 9*(2), 30-44.

Foote, C. J. (2005). The challenges and potential of high-need urban education. *Journal of Negro Education, 74*(4), 371-381.

Fuchs, D., L.S., F., Thompson, A., Svenson, E., Yen, L., Al Otaiba, N., . . . Saenz, L. (2011). Peer-assisted learning strategies in reading: Extensions for kindergarten, first grade, and high school. *Remedial and Special Education, 22*(1), 15-21.

Gallucci, C., Van Lare, M. D., Yoon, I. H., & Boatright, B. (2010). Instructional coaching: Building theory about the role and organizational support for professional learning. *American Educational Research Journal, 47*(4), 919-963.

Guthrie, J. T., Wigfield, A., & You, W. (2012). Instructional contexts for engagement and achievement in reading. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 601-634). New York: Springer.

Hernandez, D. J. (2012). *Double jeopardy: How third-grade reading skills and poverty influence high school graduation*. Baltimore, MD: The Annie E. Casey Foundation.

Institute for Children Poverty & Homelessness. (2016). *On the map: The atlas of student homelessness in New York City*. Retrieved from http://www.icphusa.org/wp-content/uploads/2016/09/ICPH-Atlas-2016.pdf

Ivey, G., & Broaddus, K. (2000). Tailoring the fit: reading instruction and middle school readers. *The Reading Teacher, 54*(1), 68-78.

Kamil, M. L., Borman, G. D., Dole, J., Kral, C. C., Salinger, T., & Torgesen, J. (2008). *Improving adolescent literacy: Effective classroom and intervention practices: A practice guide*. (NCEE #2008-4027). Washington DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

Kim, J. S., Hemphill, L., Troyer, M., Thomson, J. M., Jones, S. M., LaRusso, M. D., & Donovan, M. S. (2016). Engaging struggling adolescent readers to improve reading skills. *Reading Research Quarterly*. doi:10.1002/rrq.171

Langley, G. J., Moen, R. D., Nolan, K. M., Nolan, T. W., Norman, C. L., & Provost, L. P. (2009). *The improvement guide: A practical approach to enhancing organizational performance*. San Francisco, CA: Jossey-Bass.

Levin, H. M., & McEwan, P. J. (2001). *Cost effectiveness analysis: Methods and applications*. Thousand Oaks, CA: Sage Publications.

Matsumura, L. C., Ganier, H., & Resnick, L. B. (2010). Implementing literacy coaching: The role of school social resources. *Educational Evaluation and Policy Analysis, 32*(2), 249-272.

May, H., Perez-Johnson, I., Haimson, J., Sattar, S., & Gleason, P. (2009). *Using State Tests in Education Experiments: A Discussion of the Issues*. (NCEE 2009-013). Washington DC:

National Center for Educaiton Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

National Center for Education Statistics. (2015). The Nation's Report Card: 2015 Mathematics & Reading Assessments. Retrieved from http://www.nationsreportcard.gov/reading_math_2015/ - reading/acl?grade=8

National Center for Education Statistics. (2017). Common Core of Data. Retrieved from https://nces.ed.gov/ccd/index.asp

National Conference of State Legislatures. (2016). No time to lose: How to build a world-class education system state by state. *NCSL Study Group Report*.

O'Reilly, T., Sabatini, J., Bruce, K., Pillarisetti, S., & McCormick, C. (2012). Middle school reading assessment: Measuring what matters under a RTI framework. *Reading Psychology, 33*(1-2), 162-189.

Reim, M. C. (2014). Barriers to high school completion create barriers to economic mobility *The Heritage Foundation, Center for Policy Innovation*. Washington, DC.

Sabatini, J., Bruce, K., Steinberg, J., & Weeks, J. (2015). SARA Reading Components Tests, RISE Forms: Technical Adequacy and Test Design, 2nd Edition. *ETS Research Report*, 13-32.

Sabatini, J., O'Reilly, T., Halderman, L. K., & Bruce, K. (2014). Integrating scenario-based and component reading skill measures to understand the reading behavior of struggling readers. *Learning Disabilities Research & Practice, 29*(1), 36-43.

Sailors, M., & Price, L. R. (2010). Professional development that supports the teaching of cognitive reading strategy instruction. *The Elementary School Journal, 110*, 301-322.

Sauter, M. B., Comen, E., Stebbins, S., & Frohlich, T. C. (2016). Where does your state rank? The best- and worst-run states. *USA Today*. Retrieved from

https://www.usatoday.com/story/money/business/2016/12/10/best--and-worst-run-states/95207486/

Scammacca, N. K., Roberts, G., Vaughn, S., & Stuebing, K. K. (2015). A meta-analysis of interventions for struggling readers in grades 4-12: 1980-2011. *Journal of Learning Disabilities, 48*(4), 369-390.

Schiller, E., Wei, X., Thayer, S., Blackorby, J., Javitz, H., & Williamson, C. (2012). *A randomized clinical trial of the Fusion Reading intervention on reading achievement and motivation for adolescent struggling readers*. Paper presented at the Paper presented at the Society for Research in Educational Effectiveness, Washington, D.C.

Snow, C. E., Kim, J., Hemphill, L., Troyer, M., Jones, S., LaRusso, M., . . . O'Reilly, T. (2016). *Experimental effects of the Strategic Adolescent Reading Intervention on reading comprehension outcomes.* Paper presented at the 23rd Annual Meeting, Society for the Scientific Study of Reading, Porto, Portugal.

Somers, M.-A., Corrin, W., & Sepanik, S. (2010). *The Enhanced Reading Opportunities Study Final Report: The Impact of Supplemental Literacy Courses for Struggling Ninth-Grade Readers*. Washington, D.C.: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

Somers, M.-A., Welbeck, R., Grossman, J. G., & Gooden, S. (2015). *An Analysis of the Effects of an Academic Summer Program for Middle School Students*. MDRC: New York, NY.

Tivnan, T., & Hemphill, L. (2005). Comparing four literacy reform models in high-poverty schools: Patterns of first-grade achievement. *The Elementary School Journal, 105*(5), 419-441.

Tough, P. (2012). *How Children Succeed: Grit, Curiousity, and the Hidden Power of Character*. Boston: Houghton Mifflin Harcourt.

Troyer, M. (2017). Teacher implementation of an adolescent reading intervention. *Teaching and Teacher Education*, 6521-6533. doi:10.1016/j.tate.2017.03.005

Tuths, P. (2016). A changing landscape: Examining how public charter school enrollment is growing in DC. *DC Fiscal Policy Institute.* Retrieved from http://www.dcfpi.org/wp-content/uploads/2016/04/DCFPI-Charter-School-Report-FINAL-April-2016.pdf

Unrau, N., & Schlackman, J. (2006). Motivation and its relationship with reading achievement in an urban middle school. *Journal of Educational Research, 100*(2), 81-101.

Useem, E. (2001). New teacher staffing and comprehensive middle school reform: Philadelphia's experience. In V. A. Anfara (Ed.), *The handbook research in middle level education* (pp. 143-160). Greenwich, CT: IAP.

Vaughn, S., Cirinio, P. T., Wanzek, J., Wexler, J., Fletcher, J. M., Denton, C. D., . . . Francis, D. J. (2010). Response to intervention for middle school students with reading difficulties: Effects of a primary and secondary intervention. *School Psychology Review, 39*(1), 3-21.

Vescio, V., Ross, D., & Adams, A. (2008). A review of research on the impact of professional learning communities on teaching practice and student learning. *Teaching and Teacher Education, 24*(1), 80-91.

Wanzek, J., Vaughn, S., Scammacca, N. K., Metz, K., Murray, C. S., Roberts, G., & Danielson, L. (2013). Extensive reading interventions for students with reading difficulties after grade 3. *Review of Educational Research, 83*(2), 163-195.

Wolters, C. A., Denton, C. A., York, M. J., & Francis, D. J. (2014). Adolescents' motivation for reading: Group differences and relation to standardized achievement. *Reading and Writing, 27*(3), 503-533.