

Promoting Student Success in Algebra I
OMB Clearance Request
Part A

March 2014

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Introduction

The Office of Elementary and Secondary Education (OESE) of the U.S. Department of Education (ED) requests OMB clearance for the *profiles of practice* component of the Promoting Student Success in Algebra I (PSSA) project. The purpose of this project is to develop technical assistance tools that provide actionable information about and greater insight into the practices and resources required to enable students to succeed in mathematics in Grades 6 through 9, with an emphasis on helping all students complete Algebra I by the end of Grade 9. To this end, PSSA will conduct literature reviews as well as focus groups and on-site data collections to generate a series of user-friendly technical assistance briefs that highlight practices in mathematics professional development, instructional coaching, instructional practices, curricular alignment, and supplementary learning opportunities.

Clearance is requested for the *profiles of practice* component of PSSA project, including its purpose, sampling strategy, data collection, and data analysis approach. This submission also includes the clearance request for the data collection instruments.

This package contains three major sections:

- (1) Promoting Student Success in Algebra I: Project overview
- (2) Supporting Statement for Paperwork Reduction Act Submission
 - Justification (Part A)
 - Description of Statistical Methods (Part B)
- (3) Appendix A – Instructional Practices Protocols
Appendix B – Curricular Alignment Protocols
Appendix C – Professional Development Protocols
Appendix D – Instructional Coaching Protocols
Appendix E – Expanded Learning/Double-Dose Algebra Protocols
Appendix F – Informed Consent Forms
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Appendix H – Recruitment Materials

Promoting Student Success in Algebra I

Project Overview

The Promoting Student Success in Algebra I (PSSA) project¹ aims to provide policymakers and practitioners with a deeper understanding of how instructional practices, professional development, instructional coaching, curriculum alignment, and supplementary learning opportunities can serve as possible avenues for improving student success in mathematics and particularly Algebra I, a critical gateway course in which student success is a strong predictor of high school graduation.

Recent emphases on the rigor and coherence of mathematics standards for preK–12 students, brought about by the Common Core State Standards in Mathematics (CCSSM; National Governors Association Center for Best Practices [NGACBP] & Council of Chief State School Officers [CCSSO], 2010) and other mathematics initiatives (e.g., National Council of Teachers of Mathematics, 2000), have placed increased demands on teachers to provide instruction that supports both procedural and conceptual understanding of mathematics. That is, in addition to teaching the procedures of mathematics, which is how proficiency in mathematics is often narrowly defined, teachers are now being asked to ensure that students (1) understand the concepts that underlie those procedures and (2) demonstrate practices that are associated with deep, active learning of mathematics. This focus on concepts and practices represents a significant shift for student expectations in mathematics, especially in Algebra I courses, which have traditionally focused on algebraic manipulations. This shift—coupled with the challenges that schools and districts face in ensuring that all students successfully complete Algebra I—underscores the need for high-quality resources to guide educators and policymakers in making careful and thoughtful decisions about how to structure instruction and supports to promote student success in algebra.

The PSSA project features the following three components:

- (1) **Literature Reviews:** The project team is conducting comprehensive literature reviews and writing corresponding briefs on the five topical areas of interest under this project: instructional practices, professional development for mathematics teachers, instructional coaching, curriculum alignment, and supplementary student supports for struggling students. The objective of each literature review and in turn the briefs that will be developed is to examine the potential utility of each topical area for promoting student success in Algebra I; to produce clear and concise summaries of what is known about these areas from existing literature; and to highlight the implications for policy-makers of the research findings.
- (2) **School-Based Perspective Briefs:** To gather school-based perspectives on the research findings identified in the literature reviews, the project team assembled a Technical Working Group (TWG) consisting of seven district-level mathematics coordinators and seven Grades 6–9 mathematics teachers. The two-day TWG meeting, held in April 2013, served as a vehicle for obtaining these policymakers' and practitioners' insights on how research findings identified through the literature reviews can be used to inform school-level policies and classroom-level instructional practices that promote student success in Algebra I. During the TWG meeting, the project team conducted semi-structured discussions with TWG members to provide opportunities for these individuals to interact with research findings related to the project's five topical areas and make connections to practice, thereby increasing the utility and relevance of the literature review findings. Following the TWG meeting, the project team presented the themes that emerged from these discussions in

¹ The contractors for this study are the American Institutes for Research (AIR) and Windwalker Corporation.

five school-based perspectives briefs (one for each topical area), which will provide actionable technical assistance information to educators and policymakers on using the five topical areas as avenues for enhancing student learning in mathematics. For example, with regard to expanded learning time, the TWG participants emphasized that extra instructional time for struggling students must be intentionally structured, using high-quality curricula administered by the highest quality teachers, and that these supplementary programs must be provided sufficient resources and professional development to accomplish the tall order of moving at-risk students toward success in Algebra I.

- (3) **Profiles of Practice:** Building on the information collected from the literature reviews and TWG meeting, the project team will identify and conduct in-depth profiles of 10 sites that are implementing programs or initiatives in one of the project's five topical areas of interest (two sites for each topical area). These technical assistance products for policymakers and practitioners will serve multiple purposes. They will document how programs are developed, detail how such programs are staffed and managed, describe important contextual factors, and include concrete examples that can be used to guide the implementation process of these practices. The content of the profiles of practice will be organized into three parts, each with a distinct purpose. First, the profile will include an overview of the practice (grounded in the literature review), highlighting key issues that were common to the data collection sites. Next, the profile will include a description of the practice as implemented in the site visited by the project team. These descriptions will be written in engaging, straightforward, non-technical language, such that the reader has a clear understanding of how the practice was developed, deployed, implemented, and sustained in each site. As appropriate, the narrative description will highlight contextual issues and challenges, including how school staff overcame these challenges. Finally, the practice profile will include artifacts: samples of rubrics, observation protocols, sample lesson plans, or curricular maps. Concrete examples from classrooms, schools, and districts will help demonstrate implementation in the way that narrative alone cannot. By combining the literature base, site-based descriptions, and artifacts of teachers' work, these practice profiles will become robust technical assistance tools.

The questions guiding the data collection for the development of these Profiles of Practice are outlined in Exhibit 1.

Algebra I Topics

The PSSA project is anchored around five topical areas—instructional practices, professional development, instructional coaching, curricular alignment, and supplementary student supports. The following definitions are being utilized in this project:

Instructional Practices. Among the more direct pathways to promoting student learning in algebra are the instructional strategies that teachers use to engage students with algebraic content. Although there are vigorous debates in mathematics education about the merits of particular instructional approaches (e.g., inquiry-based teaching vs. direct instruction), there is widespread agreement that mathematically proficient students possess both procedural fluency and conceptual understanding. Recent research and recommendations by national panels have highlighted the importance of learning mathematical skills and concepts simultaneously, rather than in isolation (Kilpatrick, Swafford, & Findell, 2001; National Mathematics Advisory Panel [NMAP], 2008; NGACBP & CCSSO, 2010). Accordingly, the PSSA project will examine instructional practices that mutually promote procedural fluency and conceptual understanding

in Algebra I specifically and in mathematics more generally. That is, it will focus on the practices that tie procedural fluency to conceptual understanding rather than practices that focus separately on procedural fluency or conceptual understanding.

Professional Development. Instructional practices can be improved to better target student learning needs through the use of instructional supports such as professional development and/or instructional coaching. Broadly, the term “professional development” describes any opportunity in which a teacher can further develop his or her knowledge, skills, dispositions, and/or teaching practice. Professional development can vary considerably in form (e.g., single-day workshops, summer institutes, professional learning communities) and focus (e.g., development of content knowledge, skill in implementing new instructional strategies, sharing of activities). This project will focus on professional development that supports teachers in the design and implementation of instruction that promotes student success in Algebra I.

Instructional Coaching. Research makes clear that effective professional development must directly relate to work in the classroom and include a mechanism by which teachers receive feedback (e.g., Jerald, 2012). For this reason, many schools and districts have begun to identify ways for teachers to work with coaches. Mathematics coaching is increasingly common, particularly in elementary schools (e.g., Association of Mathematics Teacher Educators, 2010) and has been shown to have an impact on mathematics student achievement in those grades (e.g., Campbell & Malkus, 2011). Within elementary and middle schools, mathematics coaches may be responsible for a number of activities, including planning for and providing professional development interventions; supporting teacher collaboration for grade-level planning; observing and co-teaching with teachers; teaching model lessons for other teachers to observe; analyzing standardized assessment data; and teaching only mathematics within an elementary school. For this project, instructional coaching will focus on the range of activities in which a coach, a specialist, a mentor, or a teacher leader works with other teachers to support the instructional activities (e.g., planning, implementing, and evaluating the impact of mathematics instruction) within a school or schools.

Curricular Alignment. As school districts search for ways to raise student success rates in Algebra I, they may look to students’ preparation to enroll in Algebra I. Ideally, students enter Algebra I having already attained the skills and understandings needed to be successful in the course. Thus, ensuring preparation for Algebra I has implications for the mathematics curriculum from Kindergarten through Grade 8. For this project, curriculum alignment will refer to the scope and sequence of standards for student learning that support preparation for Algebra I. Work focused on the curriculum alignment topical area will identify skills and understandings that support a strong preparation for Algebra I and provide recommendations for ensuring that learning standards addressing those skills and understandings are sequenced in a coherent manner throughout Grades K through 8.

Supplementary Learning Opportunities. Because Algebra I is increasingly required for graduation, districts and schools now offer a range of opportunities to better prepare (e.g., summer bridge programs that improve students’ general mathematics and pre-algebraic knowledge) and support (e.g., double-dose algebra, afterschool enrichment programs) student success in the course. “Double dose” algebra is among the most common types of supplemental learning programs for algebra students. These programs are typically offered during the school day by replacing an elective course with a supplemental algebra course and are not accelerated in that they provide more time for exposure to the curricular content presented in regular algebra courses. For this project, supplemental learning opportunities will focus exclusively on double-dose algebra programs with these features.

Exhibit 1. Promoting Success in Algebra I Guiding Questions

| |
|--|
| • Instructional Practices |
| <ul style="list-style-type: none"> ○ How do teachers prepare for and deliver instruction that promotes both conceptual understanding and procedural fluency? ○ Why was this instructional approach selected and how was it developed? ○ What contextual factors enable and constrain the successful implementation of this type of instruction? ○ How do teachers adjust instruction for students who do not have the prerequisite skills for Algebra I? ○ What technical assistance tools are needed by practitioners in order to deliver instruction that promotes both conceptual understanding and procedural fluency? |
| • Professional Development |
| <ul style="list-style-type: none"> ○ What types of professional development activities promote teacher knowledge, teacher practice, and student success in Algebra I? ○ Why was this professional development program selected and how was it developed? ○ What factors enable and constrain the implementation of these types of professional development activities? ○ How does this professional development support teachers of students with limited preparation for Algebra I? ○ What technical assistance tools support the effective delivery of professional development for Algebra I? |
| • Instructional Coaching |
| <ul style="list-style-type: none"> ○ How are instructional coaching programs that promote student success in Algebra I implemented and supported? ○ How do instructional coaching programs support instruction? ○ How does instructional coaching meet the needs of students who have limited preparation for Algebra I? ○ How is instructional coaching evaluated and how does this evaluation inform program modifications? ○ How are challenges associated with implementing an instructional coaching program to support student success in Algebra I overcome? ○ What technical assistance tools best support instructional coaches for Algebra I? |
| • Curricular Alignment |
| <ul style="list-style-type: none"> ○ How are curricular frameworks that are vertically aligned to support student preparation for Algebra I developed? ○ How are curricular frameworks that are vertically aligned to support student preparation for Algebra I implemented? ○ How is the impact of implementation of curricular frameworks that are vertically aligned to support student preparation in Algebra I evaluated and how does this evaluation inform change/modification? ○ How are challenges associated with developing and implementing a curricular framework that is vertically aligned to support student preparation for Algebra I overcome? ○ What technical assistance tools and supports can facilitate the implementation of aligned curricula for mathematics? |
| • Supplementary Learning Opportunities |

- o What are the components of successful supplementary learning opportunities in Algebra I?
- o What is the process by which students are required or encouraged to enroll in supplementary learning opportunities?
- o How do instructional activities in supplementary algebra enrich learning for students struggling in algebra?
- o What curricular resources and professional development do districts and schools provide for supplementary algebra teachers?
- o How do districts and schools support the success of supplementary learning opportunities in algebra?
- o How do programs individualize their instruction and focus to students' specific needs and challenges?
- o What challenges do schools or districts face in implementing high-quality supplementary algebra courses?
- o What technical assistance tools are needed to facilitate implementation of supplementary learning opportunities?

Supporting Statement for Paperwork Reduction Act Submission

Justification (Part A)

A1. Circumstances Making Collection of Information Necessary

High school dropout is a national crisis, with graduation rates across the United States averaging 74.9 percent (Stillwell, 2010)—that is, about one in four high school students fails to graduate from high school. The dropout problem is worst among students of color and students with disabilities (Greene & Winters, 2005; Stillwell, 2010; U.S. Department of Education, 2006). According to multiple estimates, a single cohort of dropouts costs the nation more than \$300 billion in lost wages and taxes (Alliance for Excellent Education, 2007; Rouse, 2005) and billions more in costs for public health, crime and justice, and public assistance (Levin, Belfield, Muennig, & Rouse, 2007). In addition, high school dropouts earn, on average, \$9,200 less per year than high school graduates, and their lifetime earnings are \$1 million less than those of college graduates (Bridgeland, Dilulio, & Morison, 2006). Furthermore, Adelman (1999; 2006) showed that the odds of completing college are twice as high for high school students who take a sequence of advanced mathematics courses in high school (1999; 2006).

ED has recognized this crisis for many years and most recently, through the High School Graduation Initiative (HSGI), provided significant amounts of funding for state and local education agencies (SEAs, LEAs) to develop comprehensive programs to attack the dropout problem. Although many factors contribute to the dropout crisis and no “silver bullet” exists, research points to Algebra I as a potentially fruitful area of study. Students who fail this gateway course by the end of Grade 9 are much more likely to drop out than students who successfully complete it (Orihuela, 2006; Silver, Saunders, & Zarate, 2008). Worse yet, failure rates in Algebra I are often high. For example, 20 to 30 percent of ninth graders in Michigan fail Algebra I (Higgins, 2008), and the percentages are similarly high in urban districts. More than five years after an “Algebra for All” initiative was implemented in Milwaukee, failure rates for freshmen were 47 percent (Ham & Walker, 1999), with similar failure rates (44 percent) in Los Angeles (Helfand, 2006). More recently, Loveless (2008) showed that high Algebra I failure rates may be related to policies that enroll too many students who are underprepared to succeed in the course. Accordingly, understanding how to promote success in Algebra I for all students is a highly relevant issue for policymakers and education practitioners, particularly as 45 states and the District of Columbia prepare to

implement the Common Core State Standards for Mathematics (CCSSM), which focus on the mastery of algebraic skills.

The series of practice profiles that are the focus of this OMB clearance request will provide descriptive information regarding the implementation and sustainability of practices that have been identified as effective, through a review of the literature, for promoting student success in Algebra I. They will investigate the ways in which districts developed and/or planned for implementation of a practice to support student success, the structures that were needed to sustain these practices, and the ways in which they were able to overcome challenges associated with implementation. Ultimately, the practice profiles will serve as technical assistance tools to guide districts that are considering one or more of these practices to make informed decisions about how the practice is implemented and the types of supports needed in order to support the implementation at the classroom level.

The data collection described in this OMB request are required elements of the ED's contract for the Promoting Student Success in Algebra I project (contract GS-10-F-0112J); hence, OMB clearance is required to fulfil the terms of this contract.

A2. Use of Information

The information will be used by the Department of Education and its contractor to produce and disseminate a resource guide that shall provide detailed guidance to Local Education Agencies in implementing practices that promote success in Algebra I. The information collected will ensure that the guide is thoroughly informed by the perspectives of administrators and practitioners.

The data collection associated with PSSA will be of immediate interest and significance to policymakers and practitioners both within and outside the HSGI community because it will offer actionable information on how to promote student success in Algebra I, particularly as districts and schools face increasing demands on teacher effectiveness and student performance in preparation for the Common Core State Standards for Mathematics (CCSSM). Building on the project's literature reviews and focus groups with district and school practitioners, PSSA's practice profiles will provide an in-depth examination of how research-supported practices in professional development, instructional coaching, instructional practices, curricular alignment, and double-dose algebra are developed, implemented, evaluated, and sustained in real-world contexts. The investigations will culminate in a series of clear, user-friendly technical assistance tools that showcase best practices from high-quality programs or initiatives representing each topical area. These reports will serve as technical assistance resources and feature detailed, step-by-step guides for how practitioners and policymakers can develop and implement the g practices examined.

A3. Use of Improved Technology to Reduce Burden

The recruitment and data collection plans for this project reflect sensitivity to issues of efficiency and respondent burden. Beginning with site selection, the project team will use Internet searches and existing Algebra I listservs to pinpoint ongoing programs or initiatives related to each topical area and will enter relevant information into a Microsoft Access database that will track each program/site, its characteristics, and its progression through the selection process. Once potential sites are identified, the team will use online materials available to determine the extent to which each program has undergone internal or external evaluation and corresponding evidence for effectiveness. The project team will conduct screening interviews by telephone to reduce respondent burden and allow a more flexible screening process. In addition, interviews and focus groups conducted as part of the fieldwork will be

audiotaped and then transcribed at a later date using Microsoft Word to reduce the amount of time participants will have to engage in data collection activities. Finally, a toll-free number and email address will be provided to participants, allowing them to contact project staff directly with any questions they have. The number and email address will be provided in all respondent communication.

A4. Efforts to Avoid Duplication of Effort

The project team will avoid duplication of effort by using preexisting data whenever possible (e.g., program information available on school or district websites, published program evaluations). The team also will determine whether any of the proposed data collection elements for the practice profiles can be addressed through preexisting policy documents. This will reduce the number of questions asked in the interviews and focus groups, thus limiting respondent burden and minimizing duplication of previous data collection efforts and information.

A5. Efforts to Minimize Burden on Small Businesses and Other Small Entities

No small business or other small entities will be involved in this project.

A6. Consequences of Not Collecting the Data

The data to be collected through PSSA's practice profile component are necessary to support ED's ongoing effort to help state and local education agencies implement comprehensive programs to address the issue of high school dropout. Through the High School Graduation Initiative (HSGI), authorized under Title I, Part H of the *Elementary and Secondary Education Act* (20 U.S.C. 6551), ED has invested significant amounts of funding for state and local education agencies (SEAs, LEAs) to implement effective and sustainable approaches to reducing high school dropout.

Failure to collect the data proposed through these practice profiles will inhibit ED from fulfilling its technical assistance role by preventing ED from gaining and disseminating insights into how programs that hold promise for improving student success in Algebra I—a pivotal course for students' high school completion and college attendance—are developed and implemented. Without this understanding, ED will be unable to provide HSGI grantees with a series of user-friendly technical assistance resources that detail important considerations and step-by-step processes for implementing similar programs in other schools and districts. Additionally, ED will not have these resources to share with the community of practice (CoP) established for LEAs participating in the federal School Improvement Grant (SIG) program or other policymakers and practitioners across the nation. This may hinder state-, district-, and school stakeholders' ability to make careful and informed decisions about promising strategies to bolster students' success in Algebra and high school completion.

A7. Special Circumstances Causing Particular Anomalies in Data Collection

None of the special circumstances listed applies to this data collection.

A8. Federal Register Announcement and Consultation

a. Federal Register Announcement

ED published a 60-day Federal Register Notice allowing public comment on this request for OMB clearance and has addressed any public comments received; ED also published a 30-day Federal Register Notice.

b. Consultations Outside the Agency

A Technical Working Group (TWG) of district officials and teachers was convened in April 2013 as part of this project to provide input on research findings related to the five topical areas and thereby inform the design and collection for the profiles of practice. The TWG consisted of seven district-level mathematics administrators from a selection of the 100 largest LEAs (five members) and rural LEAs (two members) as well as seven mathematics teachers from Grades 6–9, each one nominated by the corresponding LEA mathematics expert serving as a district-level representative in the TWG. TWG members represented various regions of the United States.

A9. Payment or Gift to Respondents

Respondents will not receive a payment or a gift as a result of their participation in this project.

A10. Assurance of Confidentiality

As education professionals, the project team is vitally concerned with maintaining the confidentiality and security of its records. The team will ensure the confidentiality of the data to the extent possible through a variety of measures. The contractors' staff have extensive experience collecting information and maintaining confidentiality, security, and integrity of interview, focus group, and observation data. All members of the project team have obtained their certification on the use of human subjects in research as well as federal security clearances. The team has also worked with the Institutional Review Board (IRB) at American Institutes for Research to seek and receive approval of this project, thereby ensuring that the data collection complies with professional standards and government regulations designed to safeguard project participants.

The following confidentiality and data protection procedures will be in place:

- The team will protect the confidentiality of all information collected for the project and will use it for technical assistance purposes only. Respondents' names will be used for data collection purposes only and will be disassociated from the data prior to analysis. As information is gathered from respondents or from sites, each respondent will be assigned a unique identification number, which will be used in analysis files as well as printout listings on which data are displayed. Information on respondents may be linked to their institution but not to any individually identifiable information.
- Responses to this data collection will be used to summarize findings in an aggregate manner (within a school or district), or will be used to provide examples of implementation in a manner that does not associate responses with a specific site or individual. In the publications, pseudonyms will be used for each site. The project team may refer to the generic title of an individual (e.g., "project director," or "eighth grade teacher") but neither the site name nor the individual name will be used. All efforts will be made to keep the description of the site general enough so that a reader would never be able to determine the true name or identity of the site or individuals at the site. The contractor will not provide information that associates responses or findings with a subject or district to anyone outside the study team, except as required by law.
- Project team members will be educated about the confidentiality assurances given to respondents and to the sensitive nature of materials and data to be handled. Each team member assigned to the project will be cautioned not to discuss data. In addition, prior to beginning interviews, focus groups, or classroom observations, a member of the staff will explain to participants what will be

discussed, how the data will be used and stored, and how confidentiality will be maintained. Participants will be instructed that they can stop participating at any time. The goals of the project, the data collection activities, the risks and benefits to participation, and a synopsis of how the data are to be used will be detailed in a consent form that all participants will read and sign prior to beginning any data collection activities. Signed consent forms will be collected from site visitors and stored in secure file cabinets at the contractors' offices.

- No information that identifies any participant will be released, except as required by law. Further, the team will use pseudonyms when referring to sites in project reports, and efforts will be made to mask distinguishing characteristics, as appropriate. All institution-level identifiable information will be kept in secured locations, and identifiers will be destroyed as soon as they are no longer required. Additionally, the project team will shred all interview protocols, observation rubrics, forms, and other hard-copy documents containing identifiable data as soon as the need for the hard copies no longer exists.
- All electronic data will be protected using several methods. The contractors' internal networks are protected from unauthorized access by defense-in-depth best practices, which incorporate firewalls and intrusion detection and prevention systems. Access to computer systems is password protected, and network passwords must be changed on regular basis and conform to the contractors' strong password policies. The networks are also configured so that each user has a tailored set of rights, granted by the network administrator, to files approved for access and stored on the local area network (LAN). Access to all electronic data files and workbooks associated with this project will be limited to team members from the contractors. Any files that are saved outside these secure folders (e.g., to transmit data files between project team members at American Institutes for Research and at its partner organization, Windwalker Corporation) will be encrypted and require a strong password to access. All project staff assigned to tasks involving sensitive data will be required to provide specific assurance of confidentiality.

A11. Sensitive Questions

This project will not include the collection of sensitive information. The only data to be collected directly from participants will focus on schools' policies and practices rather than on individual people. School documents and policies/practices are data within the public domain (e.g., schools communicate their policies and programs to their students and parents in a variety of ways). In this sense, the data are not sensitive in nature.

A12. Estimated Response Burden

It is estimated that the total hour burden for the data collections for the project is 162.2 hours. This totals an estimated cost of \$4,706.11 based on the average hourly wage of participants. The table below summarizes the estimates of respondent burden for the various project activities for each topic area.

The estimated burden associated with the Instructional Practices topical area is 28 hours. This figure includes

- 2 one-hour interviews with district officials for mathematics interviews;
- 10 one-hour interviews with Algebra I teachers;
- 2 one hour interviews with principals;

- 2 one-hour interviews with math department chair interviews;
- 2 one-hour interviews with school instructional coach in two schools;
- 10 one-hour interviews with remaining teachers who were observed.

The estimated burden associated with the Professional Development topical area is 44 hours. This figure includes

- 2 one-hour interviews with district math coordinators;
- 1 one-hour focus group with ten secondary school teachers;
- 1 one-hour focus group with ten secondary school principals;
- 1 one-hour focus group with ten elementary school mathematics coordinators;
- 1 one-hour focus group with ten high school mathematics department chairs.

The estimated burden associated with the Curricular Alignment topical area is 31 hours. This figure includes

- 4 one-hour interviews with district math leaders;
- 1 one-hour focus group with six teachers who teach classes prior to Algebra I (elementary, across schools);
- 1 one-hour focus group with eight teachers who teach classes prior to Algebra I (middle, across schools);
- 1 one-hour focus group with eight teachers who teach Algebra I (cross-schools);
- 1 one-hour focus group with five math coordinators (or math department chairs) from different schools.

The estimated burden associated with the Instructional Coaching topical area is 36 hours. This figure includes

- 2 one-hour interviews with district mathematics coordinator;
- 2 one-hour interviews with district official for math coaching;
- 4 one-hour interviews with a math coach in each school;
- 2 one-hour interviews with the principal in each school;
- 2 one-hour interviews with the math department chair or teacher leader in each school;
- 2 one-hour focus groups with up to five math teachers in each school.

The estimated burden associated with the Supplementary Learning Opportunities topical area is 18 hours. This figure includes

- 2 one-hour interviews with district math coordinators;
- 2 one-hour interviews with the principal (high school);
- 2 one-hour interviews with math department chairs or teacher leaders (1 from each of the 2 schools);
- 2 one-hour focus groups with supplementary algebra teachers (up to 5 teachers in a focus group for each of the 2 schools);
- 2 observations of supplementary algebra classrooms

Exhibit A.1. Estimated Response Burden

| Topical Area | Task | Total Sample Size | Estimated Response Rate | Number of Respondents | Time Estimate (in hours) | Total Hour Burden | Hourly Rate | Estimated Monetary Cost of Burden |
|---|--|-------------------------------------|-------------------------|-----------------------|--------------------------|-------------------|-------------|-----------------------------------|
| Instructional Practices | District Official for Math Interview | 2 | 100% | 2 | 1 | 2 | 39.46 | \$78.92 |
| | Algebra I Teacher Interview | 10 | 100% | 10 | 1 | 10 | 26.46 | \$264.60 |
| | Principal Interview | 2 | 100% | 2 | 1 | 2 | 43.36 | \$86.72 |
| | Math Department Chair or Algebra Team Lead Interview | 2 | 100% | 2 | 1 | 2 | 29.06 | \$58.12 |
| | Instructional Coach Interview | 2 | 100% | 2 | 1 | 2 | 26.46 | \$52.92 |
| | Interview with each teacher who is observed | 10 | 100% | 10 | 1 | 10 | 26.46 | \$264.60 |
| | Total for Instructional Practices Data Collection | 28 | -- | 28 | -- | 28 | -- | \$805.88 |
| | Professional Development | District Math Coordinator Interview | 4 | 100% | 4 | 1 | 4 | 39.46 |
| Focus Group of Principals (Elementary Schools) | | 10 | 100% | 10 | 1 | 10 | 43.36 | \$433.60 |
| Focus Group of Principals (Secondary Schools) | | 10 | 100% | 10 | 1 | 10 | 43.36 | \$433.60 |
| Focus Group of School Math Coordinators (Elementary) | | 10 | 100% | 10 | 1 | 10 | 26.46 | \$264.60 |
| Focus Group of High School Math Department Chairs | | 10 | 100% | 10 | 1 | 10 | 29.06 | \$290.60 |
| Total for Professional Development Data Collection | | 44 | -- | 44 | -- | 44 | -- | \$1,580.24 |

| | | | | | | | | |
|---|---|---|-----------|-----------|-----------|-----------|-----------|-----------------|
| Curricular Alignment | District Math Leaders Interview | 4 | 100% | 4 | 1 | 4 | 39.46 | \$157.84 |
| | Focus Group of Teachers Who Teach Classes Prior to Algebra I (elementary, across schools) | 6 | 100% | 6 | 1 | 6 | 26.46 | \$158.76 |
| | Focus Group of Teachers Who Teach Classes Prior to Algebra I (middle, across schools) | 8 | 100% | 8 | 1 | 8 | 26.46 | \$211.68 |
| | Focus Groups of Teachers Who Teach Algebra I (cross-schools) | 8 | 100% | 8 | 1 | 8 | 26.46 | \$211.68 |
| | Focus Group of Math Coordinators (or Math Department Chairs) From Different Schools | 5 | 100% | 5 | 1 | 5 | 26.46 | \$132.30 |
| | Total for Curricular Alignment Data Collection | 31 | -- | 31 | -- | 31 | -- | \$872.26 |
| | Instructional Coaching | District Official for Math Coaching Interview | 2 | 100% | 2 | 1 | 2 | 39.46 |
| Math Coaches (in each school) Interviews | | 4 | 100% | 4 | 1 | 4 | 26.46 | \$105.84 |
| District Math Coordinator Interview | | 2 | 100% | 2 | 1 | 2 | 39.46 | \$78.92 |
| Principal (in each school) Interviews | | 2 | 100% | 2 | 1 | 2 | 43.36 | \$86.72 |
| Math Department Chair or Teacher Leader (in each school) Interviews | | 2 | 100% | 2 | 1 | 2 | 29.06 | \$52.12 |
| Focus Groups of Math Teachers (in each School) | | 10 | 100% | 10 | 1 | 10 | 26.46 | \$264.60 |
| Total for Instructional Coaching Data Collection | | 36 | -- | 36 | -- | 36 | -- | \$753.84 |

| | | | | | | | | |
|---|---|--------------------------|--------------------------------|------------------------------|-----------------------------------|----------------------------------|---------------------|--|
| Supplementary Learning Opportunities | Principal Interview (High School) | 2 | 100% | 2 | 1 | 2 | 43.36 | \$86.72 |
| | District Math Coordinator | 2 | 100% | 2 | 1 | 2 | 39.46 | \$78.92 |
| | Supplementary algebra teacher focus groups | 10 | 100% | 10 | 1 | 10 | 26.46 | \$264.60 |
| | Math Department Chair/Teacher Leader Interview | 2 | 100% | 2 | 1 | 2 | 29.06 | \$58.12 |
| | Observation of supplementary algebra classrooms | 2 | 100% | 2 | 1 | 2 | 26.46 | \$52.92 |
| | Total for Supplementary Learning Data Collection | 18 | -- | 18 | -- | 18 | -- | \$541.28 |
| TOTAL for Topical Areas: | | 157 | -- | 157 | -- | 157 | -- | \$4,553.50 |
| Consent Forms | Task | Total Sample Size | Estimated Response Rate | Number of Respondents | Time Estimate (in minutes) | Total Burden (in minutes) | Hourly Rate* | Estimated Monetary Cost of Burden |
| Consent Forms | Read and Sign Consent Form | 157 | 100% | 157 | 2 | 314 or 5.2 hours | 29.16 | \$152.61 |
| TOTAL for Topical Areas and Consent Forms: | | 314 | | 157 | | 162.2 | | \$4,706.11 |

*The hourly rate is an average rate, which was calculated by dividing the total monetary cost of burden (\$4,447.25) by the total number of respondents (157).

A13. Estimate of Annualized Cost for Data Collection Activities

There are no additional annualized costs for data collection activities associated with this data collection beyond the hour burden estimated in item A12.

A14. Estimate of Annualized Cost to Federal Government

The estimated cost to the federal government for the PSSA profiles of practice, including development of the data collection plan and data collection instruments as well as data collection, analysis, and report preparation, is \$819,046 for the two years of the project, or approximately \$409,523 per year.

A15. Reasons for Changes in Estimated Burden

This is a request for a new approved data collection; therefore there is a program change increase of 162 annual hours.

A16. Plans for Tabulation and Publication

Data collected for each site will be analyzed and included in five profiles of practice, one for each topical area. Each report will begin with an introductory section that (1) features an audience-appropriate overview of the topic and (2) outlines common themes that emerged from the data analysis. This introduction will be followed by short (1–2 pages) descriptions of each of the two sites visited per profiles of practices. Each site description includes (a) state, district, and school contexts; (b) stakeholder experiences planning, implementing, evaluating, and sustaining the initiative or program explored and (c) short- and long-term outcomes associated with the implementation of the program or initiative. These site descriptions will provide illustrative descriptions of practice to provide readers with context for interpreting the following section of the reports: a step-by-step guide detailing how practitioners in other schools and districts can develop and implement similar programs. The proposed timeline for data collection activities and data dissemination is described in detail below and shown in Exhibit A.1.

Exhibit A.1.: Timeline for Data Collection Activities and Reporting

| Activity | Scheduled Date |
|---|-----------------------|
| Final draft project plan and OMB package | Fall 2013 |
| Submission of OMB Package | January 2014 |
| Site visitor training | March 2014 |
| Data collection begins | April 2014 |
| Data collection ends | June 2014 |
| Data analysis begins | June 2014 |
| First draft of practice profiles reports to ED | August 2014 |
| Second draft of practice profiles reports to ED | October 2014 |
| Third draft of practice profiles reports to ED | November 2014 |
| Final draft of practice profiles reports to ED | December 2014 |
| ED approval of final practice profiles reports | January 2015 |
| Dissemination of practice profiles reports | February 2015 |

Preparation for the practice profiles began with the team’s development of a data collection plan, interview and focus group protocols, and classroom observation rubrics for the varied respondents targeted in the PSSA profiles of practice. Data collection will begin in April 2014 and is expected to end in June 2014. During this time, members of the team will travel to selected sites to conduct interviews, focus groups, and observations. The field team will ensure accuracy of the data and begin analyzing the data as described in the analytic approach section of this submission. Data analysis will begin in June 2014, shortly after data collection starts, once interview transcripts and observations notes are ready for coding. The contractors will submit drafts of the five reports described above to ED for review and comment, with the expectation that ED will review and provide feedback on three drafts before the final version is approved.

In addition to the five reports, the findings will be disseminated by way of hosted moderated discussions within the community of practice (CoP) developed by Jobs of the Future (JFF) for the School Turnaround Learning Community discussion group for secondary schools. The 72-hour moderated discussions will

incorporate 250-word summaries of each report and questions to stimulate conversation. These will be conducted within the online CoP developed by JFF for each report.

A17. Display of Expiration Date for OMB Approval

All data collection instruments will display the OMB approval expiration date.

A18. Exceptions to Certification for Paperwork Reduction Act Submissions

No exceptions to the certification statement identified in Item 19, “Certification for Paperwork Reduction Act Submissions,” of OMB Form 83-I are requested.