



Institute of Education Sciences Funding Opportunities Webinar Series

Overview of Continuous Improvement Research in Education

Webinar Transcript

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U.S. Department of Education

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EDUCATION SCIENCES

**IES Funding Opportunities Webinar Series
Overview of Continuous Improvement Research in Education
(Topic 2 under 84.305H)**

**Institute of Education Sciences
U.S. Department of Education**

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The Continuous Improvement Research in Education funding opportunities will support well-established partnerships among research institutions and state or local education agencies. These partnerships will address a specific education issue or problem of high importance to the education agency and implement and improve an existing approach or approaches with some promise of evidence for improving student outcomes from prekindergarten through postsecondary and adult education.

Good afternoon. This is Allen Ruby, and I am joined by James Benson and Amanda Hoffman today to talk about Continuous Improvement Research in Education, a brand new topic in the Institute of Education Sciences' (IES) new grant program, Partnerships and Collaborations Focused on Problems of Practice or Policy (84.305H).

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For the overview today, I am going to start off with a little background on IES and its mission, then go straight into the Continuous Improvement Research in Education topic, which I will shorthand with the term "Continuous Improvement," looking at its purpose, requirements, the project narrative—the most important part of your application—and then preparing and submitting an application.

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The mission of IES has three parts: one, to describe the condition and progress of education in the United States; two, to look at education practices that improve academic achievement and access to education opportunities—probably the primary purpose of the grant program; and finally, to evaluate the effectiveness of federal and other education programs also supported in the grant program.

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Just a little background on our structure, IES Director John Easton was appointed by the President, confirmed by the Senate, and is advised by a board that was also appointed and confirmed in the same way. Underneath IES are four centers: the National Center for Education Evaluation and Research (NCEE), which does large-scale evaluations that are often of federal programs, chosen by Congress and/or the administration, and carried out by contractors; the National Center for Education Statistics (NCES)—you are probably familiar with the data they collect or a state longitudinal data program they also run—they are the ones assessing the condition and progress of U.S. education, which is the first purpose of IES; and then the two grant-making centers—the National Center for Education Research (NCER) and the National Center for Special Education Research (NCSEER).

This is where Program Officers like the three of us are housed—the people you work with on writing your application. The grant review process is pulled outside both of our centers and placed in the Standards & Review Office, which is part of the Office of the Director, because we work closely with you. This allows us to have much more interaction with you since we are not involved in the grant review or grant decisionmaking processes.

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The grant programs' purpose is to answer four questions. “What works to improve student educational outcomes?”—so we can disseminate it. “What doesn't work?”—so we can stop using it. “What works for whom and where?”—so we can use it with the appropriate people in the appropriate places. “Why do things work?”—so we can build an underlying theory that we can then use in other areas as well.

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The issue of partnerships between researches and practices has become a more important priority over time at IES. IES's priorities are set by the Director and approved by the board. For partnerships, the purpose has been to help researchers focus on issues about which policymakers and practitioners are concerned, and also to help researchers communicate their findings in more understandable and useful ways.

Through the promotion of partnerships, IES is promoting a stronger role for policymakers and practitioners in setting the research agenda and increasing ongoing communication between them and researchers. In addition, there is an intention that this work will also lead to an increased capacity of education policymakers and practitioners to understand and use results from research.

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IES has been increasingly promoting research partnerships. Partnerships have always been possible under our major grant programs, the Education Research Grants and the Special Education Research Grants. In 2009, IES began a new grant program, the Evaluation of State and Local Education Programs and Policies that required a partnership. Last year, IES started the Researcher-Practitioner Partnerships in Education Research, again, requiring a partnership for the work to be done. What has changed this year is that those two newer programs have been fused into a single grant program entitled “Partnerships and Collaborations Focused on Problems of Practice and Policy.” In addition, a third topic has been added, the Continuous Improvement Research in Education topic. So this new overall grant program has three topics. Two of them have been competed in the past, and the one we are talking about today is brand new.

If you are interested in the other ones as well, we had the webinar on Researcher-Practitioner Partnerships in Education Research 2 weeks ago, so those slides and the transcript will become available on the website. We are going to have the Evaluation of State and Local Education Programs and Policies webinar next Wednesday. If you are interested in that grant topic, please join us then.

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There are several purposes of the Continuous Improvement topic. The primary one is to promote joint research, in which research institutions work together with state and local education agencies, to address an education issue or problem of key importance to the agency. The purpose of this research is to directly contribute to solving some specific issue or problem faced by a state or local education agency.

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In practice, how are you to go about doing this? A Continuous Improvement project is to implement, adapt, and revise some existing approach—existing strategy—to address the education issue or problem that is of concern to the state or local education agency. Then it is to carry out a pilot study to obtain some evidence of promise that what you have implemented, adapted and revised is improving students’ outcomes. We will talk more about what is meant by “implement, adapt, and revise,” because it is somewhat

different from IES development grants that are done under the Education Research Grants and Special Education Research Grants.

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Another purpose of all the partnership projects is to foster longer term research partnerships that will outlast the grant. The idea is that you will come together, work together, and see some benefit from this work. You will hopefully develop a longer term research agenda, and the partnership work will continue after the original project has ended.

This is a new research approach for IES, and we feel it is a fairly new area in the literature—how research can be done in partnership to address local conditions leading to wide implementation—and lacking in specifics on how to carry it out. As projects start, the partners will learn lessons on how to do this work better, and this knowledge is to then contribute to future research partnerships that are more successful.

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The Request for Applications (RFA) lists the expected products that are to come out of the grant. Many of these you would discuss in your annual and final reports to IES about the grant. You would describe how the partnership developed over the grant period; the actual education issue or problem you addressed; the approach you took to address the issue; and how you implemented, adapted, and revised the approach taken to address the issue. You would note if there were changes made in the approach, or if the education system itself changed, and why were those changes made. Also, you would discuss what process you used to decide to make adaptations and revisions, and upon what data those decisions were based.

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Next, you would do the pilot study and provide the resulting evidence on whether it did show promise to improve student outcomes. Based on these results you would conclude whether your new approach is ready for a full evaluation or whether further revision would be required. Also, you would provide some recommendations for how the partnership could be maintained over the longer term, and some lessons—maybe specific to the local agency and the education issue and maybe more general lessons—on how this approach can work, as well as how partnerships can function successfully.

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So let me ask if there are any questions on the overall purpose of this grant—we will come back to the purpose in more detail when we talk about the research narrative—if not, I want to talk a bit about some the requirements.

The first requirement of IES’s grant supported work is that it focuses on student outcomes, either directly or indirectly through some mediator, for example, through teaching. IES’ purpose is to try to improve the quality of education for all students through understanding teaching, learning, and organizing education systems. When we say all research must address education outcomes for students, we are talking about students’ academic outcomes and also some of the social and behavioral competencies that support student success in the school.

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These outcomes are for students from prekindergarten through postsecondary and adult education. Such students may be typically developing students or students with, or at risk for, disabilities. If you are interested in working on students at risk for disabilities, take a look at NCSE’s website, which has a clear but involved definition of what is meant by “students at risk for disabilities.”

These student requirements differ from those of the Education Research Grants for which you must focus on typically developing students, though you can look at subpopulations of students with disabilities. Under Continuous Improvement your focus can be solely on a group of students with, or at risk for, disabilities. But your students must at least be in preschool (age 3 or above) which differs from the Special Education Grants under which you are allowed to look at children from birth to age 3.

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Let’s put together the student outcomes and the different student groups to give you an idea of the outcomes to address. For preschool students, the primary outcome is school readiness, which combines academic outcomes—such as prereading and language—with the social and behavioral competencies a student needs to be ready to go into kindergarten.

For K through 12, we have two sets of outcomes: academic outcomes (learning and achievement, in the major academic subjects of reading, writing, math, and science) and progress through the education system. Such progress may include completing a course or grade or being retained, graduating, or dropping out. In addition, outcomes include the social skills, attitudes, and behaviors that support success in these grades.

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For postsecondary, which is focused on grades 13 to 16 (sub-baccalaureate and baccalaureate), the major outcomes are access to, persistence in, progression through, and completion of postsecondary education, perhaps for a certificate, or perhaps for a degree. For students who are in developmental education programs you can look specifically at achievement in the major academic subjects as well.

For adult education, which concerns students who are 16 years or older and outside the K-12 system—the four types of adult education that we are focused on are basic education, secondary education, adult English as a Second Language (ESL), and General Educational Development (GED) preparation—you can look at both the academic outcomes (the achievement outcomes in reading, writing, and math) or progress outcomes (the access to, persistence in, progression through, and completion of adult education programs).

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You need to identify your education issue or education problem. Again, these grants are not to create a general partnership between a research institution and a state or local agency. Also, it is not a good approach to say, “We are going to create a partnership, then we are going to meet, then we are going to decide on what issue to focus.” Instead, you should meet first before submitting your application and determine “What issue is of interest to both partners with high priority to the agency and that can be supported by the research institution,” then describe in your application saying, “Here is the issue or problem we are going to directly address.”

The RFA states that the Institute is interested in three education issues: 1) school safety; 2) the social skills, attitudes, and behaviors that contribute to student academic success; and 3) the implementation of the Common Core State Standards. However, these are not priorities in the ways that many grantors use. We do not give extra points if you address one of these issues. You are not penalized if you address another issue. We are just saying these are areas of interest to the Institute; however, applications addressing other issues will be accepted and reviewed in the same manner as applications addressing these three issues.

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Another specific requirement is that the application must come from a partnership and that partnership must be well established. You must show that you have a record of joint work for at least a year. That work does not have to be research work. It can be implementation or another type of joint work as well.

Because it is a partnership, there must be at least a principal investigator (PI) from the research institution and at least one PI from the state or local education agency. The PI from the research institution must have the ability and capacity to conduct scientifically valid research, and should have expertise in the education issues to be addressed. You may include several people from the research institute, for example a substance expert, an implementation expert, and a methodology expert. The point is to show that the research institution is bringing strength to the partnership that is specifically relevant for the education issue being studied.

From the state or local education agency the PI must have decisionmaking authority for the issue within that agency. Now it doesn't say, "Final decisionmaking authority." For many decisions, the final authority rests in the superintendent or even a board. It is unlikely that superintendents will have a great deal of time to contribute to these projects, although they can if they are interested. Something like an assistant or an associate superintendent who is responsible for the issue and has a major role in how policy will be set for that issue would meet this requirement. Someone like a principal at a school who may have decisionmaking authority inside their school would not be acceptable because they don't have authority for the whole education agency.

You will have to choose who will be the PI: who will be the lead institution, and who will be the lead researcher who will act as the direct contact with IES and who will have overall responsibility for the grant. You will have a PI from one organization, and the others will be co-PIs. One will probably have to receive a sub-award from the other. IES has no preference for which organization is the lead. If the research institution is the prime, that is fine. If the education agency is the prime, that is fine as well. You should decide on who has the capacity to manage a grant and manage the reporting requirements to IES, rather thinking about which organization will be more attractive in the review process.

Any organization (research or education agency) can take part in multiple applications. Last year we did have a restriction that an institution could only be on one application for the Researcher-Practitioner Partnerships program. That restriction has been dropped.

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State education agencies are often called education agencies, or departments, or boards, or commissions. They oversee areas such as early learning, elementary, secondary, postsecondary, higher education, and/or adult education. They may include education agencies in the U.S. territories and tribal education agencies. What we are not including here are agencies that may have some role in education but are not public education agencies, and we will talk more about this. For example, state human services or juvenile justice agencies may be involved in education but IES is requiring that the education agency be involved in these projects as well.

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Local education agencies are primarily public school districts, and these are defined in the Elementary and Secondary Acts. Some states have community college districts and these would be considered local education agencies as well.

Postsecondary education concerns public systems and is a little more complicated. Some states or cities have a higher education agency that oversees the postsecondary system. In those cases, that agency should be the partner. The system itself can be a partner but the agency overseeing it must be a partner as well. However, if such an agency does not exist, then the postsecondary system itself can act as the education agency partner. In these cases, the postsecondary system can apply either as the education agency if it wants to be studied, or it can be the research institution partner if it wants to lead the research. The only caveat there is that it cannot be both on the same project. So a postsecondary system cannot propose to study itself, even if different centers or different campuses within that system would take on different roles.

Certain organizations cannot be included as the agency partner—nonpublic organizations that oversee or administer schools, such as education management organizations or charter school management organizations. Those can be studied (and can join the project as an additional partner) but you would have to include the education agency that is responsible for overseeing them. If you had a charter school system in a state, you would also want to bring in the state education agency that is responsible for overseeing that charter school system.

One last point concerns districts that include only one school. While these are acceptable partners the reviewers may consider working with them as less significant than projects that involve education agencies with multiple schools.

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The minimum partnership requirement is one education agency and one research institution. Additional partners can be included if they contribute to the work.

You may decide you would like to include more than one state or more than one local education agency. That decision should be based on shared similarities and interests. If the education issue is of importance to several districts in a region or across the country, then they can all come in order to learn from and contribute to this research. The tradeoff is to make clear that the available resources are enough to support work in multiple agencies. However, projects should avoid bringing in multiple education agencies because they all have a link to the research institution but lack other similarities.

Including non-education state and local agencies as partners may be important for specific student populations. For example, the juvenile justice agency may be important when working with students in prison and the social services agency may be important for students whose families are involved. Bringing in an agency that has direct contact with the students or their parents, and, in some cases, may have a role in their education, could be beneficial to the project.

You may include more than one research institution. Again, you should state the reason for doing so, e.g., they may complement each other's expertise.

You can include other non-research organizations; often community groups or stakeholder groups are interested in this education issue and can contribute to the work of the partnership. They may give you feedback on the work. They may help get people involved in the research. You should describe how they are contributing to the partnership and what their role will be.

Question: *“Are private schools eligible for this grant with a partnership, for example, a private school that collaborates with public school districts and serves students?”*

Answer: *“The public school district can certainly be the education agency policy but the private school cannot be the agency partner. However, it can join the partnership for the reason you mention, that it serves the district's students and collaborates with the district. The adaptation and refinement of the approach must take place in the district schools but could also take place in the private school. You could not have a private school or a set of private schools under a private school organization, only, work with a research institution. There has to be a state or local education agency involved as a partner within which the work occurs.”*

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Let's move on to the Project Narrative. This is the substantive part of your application. It is 25 pages long and in it you describe the significance of your work, your plan for the work, who is taking part, and the type of resources you bring to the work.

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In the Significance section you discuss both the strengths of this partnership (also show that it is a well-established partnership) and the importance of the research aims of the project. Under the research aims, you would describe the education issue you are going to examine and why it is important to the education agency; the approach or approaches you are going to take to address this education issue and how you will develop evidence of its promise; and why this work is important to the partnership, to other education agencies outside the partnership, and to the field of education research.

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Regarding the partnership, you should describe who is involved: the research institution and the educational agency and any other members of the partnership if you have them. Discuss their common interest, how they complement one another, and how they will all contribute to and benefit from this work. You may want to provide some background on the state or local agency—especially if this background contributes to the importance of the education issue that you are proposing to address.

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You want to have evidence that the partnership is well-established. We mentioned that you should show that the partnership (at least the research institution and the education agency) has worked together for a full year, document that such work has been done, and identify any products of the work. As part of this, you are showing that the partners have the capacity to work together.

There is always a risk that a partnership will not work and that research done by partnerships will fail due to lack of collaboration. Under the Research-Practitioner Partnerships, which supports new and ongoing partnerships, this risk is accepted in part to try and support new partnerships. However Continuous Improvement projects are based on more complex work and require greater resources. For this reason, IES is requiring that partnerships have a track record of one year of working together in an attempt to avoid project failure due to failure in the collaboration.

You should discuss what kind of infrastructure is in place that keeps the partnership together. This might include, for example, ongoing meetings, placement of personnel in each other's organization, communication channels, and joint decisionmaking procedures and bodies.

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There is also an expectation that these projects lead to capacity-building in the education agency. The expectations for capacity-building can be varied and depend on the initial capacity of the state or local agency. If your local agency doesn't have an institutional research office, has never done any research, and/or depends on the state or someone else to collect their data, capacity-building for that agency would be very different than from an agency that has a 10-person institutional research office that does very sophisticated analyses. Capacity building may vary from helping to organize or combine data, to understanding how to use research results in decisionmaking, to taking the lead on designing and carrying out studies, or implementing/adapting new approaches, or sophisticated analyses.

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Also under the Significance section, you should discuss the research aims of the project and their importance. As part of this, you should identify the education issue or education problem you intend to address, why it is important, and how its resolution will contribute to improving specific student outcomes. Here you should include some theory and empirical evidence. You may also discuss how this issue is important to other education agencies and to other policymakers in the field of education research but these are of supportive rather than primary importance. The key point is how you are helping this specific agency, district, or state address a special problem.

If a district has an important issue, but it cannot be linked to student academic outcomes, even though it may be of high importance to the education agency, this isn't the right grant program for it.

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What is current practice now to address this issue or problem and why is the current practice not satisfactory? This sets the stage for why you need to try another approach.

Question: *“If we are accredited by the state department of education, does this qualify as working with a state education agency (SEA)?”*

Answer: *“The answer would be no if you are a nonprofit or for-profit organization. You have to be either a state education agency or a local education agency. So you could be part of the partnership, but the state education agency that accredited you would have to be on the grant as well, probably the person who is in charge of what you are working on—you would want them involved.”*

Question: *“Do I need to focus on collaborating with only one district?”*

Answer: *“There is a tradeoff. Let's say I am working with one district. That seems good because I can focus on that district. I can put all my attention and resources in one district. On the other hand, how large is that district? How many students am I going to be affecting? If we are talking about a district with three elementary schools, two middle schools, and a high school, there may be some concerns. This topic is important to the district, but overall, how important is it versus something else? So in that case, we might ask if there are two or three districts in that region that are facing the same issue that could join together. The tradeoff here is that you are spreading resources over multiple districts, so it then becomes more difficult to do the work you intend. A compromise may be trying to bring in one or two districts as partners and bringing in personnel from other districts as observers. The new approach would not be implemented in the observer*

districts but the observers could comment on how useful the approach appears to be and might end up as future collaborators.”

If you are working with a large district, you can argue that you are affecting a fair number of students here, and it is going to take all these resources within that one district to do the work.

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The questions now are “What approach or approaches are you going to take to address this education issue? What are you going to implement? What are you going to try to adapt and revise, and contrast that with current practice?” You want to be able to show that there are reasons why this approach differs from current practice, doesn’t suffer from the same shortcomings, and maybe has theoretical and/or empirical reasons why it may improve student outcomes versus what is being done now. You also are going to want to argue that implementation can be done—that it can be implemented with teachers and other education personnel, given their working conditions and that there is some promise that overall this should produce better student outcomes.

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Why am I using the term “the approach?” In almost all other IES requests for applications we use the term “intervention.” In other grant programs, you are going to develop an intervention, improve an intervention, or evaluate an intervention. An intervention includes everything you need to implement it. For example, if it is curriculum, you have all the curriculum materials—all the teacher materials, the professional development for the teachers to learn how to use it, and the student materials.

For this grant program, the idea is to allow a broader range of what districts and states can try out, so the word “approach” is being used. Approaches may fall along a continuum of how well developed they are. You could take a full-scale intervention already prepared and say, “This is something available out there. We want to implement it in this district, and we know it needs to be adapted and revised because our district’s conditions will require some adaptation.”

At the other end of the continuum, are less fully developed approaches such as lab research that leads to better student learning. So you want to say, “Well this is not a fully developed intervention. It is an approach to improving student learning, and we want to try it out in our district.” Or perhaps there are four or five different techniques being used to address the education problem and you want to combine them all together in order to have a larger impact on improving the student outcomes.

So we are walking a fine line here between a Continuous Improvement project and a Development project. But you should not propose developing a brand new intervention or approach from an abstract idea—that is the purpose of a Development project. You should come in with an approach that can be implemented in your first year of the project. Again, you are not going to sit down and spend a year or two developing an intervention. You are going to come in, implement something in the first year, see how it works, and start changing it to make it work better locally.

There needs to be a theory of change behind your approach. You should provide an underlying theory about how this approach will address the education issue and how it will lead to better student outcomes. The theory of change may change over the course of the project, just as the approach you are taking may change over the course of the project.

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You should also describe the education system. Where is this implementation going to occur—both at what level and what specific parts of the education system? It may be that not only will the approach change over time as you adapt and revise it but the system may need some changing over time to allow this approach to work. You are going to want to be looking at both the approach and the overall education system to see whether it is limiting the approach being implemented, and if it does need to change. This is one reason you need to include people with decisionmaking powers at the agency. If it turns out that the agency policy or structure is holding back the success of the approach, changes may need to be made that will allow the approach to be more successful.

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That is the Significance section. We are going to move to the next section, which is the Research Plan. I am going to turn this over to James Benson to discuss.

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Good afternoon everybody. I am James Benson, and I am the Program Officer that deals with the “Improving Education Systems: Policies, Organization, Management, and Leadership” topic within the 305A, Education Research Programs, as well as the “Continuous Improvement Research in Education” topic that we are addressing today. So I am going to discuss the requirements for the Research Plan section, and then I am going to introduce an example that, hopefully, will be exemplary in giving some further insights on both the requirements of the program, as well as some options and latitude that you have for deciding your project.

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In the Research Plan, we require that you talk about the process you are going to use to adapt and revise the approach using a short-cycle approach. We are talking about an implementation research strategy that you are going to be taking to track how well the approach is working in the field and the measures that you are going to use in order to inform revisions of the approach.

We want you to discuss the method for assessing the promise of the approach for improving student outcomes. What we are referring to here includes formative measures of student outcomes that you are going to be collecting on an ongoing basis rather than simply waiting around for summative end-of-the-year measures. We want you to include the method for tracking the project's progress, for determining its success. I think, in this area, we would be encouraging you to look at progress along a couple dimensions—most importantly, the project's progress in terms of its tractability for being implemented in the field, the preliminary positive results you see in terms of student responsiveness to the approach, and the progress in terms of the collaborative activities of the partnership.

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We want you to describe the continuous improvement process, and this includes describing how the approach will be initially implemented in the education system. This sets a baseline for what you are doing. This would be your initial approach to implementation, which is going to give you a baseline for assessing how it works, and making revisions. We want you to describe how the approach will be adapted and revised to improve its usability, feasibility, and outcomes through a short-cycle approach.

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When we refer to the “short-cycle approach,” what we are talking about is a series of cycles that you can use to improve implementation through a process in which you are regularly collecting measures. Your application should be explicit about the measures that you will collect, the frequency at which you will collect them, and how those measures will be used to inform revisions of the approach.

Unlike some forms of research that require years of looking at the data before we draw conclusions, we are asking for a plan that includes the quick release of your measurement results. The measures should be addressing usability, feasibility, and outcome measures. Usability addresses the following question. “Can intended users physically implement the approach, as well as understand it, and be willing to use it?” Feasibility answers the question, “Is the approach usable within the constraints of the

education system?” Outcome measures address the question, “Does the approach lead to the expected intermediate and final outcomes?” There, we are talking about student outcomes. Intermediate outcomes could be student outcomes as well.

We want you to describe the continuous improvement process, which includes describing the specific measures, as I have just mentioned; describing the data collection process for collecting these measures; and describing the analysis to produce the measures.

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In other words, describe the analysis that would produce indicators, if constructed from the measures collected within the short-cycle framework; describe the interpretation of measures; describe how the results will be used to revise the approach; and describe how the revised approach will be implemented in the field.

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The Research Plan should include the pilot study of a prototype, and this should be examined in year four. There are several things that you should take into account when you are looking at the pilot study. First of all, during the pilot study you should be collecting measures for the fidelity of implementation. You should also be examining student outcomes. When we say, “promise of evidence to improve student outcomes,” the reason why this might sound a little bit vague is because we are not setting the same requirement for a causal interpretation of the findings as we would if you were doing a randomized control trial.

The pilot study is not expected to be an efficacy study. You have several options for the type of study that you can do. You can do an experiment, with randomization at either the student or classroom level; this is similar to the stipulation that you can do an experiment for a pilot study under a development grant funded by the 305A grants program. You can also do a quasi-experimental study using treatment groups with additional adjustments to make sure that you have baseline equivalency. You can also do a single-case study which would meet the What Works Clearinghouse design standard for single-case studies.

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You can use data collection methods that are established specifically for the continuous improvement process, as well as make use of administrative data. You should describe the design of the pilot study, the data to be collected, the analyses, and the criteria to be used to determine if evidence of promise is found. In other words, we want you to fully describe the pilot study. When we say that you can use data collection methods

established for the continuous improvement process, what we are saying is that you can continue the data collection strategies that you were using during the initial implementation and revision of the approach.

The pilot study can also contribute to the revision of the approach. What we are saying in the second bullet point here (on the slide) is that the short-cycle approach can continue outside of the pilot study. You can continue to collect implementation-related measures and formative types of measures during the pilot study, as well as give additional attention to student outcome measures.

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You should describe the plan to track progress and success during the pilot study. You should identify potential weaknesses of the partnership and strategies for addressing them in the future. Describe how the continuous improvement process will be monitored to ensure that it is functioning. Describe how the pilot study will be overseen. Describe how improvements in the capacity of the education agency will be tracked, including the ability of the agency to take the lead in future continuous improvement processes. Also, describe how the success of the partnership will be examined.

When we look at capacity-building, when we are looking at the ability of the agency to take the lead in future research, when we are looking at the progress of the partnership, we want you to describe measurements that you will be collecting to assess these processes, and then approaches and strategies that you will be using to make use of those measures to inform your sense of whether the partnership is accomplishing what it should accomplish at various stages in its work.

Question: *“Since the pilot study should be conducted in the fourth year of the grant, how do we have time for the analysis and write-up of findings of the pilot study?”*

Answer: *“I think that is an excellent question because we all know that it takes time in order to write up such findings. I think that in this case there are a couple possibilities; one would be to get a lot of writing on the final report for other portions of the project done prior to analyzing the pilot study data. Another possibility is that you could seek an extension in order to write up the project findings; although, such an extension could not be part of your original application. You might decide to start your project in late summer or early fall rather than early summer to give you extra time to analyze your data at the end of the project. Or you might be able to do a pilot later in the third year.”*

Question: *“Does IES have a preference for the pilot study being conducted by an external researcher; in other words, the pilot study is conducted in cooperation with, so not conducted by, the primary research staff?”*

Answer: *“I would say that we don’t have this preference. In fact, with the premium that we put on capacity-building at the state or local education agency level in this grant program, I would say that we would encourage you in the other direction—which is we would like to see the research partnership itself conduct a pilot study, because that is another way in which the district or the state can develop an important experiential base in how to conduct and make use of research.”*

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I am going to move on to an example, and this is just one example of many that are possible. I would say that on the continuum of examples that could be constructed relating to approaches, with one end being approaches that are not yet refined, and the other end being approaches that are perhaps already very well-developed, this is on the side of the continuum that is more well-developed. What I am talking about here is an example in which a district is going to be implementing a math curriculum based on the National Council of Teachers of Mathematics (NCTM) recommendations for mathematics teaching in the middle school. This is a program that has been developed, and for which there are resources available on the NCTM website.

The elements of this hypothetical approach are professional development sessions with teachers, instructional coaches working with teachers in classrooms and in professional development sessions, and classroom observation using video and in-person observations. I will mention that the approach we are discussing here is one that I have constructed for the purpose of this example. The part of it that is well-formed is the piece of it that is available on the NCTM website, which contains the recommendations.

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The initial form of the approach would include elements with detailed descriptions. Regarding the professional development (PD) sessions in the application, you would want to include the scheduling of those sessions, the subject matter to be covered in those sessions, as well as the pedagogical strategies that the trainers would convey to the teachers within those sessions. Regarding the instructional coaches, the application would describe the initial location of those coaches—in other words, school-based, roaming from school to school, or sitting in district offices—as well as the activities and supervision of the coaches.

The measurement analysis strategy should facilitate short-cycle revisions of the approach. To get at this in the application, we would want you to describe the frequency and modes of classroom observation—the modes being whether they are videotaped or in-person observations—and the methods for coding that would facilitate quick-release analysis. These methods might be different from the types of qualitative coding that you would do for a longer term study.

We would also want you to include measures of usability and feasibility that could come from relatively frequent surveys of teachers and principals. For example, surveys could assess the ease or difficulty with which teachers are implementing the curriculum. They could also assess the feasibility and perceived effectiveness of the PD sessions and coaching strategies. In other words, are the PD sessions and coaching strategies feasible within the current systemic arrangements within the district, or do those system features need to be tweaked in order to facilitate the PD sessions and coaching strategies? You would want to convey a sense of how you would make the determination of whether system changes need to be made.

Slide 43

The student outcomes that you would include in your application would differ depending on the stage of implementation. At the early stage, you would want to include outcome measures which would facilitate short-cycle revisions. These could include teacher perceptions of student progress and/or formative assessments of content knowledge. The application should discuss relations between these proximate measures and longer term outcome measures, as well as how and when these measures will be collected.

You should also detail the pilot stage outcome measures, which could include such outcome measures as grades, achievement test scores, course completions, or even eventual high school graduation.

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We would want you to describe how and when the measures will be assessed and interpreted so as to facilitate short-cycle revisions to the approach for implementing the curriculum. In other words, tell the review panel how you are going to make use of classroom observations, surveys, and early-stage outcome data in order to inform revisions to the approach.

We suggest that you be specific as to the number of iterations that will take place prior to the pilot study. By “iteration,” we mean major revision. So you can structure your application in terms of revision cycles in which you are collecting data, making sense of it, and then informing revisions—oftentimes through convening some sort of advisory panel within the partnership.

We would also suggest that you discuss how the approach will be formalized as a prototype for use during the pilot study. You could discuss the documentation and school or district-level guidelines that would be drawn up in order to form the approach into a definable entity for the pilot study.

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The pilot study could take several forms, and in this instance I am referring to the research design. There could be a time-series analysis comparing student outcomes in pilot schools to outcomes for students in similar schools that are not receiving the prototype.

You could use adjustments for student and school characteristics, as is often done in time-series analyses. You could conduct an experiment for the pilot studies in which students are randomly assigned to different conditions. For example, the approach described here could be evaluated in a randomized trial versus another approach within the district. To further this example, I would say that perhaps the district is involved in implementing common core standards via several different available strategies of which this approach here is one. Students could be randomly assigned to various approaches, and then effects on student outcomes could be compared across the different treatment groups. In this example, you assume that no student would be untreated because the district is going to be trying to implement the common core standards for all of its students. You could also write a research design for a single-case study comparing student outcomes during the pilot year to the same outcomes from previous years for students in the same school or the same set of schools.

Slide 46

In terms of tracking partnership progress, there should be periodic surveys and/or interviews of partners that can be used to identify weaknesses in communication, follow-through, et cetera. This slide deals with the assessment of the partnership activities at large and was intended to go before the example that I am discussing. So this is a little bit broader than the example. But I am going to run through it here and say that the application should have a strategy for reviewing how collected measures are utilized to inform iterative improvement of the curriculum. The Research Plan would describe the role of the practitioner and the research partner in monitoring the pilot study, and the Research Plan could possibly include a framework for a third party to evaluate improvements in agency capacity and the success of the partnership.

Slide 47

Let's move on to the other two sections of the Research Narrative, the Personnel and the Resources sections.

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In the Personnel section, you need to identify all the key personnel on the project—PIs, the co-PIs, and anyone else you think are key to the success of the project. The PI may come from either the research institution or the agency, but there must be a co-PI from

each of the partners. The PI or co-PI from the education agency must have decisionmaking authority over the issue being addressed by the project.

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In the Personnel section we often see two important elements left out: 1) what each person will be doing on this project, and 2) their qualifications—including experience for doing that work. The Personnel section doesn't need to be a large section but it should lay out each key person's project activities, their background for doing such work, and their time commitment to complete the work. Another way of thinking about the Personnel section is to ask, "What work am I proposing to do in the application?" and "Who is doing it?" For every piece of work I have discussed in the application, there should be a corresponding person listed in the Personnel section described as doing that work who has the capacity and the time to do that work. For example, who will be involved in implementing the approach, measuring it, revising and adapting it; who will carry out the pilot study; and who will track the success of maintaining the partnership (personnel may take part for specific portions of the project, but someone should be available throughout the project period to make sure everything is on track). It may be that people are going to donate time. We have found that some districts either are not set up to receive grant funding to do certain activities or that the project work would be considered regular duties so no additional funds are required. These donations of agency time are termed "cost sharing," and while not required can be done. In the budget section of the application, you would list them as nonfederal fund support. You would also describe them in a letter of agreement, which we will talk about in a minute, for example, that this person is going to spend 5 or 10 percent of their time on this project and that they have the permission of the district or the state to do so.

Cost sharing is not required. You get no additional points for donating time and IES does not require it.

Slide 50

You must discuss the institutional resources that all the partners bring to the project and how these resources will contribute to building the partnership. The research institution may note the supports it has to carry out research in the field. The state or district agency may note how it can help get this approach implemented in the field—how is it set up to do that. If the approach is implemented in the schools, peer reviewers would be much more confident if the principals of the schools signed a letter saying they agreed to implement the approach in their schools and understood the details of the work to be done. Reviewers have seen projects that are not successful because while the districts have agreed to the research, the school-level administration had not signed on to the work.

The more you can show that different levels of the district are involved and are excited to take part, the better. For example, you can mention that the staff know this project is coming to reduce non-involvement in implementation and measurement.

If you are going to be looking at administrative data, you should have some agreement with the office that oversees the data that the administrative data can be used for this project. If you are a district and you have easy access to administrative data, then you can certainly point to that. If you are a district but the project is going to have to draw on the state administrative data to work, it might not be a bad idea to have the state come in as a partner and say, “Yes, we will be a partner. We will provide the data.” At the least, the state agency that is responsible for giving out the data should have a letter saying, “This is a project that we think is very useful to the state. We would be happy to provide the data, as long as the proper procedures are followed.”

So your Resources section should include some evidence that the data is available and the implementation sites are interested in taking part.

Another issue you should describe is your management structure. Partnerships can make for complicated projects so you might discuss how decisions will be made and implemented in a timely fashion so the project moves forward.

Slide 51

This is a new section in the RFA. It lists everything that you need to discuss in order to ensure that your application is responsive to the substantive requirements of the Research Narrative. In a sense, it is a checklist for you to go through to ensure that your application is not rejected for review because your Research Narrative is missing one component that we asked for. There’s no expectation that you need to write anything to respond to this section—just check through your Research Narrative to make sure it covers everything listed here. There are other requirements listed in the RFA such as specific forms to complete and the budget to fill in.

Slide 52

Let’s talk about a few of the other sections of your application: the appendices, and the budget and budget narrative.

Slide 53

Appendix A has a 15-page limit so any additional pages may be removed before review. The first three pages of Appendix A can be used to discuss revisions you have made to your application based on previous review comments. For Continuous Improvement projects, this is not yet relevant because this is the first year Continuous Improvement is

being competed. But next year, you may be making a resubmission and will use Appendix A for this purpose. IES currently has no limit on resubmissions. The majority of our applications are funded as a resubmission and it is not abnormal to apply two or three times before being funded.

Appendix A is also the place to put any figures, charts, or tables that supplement the narrative. If you are running out of space inside the 25-page limit of the Research Narrative, you can put some of your material here in a table form and refer to it, but don't use text in this appendix. Text is not acceptable. If you want to show a specific test, survey, or observation or an interview protocol, you can put it here as well. By placing these in the Appendix, you are showing the peer reviewers that you have the measures in hand and provide reviewers who are not familiar with the specific instrument an opportunity to see it.

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Appendix B, with its 10-page limit, is where you give examples of the approach you are going to be using. Here you put what you are going to implement, adapt, and revise what you are starting with. For example, it may be curriculum material, computer screenshots, professional development materials, or assessment items. This is to give the reviewers an idea what you are going to be implementing.

Slide 55

Appendix C, which has no page limit, holds the letters of agreement for all your research partners. The more you show that everybody is on board and understands the work to be done, the stronger your application. The letters should not be cookie cutter. You want letters that set out each partner's responsibilities and understanding of roles—"For example, a district and its schools may recognized that surveys are to be done five times or six times a year, or that observers will be allowed into the classrooms on a regular basis. Similarly, if you have consultants, have their letters explain what their role is going to be on the project. If you are going to be using administrative data, have a letter showing that the people in charge of the data are willing to allow you to use the data for the purposes of this project.

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You must complete a budget and a budget narrative. The maximum award is \$2.5 million. If you propose going over that, your application will be rejected as nonresponsive. Similarly, the maximum project length is 4 years, so stay within those two maximums. On the other hand, you don't have to request \$2.5 million. If you are doing a smaller project and you need less money, ask for less money. The point here is

that the budget should reflect the work to be done. There is no benefit for underbidding, and there may be questions on overbidding.

In addition, you will provide narrative that describes every aspect of your budget—how you are spending money, and in what way, under the budget categories. Through this description you will justify your budget.

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Your application is due September 4, 2013, at 4:30 p.m. and zero seconds, and the computer timestamps your application. If your application comes in after 4:30:00, it will be rejected as late, and it won't go to the review. So we ask you to submit a week early, because 1) the server slows down near the deadline and 2) your application is checked for mistakes but this can take time.

The letter of intent due date is past but you can still send James and Amanda an e-mail describing your project and saying, "Here is what I want to do. Does this fit under Continuous Improvement?" The application package is already posted, and we do have a guide on how to submit your application, on our website. It will walk through the submission process on grants.gov, which is where you can download the application package. Start dates run from July 1st to September 1st, so you can decide when the best time to start the project is rather than automatically start on July 1st.

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The grants.gov Application Submission Guide is available at the same website as the RFA. The application package is on grants.gov. If something is not working on grants.gov, they have a help line 1-800-518-4726.

If you have a problem submitting, if for some reason the server isn't working, call grants.gov, tell them what is going wrong and get a case number. If your submission is late because of a problem with the server—not because the server was slow but if the server didn't work or for some reason went down—you can then e-mail IES to say, "Please accept my application. The server broke. Here is my case number I received from grants.gov." The Standards & Review Office then investigates your case and if they find there was a problem with the server, they will accept the application. I have to note that in most cases it is not that there is a problem with the server; it is just that the server is slowed down by so many people applying at the deadline, and that is not an acceptable reason for being late. Again, I am stressing the need to apply early.

Listed here are the two Program Officers. You can e-mail them to discuss your idea, discuss your application, and ask them to review parts of your application.

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The Standards & Review Office does both a compliance screening, for such issues as formatting and page length, and a responsiveness screening. Accepted applications are then assigned to a specific review panel. Two to three reviewers will look at each application. One will probably be a substantive expert in the area you want to work. The other may be a methodological expert. If they give strong enough scores, your application will then go to a full panel to be discussed and scored.

Many of the panelists will be generalists to your topic, but there will be somebody there who knows probably every method you discuss, e.g., designs, data collection methods, analysis methods. So it is important, every time you propose to do a certain type of work, to detail what you will do that you know how to do it and that you have a person who can carry it out.

You will get an overall score and you will get scores on each section of your Research Narrative—the Research Plan, the Personnel, and the Resources.

Slide 60

We have a new online application notification system online, so you will get an e-mail letting you know that the review of your application is available. If you aren't funded the first time, consider resubmitting. Many applications improve quite a bit using the reviewer comments.

Slide 61

Here is the IES general funding website and the two Program Officers for this topic (on the slide).

Questions: *“Is there a maximum number of resubmissions?”*

Answer: *“Right now, there is no limit. You can keep resubmitting. The review panel may note a fatal flaw in your work. So you should discuss what the reviews mean with your Program because sometimes the reviews are slightly cryptic.”*

Question: *“Will you be more likely to fund applications that have submitted similar programs to other areas under 305H, or do all applications in this area have a similar likelihood of funding?”*

Answer: *“To the first part of the question, no. Let's say you received a research partnership grant and then you came and said, “That succeeded,” and your next step was to do a continuous improvement grant. You would be evaluated the same way as*

somebody just coming straight in for a continuous improvement grant would. There is no preference here for coming in with a previous IES grant to support this work. Now, do all applications have the same likelihood of funding? No, because there are quality differences in the applications. The peer reviewers are told not to compare applications. They are to use an absolute scale.

Having a Researcher-Practitioner Partnership grant may convince reviewers that you have established a partnership to support a Continuous Improvement project. So if your current partnership might not be viewed as strong, applying first to Researcher-Practitioner Partnership could be a better approach.”

Question: *“If you are working with state educational agencies and work will happen in multiple schools and districts, would you expect letters of agreement from all participating schools and/or districts?”*

Answer: *“Here we have this tradeoff of what is possible and what would be the best of all possible worlds. I would expect reviewers to be concerned if you only had the agreement with a state education agency to do work because there remains the possibility that districts will decline to take part in the study. So your application will be stronger if you come in with the letter from the state education agency and some districts saying, “Yeah, we like this idea. We want to take part.” Even stronger would be, then, if there were some letters from some schools in those districts saying, “Yeah, we like this idea too, and we want to take part.”*

What is reasonable? You have to put this grant together in a short period of time. We are talking about lots of people, so it is probably not possible to get everyone involved. You are asking for schools to try something, to implement it, to allow all this short-term cycle work to be done—all these measures to be implemented in their schools—and then to make revisions accordingly during the school year. Let’s face it, this is a very invasive process, and all people/parties have to be onboard. Now the sooner they are onboard, obviously the better but that may be difficult to accomplish

So in sum, a letter only from the state educational agency is weaker; letters from the state education agency and districts are stronger; letters from the state agency, the districts, and some of the schools in the districts are really strong.”

Question: *“On page 21 for the request for agencies it says, ‘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, PD, or other support, but grant funds may be used to support adaptation revision.’ Please provide further explanation.”*

Answer: *“Let’s say there is a fully-developed intervention that you want to use in your district or your state, already out there on the shelf—be it commercial or from a not-for-profit—and you can buy it for \$500 per student. The purpose of this grant is not to buy this type intervention but to support its implementation, adaptation, and revision. The state or the district should pay for the intervention (this also signals that this intervention is of high importance to the education agency). IES’ interest is how you, then, take that intervention, adapt it, revise it, and make it work in your district. That is where this grant money should be used.*

The intention is not to make this a grant where people can go out, buy existing things, and then use them. The intention is that, for things that people want to go out and buy, we give them additional funds to implement them well, adapt, and revise them. So if you need to buy new textbooks for your kids and your district has decided to do that, that is what you should be spending your money and the district’s money on. If you want to take those textbooks and say, “These don’t quite work, is there away to make them work better,” that is the purpose of this grant money.”

Question: *“Is there a minimum or maximum number of iterations of the short-cycle process preferred?”*

Answer: *“We don’t know. I don’t think there is enough research to say that it has to be every 30 days, every 60 days, or every 90 days. I think people have different approaches to this, and it may also depend upon what approach you are trying to use and what can reasonably be done in your district. So, again, as I mentioned this grant program is partly to increase the knowledge of how to do this process in the education field. We are looking for your ideas and your arguments for how to do this and to identify what works.”*

If something comes to mind in a few minutes or a few days or a few weeks, as you start writing, please contact the Program Officers, and they will get back to you and discuss it with you. Thank you for your time this afternoon, and we all look forward to hearing from you.

This concludes today’s webinar, “Overview of Continuous Improvement Research in Education (Topic 2 under 84.305H), part of the IES Funding Opportunities Webinar Series. Copies of the PowerPoint presentation and a transcript from today’s webinar will be available on the IES website shortly. Thank you, and have a wonderful day.