



Request for Applications

Partnerships and Collaborations Focused on Problems of Practice or Policy

CFDA Number: 84.305H

<u>COMPETITION</u>	Letter of Intent Due Date	Application Package Available	Application Due Date
	https://iesreview.ed.gov	http://www.grants.gov	http://www.grants.gov
September	June 6, 2013	June 6, 2013	September 4, 2013

IES 2013

U.S. Department of Education

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PART I: GENERAL OVERVIEW

1. REQUEST FOR APPLICATIONS

In this announcement, the Institute of Education Sciences (Institute) requests applications to its new Partnerships and Collaborations Focused on Problems of Practice or Policy grants program (Collaborations Program). Through the Collaborations Program the Institute seeks to improve the quality of education for all students through advancing the understanding of and practices for teaching, learning, and organizing education systems. This research is to be done in through close collaboration with practitioners and policymakers¹ through the partnering of researchers with U.S. State and local education agencies. Grants are to be provided under three topics:

- 1) Researcher-Practitioner Partnerships in Education Research
- 2) Continuous Improvement Research in Education
- 3) Evaluation of State and Local Education Programs and Policies

For the FY 2014 competition, the Institute will consider only applications that meet the requirements described in this Request for Applications.

The Institute has focused on increasing both the rigor and responsiveness of education research. Rigor defines the methodological quality of the research and provides confidence in its results. To improve rigor, the Institute has established methodological requirements for research and a peer-review process and has supported methodological research. Responsiveness concerns the usefulness of the research for education decision makers.² To increase responsiveness, the Institute requires research to address practical issues in U.S. education and to address education outcomes of students.

However, the Institute remains concerned that education research is not making as large a contribution to policy and practice as it could, perhaps because researchers have not focused on the questions or issues that policymakers and practitioners are most concerned about or have not communicated their findings in ways that are understandable and useful. To address this concern, the Institute has established the new Collaborations Program. The partnerships established under the Collaborations Program are intended to increase the responsiveness of the research through the required inclusion of education agencies as partners from the start of the work with the identification of the research questions, design of the project, carrying out of the research, and adoption and dissemination of the results.

The new Collaborations Program is intended to complement the Education Research Grants program (84.305A). For example, under the first topic of the Collaborations Program (Researcher-Practitioner Partnerships in Education Research), applicants can propose the development of a long-term partnership focused on a specific education issue of interest to the education agency, initial research on this issue, and planning for future research. Once it has completed its original project, the partnership may consider applying for another grant from the Institute. If further data collection and analysis on the education issue were needed, the partnership could apply for an Exploration grant under the Education Research Grants program. If the partnership sought to evaluate a program, it could apply to the third topic under the Collaborations Program (i.e., Evaluation of State and Local Education Programs and Policies) or to the Efficacy and Replication goal of the Education Research Grants program. Depending on their objectives, the partnership could also apply for another grant under the Collaborations program. For instance, if the partnership wants to undertake a short-cycle approach to the design, development, and testing of a new product or procedure, it could apply under the Continuous Improvement Research in Education Topic. Where it would apply depends on the type of work to be done.

¹ The Institute uses the term *policymaker* primarily to mean State and local education agency personnel who decide upon the programs and policies to be implemented across their agencies and within their schools.

² The work of the Institute is grounded in the principle that effective education research must address the interests and needs of education practitioners and policymakers, as well as students, parents, and community members (see <http://ies.ed.gov/director/board/priorities.asp> for the Institute's priorities).

A. Changes in the FY 2014 Request for Applications

The Researcher-Practitioner Partnerships in Education Research topic was previously a separate grant program. It has been merged into the Collaborations Program as Topic 1. Major revisions for FY 2014 include:

- The limit of one application per institution has been removed.
- The requirement to analyze the education agency's administrative data has been removed.
- The requirement to prepare a future application to the Institute has been changed to a requirement for a plan for future research.
- A new section has been added requiring you to track the progress of the partnership and examine its success.

The Continuous Improvement Research in Education topic is a new topic (Topic 2) and so has no revisions.

The Evaluation of State and Local Education Programs and Policies topic was previously a separate grant program. It has been merged into the Collaborations Program as Topic 3. Major revisions for FY 2014 include:

- A dissemination plan is required.
- The Request for Applications now explicitly recognizes that State and local education agencies may adjust implementation of the program or policy being evaluated in response to early findings from the project.

2. GENERAL REQUIREMENTS FOR THE COLLABORATIONS PROGRAM

A. Focus on Student Outcomes

The Institute seeks to improve the quality of education for all students through advancing the understanding of and practices for teaching, learning, and organizing education systems. Applications to the Collaborations Program can address typically developing students as well as students with or at risk for disabilities³ from prekindergarten through postsecondary and adult education.

All research supported under the Education Research Grants program must address the education outcomes of students. The Institute is most interested in student academic outcomes and student social and behavioral competencies that support success in school and afterwards.

The Institute supports research on a diverse set of student academic outcomes that fall under two categories. The first category includes academic outcomes that reflect learning and achievement in the core academic content areas (e.g., measures of understanding and achievement in reading, writing, math, and science). The second category includes academic outcomes that reflect students' successful progression through the education system (e.g., course and grade completion and retention in grades K through 12; high school graduation and dropout; postsecondary enrollment, progress, and completion).

³If you propose to study children at risk for developing disabilities, you must present research-based evidence of an association between risk factors in the proposed sample and the potential identification of specific disabilities. The determination of at risk for disabilities status must be made on an individual child basis, and the method used to identify at-risk status must be described in your application and applied to your sample during the sample selection process (general population characteristics such as low-income or English Learner are not acceptable indicators of at-risk status).

The Institute recognizes that a range of student social skills, attitudes, and behaviors may be important to students' academic and post-academic success. These social and behavioral competencies may be the primary focus of your research so long as your application makes clear how they relate to academic outcomes. The Institute encourages applicants to include measures of both the social/behavioral competencies and the academic outcomes expected to be affected by them.

The Institute also sets out the student academic outcomes of interest by education level as follows:

- For prekindergarten (3- to 5-year-olds), school readiness is the primary student academic outcome (e.g., pre-reading, language, vocabulary, early science and mathematics knowledge, social and behavioral competencies that are seen as a key component of school readiness).
- For kindergarten through Grade 12, the primary student academic outcomes include learning, achievement, and higher-order thinking in the core academic content areas of reading, writing, mathematics, and science measured by specific assessments (e.g., researcher-developed assessments, standardized tests, grades, end-of-course exams, exit exams) and student progression through education as measured by course and grade completion, retention, high school graduation, and dropout.
- For postsecondary education (Grades 13-16), the primary student academic outcomes are access to, persistence in, progress through, and completion of postsecondary education which includes programs for students in developmental and bridge programs as well as programs that lead to occupational certificates, associate's or bachelor's degrees. For students in developmental programs, additional outcomes include achievement in reading, writing, English language proficiency, and mathematics. The Institute has also targeted student achievement in postsecondary gateway courses for mathematics and science degrees and introductory English composition courses.
- For adult education (i.e., for students at least 16 years old and outside of the K-12 system who are engaged in adult basic education, adult secondary education, adult English literacy programs, and GED preparation), the primary outcomes are student achievement in reading, writing, English language proficiency, and mathematics as measured by specific assessments, as well as access to, persistence in, progress through, and completion of adult education courses and programs.

B. Requirements for Applying Institutions

- At a minimum, applications must include a research institution and a U.S. education agency proposing to work together in partnership.
- Applicants that have the ability and capacity to conduct scientifically valid research are eligible to apply as the research institution partner(s). These include, but are not limited to, non-profit and for-profit organizations and public and private agencies and institutions, such as colleges and universities, and research firms.
- The U.S. education agency partners may include:
 - State education agencies such as education agencies, departments, boards and commissions that oversee early learning, elementary, secondary, postsecondary/higher, and adult education. The term *State education agencies* includes U.S. Territories' education agencies and tribal education agencies.
 - Local education agencies which are primarily public school districts.⁴

⁴ As defined in the Elementary and Secondary Act (ESEA), a local education agency is a public board of education or other public authority legally constituted within a State for either administrative control or direction of, or to perform a service function for,

- Non-public organizations that oversee or administer schools (e.g., education management organizations) will need to include the public entity that has oversight of the schools as the agency partner.
 - The Institute recognizes that some local education agencies include only one school. Such agencies are eligible to apply, but the Institute notes that reviewers may consider the work less significant than projects that involve multiple schools.
- Community college districts.
- State and city postsecondary systems.
 - If there is a State or city higher education agency that oversees the postsecondary system, they should be included as another agency partner.
 - If there is no State or city education agency that oversees the postsecondary system, the system can apply as the sole agency partner.
 - A postsecondary system that applies as an education agency partner cannot also serve as the research institution partner in the same project.
- The Institute also encourages partnerships to include other organizations that can contribute to the successful outcome of the work such as community organizations, parent organizations, and teacher and staff organizations.
- Applications must include at least one Principal Investigator from a research institution and at least one Principal Investigator from a State or local education agency. All should have expertise in the education issue to be addressed, and at least one of the State or local agency's Principal Investigators must have decision-making authority for the issue within their education agency.⁵ The partnership must choose one Principal Investigator to be the Principal Investigator/Project Director who will have overall responsibility for the administration of the award and interactions with the Institute. All other Principal Investigators should be listed as Co-Principal Investigators.
- Partnerships may include more than one State or local education agency. The inclusion of more than one education agency should be justified based on their similarities and shared interests in the proposed work (e.g., contiguous school districts or similar types of districts that seek to address the same issue). You should avoid the appearance of creating a convenience partnership, that is, a group of State or district education agencies that have little in common besides their relationship with the research institution.
- Partnerships may include more than one research institution. The inclusion of more than one research institution should be justified based on their shared interests in the proposed work, the research complementarities they bring to the partnership, and their ability to maintain a long-term working relationship within the partnership.
- All institutions involved in a proposed partnership must submit Letters of Agreement (placed in Appendix C of the application) documenting their participation and cooperation in the partnership and clearly setting out their expected roles and responsibilities in the partnership.
- For the Continuous Improvement in Education Research topic, partnerships must document at least 1 year of joint work to be eligible to apply.

public elementary schools or secondary schools in a city, county, township, school district, or other political subdivision of a State, or for a combination of school districts or counties that is recognized in a State as an administrative agency for its public elementary schools or secondary schools.

⁵ Personnel with decision-making authority have responsibility for the program/policy and its implementation across the district or state.

- The Principal Investigator and a Co-Principal Investigator (representing the research institution and the education agency) must attend one meeting (for up to three days) each year in Washington, D.C. with other grantees and Institute staff. In addition, the Principal Investigator and Co-Principal Investigator should attend, if applicable to their work, the Institute's annual Statewide Longitudinal Data Systems Conference held in Washington, D.C. Finally, the Institute is launching a new National Research and Development Center on Knowledge Utilization, in which some of the focus may be on Institute-funded partnerships and collaborations. If so, PIs and Co-PIs may be asked to participate in occasional interviews or meetings sponsored by the R&D Center.

C. Applying to a Topic

You must submit your application to one of the three specific topics described in this Request for Applications:

- Researcher-Practitioner Partnerships in Education Research
- Continuous Improvement Research in Education
- Evaluation of State and Local Education Programs and Policies.

You should identify the specific topic on the SF-424 Form (Item 4b) of the Application Package. Otherwise, the Institute may reject your application as non-compliant with the requirements of this Request for Applications.

D. Resubmissions

If you intend to revise and resubmit an application that was previously submitted to either the Researcher-Practitioner Partnerships in Education Research or the Evaluation of State and Local Education Programs and Policies and did not receive an award, you must indicate on the application form that your FY 2014 application is a revised application and include the application number of the previous application (an 11-character alphanumeric identifier beginning "R305"). The prior reviews will be sent to this year's reviewers, along with the resubmitted application. You must describe your response to the prior reviews using no more than three pages of Appendix A. Revised and resubmitted applications will be reviewed according to the FY 2014 Request for Applications.

If you submitted a somewhat similar application in the past to either the Researcher-Practitioner Partnerships in Education Research or the Evaluation of State and Local Education Programs and Policies and did not receive an award but are submitting the current application as a new application, you must indicate on the application form that your FY 2014 application is a new application. You must explain why the FY 2014 application should be considered a new application rather than a revision using no more than three pages of Appendix A. Without such an explanation, if the Institute determines that the current application is similar to a previously unfunded application, the Institute may send the reviews of the prior unfunded application to this year's reviewers along with the current application.

Applications to the Continuous Improvement Research in Education topic will be considered new submissions because a competition has not been held before.

E. Submitting Multiple Applications

You may submit applications to more than one of the Institute's FY 2014 competitions. For example, you could submit an application to the Collaborations Program (84.305H) and a second application to the Education Research Grants program (84.305A). In addition, within a particular competition, you may submit multiple applications. You may not submit the same or similar applications to more than one competition. In cases where this restriction is not met, the Institute will determine whether and which applications are accepted for review and/or eligible for funding.

PART II: RESEARCHER-PRACTITIONER PARTNERSHIPS IN EDUCATION RESEARCH

1. PURPOSE

The Institute intends for the Researcher-Practitioner Partnerships in Education Research (Research Partnership) topic to support partnerships composed of research institutions and State or local education agencies. Through these partnerships education agencies can obtain the research capacity they currently do not have. These partnerships are intended to identify an education policy/practice issue with important implications for improving student achievement that is of high priority for the education agency, carry out initial research regarding the education issue, and develop a plan for further research on the issue. The ultimate goal of the partnerships is to conduct research that has direct implications for improving programs, processes, practices, or policies that will result in improved student outcomes.

The Research Partnership topic provides funding for new partnerships to form as well as for existing partnerships to expand into new areas of research. The Research Partnership topic differs from the Institute's other research grant topics and programs in that it provides support for a partnership's development of a research plan. The Institute's other research grant programs and topics can support similar partnerships but only after they have developed a research plan.

As part of the developing the research plan, partnerships are expected to complete initial research to help understand their education issue and develop future research. To this end, partnerships may analyze secondary data and/or collect primary data and analyze it. However, given the limit on the size of the grant award, the Institute expects that any large-scale data collection (quantitative or qualitative) will not be possible under the Research Partnership project. Though some pilot studies may be possible, more comprehensive data collection activities should be proposed in a future research plan.

The Institute expects the grantee to provide the following at the *end* of a Research Partnership project:

- 1) A description of the partnership as developed over the course of the grant.
- 2) A description of the education issue addressed by the partnership.
- 3) The results of the completed initial research and any conclusions drawn from it.
- 4) A plan for the partnership to carry out further research on the education issue.
- 5) Recommendations for how the partnership could be maintained over the longer term.
- 6) Lessons learned from developing the partnership that could be used by others in forming such partnerships.

2. THE PROJECT NARRATIVE

In your 25-page project narrative, use the **Significance** section to explain the strength of the proposed partnership and the importance of the policy/practice issue the partnership will investigate. Use the **Partnership and Research Plan** to detail how the partnership will be fully established, how research to examine the issue of interest will be carried out, how the plan for future research will be developed, and how the project will track its progress and determine its success. Use the **Personnel** section to describe the relevant expertise of your research team, their responsibilities within and time commitments to the project, and the inclusion of education agency personnel with responsibility for the issue of interest. Use the **Resources** section to describe the partnership's access to the research and practitioner resources that will be needed to carry out the work.

In each of these sections, you should include separate discussions addressing the partnership itself and the partnership's research activities. The reviewers will be asked to consider your application in regards to both the strength and development of the partnership and the strength of the research plan. The

expectations for these two sets of activities will differ by the stage of the partnership. Early partnerships will be expected to focus on developing the infrastructure of the partnership, building initial capacity to do and use research, and completing the first steps of the research. Mature partnerships might focus on more advanced research and building the capacity of the education agency to carry out and use such research. In the description of the four sections below, the partnership activities are noted first and the research activities second.

A. Significance of the Researcher-Practitioner Partnership

In the Significance section, you should clearly describe (a) the strength of the partnership and (b) the research aims of the project including the policy/practice issue to be examined and its importance to the education agencies involved in the partnership.

a. Strength of the partnership

You must clearly describe all the members of the partnership. At a minimum, the partnership must include a research institution and a State or local education agency. The Institute also encourages the involvement of other organizations (e.g., community, parent, teacher organizations) that can contribute to the success of the work. You should describe why they have a common interest in working together and how all members will contribute to and benefit from the partnership. Specifically, you should explain how the research institution and the education agency (and other organizations) have common interests, complementary abilities, and the capacity to work together. If several education agencies and/or research institutions are involved in the partnership, you should describe their commonalities and complementarities and justify the benefit to the partnership of including more than one of the same type of institution.

You should describe the stage of the partnership, be it an early partnership or a mature one, and how the partnership's stage will affect the type of work proposed under the grant, the roles of the partners, and the expectations for the results of the project including both the research produced and the future of the partnership. You should describe the process through which the involved organizations decided to propose a Research Partnership project. As part of this, you should discuss any past or ongoing collaborations between the members of the partnership and the results of those joint efforts. The purpose of this discussion is for you to show that the proposed partnership is well-grounded in previous discussions and agreements, and possibly joint activities, among the institutions involved.

You should note any other research partnerships the education agency already has in place and the research topics they address. If such collaborations exist, you should discuss how this proposed partnership and the work it will do differs from them and how it would provide non-overlapping research support to the education agency.

You should discuss the partnership infrastructure already in place and that will be put in place to support the success of the project. This infrastructure should include researchers from both the research agency and the education agency as well as decision makers at the education agency. Examples of infrastructure include: regular scheduled meetings, subgroups to complete specific project tasks according to a timetable, a specific person to manage partnership relations, and the regular involvement of the decision makers whose time on the project is funded by the grant.

Furthermore, you should describe how the partnership will lead to increased capacity of the State or local education agency to obtain data, carry out research, and use the results of research in the longer run. This could include discussing the longer-term research interests of the partners; the type of structures that might be put into place to support the identification of additional issues for joint research, the development of research agendas and plans, and grant applications to support such work; and the maintenance of these structures when changes in leadership occur.

b. Research aims of the partnership

You must clearly describe the policy/practice issue to be examined by the research partnership. In addition, you should provide a framework for understanding the issue that will guide your research and provide an overview of the data to be analyzed and how the results will inform the education agency's decisions (be they policy/practice decisions or decisions that further research is necessary). The issue may be of importance at one or more levels, e.g., agency, district, school, classroom, or individual student level. You may propose research at any one or combination of these levels. The level you work at may also affect the agency personnel you work with. For example, teachers will be key partners when examining the issue at the classroom level while district staff may be more important for agency-level research.

The policy/practice issue may be described at a general level with specifics to be determined during the project or you may have already identified a specific facet of the issue to be addressed. The research issue may be a longstanding one for the district or a new challenge. For example, a district may know that student mobility is an ongoing important issue from past descriptive data showing a high level of student mobility or small-scale qualitative data showing the disruptive results of mobility. The research to be done by the partnership (both under the partnership project and the resulting grant application to support future research) might be aimed at addressing the specific details that would provide a better understanding of student mobility (e.g., the factors associated with mobility, the types of students more likely to be mobile, whether all mobility is related to poorer student academic performance, whether the relationship between mobility and student performance differs by subject, which schools suffer from the greatest student mobility, whether mobility primarily occurs within district or across districts).

Alternatively, an education agency may be faced with a new issue whose full dimensions are not yet fully known. For example, the adoption of the Common Core State Standards and their assessments will raise challenges at the State, district, school, and classroom levels. A partnership might propose work to examine implementation at any of these levels and the link to student outcomes. The long-term goal of the partnership would be to support implementation of the Common Core in a manner that supports student success in school.

An important part of the description of the issue is its links (both theoretical and empirical) with student academic achievement. A simple theory of change can be used to show how the policy/practice issue is linked to student outcomes and any intermediate outcomes. The Institute supports work on education factors that can be linked directly or indirectly to student academic outcomes. For example, high student mobility may be directly linked to student academic outcomes, while high teacher mobility may have indirect links to student outcomes (e.g., loss of continuity of instruction which then impacts student learning). You should describe the theoretical links between the issue and specific student academic outcomes and any empirical support for these links. Regardless of whether the issue has a direct or indirect link to student outcomes, the significance of the research aim of the partnership is heavily dependent on whether the issue to be examined has a strong link to student academic outcomes. Issues that cannot be strongly linked to student academic outcomes, though possibly of high importance to the education agency, should not be proposed as the subject of a Research Partnership project.

You should clearly show how the research done on the policy/practice issue will help the State or local education agency. The Institute intends that issues addressed by Research Partnership projects be more than theoretically or empirically interesting. You should clearly show how the partnership's work could contribute to specific decisions and actions taken by a State or local education agency to improve student academic outcomes. Furthermore, you should show that is an issue of great importance to the education agency. Evidence of its importance might include identifying past and ongoing agency efforts regarding the issue and showing that the issue falls within the agency's current priorities and research agenda. Overall, you are making the point that the issue is of great concern to the education agency, that the agency will have a major stake and interest in the work, and that the results of the work can be used by

agency in its decisions on how to address the issue. In addition, you could also note past research done on the issue by the research institution and discuss whether any other partner organizations have worked on this issue.

Of secondary importance, is whether the policy/practice issue is a concern to other education agencies or State and national policymakers. You might argue that the research you propose will be of value to other States and districts and may lead them to carry out similar work should your results prove useful. Similarly, the issue's importance may be greater if it is an ongoing topic within the education research literature. Therefore, while the generalizability of the specific research is not a key concern of Research Partnership projects, it can add to their value. You should discuss how your proposed research could contribute to the literature through your findings or to the field of applied research/models used by education agencies through your research design.

B. Partnership and Research Plan

In the Partnership and Research Plan you should clearly describe (a) how the partnership will be fully established, (b) what initial research will be done and how the partnership will carry it out, (c) how the partnership will lay the groundwork for future research after the grant is over, and (d) and how the project will track its progress and determine its success.

a. The Partnership Plan

In the Significance section, you described who is included in the partnership and how it is intended to function. In this section, you should describe the activities that will be carried out so that the partnership will function as expected. Your partnership may be newly developed or stem from earlier collaborations, but in either case, you should describe the ways in which the partnership will be maintained and deepened over the course of the Research Partnership project. You should discuss the actions and processes the partnership will use to establish and increase its joint infrastructure and the timeline for this work. This infrastructure should include both the researchers from both partners as well as the education agency's decision makers. This description includes partnership activities organized around the proposed research, such as how often partnership personnel meet and how the substance of these meetings is expected to change over time, how decisions on research direction will be made, how the initial research will be jointly carried out, and how the results will feed into the agency's decision making. You should identify those partnership activities that while contributing to the proposed research are also aimed at maintaining a longer-term collaboration.

The partnership's infrastructure should be sufficient to support and guide the research activities. You should describe how the infrastructure will support the partnership in its development and implementation of the research plan in a way that ensures the research addresses the priorities of the education agency. This may include how the partnership will narrow the issue to be examined if it is broad, how the initial research will be planned and jointly carried out, how decisions on the research direction will be made as the research progresses, and how the results will be jointly examined and presented to other members of the education agency and the public. Strong applications will provide specific processes for addressing these aspects of the partnership. For example, you might propose:

- Creating a broad-based advisory group to provide input at several points during the project to ensure that the partnership receives comments from the spectrum of stakeholders in the education system,
- Creating a joint review process for the release of results, and/or
- Releasing a report and/or holding a meeting for a general audience describing what the partnership found and what its future research plans are.

Under the Significance section, you also described the intended future research capacity of the education agency. In this section, you should describe the capacity building activities that will lead to this goal and how these will improve the agency's ability to do research, to incorporate research results into its decision making, and to set research agendas of use to future decision making.

The stage of the partnership will affect the research and capacity-building activities and how quickly they will occur. Already existing partnerships should clearly differentiate how the proposed work differs from already ongoing work. Early partnerships and partnerships that are including additional organizations may need more initial activities to start the partnership and more time to establish the infrastructure needed to complete the rest of the project. However, these initial activities do not replace the research work to be done. You should provide a realistic vision for building both the partnership and carrying out the research. Partnerships that are overly complicated or too early in their development to carry out the research component within the required timeframe will not be strong candidates for a Research Partnership grant.

b. The Research Plan

The primary purpose of the partnership is to explore an important education issue linked to student academic achievement and develop a plan for future joint research. In the Significance section you laid out the policy/practice issue to be examined, the framework to examine it, an overview of the data and analyses to be done, and how the results will contribute to the agency's decision making. In this section, you should describe the specifics of the research to be done to answer your proposed research questions and prepare for your future research.

The partnership must carry out initial research on the issue, and you must describe the plan for that initial research. The research proposed should be based on the research needs of the education agency in regards to the education issue being examined. Examples of research approaches include:

- Primary data collection with appropriate analyses, or
- Appropriate secondary data analyses of existing data sets such as the education agency's administrative data, or
- Primary data collection and analysis of a combination of primary and secondary data.

The Institute expects that mixed methods combining quantitative and qualitative work may yield the most useful findings. However, purely quantitative analyses (e.g., secondary data analyses) are acceptable, as are purely qualitative analyses so long as careful attention is given to selection of the sample and analysis of the data.

You should describe your research design, sample, measures, and analysis procedures. Your research plan should depend upon the state of knowledge regarding the issue you are researching, the needs of the education agency, and the stage of the partnership. Your research may entail exploring the issue to better understand it and its potential links to student outcomes. Alternatively, you may be more interested in examining how current education agency practice or policy is related to student outcomes. For example, a district may be undergoing a large demographic change through the influx of students from immigrant families. The district may be interested in finding out the magnitude of the change, which of its schools are experiencing it, how capable the teachers and schools feel about responding, and what supports are in place to help them and the students. The purpose of your initial research might be to provide the basis for a future research project exploring these points in more detail or it might be to provide the basis for the development of a district intervention to better support these students. Another district might have a longer history of serving children of immigrants and its interest might be to develop a future project evaluating how well its ongoing programs support these students' academic achievement. The partnership's initial analysis might entail a similar analysis of the number of such students and their location, but might also include a cataloging of the ongoing district programs to support them and analyses linking student participation in these programs and their academic outcomes to see if there is any initial evidence of the programs' success.

The level of the analysis should be discussed. For example, if you are looking at classroom processes,

you should discuss how the analysis will address the classroom level and the potential implications of classrooms being nested in schools.

The Institute is not requesting a data analysis plan with the detail required of its Education Research Grants program. If you are prepared to carry out a full analysis to address your research question (rather than a preliminary analysis), you should apply to the Exploration goal under the Education Research Grants program. However, you should provide enough detail so that the reviewers can determine whether your data and analysis are adequate to fulfill the purpose of the project. Therefore, you should be clear on how the data and the data analysis will (1) address the research questions you have posed, (2) provide results useful to the education agency, and (3) support future research.

c. Plan for Future Research

Partnerships are to plan for future research based on the results of the initial research. The Institute encourages such planning to be incorporated into future applications to the Institute's grant programs in order to carry out a more intensive research project on the issue of interest that will be of value to the education agency. You should describe the process the partnership will use to determine what type of future research may be of use to the education agency and how the partnership intends to obtain the commitment to the research from the research personnel, education agency personnel, sources of data that will be used, and districts/schools that will need to be involved.

It may be helpful to discuss what the Research Partnership project will contribute to make the future work possible, i.e., that the future work could not have been proposed without first completing the Research Partnership project. This may be most important if you are applying as a mature partnership as the reviewers may raise questions as to why an existing strong partnership does not directly apply under one of research goals. The reasons might include the future work is of the type not done before by the partnership (e.g., that the partnership has never attempted joint development work) or that certain structures must be in place before the future work can be done (a complicated data merge involving multiple agencies might need to be attempted before an Exploratory study or a better understanding of how an intervention is being implemented is required before an Efficacy study). In all cases, stronger applications will justify the need for a Research Partnership project before the future work is to be proposed.

d. Tracking the Partnership's Progress and Determining its Success

You must describe how you will track the progress of both the partnership and the research it has proposed to do. Partnerships will start with different strengths and weaknesses, and you should discuss how those of your partnership will be identified, monitored, and addressed over the course of the project. Your plan should take into account the Institute's intent that the Researcher-Practitioner topic will establish partnerships that will carry out initial research of use to the education agency, develop future research plans, and continue working together after the grant ends. The most basic measures include maintaining the partnership during the life of the project and producing useful research and a plan for follow-on research. A more thorough assessment of the quality, commitment, breadth, and strength of the partnership would help further identify the success of the project and the potential for future work by the partnership. The Institute encourages you to include indicators that you would value as signs of the project's success.

C. Personnel

In this section, you must identify all key personnel on the project team including the Principal Investigator and the Co-Principal Investigator(s). The Principal Investigator may be from either the research institution or the education agency, but there must also be a Co-Principal Investigator from each of the other members of the partnership. The Principal or Co-Principal Investigator from the education agency must have decision-making authority for the issue being examined. The education agency is expected to contribute decision makers, practitioners, and, if available, researchers to the partnership. Should other organizations be part of the partnerships, their key personnel should be described as well.

You should discuss how the research and program expertise of the key personnel together reflect the content and methodological foci of the partnership. In addition, you should briefly describe the following for each key personnel:

- Qualifications and how these contribute to the
 - Development of the partnership
 - Research to be carried out by the partnership
 - Capacity of the partnership to carry out future research
- Roles and responsibilities within the partnership
- Percent of time and calendar months per year (academic plus summer) to be devoted to the partnership
- Previous experience working in this type of partnership and outcomes from that work.

All key personnel must be named in the application. The Institute will not accept applications that propose to hire experts in specific methodological or policy issues after the grant is received.

Partnerships should include at least one key personnel with a large enough time commitment to help maintain the progress of the partnership during the project.

If any key personnel intend to donate time to the project, his or her donated time must be listed in the budget and budget narrative and described as cost sharing. The Institute does not require or request such cost sharing nor consider it in award decisions, but it does require that any cost sharing be documented. Personnel proposing to donate time must affirm that they have such time available.

D. Resources

You should describe the institutional resources of all the institutions involved in the partnership and how these resources will contribute to both building the partnership and contributing to the research the partnership will carry out. You must include Letters of Agreement in Appendix C from all institutions involved in the partnership documenting their participation and cooperation and clearly setting out their expected roles and responsibilities. In addition, if individual schools are to take part in the work, they should also provide Letters of Agreement conveying an understanding of their role in the partnership. Also, organizations holding data to be analyzed should provide Letters of Agreement stating their willingness to release the data for use by the partnership.

If teachers or other school staff are expected to play an important role in the research (e.g., through teacher observations, surveys, logs), you should discuss how their cooperation will be obtained and how much they already know about and support the work. It would also be helpful to provide evidence from past work of high teacher or staff involvement in a study.

In addition, you should describe the partnership's management structure for the project including how the partnership will determine the ongoing roles of each partner, the direction of the research, and the development of the grant application. If you have discussed this structure earlier in the Project Narrative, you may refer to that description, but you should ensure that you have adequately described how the management structure will carry out all aspects of the work. You might consider including a diagram of the management structure in Appendix A.

E. Ensuring Responsiveness of the Project Narrative

The Institute will review only applications that are responsive to all the requirements set out in this request. To help ensure responsiveness to the substantive requirements for the Project Narrative, you should be sure to include/address the following.

In the Significance section:

- A description of the institutions in the partnership (in support of this Letters of Agreement from each one should be provided in Appendix C).
- A description of the education issue to be researched by the partnership including its links to both student outcomes and potential decisions to be made by the education agency partner.

In the Partnership and Research Plan:

- A plan for the development of the partnership.
- A plan for the research to be done on the specified education issue that includes a description of research design, sample, measures, and analysis.
- A plan regarding further research on the specified education issue.
- A plan for tracking the progress of both the partnership and the research it has proposed to do.
- A plan for how you will examine the success of the partnership.

In the Personnel section:

- Identification of key personnel and how they meet the Personnel requirements.

Overall:

- A time frame that falls within the maximum project length and a budget that falls within the maximum award.

3. AWARDS

Research Partnership projects can last 1 to 2 years. The maximum length of the grant is 2 years, and the maximum amount of the award is \$400,000 (total cost = direct costs + indirect costs).

Any application proposing a project length longer than the maximum length or a budget higher than the maximum award will be deemed nonresponsive to the Request for Applications and will not be accepted for review.

PART III: CONTINUOUS IMPROVEMENT RESEARCH IN EDUCATION

1. PURPOSE

Under the Continuous Improvement in Education Research (Continuous Improvement) topic, the Institute will support well-established partnerships among research institutions and State or local education agencies to address a specific education issue or problem of high importance to the education agency. The partnership will select an existing approach (or approaches) to the issue/problem that has some promise of evidence for improving student outcomes. The partnership will adapt and revise the approach by applying continuous improvement strategies in order to improve implementation, intermediate outcomes, and student outcomes. In addition, the partnership will identify and implement systemic changes that may need to be made in support of the success of the approach.

The approach you choose to implement can fall along a continuum that runs from a single intervention to a set of related strategies designed to address a problem or issue. The key point is that you propose an approach that has a compelling logic or underlying theory and that has at least some evidence of promise or efficacy. If you are interested in fully developing a new approach, you should apply under the Development and Innovation goal of the Education Research Grants program (84.305A). Your approach may change substantially over the project or only slightly as you adapt it to local conditions, but you should have something that can be implemented early in the first year of the project.

The Institute is very interested in projects that address three education issues: (1) school safety, (2) social skills, attitudes, and behaviors (sometimes called social-psychological, social-emotional, or psychological/behavioral skills) that contribute to student academic success, and (3) implementation of the Common Core State Standards in English and mathematics. However, you may apply to work on any education issue and will not be penalized for proposing something different.

In addition to helping State and local education agencies address self-identified education issues, the Institute seeks to learn broader lessons about how approaches can be adapted to address both local conditions and the difficulties that are faced during wide implementation. While these difficulties may differ by approach or student outcome (for example see Yeager and Walton, 2011 regarding barriers to the adoption of social-psychological interventions), the Institute expects that projects under the Continuous Improvement topic will contribute to both general and topic-specific knowledge regarding successful implementation.

The Continuous Improvement topic draws upon two stands of research and combines two approaches intended to complement one another. The first is a design-based research focus on the systems involved in education as they have evolved in local contexts (Berwick, 2008; Brown, 1992, Design-Based Research Collaborative, 2003; Bryk 2009; Penuel, et. al. 2011). The place-based focus of the work and collaborative partnership among researchers, practitioners, policymakers, and other stakeholders are to help ensure that the research is conceptualized and implemented where it is to be used (in its natural setting) in order to address the complexity of the education system involved, which is often not yet well-understood by researchers and whose complexity may be partly local in nature. The work is also intended to develop the capacity of the collaborating practitioners to sustain the continuous improvement strategies and resulting innovations once the project ends.

Design-based research also expects to change the systems in which education occurs. These systems (sometimes called *environments*) operate at different levels depending on where the approach is to operate (e.g., in specific classrooms, across a whole school, throughout the district, or across all districts within a state). The point of the work is not to overlay a specific practice or set of practices on an existing system but to adapt/revise it within the education system, so that it is integrated within the system, and to revise the existing system as necessary to implement and incorporate the practice. For example, a new approach to teaching vocabulary or a new program to prevent bullying would not be added on as another component of classroom instruction or a separate school-wide activity. Instead, such practices and

programs would be adapted to the education system through collaboration with school personnel to fit within the ongoing running of English classes and school-wide activities. Their integration into the classroom and school systems could require modifications or even wholesale change in these systems (e.g., a change in classroom instruction), as well as changes in themselves.

The second strand of research is an ongoing short-cycle approach to design and development of tools, products, or procedures. These short cycle methods are often drawn from management methods used in business for the ongoing improvement of processes and products. Examples of these include PDCA (Plan, Do, Check, Act which is also known as Plan, Do, Study, Act or the Deming Cycle), Six Sigma (DMIAC-Define, Measure, Analyze, Improve, Control and DMADV-Define, Measure, Analyze, Design, Verify), and methods fostering multiple tests of small improvements (Deming, 1986; Imai, 1986; Morris & Hiebert, 2011; Pyzdek and Keller, 2009). These methods envision the use of multiple cycles of implementation, testing, and revision with each cycle leading to further improvements in the product or process.

Under the Continuous Improvement topic, the Institute does not require the project to examine the causal evidence of the impact of the approach, but it does require the project to look for evidence of the promise of the approach to have the hypothesized impact. Specifically, by the end of a Continuous Improvement project, the Institute expects the grantee to provide the following:

- 1) A description of the partnership as it further develops over the course of the grant.
- 2) A description of the education issue or problem to be addressed by the partnership and its importance to the education agency.
- 3) A description of the approach (approaches) used by the partnership at the start of the project and the system it was used within.
- 4) A description of the approach used at the end of the project along with a discussion of the changes that had been made in it, in the system within which it is implemented, and the reasons for those changes.
- 5) A description of the process of continuous improvement used to adapt/revise the approaches along with the data summaries upon which revisions were based.
- 6) The results from the pilot analysis of the approach regarding evidence of the promise of the approach and the restructured system it is implemented within to improve student outcomes.
- 7) A determination as to whether the approach is ready for a full evaluation or requires further development.
- 8) Recommendations for how the partnership could be maintained over the longer term.
- 9) Specific and general lessons from the revisions to the approach and changes made in the education system that improved the approach and its implementation.
- 10) Lessons learned from the joint development work performed the partnership that could be used by other partnerships.

2. THE PROJECT NARRATIVE

In your 25-page project narrative, use the **Significance** section to explain the strength of the proposed partnership and explain why it is important to adapt/revise the approach with this education agency. Use the **Research Plan** section to discuss how you will implement, revise and adapt your approach; determine its promise for improving the targeted student outcomes; track the project's progress and success; and make modifications as needed. Use the **Personnel** section to describe the relevant expertise of your research team and their responsibilities within and time commitments to the project including the education agency personnel with responsibility for the issue of interest. Use the **Resources**

section to describe the partnership's access to the research and practitioner resources that will be needed to carry out the work and the management structure to be used by the partnership.

A. Significance

In the Significance section, you should clearly describe (a) the strength of the already well-established partnership and (b) the research aims of the project including the education issue or problem to be addressed, the approach to be taken to address it, and their importance to the education agency involved in the partnership, other education agencies, and the field of education research.

a. Strength of the partnership

You must clearly describe all the members of the partnership. You should describe why they have a common interest in working together and how all members will contribute to and benefit from the partnership. The partnership proposed must be an already well-established one. At a minimum, the partnership must have carried out joint work for at least 1 year and you must document that such work has occurred and identify the products produced from the joint work. Partnerships that have not worked together for at least 1 year should first apply to Topic 1: Researcher-Practitioner Partnerships before applying to the Continuous Improvement topic.⁶ In addition, you should describe the process through which the involved organizations decided to propose a Continuous Improvement project.

You should describe how your partnership will be organized to carry out the work proposed. You should discuss any partnership infrastructure already in place and that will be put in place to support the success of the project. Examples of infrastructure include: regular scheduled partner meetings, partner subgroups to complete specific project tasks according to a timetable, a specific person to manage partnership relations, and the regular involvement of decision makers from the education agency.

Furthermore, you should describe how the partnership will improve the research and development capacity of the State or local education agency in the longer run. Capacity building may address the State or local education agency's ability to obtain data, improve implementation, carry out research and development, and use the results of research in the longer run. Expectations for capacity building depend upon the initial capacity of the education agency; however, the Institute intends that education agencies learn how to implement a continuous improvement approach (with or without the need for an ongoing partnership depending on their initial status) and incorporate research results into their decision making.

b. Research aims of the partnership

The Significance section should answer four questions regarding the work to be done by the project: (a) What is the specific approach to be implemented, adapted, and revised?, (b) What is the specific education system it is to operate within?, (c) Why is this approach expected to produce better student outcomes than current education practice?, and (d) What is the overall importance of the proposed project? In answering these questions, you should do the following:

- Describe the specific issue or problem the education approach is to address including the overall importance of this issue/problem to the education agency partner and how its resolution will contribute to the improvement of student outcomes. The importance of the issue or problem to other education agencies, policymakers and stakeholders, while of secondary importance, can also be included in your discussion to support the significance of your work.
- Describe current typical practice the education agency is using to address this issue or problem and why current practice is not satisfactory.

⁶ The Institute requires partnerships to be well-established before applying for a Continuous Improvement topic in order to reduce project failure due to partner incompatibilities, increase the time and resources available for the work (by reducing the time and resources needed to establish and maintain the partnership), and allow for a quick implementation of the approach.

- Describe the proposed approach to be implemented, adapted, and revised; its key components; and how it is to be implemented. Contrast these with current typical practice and its identified shortcomings. Your description of the proposed approach should show that it has the potential to produce substantially better student outcomes because (a) it is sufficiently different from current practice and does not suffer from the same shortcomings; (b) it has key components that can be justified, using theoretical or empirical reasons, as powerful agents for improving the outcomes of interest; (c) its implementation appears feasible for teachers, other education personnel, and/or schools given their resource constraints (e.g., time, funds, personnel, schedules); and (d) there is evidence for the promise for this approach to produce better student outcomes (this evidence does not have to be causal).
- Describe the current status of the approach within the education agency.
 - If the agency is already implementing the approach, discuss the current state of implementation and why a Continuous Improvement grant is needed.
 - If the education agency is not yet implementing the approach, describe how the agency has come to the decision to do so and how it will obtain the materials necessary (e.g., through the agency's own funds, provision of an intervention by a developer/distributor) and the date by which these materials will be obtained. Letters of Agreement should be included in Appendix C showing the relevant sources of support for obtaining and implementing the intervention. The Institute does not intend that grant funds be used by the agency to purchase an intervention (e.g., products such as texts or software, professional development, other support), but grant funds may be used to support adaptation and revision. Discuss why a Continuous Improvement grant is needed.
- Describe the education system in which you will implement, adapt, and revise the approach including its level (e.g., classroom, school, district, multiple districts or state). Discuss why the approach will need to be adapted and revised to work within this system. Identify aspects of the system that you expect may need to be changed so that the approach can succeed.
- Describe the initial theory of change for your proposed approach (you may need to revise your theory over the course of the project). The theory of change details the process through which the key components of the approach are expected to work within the educational system and lead to the desired student outcomes. When you clearly describe the theory of change that guides the approach, reviewers are better able to evaluate (a) the approach's grounding in its theoretical and empirical foundation and (b) the relation between the approach and the outcome measures. For approaches that will affect the teaching and learning environment and, thereby, indirectly affect student outcomes, you should be clear in your theory of change to identify the proximal outcomes that the approach will affect (e.g., teacher practices) and how these proximal outcomes are to impact the more distal student outcomes intended to be improved.
- Describe how the proposed approach is a reasonable operationalization of the theory and provide empirical evidence supporting the theory of change (e.g., data from a prior study of from other school districts that suggest the approach will lead to the intended outcomes).
- Discuss the expected practical importance of the approach including what contribution it can make to address the issue or problem that forms the basis of the project.

B. Research Plan

In the Research Plan, you should discuss how the partnership will adapt and revise the approach using the short cycle approach to test and improve its implementation and results. Further, you should discuss how the partnership will identify any changes needed in the education system to improve implementation and outcomes. Also, you should discuss the method for assessing the promise of the approach for

achieving the expected outcomes. You should describe the sample, setting, and measures and show them to be appropriate for meeting the research aims of the project.

The short cycle approach requires ongoing measurement with the resulting data made available quickly in order to inform the next step of the cycle. Your measures should address: (a) usability, (b) feasibility, and (c) the outcomes to be examined (both intermediate and final student outcomes). Usability of the approach includes whether the intended user is physically able to use the approach, understands how to use it, and is willing to use it. Feasibility of the approach shows that the end user can use the approach within the requirements and constraints of the education system (classroom, school, district, multiple districts or State). Feasibility feeds into both revisions of the approach and the education system. Outcomes that can be measured in the short cycle approach must be included (e.g., outcomes that can change relatively quickly). Many student outcomes of practical interest to the education agencies, especially academic ones, cannot be measured over such short periods. In such cases, you should discuss the potential links between the outcomes that can be measured during the cycles and the longer-term outcomes and how you will link revisions of the approach to changes in longer-term outcomes.

You should discuss the procedures for collecting the data that are used in these types of measures. For student outcome measures, you should also discuss the measures' psychometric properties (e.g., reliability and validity). If you need to develop a measure, you should describe what will be developed, why it is necessary, how it will be developed, and, as appropriate, the process for checking its reliability and validity. You should also discuss how and when these measures will be collected during each short cycle and how they will be used to make revisions during the following cycles. The majority of the project's time and resources should focus on the continuous improvement process.

a. The Continuous Improvement Process

In describing the continuous improvement process, you should make clear (a) the process through which the approach will be obtained and initially implemented in the education system; (b) how the approach will be adapted and revised within the education system to improve usability, feasibility, and outcomes through the short cycle approach; and (c) how the education systems will be adjusted to improve the approach's success.

In the Significance section, you described your proposed approach. When describing the continuous improvement process, you must discuss how you will initially implement your approach. You should then discuss how you will adapt, refine, and improve upon the initial approach through the short cycle approach, observing its functioning within the education system and making adjustments to the approach or the system as necessary. Though it may be difficult to predict the actual number of cycles you will go through, you should discuss both the potential maximum number of cycles you will have time for and the level of outcomes you hope to attain after completing all the proposed cycles. The Institute expects that mixed methods research may be required to understand how the approach functions within the system and how the system constrains or promotes the approach's success. You should describe how your measures will be collected, interpreted, and fed back into the improvement process. Providing a timeline (either in the Project Narrative or Appendix A) delineating the process can help the reviewers understand the ordering of the steps in your process.

You must describe the data you intend to collect to determine how well the approach is functioning, how well the desired outcomes are being met, and what attributes of the approach and the education system will need revision to improve the approach's functioning. You should also describe the processes that will be used to interpret the data and how the partnership will determine what changes are to be made in the approach and in the education system.

b. The Pilot Study

Because these projects can last up to 4 years, the Institute expects that a successful project should have at least a prototype approach that can be examined during the fourth year (improvement efforts may

continue outside the pilot study). You must provide a plan for a pilot study that will provide evidence of the promise of the approach for achieving its intended outcomes (including student outcomes) when it is implemented within the education agency. Also, the pilot study should examine the fidelity of the implementation of the approach. The Institute does not expect the pilot study to be an efficacy study, and reviewers are not expected to evaluate your pilot study plan for the same rigor as they would for an Efficacy and Replication project under the Education Grants Program or a State and Local Evaluation within this Request for Applications. However, experiments have been run within design-based research, especially at the student or classroom level, and should not be ruled out. You may also consider using:

- single-case studies that adhere to the criteria for single-case designs that meet the design standards set by the What Works Clearinghouse,⁷ or
- quasi-experimental studies based on the use of comparison groups with additional adjustments to address potential differences between groups (i.e., use of pretests, control variables, matching procedures).

Your plan should discuss the design of the pilot study, the data to be collected, the analyses to be done, and how you will conclude whether any change in student outcomes is consistent with your underlying theory of change and is large enough to be considered a sign of promise of the approach's success. The Institute expects that the pilot study may draw upon the measures and data collection methods established for the adaptation and revision of the approach plus additional administrative data gathered by the education agency.

c. Tracking the Partnership's Progress and Determining Its Success

You must describe how you will track the progress of both the partnership and its work. Partnerships will start with different strengths and weaknesses, and you should discuss how those of your partnership will be identified, monitored, and addressed over the course of the project.

You should discuss any processes you will use or structures you will establish to ensure that the approach's adaptation and revision is on track, that the continuous improvement process continues to function as proposed, and that evidence regarding the promise of the interaction's impact on student outcomes is collected. For example, a broad-based advisory group, including personnel with authority within both the research organization and the education agency, may be useful for establishing and maintaining such a focus.

You must also describe how you will examine the success of the partnership. Your plan should take into account the Institute's intent that the Continuous Improvement topic will establish partnerships that continue after the grant ends. Further, the Institute intends that Continuous Improvement projects increase the capacity of the education agency to apply the continuous improvement process after the grant has ended. The most basic measures of success include maintaining the partnership during the life of the project and completing the adaptation, revision, and piloting proposed. A more nuanced analysis of the quality of the partnership and the continuous improvement process would help further identify the success of the project and potentially provide lessons for the field. The Institute encourages you to include indicators that you would value as signs of the project's success and would lead to advances in this form of research.

C. Personnel

In this section, you must identify all key personnel on the project team including the Principal Investigator and the Co-Principal Investigator(s). The Principal Investigator may be from either the research institution or the education agency, but there must also be a Co-Principal Investigator from each of the other members of the partnership. The Principal or Co-Principal Investigator from the education

⁷ See Appendix F of the WWC Procedures and Standards handbook at <http://ies.ed.gov/ncee/wwc/DocumentSum.aspx?sid=19>.

agency must have decision-making authority for the issue being examined. The education agency is expected to contribute decision makers, practitioners, and, if available, researchers to the partnership. Should other organizations be part of the partnerships, their key personnel should be described as well.

You should discuss how the research and program expertise of the key personnel together reflect the content and methodological foci of the partnership. In addition, you should briefly describe the following for each key personnel:

- Qualifications and how these contribute to the
 - Maintenance of the partnership,
 - Development of the approach to be carried out by the partnership,
 - Pilot study on the promise of the approach to improve student outcomes,
 - Capacity of the partnership and the education agency on its own to carry out future research;
- Roles and responsibilities within the partnership;
- Percent of time and calendar months per year (academic plus summer) to be devoted to the partnership; and
- Previous experience working in this type of partnership and outcomes from that work.

All key personnel must be named in the application. The Institute will not accept applications that propose to hire experts in specific methodological or policy issues after the grant is received.

Partnerships should include at least one key personnel with a large enough time commitment to help maintain the progress of the throughout the project.

If any key personnel intend to donate time to the project, his or her donated time must be listed in the budget and budget narrative and described as cost sharing. The Institute does not require or request such cost sharing nor consider it in award decisions but does require its documentation. Personnel proposing to donate time must document that they have such time available.

D. Resources

You should describe the institutional resources of all the institutions involved in the partnership and how these resources will contribute to both building the partnership and contributing to the research the partnership will carry out. You should describe the partnership's access to the districts and/or schools (or other education delivery settings) in which the research will take place and to any data sets that will be analyzed. You must include Letters of Agreement in Appendix C from all institutions involved in the partnership documenting their participation and cooperation and clearly setting out their expected roles and responsibilities in the partnership. In addition, if any individual schools are to take part in the work, they should also provide Letters of Agreement conveying an understanding of their role in the partnership. Letters of Agreement from the education agency and any school participants should be clear in their willingness to implement the approach and make changes in their own processes and procedures. Also, organizations holding data to be analyzed should provide Letters of Agreement stating their willingness to release the data for use by the partnership.

If teachers or other school staff are expected to play an important role in the research (e.g., through teacher observations, surveys, logs), you should discuss how their cooperation will be obtained and how much they already know about and support the work. It would also be helpful to provide evidence from past work of high teacher or staff involvement in a study.

In addition, you should describe the partnership's management structure for the project regarding how the partnership will determine the ongoing roles of each partner, how the data is collected and interpreted, how to adapt and revise the approach and the education system, how to implement those

revisions, and how to examine the promise of the revised approach. You might consider including a diagram of the management structure in Appendix A.

E. Ensuring Responsiveness of the Project Narrative

The Institute will review only applications that are responsive to all the requirements set out in this request. To help ensure responsiveness to the substantive requirements for the Project Narrative, you should be sure to include/address the following:

In the Significance section:

- A description of the institutions in the partnership (with Letters of Agreement from each one in Appendix C).
 - Meeting the requirement that the partnership must have carried out joint research for at least 1 year.
- A description of the education issue/problem to be researched by the partnership including its links to both student achievement and potential decisions to be made by the education agency partner.
- A description of the education system in which the approach is to be adapted/revised.
- A description of the approach and how it is intended to address the education issue/problem.
- The source for the approach: whether the education agency has already obtained the materials needed or what non-grant resources it will use to obtain them.

In the Research Plan:

- The adaptation and revision plan for the approach using a short cycle continuous improvement process.
- The pilot study.
- A plan for tracking the progress of both the partnership and the research it has proposed to do.
- A plan for how you will examine the success of the partnership.

In the Personnel section:

- Identification of key personnel and how they meet the Personnel requirements.

Overall:

- A time frame that falls within the maximum project length and a budget that falls within the maximum award.

3. AWARDS

Your proposed length of project should reflect the scope of work to be accomplished. **The maximum duration of a Continuous Improvement project is 4 years.**

Your budget should reflect the scope of the work to be done and will vary according to the type of program/policy being evaluated. **The maximum award for a Continuous Improvement project is \$2,500,000 (total costs = direct + indirect costs).**

The Institute does not intend that grant funds be used by the education agency to purchase an intervention (e.g., products such as texts or software, professional development, other support) but to be used to support the revision and adaptation of the approach.

The Institute intends to fund no more than four awards in FY 2014.

Any application proposing a project length longer than the maximum length or a budget higher than the maximum award will be deemed nonresponsive to the Request for Applications and will not be accepted for review.

PART IV: EVALUATION OF STATE AND LOCAL EDUCATION PROGRAMS AND POLICIES

1. PURPOSE

The Institute intends to fund partnerships composed of research institutions and State and local education agencies to carry out rigorous evaluations of education programs or policies (programs/policies) that are implemented by State or local education agencies to improve student academic outcomes from prekindergarten through postsecondary and adult education. These programs/policies are to be fully developed and implemented under conditions of routine practice by a State, district, or consortium of States or districts. These evaluations are to determine both the overall impact of the programs/policies and the impact across a variety of conditions. By *overall impact*, the Institute means the degree to which a program/policy has on average a net positive impact on the outcomes of interest in relation to the program or practice to which it is being compared. By referring to *impact across a variety of conditions*, the Institute conveys the expectation that subgroup analyses of different student populations, types of schools, and other potential moderating conditions will be conducted to determine if a program/policy produces beneficial impacts for some groups or under some conditions. By *fully developed*, the Institute means a program/policy that is ready to be implemented by schools or districts. That is, all of the materials, manuals, and other supports are ready to be distributed to and used by schools or districts. By *conditions of routine practice*, the Institute means that the program/policy is implemented without special support by developers of the program/policy or the research team to improve, for example, the fidelity of implementation of the program/policy.

Through the Evaluation of State and Local Education Programs and Policies (State/Local Evaluation), the Institute seeks to establish long-term partnerships between research institutions and education agencies that will focus their research efforts on programs/policies of high relevance to policymakers and practitioners. Through these partnerships, education agencies will identify research questions of high importance to their work, shape the evaluation to meet their conditions, and have direct access to the results. The State/Local Evaluation topic takes advantage of the ongoing implementation of programs/policies to improve student achievement by State and local education agencies. These education agencies may lack the funds and/or the research capacity to evaluate such programs/policies, yet such evaluations are necessary to distinguish those programs/policies producing the expected outcomes from those that do not, to identify the particular groups (e.g., types of students, teachers, or schools) for which programs/policies work, and to determine which aspects of programs/policies need to be modified. The results of such evaluations are of value not only to the education agency directly involved, but also to other States and districts that may be using or considering the use of similar programs/policies.

The Institute intends for the State/Local Evaluation topic to influence both the research community and the education agencies. If researchers focus more on programs/policies of high significance to education agencies, the relevance of their work will increase. And if State and local education agencies receive useful results from the research, their demand for such research will increase. Finally, as the partnerships increase the capacity to carry out such evaluations, more of this type of work can be done.

The Institute intends to invest in the evaluation of programs and policies that substantially modify or differ from existing practices. The modest changes in programs/policies that States and districts make on an ongoing basis, such as small changes in daily schedules or making minor adjustments to teacher certification systems, are not the targets of this research program. Ongoing projects are evaluating State and local programs/policies that include: expansion of preschool, technology-based formative testing, rigorous curriculum requirements, high-stakes testing, professional development programs, and multi-pronged reading interventions.

The Institute expects the grantee to provide the following at the *end* of a funded State/Local Evaluation project:

- 1) Evidence of the impact of a clearly specified program/policy, implemented by a State or local education agency, on relevant student academic outcomes relative to a comparison condition using a rigorous research design which can be used to make causal inferences. The impacts include both overall impacts and impacts under a variety of conditions.
- 2) Conclusions on and revisions to the theory of change that guides the program/policy and a discussion of the broader contributions the study makes to our theoretical understanding of education processes and procedures.
- 3) If a beneficial impact is found, then the identification of the organizational supports, tools, and procedures that are needed for sufficient implementation of the core components of the program/policy under routine practice.
- 4) If a beneficial impact is not found, then a determination of whether and what type of further research would be useful to revise the program/policy and/or its implementation.
- 5) The financial costs of the program/policy.

Your application to evaluate a program/policy implemented by a State or local education agency can be submitted either to the State/Local Evaluation topic or to the Education Research Grants program (CFDA 84.305A) under the Efficacy and Replication goal or the Effectiveness goal. When deciding where to submit your application, you should keep in mind that the State/Local Evaluation topic requires: (a) the program/policy to be implemented by a State or local education agency under routine conditions, and (b) the presence of a strong partnership between a research institution and a State or local education agency. Grant funds may not be used to implement the program/policy.

2. THE PROJECT NARRATIVE

In your 25-page project narrative, use the **Significance** section to explain why it is important to test the impact of the program/policy. Use the **Research Plan** section to detail the evaluation of the program/policy. Use the **Personnel** section to describe the relevant expertise of your research team, their responsibilities within and time commitments to the project, and the inclusion of education agency personnel with responsibility for the issue of interest. Use the **Resources** section to describe the partnership's access to the research and practitioner resources that will be needed to carry out the work and the management structure to be used by the partnership.

A. Significance

In the Significance section of the project narrative, you should clearly describe: (a) the type and strength of the partnership; (b) your research questions; (c) the fully developed program/policy; (d) the theory of change for the program/policy; (e) the conditions under which the program/policy will be implemented; (f) a compelling rationale for testing the impact of the program/policy; and (g) a dissemination plan to provide results throughout the educational agency, as well as to practitioners, policymakers, other education agencies, and the public interested in the program/policy.

a. The Partnership

You must clearly describe all the members of the partnership. At a minimum, the partnership must include a research institution and a State or local education agency. You should describe why they have a common interest in working together and how all members will contribute to and benefit from the partnership. Specifically, you should explain how the research institution and the education agency (and any other organizations involved) have common interests, complementary abilities, and the capacity to work together.

You should identify the specific purpose of your State/Local Evaluation project. State/Local Evaluation partnerships may focus almost entirely on the evaluation of a specific program/policy of high importance

to the education agency. They may focus on both an evaluation and capacity building (e.g., obtain data, carry out research and development, and use the results of research) within the education agency. They may also include efforts to build a long-term partnership and joint research agenda.

You should describe how your partnership will be organized to carry out the purposes proposed. You should discuss any partnership infrastructure already in place and that will be established to support the success of the project. Examples of infrastructure include: regular scheduled partner meetings with written notes on decisions made for future reference, partner subgroups to complete specific project tasks according to a timetable, a specific person to manage partnership relations, and the regular involvement of decision makers from the education agency. If the project will engage in capacity building and/or exploring a long-term partnership, you should discuss your proposed activities to these ends.

You should describe the process through which the involved organizations decided to propose a Research Partnership project. As part of this, you should discuss any past or ongoing collaborations among the members of the partnership and the results of those joint efforts. The purpose of this discussion is for you to show that the proposed partnership is well grounded in previous discussions and agreements, and possibly joint activities, among the institutions involved.

You should describe the stage of the partnership, be it an early partnership or a mature one, and how the partnership's stage will affect the type of work proposed under the grant, the roles of the partners, and the expectations for the results of the project. Partnerships of any stage are acceptable for a State/Local Evaluation project. More important is whether the partnership's organization, activities, grounding, and proposed infrastructure appear adequate to carry out the proposed evaluation.

b. Research Questions

You should clearly describe the aims of your project, including your hypotheses and/or research questions to be addressed. You should identify the issue or problem that the State or district is trying to address through the program/policy and discuss the overall importance of this issue or problem for the improvement of student outcomes. The importance of the issue or problem to the education agency, and education stakeholders in general, should be included in your discussion.

c. The Program/Policy

You should clearly describe the program/policy, including its individual components. In addition, you should describe the processes and materials (e.g., manuals, websites, training, coaching) that will be used to support its implementation. You should provide evidence that the program/policy is fully developed and that all materials required for its implementation are readily available for use in authentic education delivery settings. Also, you should note the fidelity measure(s) that you will use to assess the implementation of the program/policy as well the means you will use to determine what the comparison group is receiving. If a fidelity measure needs to be developed, you can propose devoting a short period of time (e.g., 2-6 months) to its development. However, the program/policy itself must be fully developed.

As part of your description of the program/policy, you should discuss how it substantially modifies or differs from existing practices (either in the same location or in other locations). Strong applications will include detailed descriptions of what the comparison group experiences. By clearly describing the components of the program/policy and the comparable program/policy that the comparison group will receive or experience, you help reviewers to better judge whether the program/policy is sufficiently different from what the comparison group experiences so that one might reasonably expect a difference in student outcomes

In addition, you should discuss any previous attempts to evaluate the program/policy and clearly distinguish your proposed evaluation from prior work and the additional contribution it will make.

d. Theory of Change

You should explain the rationale for the program/policy. Why is the program/policy likely to improve student outcomes? The Institute recognizes that oftentimes programs/policies that emerge out of a practice context are not based on a formal theory of change. However, you should articulate the underlying logic or sequence of events that will ultimately result in improved student academic outcomes. The programs/policies may effect student outcomes directly (e.g., a tutoring program for low-achieving students) or indirectly (e.g., a professional development program to improve the quality of instruction which is to improve student outcomes). For example, a State might implement a program to provide incentives to recruit master teachers to teach at chronically low-performing schools. The theory of change might be that (a) monetary incentives will increase the number of master teachers who are willing to leave their current schools to teach at low-performing schools, (b) master teachers will provide better instruction to their students and coaching that will enhance instruction of other teachers in the school, and (c) enhanced instruction will lead to better student outcomes. By including the proximal and distal outcomes expected from the program/policy in the theory of change, you provide more opportunities to test the theory and revise it accordingly.

The theory of change helps reviewers judge whether the program/policy is likely to produce a positive impact on desired outcomes relative to current practice. It also provides a framework for determining critical features of the program/policy and its implementation that should be measured. In the previous example, the theory of change suggests that the evaluation team might need to measure (a) the number of master teachers in treatment and comparison schools prior to and after the implementation of the program/policy; (b) whether master teachers in the treatment group are aware of the incentive program once the program/policy has been implemented; (c) number of hours, type, and quality of coaching provided by master teachers at treatment and control schools; (d) quality of instruction provided by regular teachers prior to and after implementation of the program/policy; and (e) student outcomes prior to and after implementation of program/policy.

e. Conditions of Implementation

Under the State/Local Evaluation topic, you must evaluate a program/policy implemented by States and districts. By *State or district implementation*, the Institute means that a State education agency or local education agency has decided, apart from participation in any evaluation, to fund the implementation of the program/policy and to oversee the implementation of the program/policy as part of its regular responsibilities. This restriction does not preclude evaluating a program/policy that is delivered by entities outside of State or district personnel so long as the State or district education agency has contracted, or otherwise established an agreement, with the outside entity to deliver the program/policy. You must clearly describe who is responsible for the implementation of the program/policy.

For a program/policy that is to be implemented by the State or district education agency, you must indicate the date when the State or district will begin implementation. You should show that the new program/policy will be implemented during the timeframe of the grant. Evidence that implementation will take place can include, for example, new State laws or regulations, appropriation of targeted funds, and the establishment of new authorities for implementation and oversight.

If the program/policy has already been implemented in some schools but is not yet universal within the State or district and the proposed evaluation will, for example, take advantage of expansion of the program/policy to additional schools or districts, you must indicate the date when the State or district will begin the implementation of the program/policy in new schools or districts.

You should show that the program/policy will be implemented under routine practice (e.g., typical operating conditions) and identify the variety of settings and populations for which you will be able to test its impacts.

f. Rationale

In justifying your evaluation, you should address why the program/policy is likely to produce better student outcomes relative to current practice (or argue that the program/policy is current practice if widely used) and what the overall practical importance of the program/policy is (why education practitioners or policymakers should care about the results of the proposed evaluation).

You should provide both evidence of the program/policy's widespread use and conceptual arguments for the importance of evaluating the program/policy because of its relevance to public policy or current education practice as would be judged by practitioners and policymakers. By *widespread use*, the Institute means used across multiple states or in the majority of districts in a single state or in the majority of schools in one or more large districts. Widespread use of the program/policy provides empirical evidence for the practical importance of its evaluation. You should also point out any broader conceptual importance your evaluation may have, for example, if the program/policy is the primary approach currently used, or if it is representative of the most commonly used approaches, or if it offers an alternative approach to the most commonly used approaches. In addition, you should describe studies that have attempted to evaluate the program/policy, note their findings, and discuss why your proposed study would be an important improvement on past work.

In addition, you should note any evidence of the feasibility and affordability of the program/policy. Such evidence could increase the likelihood of the program/policy's adoption by other States and districts if you found it improved student outcomes.

It can be helpful to end the Significance section with a summary paragraph justifying the importance of the proposed work. From the reviewers' perspective, such a paragraph organizes the arguments made throughout the Significance section and better prepares them to read the Research Plan.

B. Research Plan

Your Research Plan must clearly describe (a) the sample and setting; (b) an appropriate research design that can support causal inferences; (c) a detailed power analysis; (d) the measures that will be used to assess proximal and distal outcomes, fidelity of implementation, and comparison group practices; (e) key moderators or mediators; (f) the data analyses; and (g) a cost analysis plan.

a. Sample and Setting

You must define the sample to be selected and sampling procedures to be employed for the proposed study, including justification for exclusion and inclusion criteria. You should show how this sample addresses the overall aims of the project. Additionally, you should describe strategies to increase the likelihood that participants (e.g., districts, schools, teachers, and/or students) will join the study and remain in the study over the course of the evaluation.

b. Research Design

You must provide a detailed description of the research design. State/Local Evaluation projects are to provide causal findings, and you must show how you will be able to make causal inferences based on the results from your design.⁸ You should describe how potential threats to internal validity would be addressed. For all types of research designs, including those using random assignment, you should explain how you will document that the treatment and comparison groups are equivalent at the outset of the study and how you will document the level of bias occurring from overall and differential attrition rates.⁹

⁸ Applicants may find the following article useful: Song, M., & Herman, R. (2010). Critical Issues and Common Pitfalls in Designing and Conducting Impact Studies in Education: Lessons Learned From the What Works Clearinghouse (Phase I). *Educational Evaluation and Policy Analysis*, 32(3), 351-371.

⁹ See pages 11-16 of the WWC Procedures and Standards Handbook: Version 2.1 (September 2011) available at http://ies.ed.gov/ncee/wwc/pdf/reference_resources/wwc_procedures_v2_1_standards_handbook.pdf.

In the Significance section, you described the program/policy, how it would be implemented, and what supports are expected to be necessary for a successful implementation. In addition to discussing how your Research Design will be used to evaluate the impact of the program/policy, you must also address how it identifies and assesses the factors associated with successful implementation of the program/policy. You should collect data on the conditions in the school and district setting that may affect the fidelity of implementation and that can help you to understand why the program/policy is or is not implemented with high fidelity. Should you propose an evaluation that relies solely on secondary data analyses of historical data that do not contain this information, you are not required to include this type of analysis or the collection of fidelity data in your application. However, such applications will be stronger if they include a means to check fidelity during the period studied.

In describing your design, you should give a thoughtful justification for the selection of the counterfactual. In evaluations of education programs/policies, individuals in the comparison group typically receive some kind of treatment; rarely is the comparison group a "no-treatment" control. For some evaluations, the primary question is whether the program/policy treatment is more effective than a particular alternative treatment. In such instances, the comparison group receives a well-defined treatment that is usually an important comparison to the target program/policy for theoretical or practical reasons. In other cases, the primary question is whether the program/policy treatment is more effective than what is generally available and utilized in schools. In such cases, the comparison group might receive what is sometimes called *business-as-usual*. Business-as-usual generally refers to situations in which the standard or frequent practice across the district or region is a relatively undefined education treatment. However, business-as-usual may also refer to situations in which a branded program/policy (e.g., a published curriculum or program) is implemented with no more support from the developers of the program than would be available under normal conditions. In either case, *using a business-as-usual comparison group is acceptable*. For either type of business-as-usual, you should detail as much as possible the treatment or treatments received in the comparison group. By clearly describing the program/policy and the comparable treatment that the comparison group will receive, you help reviewers to better judge whether the program/policy is sufficiently different from what the comparison group receives so that one might reasonably expect a difference in student outcomes.

In addition, you should describe strategies for reducing potential contamination between treatment and comparison groups. You do *not* necessarily need to randomize at the school level to avoid contamination between groups especially if you identify conditions and processes that will reduce the likelihood of contamination.

State/Local Evaluation projects are to provide feedback to the education agency throughout the project and the agency may use this information to adjust the program/policy. For example, findings of weak or poor program fidelity in Year 1 of the project may lead the agency to increase its implementation efforts. As a result, designs need to be somewhat flexible to allow for modifications in the program/policy during the project period.

Typical designs for State/Local Evaluation projects include (i) randomized controlled trials, (ii) regression discontinuity designs, and (iii) strong quasi-experimental designs. If you propose to use a design other than a randomized controlled trial, you must make a compelling case that randomization is not possible and that your alternative design substantially minimizes selection bias or allows it to be modeled.

(i) Randomized Controlled Trials

Studies using random assignment to program/policy and comparison conditions have the strongest internal validity for causal conclusions and, thus, are preferred. When a randomized controlled trial is used, you should clearly state and present a convincing rationale for the unit of randomization (e.g., students, classroom, teacher, or school). You should explain the procedures for random assignment

of groups (e.g., schools) or participants to program/policy and comparison conditions and how the integrity of the assignment process will be ensured.¹⁰

The procedures used for random assignment are expected to depend upon the program/policy's implementation. In some cases, the State or district may be able to assign all appropriate units to the treatment and control groups while in others only a subset of units, often volunteers, can be randomly assigned. The two experimental evaluations of the School Development Program (SDP) illustrate these two approaches (Cook et al. 1999; Cook, Murphy, & Hunt, 2000).

Lotteries are often used to randomly assign participants to treatment and control groups. Lotteries are especially useful for randomly assigning groups to these two conditions in situations where participants have to apply to receive a program/policy but resources are not sufficient to provide the program to all applicants (see Kemple & Snipes, 2000 for an example regarding the Career Academies Evaluation). When proposing a lottery design, it is important to document that oversubscription will occur; whether participants may take part in multiple lotteries (e.g., apply to a number of charter or magnet schools), and if so, how the design will address this; and whether those who do not gain entry through the lottery will remain available as the control group (e.g., students who lose a charter or magnet school lottery may go to private schools or to other districts where data collection is not possible and so attrit from the control group).

Random assignment can also be implemented through a staggered roll-out of the program or policy with the treatment group receiving the program/policy immediately and the control group receiving it at a future time. This type of implementation also allows a district or State to more easily manage the implementation of the program/policy and spread the cost over a number of years. For example, if a new program/policy is deployed for one-third of a State's districts each year over a 3-year period and the districts take part in a lottery to determine when each will receive it, then in Year 1, one-third of the districts can be the treatment group and the remaining districts are the control group. In the second year, the second group joins the treatment group, and the control group is the one-third of the districts not yet receiving the program/policy. In the third year, all districts are participating. When proposing a staggered randomized design, it is important to justify that the time between the roll-out of the program/policy for the treatment group and when the control group will receive it will be long enough to expect the program/policy to improve the treatment group's outcomes relative to the control group.

Random assignment can also be done when everyone will receive some variation of the program/policy. In such a case, the State or district implements a program or policy but tries out variations in an attempt to determine the most successful way to structure the program or policy or whether variations may have differential subgroup impacts (for example, see Hastings, Van Weelden, & Weinstein, 2007 for a study on variations in information provided to parents on school choice in the Charlotte-Mecklenburg school district).

(ii) Regression Discontinuity Designs

Studies using regression discontinuity designs may also provide unbiased estimates of the effects of an education program/policy (for example, see Gormley, Gayer, Phillips, & Dawson, 2005 regarding the impact of preschool). If you propose to use a regression discontinuity design, you should explain the appropriateness of the assignment variable, show that there is a true discontinuity, document that no manipulation of the assignment variable has occurred and that the composition of the treatment and comparison group does not differ in ways that would indicate selection bias, and

¹⁰ What a randomized controlled trial must do to meet the WWC's evidence standards is described in the WWC Procedures and Standards Handbook (2011) available at <http://ies.ed.gov/ncee/wwc/DocumentSum.aspx?sid=19> .

include sensitivity analyses to assess the influence of key procedural or analytic decisions on the results.¹¹

(iii) Quasi-Experimental Designs

You may propose rigorous quasi-experimental designs that come close to true experiments in minimizing the effects of selection bias (that may result in differences in the composition of the intervention and comparison groups) on estimates of the program/policy's impacts.¹² You must justify how the proposed design permits drawing causal conclusions about the effect of the program/policy on the intended outcomes. To this end, you should identify and justify the specific assumptions made by the design, discuss how selection bias will be minimized or modeled,¹³ demonstrate how you will obtain equivalence between the intervention and comparison groups at program/policy entry on the variables that are to be measured as final student academic outcomes (e.g., student achievement scores) or obtain such equivalence through statistical procedures, and demonstrate how you will obtain equivalence on other variables that may affect intended outcomes of the program/policy being evaluated (e.g., demographic variables, experience and level of training of teachers, motivation of students). You should explicitly discuss the threats to internal validity that are not addressed convincingly by the design and how conclusions from the research will be tempered in light of these threats.

The acceptability of a quasi-experimental design for a causal analysis depends on the specifics of the evaluation. For example, short comparative interrupted time-series analyses have been used to evaluate whole-school reform programs for schools serving at-risk student populations (Bloom, 1999; Bloom, et al., 2001; Kemple & Herlihy, 2004; Kemple, Herlihy, & Smith, 2005). Matching designs, including the use of propensity scores, using only commonly available variables (such as race/ethnicity and gender) are unlikely to be considered strong enough to control for unobserved factors involved in selection and related to the outcomes. Instrumental variable analyses should be based on instruments shown to be strongly correlated with the independent variable and correlated with the outcome through that independent variable (but not directly correlated with the outcome or indirectly correlated with the outcome through unobserved variables).

c. Power

You must clearly address the statistical power of the research design to detect a reasonably expected and minimally important effect. You should address the clustering of participants (e.g., students in classrooms and/or schools and/or districts) in your power analysis. A strong discussion of power will include the following:¹⁴

- The minimum effect of the program/policy you will be able to detect and a justification as to
 - why this level of effect would be expected from the program/policy and
 - why this would be a practically important effect.
- A description of how either the power for detecting the minimum effect or the minimum detectable effect size was calculated for the sample in answering the primary research questions. You should provide the statistical formula used and also
 - describe the parameters with known values used in the formula (e.g., number of clusters, number of participants within the clusters),

¹¹ What a regression discontinuity design must do to meet the WWC evidence standards is described in Standards for Regression Discontinuity Designs (2010) available <http://ies.ed.gov/ncee/wwc/DocumentSum.aspx?sid=19>.

¹² What a quasi-experimental design must do to meet the WWC's evidence standards with reservations is described in the WWC Procedures and Standards Handbook (2008) available at <http://ies.ed.gov/ncee/wwc/DocumentSum.aspx?sid=19>.

¹³ For more information, see Shadish, W. R., Cook, T. D., and Campbell, D. T. (2002). *Experimental and Quasi-Experimental Designs for Generalized Causal Inference*. Boston, MA: Houghton Mifflin Company.

¹⁴ For more information, see Donner, A., & Klar, N. (2000). *Design and Analysis of Cluster Randomization Trials in Health Research*. New York, NY: Oxford University Press; Murray, D. M., Varnell, S. P., & Blitstein, J. L. (2004). Design and Analysis of Group-Randomized Trials: A Review of Recent Methodological Developments. *American Journal of Public Health, 94*(3), 423-432; W.T. Grant Foundation & University of Michigan, http://sitemaker.umich.edu/group-based/optimal_design_software.

- describe the parameters whose values are estimated and how those estimates were made (e.g., intraclass correlations, role of covariates),
 - describe other aspects of the design and how they may affect power (e.g., stratified sampling/blocking, repeated observations), and
 - describe predicted attrition and how it was addressed in the power analysis.
- Similar descriptions should be provided for any causal analyses to be done using subgroups of the proposed sample.

d. Measures

You should give careful consideration to the selection of measures and justify the appropriateness of the chosen measures concerning (i) outcomes, (ii) fidelity of implementation of the program/policy, and (iii) what the comparison group receives.

You should describe the procedures for and the timing of the collection of data that will be used as measures and indicate procedures to guard against bias entering into the data collection process (e.g., pretests occurring after the program/policy has been implemented or differential timing of assessments for treatment and comparison groups).

If additional measures need to be developed, applicants should make the case for their need, describe what will be developed and how it will be developed, and to the extent possible, provide examples of items (examples of items may be included in Appendix B).

(i) Outcomes

You should include student academic outcome measures that are of practical interest to schools, districts, and States. These may include grades, State or district standardized assessments of student achievement, State end-of-course exams, exit exams, attendance and tardiness rates, drop out and/or graduation rates. For programs/policies designed to directly change the teaching and learning environment and, in doing so, indirectly affect student outcomes, you should also provide measures of the proximal outcomes (e.g., teacher behaviors, teacher mobility, knowledge of instructionally relevant content). The Institute recommends that, where possible, States and districts incorporate the use of administrative data in the evaluation. You should provide information on the reliability, validity, and appropriateness of proposed measures. You should make clear how the measures align with the theory of change and that the skills or content the program/policy is designed to address are captured in the measures.

(ii) Measures of Implementation Fidelity

You should specify how the implementation of the program/policy will be documented and measured. This will include describing your fidelity measure(s) to assess the implementation of the program/policy. You should make clear how the fidelity measures capture the core components of the program/policy. Your description of the fidelity measures and the measures of what is occurring in the comparison group (see below) should show that the two sets of measures are sufficiently comprehensive and sensitive to identify and document critical differences between what the treatment and comparison groups receive. You should also discuss how you will identify and assess factors associated with the fidelity of implementation; such information may provide insight into what supports are needed within schools or districts to successfully implement the program/policy with high fidelity.

If you are proposing an evaluation that relies on secondary data analyses of historical data that does not contain fidelity information, you are *not* required to include fidelity data; however, applications will be stronger if they include some type of check on fidelity during the period studied. You should provide an explanation for why data on fidelity of implementation of the program/policy will not be included in the project. The Institute recognizes that there may be some applications that will rely on secondary analyses of administrative data (e.g., State assessment data) and include both historical

data and future data (e.g., a regression discontinuity design in which the time frame for the data goes from 2008 through 2016). In such cases, stronger applications will address fidelity of implementation, at least during the prospective years. As with all methodological issues, you should provide a clear rationale for your decision regarding the proposed research approach.

(iii) Measures of Comparison Group Practices

Comparisons of a program/policy against other conditions are only meaningful to the extent that you describe what the comparison group receives or experiences. You should identify the measure(s) you will use to measure the comparison group's experience so that you can compare the treatment and comparison groups on the implementation of critical features of the program/policy. Such a comparison will allow you to determine whether there was clear distinction in what the groups received or whether both groups received key elements of the program/policy. You can then use this determination for *post hoc* explanations of why the program/policy does or does not improve student learning relative to the counterfactual.

e. Mediators and Moderators

The Institute expects State/Local Evaluation projects to examine relevant moderating factors but recognizes that many evaluations are not powered to rigorously test the effects of a wide-range of moderators. Therefore, you should focus on a small-set of moderators for which there is a strong theoretical and/or empirical base to expect they will moderate the impact of the program/policy on the student outcomes measured. Moderating variables that are also likely to affect outcomes in the comparison condition should be measured in both in the treatment and the comparison groups. The Institute encourages your use of observational, survey, and qualitative methodologies to assist in the identification of factors that may explain the variation in the effect of the program/policy.

The Institute recognizes that most State/Local Evaluation projects are not designed or powered to rigorously test the effects of specific mediating variables. However, the Institute encourages you to propose exploratory analyses to better understand potential mediators of the program/policy.

f. Data Analysis

You must include a detailed description of your data analysis procedures. You should make clear how the data analysis directly answers your research questions/hypotheses. You should include your data analysis plans for evaluating the impact of the program/policy and for additional analyses such as subgroup impacts, the roles of moderators and mediators, and fidelity of implementation (including identifying what is needed for sufficient implementation of the program/policy). For quantitative data, specific statistical procedures (including the equations for the models to be estimated) should be described. Your analysis procedures should address any clustering of students in classes and schools, even when individuals are randomly assigned to condition, which generally requires specialized multilevel statistical analyses. In addition, you should discuss how exclusion from testing and missing data will be handled in your analysis. Also, if you intend to link multiple data sets, you should provide sufficient detail for reviewers to judge the feasibility of the linking plan.

For qualitative data, you should delineate the specific methods used to index, summarize, and interpret the data, along with the theoretical perspective taken in collecting and analyzing the data. You should discuss whether the qualitative and quantitative data will be used in the same analyses (e.g., incorporating fidelity of program/policy data into the impact analysis¹⁵) or be used in complementary analyses.

¹⁵ See, e.g., Hulleman, C. S., & Cordray, D. S. (2009). Moving from the Lab to the Field: The Role of Fidelity and Achieved Relative Program/Policy Strength. *Journal of Research on Educational Effectiveness*, 2, 88-110.

g. Cost Analysis

A cost analysis must be included. This analysis is to assess the financial costs of program implementation and assist education agencies in understanding whether implementation of the program is practicable given their available resources. You should collect data on the monetary expenditures for the resources that are required to implement the program. Financial costs for personnel, facilities, equipment, materials, and other relevant inputs should be included. Annual costs should be assessed to adequately reflect expenditures across the lifespan of the program. The Institute is not asking you to conduct an economic evaluation of the program (e.g., cost-benefit, cost-utility, or cost-effectiveness analyses), although you may propose such evaluation activities if desired.¹⁶

h. Dissemination Plan

You must include a dissemination plan describing how the results of the study will be provided to the education agency, the policymakers and practitioners working with the program/policy, interested members of the public, other education agencies, and the research community. Dissemination of findings through academic articles in peer reviewed journals and presentations at academic conferences is expected but should make up only one component of your plan. Dissemination to the education agency is an important component and should not be confined to the last years of the project. Instead there should be regular contact (formal and informal) through which findings are presented on a regular basis to the agency's policymakers and practitioners so that the educational agency is kept aware of the project's work, can provide advice on the research, and can adjust its own activities accordingly. Dissemination to other practitioners and policymakers (including other education agencies), and the public is another key component of your plan and should occur when the project is certain of its findings and can provide results that others can use in their own decision making. You should consider both targeted dissemination activities (e.g., presenting at conferences attended and publishing in sources read by practitioner and policies) as well as more widely available media (e.g., a project website).

C. Personnel

In this section, you must identify all key personnel on the project team including the Principal Investigator and the Co-Principal Investigator(s). The Principal Investigator may be from either the research institution or the education agency, but there must also be a Co-Principal Investigator from each of the other members of the partnership. The Principal or Co-Principal Investigator from the education agency must have decision-making authority for the issue being examined. You should discuss how the research and program expertise of the key personnel together collectively demonstrates expertise in the relevant content domain(s), maintaining a partnership between researchers and practitioners including working within schools, assessing the fidelity of implementation of the program/policy, the methodology required to evaluate the impact of the program/policy, and disseminating the findings.

You should briefly describe the following for all key personnel:

- Qualifications;
- Roles and responsibilities within the project;
- Percent of time and calendar months per year (academic plus summer) to be devoted to the project; and
- Past success at disseminating research findings in peer-reviewed scientific journals.

In your discussion of your personnel and their roles, you should address both the collaborative nature of the work and the independence of the evaluation. Personnel from all the partners are expected to work together. You should discuss how research personnel from the education agency will work with personnel from the research institution, whether and how practitioners will take on important roles in the evaluation, and how agency personnel with decision making authority over the program or policy being evaluated will have regular input into the evaluation and receive regular briefings on its progress. At the

¹⁶ For additional information on how to calculate the costs of a program or conduct an economic evaluation, see Levin, H.M., & McEwan, P.J. (2001). *Cost-Effectiveness Analysis*. 2nd Ed. Thousand Oaks, CA: Sage Publications.

same time, you should note how the key activities of the evaluation (the determination of random assignment, the data collection, and the impact analysis) will be carried out by people (including the principal investigator) not involved in the development and/or distribution of the program or policy and with no financial interest in the outcome of the evaluation.

If any part of the study is to be conducted by another organization (e.g., data collection, data coding, analysis of data), that organization and its personnel involved must be included in the application. It is not acceptable to simply propose that grant funds be used to contract with an unspecified organization to collect and/or analyze data.

D. Resources

You should describe the institutional resources of all the institutions involved in the partnership and how these resources will contribute to both building the partnership and contributing to the evaluation the partnership will carry out. You should discuss the overall management of the research project (how the partnership will function and make decisions) and what resources and procedures are available to support the successful completion of this project. You must include Letters of Agreement in Appendix C from all institutions involved in the partnership documenting their participation and cooperation and clearly setting out their expected roles and responsibilities in the partnership. You should document the availability and cooperation of the schools taking part in the work. You should also document the availability and cooperation of any organizations holding data sets that will be required to carry out the research proposed in the application via Letters of Agreement from these organizations. These letters should be placed in Appendix C and should convey that all organizations understand what their participation in the evaluation will involve (e.g., annual student and teacher surveys, implementing all components of the program/policy if placed into the treatment group, not receiving the program/policy for X-number of years if placed on a wait-list control, providing specific data sets).

If teachers or other school staff are expected to play an important role in the research (e.g., through teacher implementation of new practices, taking part in observations and surveys, recording activities or student behavior), you should discuss how teacher support for this work will be obtained, document current teacher knowledge and support for the work, and provide any evidence from past work of high teacher involvement.

E. Ensuring Responsiveness of the Project Narrative

The Institute will review only applications that are responsive to all the requirements set out in this request. To help ensure responsiveness to the substantive requirements for the Project Narrative, you should be sure to include/address the following.

In the Significance section:

- A clear description of the State or local program/policy to be evaluated, who is responsible for its implementation, and the date implementation began.

In the Research Plan:

- A research plan that describes the sample and setting; causal research design; power analysis; outcome measures for outcomes, fidelity of implementation, and comparison group practices; moderators and mediators; data analysis; and cost analysis.
- A dissemination plan that includes ongoing contact with the education agency and providing results to the academic community, the education agency's practitioners and policymakers, the public, and other education agencies.

In the Personnel section:

- Identification of key personnel and how they meet the Personnel requirements including a Principal or Co-Principal Investigator from the education agency with decision-making authority

for the program/policy being studied and a Principal or Co-Principal Investigator from the research institution with the methodological expertise to carry out the evaluation design.

Overall:

- A time frame that falls within the maximum project length and a budget that falls within the maximum award.

3. AWARDS

Your proposed length of project should reflect the scope of work to be accomplished. **The maximum duration of a State/Local Evaluation project is 5 years.**

Your budget should reflect the scope of the work to be done and will vary according to the type of program/policy being evaluated. **The maximum award for a State/Local Evaluation project is \$5,000,000 (total costs = direct + indirect costs).**

Funds available through this program must be used solely for purposes of the evaluation. **Funds must not be used to support the implementation of the program/policy.** The cost of the program/policy includes any materials, textbooks, software, computers, assessments, or training required to implement the program/policy. Grant funds can be used to pay teachers or other participants for time involved in completing questionnaires, surveys, or any other assessments that are part of the evaluation. In the budget narrative, you should make clear that no grant funds will be used to support implementation of the program/policy.

Any application proposing a budget period longer than the maximum or a budget higher than the maximum award will be deemed nonresponsive to the Request for Applications and will not be accepted for review.

PART V: GENERAL SUBMISSION AND REVIEW INFORMATION

1. MECHANISM OF SUPPORT

The Institute intends to award grants pursuant to this request for applications. The maximum length of the award period varies by topic, ranging from 2 years for Topic 1, 4 years for Topic 2, and 5 years for Topic 3.

2. FUNDING AVAILABLE

Although the Institute intends to support the research topics described in this announcement, all awards pursuant to this request for applications are contingent upon the availability of funds and the receipt of meritorious applications. The Institute plans to award no more than four grants under Topic 2. The actual number of grants awarded under a specific topic will depend upon the number of high quality applications submitted to that topic and the availability of funds.

The size of the award depends on the scope of your project and the topic under which you apply. Please attend to the maximums set for project length and budget for each topic. **If you request a project length longer than the maximum or a budget higher than the maximum, your application will be deemed nonresponsive and will not be reviewed.**

3. ELIGIBLE APPLICANTS

Applications must be made by partnerships of at least one research institution and at least one State or local education agency.

Can I apply if I work at a for-profit developer or distributor of an intervention?

Yes, you may apply if you or your collaborators develop, distribute, or otherwise market products or services (for-profit or nonprofit) that can be used as interventions or components of interventions in the proposed research activities. However, the involvement of the developer or distributor must not jeopardize the objectivity of the research. In cases where the developer or distributor is part of the proposed research team, you should discuss how you will ensure the objectivity of the research in the project narrative.

Can I apply if I intend to copyright products developed using grant funds?

Products derived from the grant may be copyrighted, and used by the grantee for proprietary purposes, but the U.S. Department of Education reserves a royalty-free, non-exclusive, and irrevocable right to reproduce, publish, or otherwise use such products for Federal purposes and to authorize others to do so [34 C.F.R. § 74.36(a) (2013) (<http://www.ecfr.gov/cgi-bin/retrieveECFR?gp=1&SID=28ac4dbfeabba7d842fc8544fc835881&ty=HTML&h=L&r=SECTION&n=34y1.1.1.1.21.3.13.16>)].

Can I apply if I am not located in the United States or if I want to collaborate with researchers located outside of the United States?

A research institution not located in the territorial United States may be the research institution partner or a sub-awardee. Institutions not located in the territorial U.S. (both primary grantees and sub-awardees) **cannot charge indirect costs.**

The State or local education agency must be located in the territorial United States.

All research supported by the Institute **must be relevant to education in the United States.**

4. THE PRINCIPAL INVESTIGATOR

The Principal Investigator is the individual who has the authority and responsibility for the proper conduct of the research, including the appropriate use of federal funds and the submission of required scientific progress reports.

The partnering institutions (the research institution and the State or local education agency) must each identify at least one Principal Investigator from their organization. Your institution may elect to designate more than one Principal Investigator. In so doing, the institution identifies them as individuals who share the authority and responsibility for leading and directing the research project intellectually and logistically. All Principal Investigators will be listed on any grant award notification.

However, the partnering institutions applying for funding must designate a single point of contact for the project. The role of this person is primarily for communication purposes on the scientific and related budgetary aspects of the project and should be listed as the Principal Investigator. All other Principal Investigators should be listed as Co-Principal Investigators.

The Principal Investigator and a Co-Principal Investigator from the partnering institutions are expected to attend one meeting each year (for up to 3 days) in Washington, D.C. with other grantees and Institute staff. The project's budget should include this meeting. Should either the PI or Co-PI(s) not be able to attend the meeting, he/she can designate another member of the research team to attend.

5. SPECIAL CONSIDERATIONS FOR INDIRECT COST RATES AND FOR EXPENSES FOR HOSTING MEETINGS AND CONFERENCES

When calculating your expenses for research conducted in field settings, you should apply your institution's negotiated off-campus indirect cost rate, as directed by the terms of your institution's negotiated agreement with the federal government.

Institutions, both primary grantees and sub-awardees, not located in the territorial U.S. cannot charge indirect costs.

If you are requesting funds to cover expenses for hosting meetings or conferences, please note that there are statutory and regulatory requirements in determining whether costs are reasonable and necessary. Depending on the type of organization you belong to, you should refer to the Cost Principles for Federal Grants:

- 2 CFR Part 225 (OMB Circular A-87, State, Local, and Indian Tribal Governments), <http://www.gpo.gov/fdsys/pkg/CFR-2011-title2-vol1/xml/CFR-2011-title2-vol1-part225.xml>;
- 2 CFR Part 220 (OMB Circular A-21, Educational Institutions), <http://www.gpo.gov/fdsys/pkg/CFR-2011-title2-vol1/xml/CFR-2011-title2-vol1-part220.xml>; or
- 2 CFR 230 (OMB Circular A-122, Non-Profit Organizations), <http://www.gpo.gov/fdsys/pkg/CFR-2011-title2-vol1/xml/CFR-2011-title2-vol1-part230.xml>.

In particular, federal grant funds cannot be used to pay for alcoholic beverages or entertainment, which includes costs for amusement, diversion, and social activities. In general, federal funds may not be used to pay for food. A grantee hosting a meeting or conference may not use grant funds to pay for food for conference attendees unless doing so is necessary to accomplish legitimate meeting or conference business. You may request funds to cover expenses for working meetings (e.g., working lunches); however, the Institute will determine whether these costs are allowable in keeping with OMB Cost Principles. Grantees are responsible for the proper use of their grant awards and may have to repay funds to the Department if they violate the rules for meeting- and conference-related expenses.

6. DEMONSTRATING ACCESS TO DATA AND EDUCATION DELIVERY SETTINGS

You may propose to conduct research that requires access to studies currently under way, secondary data sets, or education delivery settings (e.g., classrooms, schools, districts). In such cases, you will need to provide evidence that you have access to these resources prior to receiving funding. Whenever possible, you should include Letters of Agreement from those who have responsibility for or access to the

data or settings you wish to incorporate when you submit your application. Even in circumstances where you have included such letters with your application, the Institute may require additional supporting evidence prior to the release of funds. If you cannot provide such documentation, **the Institute may not award the grant or may withhold funds.**

You will need supporting evidence of partnership or access if you are:

Building off existing studies

You may propose studies that piggyback onto an ongoing study (i.e., that require access to subjects and data from another study). In such cases, the Principal Investigator of the existing study must be one of the members of the research team applying for the grant to conduct the new project.

Using secondary data sets

If your application is being considered for funding based on scientific merit scores from the peer review panel and your research relies on access to secondary data sets (such as federally-collected data sets, State or district administrative data, or data collected by you or other researchers), you will need to provide documentation that you have access to the necessary data sets in order to receive the grant. This means that if you do not have permission to use the proposed data sets at the time of application, you must provide documentation to the Institute from the entity controlling the data set(s) before the grant will be awarded. This documentation must indicate that you have permission to use the data for the proposed research for the time period discussed in the application. If you obtained permission to use a proposed data set prior to submitting your application, the Institute may ask you to provide updated documentation indicating that you still have permission to use the data set to conduct the proposed research during the project period.

Conducting research in or with education delivery settings

If your application is being considered for funding based on scientific merit scores from the peer review panel and your research relies on access to education delivery settings (e.g., schools and districts), you will need to provide documentation that you have access to the necessary settings in order to receive the grant. This means that if you do not have permission to conduct the proposed project in the necessary number of settings at the time of application, you will need to provide documentation to the Institute indicating that you have successfully recruited the necessary number of settings for the proposed research before the full first-year costs will be awarded. If you recruited sufficient numbers of settings prior to the application, the Institute may ask you to provide documentation that the schools originally recruited for the application are still willing to partner in the research.

In addition to obtaining evidence of access, the Institute strongly advises applicants to establish a written agreement, within 3 months of receipt of an award, among all key collaborators and their institutions (e.g., Principal and Co-Principal Investigators) regarding roles, responsibilities, access to data, publication rights, and decision-making procedures.

7. PUBLIC AVAILABILITY OF RESULTS

Recipients of awards are expected to publish or otherwise make publicly available the results of the work supported through this program. Institute-funded investigators **must submit final, peer-reviewed manuscripts** resulting from research supported in whole or in part by the Institute to the Educational Resources Information Center (ERIC, <http://eric.ed.gov>) upon acceptance for publication. An author's final manuscript is defined as the final version accepted for journal publication or other form of public release and includes all graphics and supplemental materials that are associated with the article. The Institute will make the manuscript available to the public through ERIC no later than 12 months after the official date of publication. Investigators and their institutions are responsible for ensuring that any publishing or copyright agreements concerning submitted articles fully comply with this requirement.

8. SPECIAL CONDITIONS ON GRANTS

The Institute may impose special conditions on a grant if the applicant or grantee is not financially stable; has a history of unsatisfactory performance; has an unsatisfactory financial or other management system; has not fulfilled the conditions of a prior grant; or is otherwise not responsible.

9. SUBMITTING A LETTER OF INTENT

The Institute asks that you submit a letter of intent by **4:30 p.m.** Washington D.C. time on **June 6, 2013** for the competition to which you plan to submit. Institute staff use the information in the letters of intent to identify the expertise needed for the scientific peer review panels, secure a sufficient number of reviewers to handle the anticipated number of applications, and provide feedback to you on your research idea. The Institute encourages you to submit a letter of intent even if you think you might later decide not to submit an application. **The letter of intent is not binding and does not enter into the review of a subsequent application.** The letter of intent must be submitted electronically using the instructions provided at <https://iesreview.ed.gov>. Receipt of the letter of intent will be acknowledged via email. **Should you miss the deadline for submitting a letter of intent, you still may submit an application.** If you miss the deadline, the Institute asks that you inform the relevant program officer of your intention to submit an application.

A. Content

The letter of intent should include:

- 1) Descriptive title,
- 2) Topic that you will address,
- 3) Brief description of the proposed project,
- 4) Name, institutional affiliations, addresses, telephone numbers and e-mail addresses of the Principal Investigator and the Co-Principal Investigators from the partnering institutions
- 5) Name and institutional affiliation of any key collaborators and contractors,
- 6) Duration of the proposed project, and
- 7) Estimated total budget request (the estimate need only be a rough approximation).

B. Format and Page Limitation

Begin by selecting the letter of intent form for the research topic that you plan to submit your application under (<http://iesreview.ed.gov>). The online submission form contains fields for each of the seven content areas listed above. Use these fields to provide the requested information. The project description should be single-spaced and should not exceed 1 page (about 3,500 characters).

10. APPLICATION INSTRUCTIONS AND APPLICATION PACKAGE

A. Documents Needed to Prepare an Application

To complete and submit an application, you need to review and use three documents: the Request for Applications, the IES Grants.gov Application Submission Guide, and the Application Package.

- 1) The *Request for Applications* for the Partnerships and Collaborations Focused on Problems of Practice or Policy grant program (CFDA 84.305H) describes the substantive requirements for a research application.

✓ Request for Applications <http://ies.ed.gov/funding/>

- 2) The *IES Grants.gov Application Submission Guide* provides the instructions for completing and submitting the forms included in the Application Package.

✓ IES Grants.gov Application Submission Guide <http://ies.ed.gov/funding/>

Additional help navigating Grants.gov is available in the Grants.gov User Guides:

- ✓ Grants.gov User Guides http://www.grants.gov/applicants/app_help_reso.jsp

3) The *Application Package* provides all of the forms that you must complete and submit. The application form approved for use in the competitions specified in this RFA is the government-wide SF-424 Research and Related (R&R) Form (OMB Number 4040-0001). *Section C* below explains how to download the Application Package from Grants.gov.

B. Date Application Package is Available on Grants.gov

The Application Package will be available on <http://www.grants.gov/> by **June 6, 2013**.

C. How to Download the Correct Application Package

a. CFDA number

To find the correct downloadable Application Package, you must first search by the CFDA number for the research competition *without* the alpha suffix. To submit an application to the Research-Practitioner Collaborations grants program, you must search on: **CFDA 84.305**.

b. Collaborations Program Application Package

The Grants.gov search on CFDA 84.305 will yield more than one Application Package. For the Research-Practitioner Collaborations grants program, you must download the Application Package marked:

Partnerships and Collaborations Focused on Problems of Practice or Policy CFDA 84.305H

You must download the Application Package that is designated for the grant competition and competition deadline. If you use a different Application Package, even if it is for an Institute competition, the application will be submitted to the wrong competition. Applications submitted using the incorrect application package may not be reviewed for the Research-Practitioner Collaborations grant program.

11. MANDATORY ELECTRONIC SUBMISSION OF APPLICATIONS AND DEADLINE

Applications must be **submitted electronically and received by 4:30:00 p.m., Washington, DC time on September 4, 2013**.

Grant applications must be submitted electronically through the Internet using the software and application package provided on the Grants.gov web site: <http://www.grants.gov/>. You must follow the application procedures and submission requirements described in the Institute's Grants.gov Application Submission Guide and the instructions in the User Guides provided by Grants.gov.

Please note that to submit an electronic application through Grants.gov, your institution must be registered with Grants.gov (http://www.grants.gov/applicants/organization_registration.jsp).

To register with Grants.gov, your institution must have

- a valid Dun and Bradstreet Data Universal Numbering Systems (DUNS) number, and
- an active registration with the System for Award Management (SAM) (see <https://www.sam.gov/portal/public/SAM/>).

Your institution is strongly encouraged to start the Grants.gov registration process *at least 4 weeks* prior to the application due date. For more information on using Grants.gov, you should visit the Grants.gov web site.

Applications submitted in paper format will be rejected unless you (a) qualify for one of the allowable exceptions to the electronic submission requirement described in the Federal Register notice announcing the Research-Practitioner Collaborations grant program (CFDA Number 84.305H) competitions described

in this Request for Applications and (b) submit, no later than 2 weeks before the application deadline date, a written statement to the Institute that documents that you qualify for one of these exceptions.

12. TECHNICAL ASSISTANCE FOR APPLICANTS

The Institute encourages you to contact the Institute's program officers as you develop your application. Program officers can offer advice on choosing the appropriate research topic to apply under and preparing applications, as well as substantive advice on your research idea and draft project narrative. To identify the appropriate program officer for your research idea, see *Section 19* below.

In addition, you are encouraged to sign up for the Institute's funding opportunities webinars for advice on choosing the correct research competition, grant writing, or submitting your application. For more information regarding webinar topics, dates, and registration process, see <http://ies.ed.gov/funding/webinars/index.asp>.

13. WRITING YOUR APPLICATION: CONTENT AND FORMATTING REQUIREMENTS

A. Overview

In this section, the Institute provides instructions regarding the content of the (a) project summary/abstract, (b) project narrative, (c) Appendix A, (d) Appendix B, (e) Appendix C, and (f) bibliography and references cited. Instructions for all other documents to be included in the application (i.e., the SF-424 forms, biographical sketches, narrative budget justification, and human subjects narrative) are provided in the *IES Grants.gov Application Submission Guide*.

B. General Format Requirements

Margin, format, and font size requirements for the project summary/abstract, project narrative, Appendix A, Appendix B, Appendix C, and bibliography are described in this section. You must adhere to the type size and format specifications for the entire narrative, including footnotes, to ensure that your text is easy for reviewers to read and that all applicants have the same amount of available space in which to describe their projects.

a. Page and margin specifications

For the purposes of applications submitted under this RFA, a "page" is 8.5 in. x 11 in., on one side only, with 1-inch margins at the top, bottom, and both sides.

b. Spacing

Text must be single spaced in the narrative.

c. Type size (font size)

Type must conform to the following three requirements:

- The height of the letters must not be smaller than a type size of 12 point.
- The type density, including characters and spaces, must be no more than 15 characters per inch (cpi). For proportional spacing, the average for any representative section of text must not exceed 15 cpi.
- The type size must yield no more than six lines of type within a vertical inch.

To ensure your font meets these requirements, you should check the type size using a standard device for measuring type size, rather than relying on the font selected for a particular word processing/printer combination. The type size used must conform to all three requirements. **These requirements apply to the PDF file as submitted.**

When applicants use small type size, it difficult for reviewers to read the application and applicants may receive an unfair advantage by allowing for more text in their applications. **Consequently, the use of small type font is grounds for the Institute to not accept an application for review.**

As a practical matter, applicants who use a 12-point Times New Roman font without compressing, kerning, condensing, or other alterations typically meet these requirements. Figures, charts, tables, and figure legends may be in a smaller type size but must be readily legible.

d. Graphs, diagrams, tables

The Institute encourages applicants to use black and white in graphs, diagrams, tables, and charts. If you choose to use color, you must ensure that the material reproduces well when photocopied in black and white.

C. Project Summary/Abstract

a. Submission

You must submit the project summary/abstract as a separate PDF attachment.

b. Page limitations and format requirements

The project summary/abstract is limited to one single-spaced page and must adhere to the margin, format, and font size requirements described in *Section 13.B General Format Requirements*.

c. Content

The project summary/abstract should include:

- 1) Title of the project,
- 2) The RFA topic under which you are applying (e.g., Continuous Improvement Research in Education),
- 3) A brief description of the partnership that will carry out the work,
- 4) A brief description of the purpose of the project,
- 5) A brief description of the setting in which the research will be conducted (e.g., rural school districts in Alabama),
- 6) A brief description of the sample that will be involved in the study (e.g., age or grade level, race/ethnicity, SES),
- 7) If applicable, a brief description of the intervention or assessment to be developed, evaluated or validated,
- 8) If applicable, a brief description of the control or comparison condition (i.e., who the participants in the control condition are and what they will experience),
- 9) A brief description of the primary research method,
- 10) A brief description of measures and key outcomes, and
- 11) A brief description of the data analytic strategy.

Please see <http://ies.ed.gov/funding/gransearch> for examples of project summaries/abstracts.

D. Project Narrative

a. Submission

You must submit the project narrative as a separate PDF attachment.

b. Page limitations and format requirements

The project narrative is limited to **25 single-spaced pages** for all applicants. The 25-page limit for the project narrative does not include any of the SF-424 forms, the 1-page summary/abstract, the appendices, research on human subjects information, bibliography, biographical sketches of senior/key personnel, narrative budget justification, subaward budget information, or certifications and assurances. If the Institute determines that the narrative exceeds the 25 single-spaced page limit, the Institute will remove any pages after the twenty-fifth page of the narrative.

To help the reviewers locate information and conduct the highest quality review, you should write a concise and easy to read application, with pages numbered consecutively using the top or bottom right-hand corner.

c. Format for citing references in text

To ensure that all applicants have the same amount of available space in which to describe their projects in the project narrative, you should use the author-date style of citation (e.g., James, 2004), such as that described in the *Publication Manual of the American Psychological Association, 6th Ed.* (American Psychological Association, 2009).

d. Content

Your project narrative must include **four sections** in order to be compliant with the requirements of the Request for Applications: (a) **Significance**, (b) **Research Plan**, (c) **Personnel**, and (d) **Resources**. Information to be included in each of these sections is detailed in the discussion of the Project Narrative under each topic. The information you include in each of these four sections will provide the majority of the information on which reviewers will evaluate the application.

E. Appendix A (Required for Resubmissions, Optional Otherwise)

a. Submission

If you have an Appendix A, you must include it at the end of the project narrative and submit it as part of the same PDF attachment.

b. Page limitations and format requirements

Appendix A is limited to 15 pages. It must adhere to the margin, format, and font size requirements described in *Section 13.B General Format Requirements*.

c. Content

(i) Required Content for Resubmissions

Appendix A is required if you are resubmitting an application or are submitting an application that is similar to an application you submitted previously. If you are resubmitting an application, you must provide a description (up to three pages in length) of how the revision is responsive to prior reviewer comments. If you have submitted a somewhat similar application in the past but are submitting the current application as a new application, you must provide a rationale (up to three pages in length) explaining why the current application should be considered a *new* application rather than a *resubmitted* application.

(ii) Optional Content for All Applications

You may also include figures, charts, or tables that supplement the project narrative as well as examples of measures (e.g., tests, surveys, observation and interview protocols) to be used in the project in Appendix A. These are the only materials that may be included in Appendix A; all other materials will be removed prior to review of the application. You should include narrative text in the 25-page project narrative, not in Appendix A.

F. Appendix B (Optional)

a. Submission

If you choose to have an Appendix B, you must include it at the end of the project narrative, following Appendix A (if included), and submit it as part of the same PDF attachment.

b. Page limitations and format requirements

Appendix B is limited to 10 pages. It must adhere to the margin, format, and font size requirements described in *Section 13.B General Format Requirements*.

c. Content

In Appendix B, if you are proposing to study, develop, evaluate, or validate an intervention or assessment, you may include examples of curriculum material, computer screen shots, assessment items, or other materials used in the intervention or assessment to be studied, developed, evaluated, or

validated. These are the only materials that may be included in Appendix B; all other materials will be removed prior to review of the application. You should include narrative text describing these materials in the 25-page project narrative, not in Appendix B.

G. Appendix C (Required)

a. Submission

Appendix C must be included at the end of the project narrative, following Appendix B (or if no Appendix B is included, then Appendix C should follow Appendix A if it is included) and submit it as part of the same PDF attachment.

b. Page limitations and format requirements

Appendix C does not have a page limit. Appendix C contains Letters of Agreement from the research partners (e.g., research institutions, State and local education agencies, other organizations, consultants). You must ensure that the letters reproduce well so that reviewers can easily read them. Do not reduce the size of the letters.

c. Content

You must include in Appendix C the Letters of Agreement from partners (e.g., research institutions, State and local education agencies, other organizations), data sources (e.g., State agencies holding administrative data), and consultants.

Letters of Agreement should include enough information to make it clear that the author of the letter understands the nature of the commitment of time, space, personnel, and resources to the research project that will be required if the application is funded. Letters of Agreement regarding the provision of data should make it clear that the author of the letter will provide the data described in the application for use in the proposed research and in time to meet the proposed schedule.

H. Bibliography and References Cited

a. Submission

You must submit this section as a separate PDF attachment.

b. Page limitations and format requirements

There are no limitations to the number of pages in the bibliography. The bibliography must adhere to the margin, format, and font size requirements described in *Section 13.B General Format Requirements*.

c. Content

You should include complete citations, including the names of all authors (in the same sequence in which they appear in the publication), titles (e.g., article and journal, chapter and book, book), page numbers, and year of publication for literature cited in the project narrative.

14. APPLICATION PROCESSING

Applications must be **submitted electronically and received by 4:30:00 p.m., Washington, D.C. time on September 4, 2013**. After receiving the applications, Institute staff will review each application for completeness and for responsiveness to this Request for Applications. Applications that do not address specific requirements of this request will be returned to the applicants without further consideration.

Once you formally submit an application, Institute personnel will not comment on its status until the award decisions are announced except with respect to issues of completeness and responsiveness.

15. PEER REVIEW PROCESS

The Institute will forward all applications that are compliant and responsive to this request to be evaluated for scientific and technical merit. Reviews are conducted in accordance with the review criteria

stated below and the review procedures posted on the Institute's website, http://ies.ed.gov/director/sro/peer_review/application_review.asp, by a panel of scientists who have substantive and methodological expertise appropriate to the program of research and request for applications.

Each compliant and responsive application is assigned to one of the Institute's scientific review panels. At least two primary reviewers will complete written evaluations of the application, identifying strengths and weaknesses related to each of the review criteria. Primary reviewers will independently assign a score for each criterion, as well as an overall score, for each application they review. Based on the overall scores assigned by primary reviewers, the Institute calculates an average overall score for each application and prepares a preliminary rank order of applications before the full peer review panel convenes to complete the review of applications.

The full panel will consider and score only those applications deemed to be the most competitive and to have the highest merit, as reflected by the preliminary rank order. A panel member may nominate for consideration by the full panel any application that he or she believes merits full panel review but that would not have been included in the full panel meeting based on its preliminary rank order.

16. REVIEW CRITERIA FOR SCIENTIFIC MERIT

The purpose of Institute-supported research is to contribute to solving education problems and to provide reliable information about the education practices that support learning and improve academic achievement and access to education for all students. The Institute expects reviewers for all applications to assess the following aspects of an application in order to judge the likelihood that the proposed research will have a substantial impact on the pursuit of that goal. Information pertinent to each of these criteria is also described in each topic section.

For Partnerships and Collaborations Focused on Problems of Practice or Policy, the Institute expects reviewers to consider these four aspects in regards to both the partnership being proposed and the research being carried out.

A. Significance

Does the applicant provide a compelling rationale for the significance of the project as defined in the Significance section for the topic under which the applicant is submitting the application?

B. Research Plan

Does the applicant meet the methodological requirements described in the Research Plan section for the topic under which the applicant is submitting the application?

C. Personnel

Does the description of the personnel make it apparent that the Principal Investigator and other key personnel possess appropriate training and experience and will commit sufficient time to competently implement the proposed research? Is there evidence that the partnership involves meaningful participation by researchers and practitioners and that there is a structure and process in place to support a productive working relationship?

D. Resources

Does the applicant have the facilities, equipment, supplies, and other resources required to support the proposed activities? Do the commitments of each partner show support for the implementation and success of the project?

17. RECEIPT AND START DATE SCHEDULE

A. Letter of Intent Receipt Dates

June 6, 2013

B. Application Deadline Date

September 4, 2013 4:30:00 pm Washington, D.C. time

C. Earliest Anticipated Start Date

July 1, 2014

D. Latest Possible Start Date

September 1, 2014

The grant review and award process takes approximately 8 months from the time of submission of the application. Applicants will be notified about funding decisions via email *no later than* the earliest anticipated start date (July 1, 2014).

18. AWARD DECISIONS

The following will be considered in making award decisions:

- Scientific merit as determined by peer review,
- Responsiveness to the requirements of this request,
- Performance and use of funds under a previous Federal award,
- Contribution to the overall program of research described in this request, and
- Availability of funds.

19. INQUIRIES MAY BE SENT TO

A. Researcher-Practitioner Partnerships in Education Research

Dr. Allen Ruby
National Center for Education Research
Institute of Education Sciences
400 Maryland Ave, SW
CP – 610E
Washington, DC 20202

Dr. Amanda Hoffman
National Center for Special Education Research
Institute of Education Sciences
400 Maryland Ave, SW
CP – 510B
Washington, DC 20202

Email: Allen.Ruby@ed.gov
Telephone: (202) 219-1591

Email: Amanda.Hoffman@ed.gov
Telephone: (202) 208-1177

B. Continuous Improvement Research in Education

Dr. James Benson
National Center for Education Research
Institute of Education Sciences
400 Maryland Ave, SW
CP – 622
Washington, DC 20202

Dr. Amanda Hoffman
National Center for Special Education Research
Institute of Education Sciences
400 Maryland Ave, SW
CP – 510B
Washington, DC 20202

Email: James.Benson@ed.gov
Telephone: (202)

Email: Amanda.Hoffman@ed.gov
Telephone: (202) 208-1177

C. Evaluation of State and Local Education Programs and Policies

Dr. Allen Ruby
Institute of Education Sciences
400 Maryland Ave, SW
CP – 610E

Washington, DC 20202

Email: Allen.Ruby@ed.gov
Telephone: (202) 219-1591

20. PROGRAM AUTHORITY

20 U.S.C. 9501 et seq., the "Education Sciences Reform Act of 2002," Title I of Public Law 107-279, November 5, 2002. This program is not subject to the intergovernmental review requirements of Executive Order 12372.

21. APPLICABLE REGULATIONS

The Education Department General Administrative Regulations (EDGAR) in 34 CFR parts 74, 77, 80, 81, 82, 84, 85, 86 (part 86 applies only to institutions of higher education), 97, 98, and 99. In addition 34 CFR part 75 is applicable, except for the provisions in 34 CFR 75.100, 75.101(b), 75.102, 75.103, 75.105, 75.109(a), 75.200, 75.201, 75.209, 75.210, 75.211, 75.217, 75.219, 75.220, 75.221, 75.222, and 75.230.

22. REFERENCES

- American Psychological Association (2009). *Publication Manual of the American Psychological Association* (6th ed.). Washington, D.C.: Author.
- Berwick, D. M. (2008). The science of improvement. *The Journal of the American Medical Association*, 299(10), 1182–1184.
- Bloom, H. (1999). *Estimating Program Impacts on Student Achievement Using "Short" Interrupted Time Series*. Washington, D.C.: MDRC.
- Bloom, H., Ham, S., Melton, L., O'Brien, J., Doolittle, F., & Kagehiro, S. (2001). *Evaluating the Accelerated Schools Approach: A look at Early Implementation and Impacts on Student Achievement in Eight Elementary Schools*. Washington, D.C.: MDRC.
- Brown, A.L. (1992). Design experiments: Theoretical and Methodological Challenges in Creating Complex Interventions in Classroom Settings. *The Journal of the Learning Sciences*, 2(2):141-178.
- Bryk, A. S. (2009). Support a Science of Performance Improvement. *Phi Delta Kappan*, 90(8), 597–600.
- Cook, T.D., Habib, F., Phillips, M., Settersten, R.A., Shagle, S.C., & Degirmencioglu, S.M. (1999). Comer's School Development Program in Prince George's County, Maryland: A Theory-Based Evaluation. *American Educational Research Journal*, 36, 543-597.
- Cook, T.D., Murphy, R.F., & Hunt, H.D. (2000) Comer's School Development Program in Chicago: A Theory-Based Evaluation. *American Educational Research Journal*, 37, 535-597.
- Deming, W. E. (1986). *Out of the Crisis*. MIT Center for Advanced Engineering Study
- Design-Based Research Collaborative (2003). Design-based Research: An Emerging Paradigm for Educational Inquiry. *Education Researcher*, 32:5-8.
- Gormley, W. T., Gayer, T., Phillips, D., & Dawson, B. (2005). The Effects of Universal Pre-K on Cognitive Development. *Developmental Psychology*, 41, 872-884.

- Hastings, J., Van Weelden, R., & Weinstein, J. (2007). Preferences, Information and Parental Choice in Public School Choice. *National Bureau of Economic Research, Working Paper 12995*. Retrieved February 28, 2008: <http://www.nber.org/papers/w12995>.
- Imai, M. (1986). *Kaizen: The Key to Japan's Competitive Success*. New York: Random House.
- Jackson, R., McCoy, A., Pistorino, C., Wilkinson, A., Burghardt, J., Clark, M., Ross C., Schochet, P., & Swank, P. (2007). *National Evaluation of Early Reading First: Final Report*, U.S. Department of Education, Institute of Education Sciences, Washington, D.C.: U.S. Government Printing Office. Downloaded on January 31, 2008, from <http://ies.ed.gov/ncee/pubs/20074007/index.asp>.
- Kemple, J., & Herlihy, C. (2004). *The Talent Development High School Model: Contexts, Components, and Initial Impacts on Ninth-Grade Students' Engagement and Performance*. New York, N.Y.: MDRC.
- Kemple, J., Herlihy, C., & Smith, T. (2005). *Making Progress Toward Graduation: Evidence From the Talent Development High School Model*. New York, N.Y.: MDRC.
- Kemple, J. J., & Snipes, J. C. (2000). *Career Academies: Impacts on Students' Engagement and Performance in High School*. New York, N.Y.: MDRC.
- Morris, A. K., & Hiebert, J. (2011). Creating Shared Instructional Products: An Alternative Approach to Improving Teaching. *Education Researcher*, 40, pp. 5–14.
- Penuel, W. R., Fishman, B. J., Cheng, B., & Sabelli, N. (2011). Organizing Research and Development at the Intersection of Learning, Implementation, and Design. *Educational Researcher*, 40 (7), 331–337.
- Pyzdek, T. and Keller, P.A. (2009). *The Six Sigma Handbook, Third Edition*. New York, NY: McGraw-Hill
- Sinclair, M. F., Christenson, S. L., Evelo, D. L., & Hurley, C. M. (1998). Dropout Prevention for Youth With Disabilities: Efficacy of a Sustained School Engagement Procedure. *Exceptional Children*, 65, 7–21.
- Sinclair, M. F., Christenson, S. L., & Thurlow, M. L. (2005). Promoting School Completion of Urban Secondary Youth With Emotional or Behavioral Disabilities. *Exceptional Children*, 71, 465–482.
- Shavelson, R.J., Phillips, D.C., Towne, L., and Feuer, M.J. (2003). On the Science of Education Design Studies. *Education Researcher*, 32(1), 25-28.
- Yeager, D.S. and Walton, G.M (2011). Social-Psychological Interventions in Education: They're Not Magic. *Review of Educational Research*, 81, 267-301.