IES Funding Opportunities Webinar:
Grant Writing Workshop

April 6, 2012

U.S. Department of Education

ies INSTITUTE OF EDUCATION SCIENCES

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Grant Writing Workshop
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Transcript
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Slide 1

Good afternoon everyone, and good morning for those of you on the West Coast. Thanks so much for taking your Friday to spend some time with us. All of you should have a set of slides and you'll see that there are quite a few. It is our hope that we'll get through all of them today, but I will skip as necessary as a function of time. I just wanted to let everyone know that there are some opportunities for you all to provide feedback, answer some questions, and think through some issues. You'll see them when they come up. When you do, I'd like you to go ahead and use the Q&A box and send in answers, so that we can try to make this interactive. I'm going to go ahead and get started. Again, I thank you for joining us.

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First, let me tell you a little bit about what our plan is for this webinar session. I'm going to talk a bit about the Institute of Education Sciences (IES) for those of you unfamiliar with the research and the work that we do. I'm going to then give you a very general overview of the IES grant programs. Then, I'm going to spend the bulk of our time together really focused on our two main grant programs: the Education Research Grants program and the Special Education Research Grants program. I'm going to talk about the grant topics that are currently available under those competitions as well as the research goals to which our applications must be submitted.

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I'm then going to spend some time talking about the four sections of the Research Narrative. When you're preparing a research grant application, these are the critical pieces you need to develop. I'm going to talk with you about what to do in the Significance, Research Plan, Personnel, and Resources section. If we have time and if

you all are interested, I am going to spend a bit of time talking about the other IES grant programs, just so you can get a sense of the different programs that are available and the variations in terms of requirements and expectations for those applications. I'll close with a discussion of the application submission and review process.

I do want to invite you to send questions using the Q&A box on the bottom right of your screen. I will pause at appropriate times and do my best to answer those questions.

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Let me tell you just a little bit about IES.

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For those of you unfamiliar with our structure, I have a graphic here for you. There are four centers that are under the Office of the Director. We are currently overseen by our Second Director, John Q. Easton, who is advised by the National Board for Education Sciences (NBES). NBES is both presidentially-nominated and Senate-confirmed. The Standards & Review Office, which oversees our review process, reports directly to the Office of the Director and has a separate set of responsibilities for review. The two research centers are not involved in the review process. This distinction, as you'll learn as we talk about it today, is actually a good thing for both the applicant and the Program Officers. It gives us the freedom to work closely with you as you're developing your applications.

As I said before, we have four centers. Today, I'm going to talk about the work of the National Center for Education Research (NCER) and the National Center for Special Education Research (NCSER). IES also has the National Center for Education Statistics (NCES), which I'm sure many of you are familiar with. NCES oversees things like the National Assessment of Educational Progress (NAEP) and oversees many data collections including the Early Childhood Longitudinal Study (ECLS), Birth and Kindergarten Cohorts.

Some of you may also be familiar with the National Center for Education Evaluation and Regional Assistance (NCEE). NCEE is responsible for the oversight and evaluation of federal dollars and federal programs as well as providing regional assistance to the states around questions of interest and concern to them.

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The two research centers have parallel missions but with separate populations of interest. Both centers support rigorous research that address the nation's most pressing education needs. NCER is really focused on the preschool through adult education

span, whereas NCSER is targeted on birth through the end of high school and focused on students at risk for or diagnosed with disabilities. That's really the distinction between the two centers. Otherwise, a lot of what I'm going to talk about today shows that we have strong overlap and we have a coordinated research effort that we support. It may be that one of the most important questions for you to decide is whether your application is better suited for NCER or NCSER.

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Let's start with the outcomes of interest. I think it's always helpful for folks on the phone to think about "*What is it that you're trying to change?*" I've organized this developmentally. One of the hazards of being a developmental psychologist is that we think about things over time. For the youngest learners in our country, we do support work from birth through preschool, but the research that we support for infants and toddlers is only under NCSER. For those infants and toddlers with disabilities, we do support research looking at how to improve developmental outcomes for those children. For both centers, we are also interested in supporting research that looks at how to improve school readiness for all children across the country.

The bulk of the work that we support is focused on the kindergarten through Grade 12 area. As you can see, we are really interested in a wide range of outcomes. Academic outcomes, of course, are very important to all of the work that we support. We are trying to understand how to improve student performance in reading, writing, math, and science. We're also interested, however, in looking at ways to improve outcomes such as behaviors, interactions, and social skills that support learning in school and the successful transition to post-school opportunities. This is important for both typically developing children as well as children with special needs. In addition, we're interested in high school graduation as a critical outcome. We want to answer the question, "*How do we make sure that the largest number of students possible proceeds all the way through graduation from high school?*"

For students with disabilities, we're very interested in learning how best to support those functional outcomes that improve educational results, transitions to employment, independent living, and postsecondary education.

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Within NCER, we also look at outcomes in the areas of both postsecondary and adult education. For those of you interested in postsecondary research, we are interested in outcomes such as access, persistence, and completion in the area of postsecondary education. We're also interested in learning how to improve students' achievement in gateway math and science courses as well as achievement in introductory composition

courses. Performance in these classes is critically important to students' further success in postsecondary education.

For those of you interested in carrying out research with adult learners, we are interested in ways to improve students' reading, writing, and mathematics outcomes for both basic and secondary education students as well as English learners or adults who are graded into basic and secondary levels.

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You can see we have a wide range of outcomes we're interested in supporting. If any of the work that you're proposing to do fits in these areas, I invite you to put in an application.

Given that general framework, let me share a bit about our IES grant programs.

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As I noted before, we have quite a lot of programs across both of the competitions. Let me orient you to this slide. The primary focus of this presentation is going to be on those top two grant programs—the Education Research Grants program and the Special Education Research Grants program. This is because much of the work that comes below that top red line really takes into account what we support through those first two programs. For those of you wondering what the numbers in the parentheses are, those are our Catalog of Federal Domestic Assistance (CFDA) numbers. The 84.305 programs are all within NCER. The 84.324 programs are all within NCSER.

The second group of Requests for Applications (RFAs) that I have listed here are other research programs that we support work in. These programs include the Statistical & Research Methodology in Education, Evaluation of State & Local Education Programs & Policies, the new A3 initiative coming out of NCSER, and our brand new Researcher-Practitioner Partnerships in Education Research. All of these programs are really designed to provide support to carry out different kinds of research in different education settings.

The bottom two programs are our research training grant programs in NCER and our research training program in NCSER. There are different sets of requirements and expectations around these programs and I'm going to just touch on them during this webinar. I do want to make sure you are aware that there are webinars addressing the research grant training programs and, everything except the Statistical & Research Methodology Program. So, there are unique webinars for most of these funding opportunities. If you are particularly interested in those, I want to alert you to the fact that there will be future webinars focused in greater detail on each of those programs.

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Before I jump into details about what to put in your application, let's just get the dates out there, so you know what you're working toward. For our two main research grants programs, we accept applications both in June and September. Just so you know, there are two deadlines for those; however, those are the only two grants programs for which we have two deadlines. All of our other grants programs only have one application deadline. The only other RFA, for which we are accepting applications, is the Statistics & Methodology Program, 84.305D.

Letters of Intent (LOIs) are due by April 19, and application packages will be posted on that date as well. All of our other grants programs have applications due on July 19.

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As you are preparing to apply, there are three things here that you need to download and then there is the Letter of Intent. I want to make sure that every one of you realizes that in order to submit a complete application, you need the RFA, the Application Grant Submission Guide, and the application package. The LOI is something that I want to encourage everyone to do, because it really does provide you with an opportunity to interact with your program staff. As I move forward, we'll see that descriptions of each of these components are on the next four slides.

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There's a separate RFA for each grant program. The RFA describes the requirements for an application. Often I'll get questions where people say, "*Well, I want to know when I can start preparing my application. When is the application package going to become available?*" The application package is a great thing to have and you do need that to submit the application, but you don't need to wait for that application package to start preparing your application. In each of the RFAs, there is a description about the expectations for what is to be included in the Research Narrative, what should go into the appendices, and what you need for your budget and your Budget Narrative. So there's no reason to wait until the application package is available.

I hope that all of you have been to our *Funding* webpage and have seen the RFAs. If you're interested in making sure that you get immediate notification of future RFAs, sign up for the IES *Newsflash.*

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LOIs, as I referenced before, are great ways for you to provide Program Officers here at IES with a description of your work. The other reason that it's really great for you to do this is that all of our program staff will reply to the LOIs they receive. This is a great way

for you to begin a conversation with a Program Officer. One of the most important messages I hope you take away from this webinar is that conversations should really be occurring between you and the Program Officer, because the Program Officer can provide you with a lot of support as you're pulling your application together.

So what goes in the LOI? The LOI should include a short description of your intended application. You should identify who the principal investigator (PI) is, where this work will be occurring, and who your collaborators are. The budget should just be a rough estimate. You should include up to a 1-page abstract describing the work that you plan to do. Please know that none of this information goes forward to the review process. It is superseded by everything you include in your application. This is just a great way for you to get on paper what you think you're going to be putting in and what you think it's going to cost. Then, you can begin a conversation with your Program Officer.

Just so you know, the LOI is submitted under https://iesreview.ed.gov, which is not the Grants.gov website; it's a different website. You want to make sure that you submit your LOI there. That information is already available. So, if you're ready to submit your LOI, you can go ahead and do that right now.

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The *Application Grant Submission Guide* will be available no later than April 19, 2012. The *Application Grant Submission Guide* includes instructions for completing and submitting the application package. This is actually a very helpful guide and it's meant to help you fill out the forms that are included in the Grants.gov package. This is something that you want to make sure you have. You also want to make sure that if you're at a university or an institution that has a Sponsor Projects Office, they have this guide because it will really make sure that everyone who's putting information into forms knows what information to include in which box.

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Those packages that I've referred to are available at Grants.gov or will be available. They will be available on April 19. For the September deadline, those packages will be available starting July 19.

It is important for you to know that packages are specific for each grant program and deadline. If you start an application with the package downloaded in April and you decide not to submit in June, you must go back in late July and download the other application package that is the correct one for the September 20 deadline. It's critical that you have the right application package for the right deadline. Otherwise, your application will not go forward for review. I know how much work it is to put an

application together, and the last thing you want is to put it together and then find out at the last minute that you have the wrong package. So, please be mindful of that.

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Who can apply? One of the questions that we frequently get is "*Who is eligible to apply?"* In general, applicants who have the ability and capacity to conduct scientifically valid research are eligible to apply for our competitions. These applicants include, but are not limited to, nonprofit and for-profit organizations and public and private agencies and institutions, such as colleges, universities, and school districts. If you look on our website you'll see that we do fund a range of different types of institutions, but much of our research funding is directed toward universities, research agencies, and school districts. That does not mean if you oversee a small business that you are not eligible. Small businesses are certainly eligible to apply, as long as they have the ability and capacity to conduct scientifically valid research.

I do, however, want to draw your attention to the fact that eligibility requirements are different for some of the other programs. There are specific requirements for the training programs, the Evaluation of State & Local Programs & Policies, and Researcher-Practitioner Partnerships in Education Research. For everything I say today, I want to make sure that you know that you should refer back to the specific RFA that you are applying under, because the requirements that are stated in that RFA are the requirements that the reviewers will be using to review your application. If you have a question, just make sure that you go back to that RFA.

Let's jump into some of the specifics. How do you know what the right grant program is for the research that you'd like to propose?

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The first thing is to make sure that you read the RFA and you want to make sure it's the right RFA. Then, you want to review announced topics and methodological requirements. Even if you have applied to IES in the past, it's really important that you go back and re-read the RFA for the current fiscal year. We do make changes to our RFAs every year, in an attempt to improve them and reflect the work that we have supported to date. Please make sure that you go back and review the current RFA, before you revise or submit a new application.

For those of you new to IES and for those of you trying to figure out whether your proposal is appropriate for IES or the National Institutes of Health (NIH) or maybe the National Science Foundation (NSF), you might want to spend some time visiting and reviewing the abstracts of currently-funded projects under a particular topic or program. This provides you with a nice way to get a sense of the range of work that IES has

supported and get a sense of whether the work that you're proposing is in line with that type of work.

Finally, after you've done your homework—read the RFA, reviewed current requirements, and looked at abstracts—please reach out to the appropriate Program Officer. You can do this prior to submitting your LOI. In fact, if you think you have a good idea already and are ready to reach out to your Program Officer, please don't wait. We're all busy, as you might imagine, and we have lots of folks who we work with. I know that we appreciate individuals who are ready to initiate a conversation early on and reach out and talk with us then.

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Now, I've given you an overview. I hope you have a good sense of the range of programs we have, deadlines, when things should come in, and what pieces of information you should have in order to prepare your grant application. Now what I'd like to do is jump into the Education Research Grants Program and the Special Education Research Grants Program and go over our topics and goal structure so that you can have a good sense of the kind work that we support and the kinds of things you need to be thinking about as you begin to write your application.

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The first thing to know is that all applications to either the NCER or NCSER main RFAs—the 84.305A or the 84.324A grants programs—must be directed to a specific topic. You must decide whether your application should be submitted to Reading & Writing, for example, or to Effective Teachers & Effective Teaching. You can't pick more than one. You need to identify which topic you would like your application to be considered under on the Cover Sheet—the SF 424 Form that is a part of the application package you download from Grants.gov. Item 4b, which says *Agency Identifier Number*, is the place where you put in the appropriate code identifying which topic and research goal you're applying under.

The other thing that we recommend for all of our applicants is that you include a restatement of the topic and research goal at the top of the abstract and the Research Narrative. One of the things you want to think about as you're putting your application together is "*How do you make your application easy for reviewers to read?*" You want to make sure your reviewers are happy. One of the ways you do this is to make sure that you're redundant—you include the same information in multiple different locations.

Question: *"Do you have to have a Ph.D. to conduct this level of research?"*

Answer: *I think that there is no stated requirement that you have to have a Ph.D. to conduct this research and it may be that you have expertise already, but it is true that the vast majority of the work we support is led by doctoral-level researchers. It's just a matter of you providing compelling information to the reviewers about your expertise and qualifications to conduct this type of research.*

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Let me jump into the topics. As you can see, under the Education Research Grants Program, we have 10 topics under which applicants are invited to submit their projects. These topics vary: work in taking basic cognitive science research and applying it in education settings; work in the area of early learning for young learners; work in the area of postsecondary and adult education for learners at the other end of the developmental trajectory; programs in reading and writing, or in math and science; and programs focused specifically on English language learners, if you're interested in learning or studying how to support English language learners that would be a topic where you could look. I've bolded Education Technology and Reading & Writing. I want to draw your attention to those two for two reasons. The first is that under Education Technology, for the first time, we are inviting applications under Goal 1 (our Exploration goal). I just want to put that on your radar screen. For those of you who are interested in doing work in the area of Reading & Writing, I'd like you to know that we are, for the first time in the past 2 years, once again accepting applications for the development of reading interventions.

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You are going to have to send the answers to these scenarios to my colleagues here, who are going to let me know whether we have an answer. *Can you identify the appropriate research topic under which this research question would be appropriately submitted?*

Exercise Scenario: *The purpose of this study is to examine the association between aspects of preschool quality and child health behavioral and cognitive outcomes in community-based and school-based early care and education programs.*

Exercise Answer: *The Early Learning Programs & Policies would be the correct place where you would want to submit this.*

Exercise Scenario: *The purpose of this research is to test several possible ways to influence participation in college savings plans and subsequent savings behavior.*

They have two types of answers so far; one is Improving Education Systems and another is Postsecondary & Adult Education.

Exercise Answer: *So, I think it could go potentially under both, right? If it was systemic—an Improving Education Systems project—this would be an attempt to look at a district level policy where they're trying to influence participation in college savings plans, or it could be something that's happening in the state college system or under a private system where they're trying to influence access and persistence under postsecondary.*

So one of the things I do want to talk with you all about is, "*How do you make that decision? How do you choose the right topic?*"

Exercise Scenario: *This study will provide a detailed examination of factors that predict gender differences in elementary school mathematics performance.*

Exercise Answer: *Mathematics & Sciences Education.*

Exercise Scenario: *This project is designed around findings from a local needs assessment of teachers, which found (a) a need for more support for laboratory work, (b) a need for greater access to subject matter experts, and (c) a strong desire to plan together.*

Two possible responses so far—Effective Teachers & Effective Teaching and Improving Education Systems.

Exercise Answer: *It would not be under Systems. Systems is really not focused on teachers. It would really be under Effective Teachers & Effective Teaching, because the focus here is really about supporting teachers in becoming more effective in the work that they do. Wai is actually the Program Officer for that competition. If you're interested in learning more about Effective Teachers & Effective Teaching, you can reach out and talk to Wai about that.*

Now, for those of you who are interested, these are actual projects that we have funded.

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Let's see, if we can do just as well under the Special Education Research Grants program. As you can see, there are similar topics to what we fund under the Education Research Grants program. You see that we have a topic for Cognition & Student Learning. We have topics in Early Intervention & Early Learning, Math & Science, Reading, Writing, & Language Development, and Social & Behavioral Outcomes. We

have a topic on Policy, Finance, & Systems and we have a topic on Transition Outcomes. What's unique about these topics is that for some of them—particularly Early Intervention and Reading, Writing & Language Development—we can support work in infancy and toddlerhood. That's one piece that makes it distinct.

The other thing I want to draw your attention to is that we do have a program focused specifically on proving our knowledge of Autism Spectrum Disorders. If that's an area of interest to you, I invite you to look at the requirements for the Autism topic. In addition, we have a topic specifically inviting applications looking at Families of Children with Disabilities. "*How do we support families who are raising children with disabilities and how do we help them support the learning of their kids?*"

Finally, we have a relatively new topic here—I think this is just the second year they've competed it—looking at Technology for Special Education. Again, technology has many potential benefits and those benefits may be particularly important in special education.

We also have a Professional Development topic—focusing on learning how best to support teachers who work with students with special needs.

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Let's try our Q&A again and figure out what the right topic is under the Special Education Research Grants Program.

Exercise Scenario: *Under this project, the research group will develop and preliminarily evaluate SELF (Social-Emotional Learning Foundations to promote emotional and behavioral self-regulation for children in kindergarten and first-grade who are at risk for emotional and behavioral disorders).*

Which topic would you submit this one under? Remember, we're looking at the Special Education Research Grants program topics.

Our participants are suggesting Cognition & Student Learning, Social & Behavioral Outcomes to Support Learning, and Early Intervention.

Exercise Answer: *Good suggestions and things that you would need to think about. I think the first thing I would do is invite you to talk with Jackie Buckley, who oversees our Social & Behavioral Outcomes to Support Learning. The focus is really on social learning, and it's also looking at emotional and behavioral disorders.*

Early Learning is a potential choice, because we have children in kindergarten. Although if this had been an emotional and behavioral self-regulation program for

children in pre-kindergarten and kindergarten, then I would have been more likely to invite you to talk with the Early Learning Program Officer. Because it's kindergarten and first-grade, I think it's probably a better fit for the Social & Behavioral topic.

The other one was the Cognition & Student Learning topic, that could certainly be a potentially appropriate area for it, but it might depend upon how you frame what this emotional and behavioral self-regulation program did.

So I think you guys are getting a sense that there are sometimes multiple topics where researchers can potentially apply. If you are in that situation where you have multiple topics that you think might be relevant, I want to encourage you to reach out to all of the Program Officers that you think might be relevant—maybe all at once—and we will coordinate and perhaps have a shared conference call amongst all of us to talk through your project and provide you with some recommendations about what might be the best fit for the work you're proposing.

Let's just do a couple more here before we move into additional information.

Exercise Scenario: *The research will provide guidance for speech-language pathologists by examining how dosage, techniques, and context are associated with language outcomes.*

We have Reading, Writing & Language Development, and Professional Development for Teachers & Related Service Providers.

Exercise Answer: *It could be either of those. It could be, if you're trying to understand what sort of techniques and contexts are associated with language outcomes and you're really interested in understanding the student piece, Reading, Writing & Language Development might be appropriate. If what you're really interested in is understanding the patterns that speech language pathologists use in providing support to students, then the Professional Development Program might be the most appropriate one.*

Exercise Scenario: *There have been challenges with making computer-based test items accessible to students who are Braille readers. The purpose of this project is to add enhancements in testing accommodations, for students who are blind or have low vision, to an existing platform that delivers a grade 8 reading assessment. This project will provide a fully functional computer-based test delivery platform designed to increase accessibility and meet the needs of these students.*

Exercise Answer: *I think that Technology for Special Education is the first thing that I would think about. It's also possible that because it's in reading, it could potentially be under Reading, Writing & Language Development, but I think Technology for Special Education seems like the best fit—at least for right now.*

Thanks, everyone. I'm glad people are engaged. It's a long session, so we're trying to make this a little bit more interactive.

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What are some of the topic-specific issues that you need to be aware of when you're trying to make decisions about the right area? The first is to know that every single one of our topics requires student outcomes—even areas like Effective Teachers and Systems. Our goal is to understand how changes in the education systems at-large link to student outcomes, and so we've got to have that student outcome piece in whatever application you put together.

A critical thing, particularly for the Education Research Grants Program area, is to know that the topics are restricted by age. You want to make sure that you don't inadvertently put your proposal under a topic for which that age is excluded. Most of our topics are focused on K-12 students only. The exceptions are listed below.

For example, you're going to propose under the Early Learning Programs & Practices topic, the focus there is primarily pre-kindergarten—for us defined as ages 3 to 5 and their teachers. The only exception in this topic is if you choose to follow your pre-kindergarten students out of pre-kindergarten into kindergarten or first-grade or however long you can, given the time period that you have available. Then, you can choose either Early Learning or potentially Reading & Writing or Math & Science Education or whatever the right topic would be. And then you have a choice.

For Education Technology, pre-kindergarten through adult are eligible, except in the area of science. For the area of science, you can do pre-kindergarten through Grade 12. So these are the kinds of small things that you do want to pay attention to, and these are the kinds of things that Program Officers can alert you to.

Under Cognition, it's pre-kindergarten through adult. Under Postsecondary & Adult, the focus is on older students. I guess the things you need to be aware of is that Postsecondary can include high school programs, like the College Savings Program we talked about, so long as the focus is on how those programs help support students matriculate into postsecondary programs. For us, postsecondary is limited to sub-baccalaureate and baccalaureate programs. We do not support research in graduate education. So that's important to note.

For adults, we support adult learners across a spectrum of different kinds of adult education settings. We support work in adult basic education, adult secondary education as well as adult education programs for English learners.

Question: *"Can the same proposal be submitted to more than one program?"*

Answer: *And the answer is, "No, it cannot." Even though we have different topics here, they are all considered to be part of the same program of research. There's a single CFDA number, 84.305A; and so you are actually submitting to a topic within the Education Research Program. You cannot submit the same proposal to more than one topic area. You can submit more than one proposal if those proposals are different, but you cannot submit the same proposal to more than one program.*

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Here are some other things to consider as you're thinking about the right topic to apply to. Under the topic of Improving Education Systems: Policy, Organization Management, & Leadership, you can propose to study anything that is designed to improve the overall functioning of a school, district, state, or national education system. This includes things like programs, the financing of a district or a state, leadership in terms of things like understanding principal development as well as organization and management. We have over the years had separate topics looking at pieces of this area of study, but upon reflection we decided to pull them into a single topic because many interventions proposed to be developed or examined include all of these approaches and are really intertwined. We felt that putting it into a single topic would allow researchers to examine some of these really critical questions.

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Topics can overlap. We did talk briefly about this when we went through the examples. Effective Teachers & Effective Teaching could potentially overlap with several of the other topics. Depending upon your own expertise, you may want to apply under Cognition if you're a cognitive scientist. Or maybe if you've come out of professional development field, what you'd really like to do is take information from cognitive science research and apply that to a teacher professional development program. In that case, Effective Teachers & Effective Teaching might be the most appropriate topic for you.

Under Improving Education Systems, I want to draw your attention to the fact that if you're proposing to study teacher certification, recruitment, and retention issues as ways to understand how to promote Effective Teachers & Effective Teaching, you can choose to apply under Improving Education Systems or under Effective Teachers & Effective Teaching. This is a great example of a time when you probably would want to have a phone call with the Program Officers for the two topics—Wai Chow and Katina

Stapleton—and talk with them about what might make the most sense given your own background and expertise and given the particular project you wish to carry out.

Education Technology has potential overlap with all of our programs. We pulled out the Education Technology topic, because we wanted to let the field know that we're very interested in supporting research in Education Technology. Making a decision about whether you come in under Education Technology or one of the other program areas may depend a lot upon your team. What is the expertise of your team? Are you a strong technological team? Is the technology component a big part of the proposal or are you more of a team that comes out of a substantive area, e.g., are you a reading researcher? That may help you make a decision about the appropriate topic area—or it may be that both are appropriate and you should just choose.

Similarly, English Learners and Improving Education Systems also overlap with all topics, except Early Learning Programs & Policies and Postsecondary & Adult Education. This goes back to the grade restriction we talked about earlier. Improving Education Systems is limited to work in the kindergarten through Grade 12 system.

These are just some examples of things for you to think about.

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So, how do you decide? This is the critical question, "*How do you know where to apply?*" Some things that we encourage our applicants to think about are "*What is the research literature that you're citing as you're developing the Significance section of your project?*" "*Are you emphasizing professional development literature or are you emphasizing economics of teaching literature?*" That may really help you think about which panel of reviewers is most appropriate—which topic is most appropriate—for the work you're proposing.

"*What area is your training in?*" "*Are you a cognitive scientist who has a specialty in reading or are you a reading researcher with an interest in cognitive science?*" The way in which the focus is in terms of your own training may help you select an appropriate topic.

If your focus is on a specific population of students or teachers, then you really do want to submit your application for consideration under a particular topic. If your focus of research interest is on students with autism, then the Autism Spectrum Disorders topic is more than likely the most appropriate place for you. If your primary focus is on English language learners and you want to develop an intervention specifically for use with English language learners, then the English Learners competition is probably the most appropriate topic for you.

On the other hand, almost all of the research that we support these days includes a subgroup of English learners but that does not mean that the English Learners competition is appropriate.

Question: *"Who are the reviewers for each program and is there a list?"*

Answer: *There is indeed a list of reviewers. It's not split out by program, but there is a public list of those. At the very end of the presentation, I have a link to the Standards & Review Office, and they are the office that runs the review program and has a list of all of the individuals who have reviewed for us, I believe, since 2006. If I don't show you that just remind me, but that information is available on our website.*

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We get a lot of individuals who want to study pre-service programs for teachers and principals. I just want to let everyone know that we are only supporting exploratory research on teacher pre-service programs. We do NOT support the development of pre-service programs, the evaluation of them, or the measurement of pre-service teachers. In part, this has to do with the fact that we have a time limit in terms of the number of years that we can support research; also, because pre-service programs can be anywhere from 2 to 4 years in length, it becomes hard for us to study and understand pre-service programs and then link programs to student outcomes.

Exploratory research can be done if you have access to secondary data that includes information about student teachers, their training, and then their performance as teachers of record. Then, you can look at the associations between those pre-service programs and student outcomes. You can, however, develop or evaluate components to be used in pre-service settings with current in-service teachers. That is one option if you want to start to develop and test out some ideas.

In addition, we do provide support for leadership pre-service programs, if those programs last 24 months or less. If that's a particular topic of interest to you, I'm going to refer you to Katina Stapleton, who is our leadership expert on our staff. She can help you think about whether your program is appropriate for the work that we support.

Slide 30

Question: *"Can this pre-service apply only to teachers, and can it apply to related service providers?"*

Answer: *I'm pausing because that's a question for Special Education and I actually don't know the complete answer to that question. I am going to just sort of put that in my parking lot and we'll try to get an answer for you. If you don't hear from me with an*

answer, please do e-mail me directly. I will make sure to confer with my Special Education colleagues and make sure we get you the correct answer for that.

Question: *"Will Program Officers review draft grant proposals prior to submission?"*

Answer: *The answer to that is "Yes," and I will talk more about that later on in the presentation.*

What about under Special Education? Are there similar issues for you to think about? Of course.

Under Special Education, one of the things that applicants often struggle with is how do they know whether the students they're proposing to work with are truly at risk for developing disabilities. Please know that, according to the Special Education Research Grants Program, a student is at risk for developing a disability based upon an individual assessment as opposed to a population characteristic. So, students who are at risk for low school performance as a function of coming from a low socioeconomic environment is not a student at risk for developing disabilities because of their low SES. I hope that makes sense.

Just know that when you're putting your application together, if you want to be considered under Special Education, you really need to be describing the characteristics of individual learners that make them at risk as opposed to population features. You do want to be as specific as you can be about which disabilities you are proposing to address. You want to specify inclusion and exclusion criteria and screening criteria to the degree you have that information.

The topics listed below must address students with an identified disability only and not students at risk for a disability. If you're proposing to apply under Transition Outcomes, Autism Spectrum Disorders, or Families of Children with Disabilities, all three of those topics require that you work with children who have an identified disability.

Slide 31

For the Special Education Research Grants Program, as I noted before, there are different grade and age spans. For Early Intervention, you can begin at birth and work up through age 5. Cognition is birth to Grade 12; Technology is birth to Grade 12; under the area of Autism, you can start in pre-kindergarten. Transition is the only area where you can start with secondary students as they move into postsecondary settings, since the target goal here is to follow these students and support them as they move out of the secondary system. For all of the other programs, the limit is kindergarten to Grade 12.

There are some overlaps in Special Education, as there are in our regular education programs. For example, under Autism, comprehensive interventions with multiple outcomes should go to Autism. If you're focused only on a single outcome—so whether an intervention working with students is affecting mathematics and science—then you should go under Math & Science Education. Similarly for Early Intervention and other topics, if you begin with pre-kindergarten students and follow them, you can select which is the appropriate topic given your particular area of interest.

Slide 32

Your head is probably spinning at this point going, "*Oh my goodness, how do I know which topic to go under?*" I think it's really not as complicated as it seems. Think about your research question. Think about what makes the most sense given the critical questions you want to answer and make your best guess about which topic it fits under. If you're still unsure, go back and re-read the RFA, talk with a Program Officer, and know that if you submit your LOI and you identify a topic and the Program Officer reviews the LOI and says, "*Hmm, I'm not sure if that's the right topic,*" they will reach out to you and they will provide you with that feedback. Then, you can have a follow-up conversation to make a decision about which topic is most appropriate for you.

Again, you need to provide a compelling case to the reviewer that the topic you've selected is the topic that makes the most sense for the question that you're trying to answer—so long as it fits all the other requirements.

Slide 33

I'm going to switch to the other part of our main RFAs—the two parent RFAs—if you want to call them that.

Once you've selected your research topic—and really for many of you, that's relatively straightforward—you need to identify what research questions you want to ask and how those map onto the research goals that IES has identified in their RFAs. Just like with the topics, you are required to select one research goal—and one research goal only—and develop an application around that.

Here again, under Item 4b, you want to include information about the research goal. There are five of them. You want to repeat that information at the top of the abstract and the Research Narrative. This is to your benefit. This helps the reviewers make sure that they are evaluating your application with the requirements specific to the research goal that you are submitting under. The goal tells you what kind of research can be done. Just to repeat, every application that is submitted is directed to a specific topic and goal combination.

One of the reasons for identifying research goals to submit under is to make sure that the scope of work proposed can actually be completed in the time period that's allotted. We don't have indefinite resources. We have limited resources and limited years of funding that we can give to applicants. So, what we've tried to do here is carve out, if you will, distinct areas of research that can form coherent projects and that can be productively completed in the time allotted.

Slide 34

Let's just move on here. There are five research goals that I assume are familiar to many of you, but may be new to some: Exploration, Development & Innovation, Efficacy & Replication, Effectiveness, and Measurement. For those of you familiar with the IES goal structure, you may notice that Effectiveness is a new research goal. This was formerly called Scale-Up Evaluation. We've made a decision to change the name of this topic to Effectiveness, because we believe it more accurately captures the purpose of that goal. We'll talk more about that in a few minutes.

Slide 35

Let's start first with Exploration. Exploration is what I like to call our "hypothesis generation goal." The purpose here is to explore associations between education outcomes and malleable factors and the hope of these projects is that we can identify factors and conditions that may mediate or moderate the relations between these malleable factors and student outcomes. So, there's two pieces. The first is that you can look at these associations between outcomes and malleable factors and the second is that you may identify mediators and moderators.

Slide 36

The critical piece of Exploration here is really that we want to identify things to change in the education system that can improve student outcomes. The factors that can be explored can include student, teacher, or school characteristics. They can be education programs or policies. We don't specify at which level of course that this can occur, because it will depend upon the topic.

Perhaps you want to explore underlying processes that might enhance or inhibit learning—perhaps self-regulatory behaviors or executive function in younger or older children. You could look at aspects of a school, district, or community that are associated with beneficial education outcomes. Maybe there are unique features of the district that you work in that seem to be associated with student outcomes and we want to carry out some systematic research around that. Perhaps you believe that there are education interventions associated with beneficial education outcomes, but there isn't

information to explore/describe how those associations are occurring. All of these are potential malleable factors.

Slide 37

Under Exploration, we invite a variety of different methodological approaches depending upon the kind of data that you have available and, again, the research questions that you want to address. Some possible methods that we support under Exploration include the analysis of secondary data.

For example, if you want to look at information that's available in a national data set—perhaps something collected by NCES—you could propose an Exploration study to look at those questions. Perhaps you'd like to collect primary data—you'd like to go into a classroom and observe teachers (maybe you want to look at high school English teachers) to learn what is it about teachers who are really effective at teaching writing skills (to high school students). You don't know what those features are, but you do know that there are some teachers who seem to do a really good job at developing writing skills and other classes where students' writing skills seem to stagnate or not continue to grow. Maybe what you'd like to do is go into those classrooms and try to collect information about what's different between those two different instructional settings. You could propose to do that under Exploration.

Maybe what you'd like to do is look at the research literature and complete a meta-analysis. Maybe you want to look at an area where there's been a lot of research done. There doesn't appear to be any single set of outcomes that are coming out of the meta-analyses, but you believe that if you were to go back and look at those data, you might be able to identify mediators that would be potentially amenable to change. You could propose a meta-analysis.

Do know that we have funding limits, both in terms of time and money available. For the next several sets of slides, I'm going to have things that say "maximum" in terms of the number of years and the amount of dollars. Please know that the dollar amounts that are included are the maximum you can request over 2 years and those are total costs (both direct and indirect). If you're only proposing to do a secondary data analysis or a meta-analytic study, you can ask for no more than 2 years and no more than $700,000. If you're proposing to collect primary data, then you can request up to 4 years' worth of funding and $1.6 million.

I do want to let everyone know that if you exceed the time allotment or the financial allotment, your application will be returned without review. So, these are hard maximums, and this is a change from prior years. So, you do want to make sure that you come in with the right amount of time and at or below the funding level.

One of the things in the new RFA that we've tried to do is lay out what you should have at the end of a project.

Slide 38

Sometimes it helps thinking about at the end of a project in terms of developing your whole proposal. Let me just walk you through what we have included in the RFA and this is sort of just the short version of it. I want to invite you to go to the RFA where we elaborate on this.

What should you have at the end of an Exploration project? First, you should have a clear description of any malleable factors found and any accompanying mediators and/or moderators. You should have evidence regarding the associations of those factors with student outcomes. You should have a well-specified conceptual framework and/or theoretical framework linking identified factors and student outcomes. Lastly, you should have information about whether what you learned in this project could lead to the development or refinement of an intervention, the rigorous evaluation of an intervention, or the development of a conceptual framework that could be used to support the development or revision of an assessment. The idea here is that because Exploration is a hypothesis-generating goal it should take you into future research opportunities. You're going to learn something that we can apply to future projects.

I just want to let folks know there was a question that came in about limits for software development under meta-analysis. I'm going to answer that question later. That comes in under the Statistics & Research Methodology Program, but we're not there yet.

Slide 39

This is an interactive portion here. So tell me whether you think these research questions would be appropriate questions for Exploration.

Exercise Question: *Do middle school girls score higher on English achievement tests than boys?*

Would this be an appropriate question for Exploration?

Exercise Answer: *We've got "Yes" and "No," so people are undecided. So, in some ways it depends upon how you frame the question.*

If you're looking to see whether this is something that's malleable – the fact that it's a girl versus a boy – you can't generally in the context of school change the gender of a child, but it might be that there's something involved in terms of the way that instruction is happening, in terms of the way the teachers are interacting with girls as opposed to

boys, that might suggest that there are things that you could change in a school environment. It really depends upon how you frame what you really want to learn from that question.

Exercise Question: *Is hands-on science teaching associated with better grades for boys?*

Exercise Answer: *You can certainly look to see whether in fact hands-on science teaching is associated with better grades for boys, but the real question becomes "What's the malleable factor there?" Would you guys then suggest that you have segregated teaching for girls and boys? That's probably not something that many school districts or schools would be able to implement, but maybe there are things you could learn about the way in which the hands-on science teaching is associated—what are the features of that instruction that appear to be supporting boys in ways differential than for girls.*

Exercise Question: *Is increasing foster care payments linked to better academic outcomes of foster children?*

Exercise Answer: *Here's perhaps a more straightforward one. If there is evidence in the extant data set that increasing foster care payments seems to be linked to better academic outcomes of foster children, that might be important to know. However, what's important to note here is that increasing foster care payments is not something that's under the control of the education system. So, while it's an interesting question to ask, it's not an appropriate research question for IES, because the malleable factor is not under the control of the education system.*

We have a question here from the audience.

Question: *"Will exploration of an education intervention in a non-academic setting, such as a city or community center, be supported?"*

Answer: *It certainly is possible that it can be, so long as it's tied to education outcomes and under the control of the education system. If you look in the RFA, we talk about authentic education delivery settings—if it's an afterschool program, for example, that's happening in a non-academic setting but if it could then be linked to student performance on academic outcomes and under the control of the education system it may well be appropriate. I think this is another great question to talk with your Program Officer about, to think about the ways in which you want to make sure that this would be appropriate. I'm also just trying to think – there's a lot of maybe's around this. It really depends upon how you frame that question, but certainly it's potentially appropriate.*

Question: *"If we want to do 3 years collecting primary data, can we still ask for the full $1.6 million for primary data?"*

Answer: *You are not restricted from asking for the full amount of money but you want to make sure that you have a strong justification for it. I think you want to talk very carefully with your Program Officer to make sure that that is in fact a justifiable request. You have to convince the reviewers as well, the reviewers will certainly know that you are asking for more money for a shorter period of time. So you really just need to provide a compelling justification.*

Exercise Question: *Does the Bluebird Reading Curriculum cause higher student achievement on reading tests?*

Exercise Answer: *We have a lot of people who are shaking their heads. The answer is, "No." You guys are right, because the purpose of this question is to understand a cause. If you're really looking to answer that "*What works" *question, you really want to submit your application under Efficacy because that is the goal that's really focused on exploring causal questions.*

Exercise Question: *Do students with certain types of disabilities have shorter attention spans?*

Exercise Answer: *The answer is definitely, "Yes." If we learn that there are particular characteristics of students that are associated with different kinds of attention spans, then we may want to think about features in our education environment that we could modify to account for and assist students with different characteristics that they bring to the classroom. Again, we're not going to be able to change the students. We can't change their disability characterization, but we can alter the way that we provide support to those students as they are learning.*

I hope that helps you all think through some of the factors to consider when you're trying to decide if your project is appropriately considered under Exploration. Thanks for the questions, and thanks for playing along.

Slide 40

We're going to shift now to what we finally call Goal 2, the Development & Innovation goal. At this point, I want to pause. People often ask, "*Well, do I have to start with Exploration in terms of the projects that I propose, or can I start anywhere along the goal spectrum?*" The answer is you can start anywhere along the goal spectrum in terms of putting in your application. It really just depends upon what your research question is. People apply to IES with different research questions all the time. Don't feel

like the order in which we're talking about these has any implications for the order in which you would apply for funding.

Why would you apply under Development & Innovation? This is if your desire is to develop an innovative intervention—such as a curriculum, an instructional approach, a program, or a policy—or if what you'd really like to do is improve existing education interventions that are being used but are not perfect, you can propose to do this and follow an iterative process where you have maybe initial components or an initial version of a curriculum. Then, you go out and you collect data on its feasibility and its usability. Is the intervention actually working as you intended? You get feedback from the end user. You make revisions. You do that process a couple of times and then, as you move into the final year of your project, you have the opportunity to collect pilot data. The expectation is that you'll collect pilot data on student outcomes.

The purpose here is to see if in fact this new or revised intervention is showing the expected type of outcomes on student achievement or whatever the right student outcome is for you.

Slide 41

In the context of Development, we expect you to measure and collect information about the feasibility of implementation. You might have developed the most beautiful curriculum for teaching students about chemical reactions. You've got this really extraordinary intervention, but if you don't test it with the end user who you are expecting to use it—that high school teacher who's going to be using it, those students and maybe the students with disabilities in the classroom that are going to be using it—then we don't really know if it's feasible for your intervention to be implemented.

As part of your Development project, you should propose to implement the intervention in an authentic education delivery setting with a small sample of users. It doesn't have to be big, but just test it out with folks who have the characteristics of the folks you expect to be using it. You want to make sure it's in the right setting and with the right users. I think users in this context should include both students and the deliverers of the intervention. If you're coming in under the Special Education context, then there may be features and characteristics of the learners that are really different than if you were to come in under the regular education program. Make sure you take those factors into consideration.

Slide 42

After you have revised and developed your intervention and you have something that's both feasible and usable, then you are expected to propose a pilot study on the promise of the intervention to achieve intended outcomes. There is no requirement that this

project be a study designed to support causal inference. However, as you'll see in the RFA, pilot data tends to be stronger with a comparison group. So, it's often hard to know whether your intervention is actually supporting improved student outcomes, if all you have is pre- and post-test data. So, it's often helpful to have some form of a comparison group to compare whether the students who are participating in the new intervention are outperforming those who have typical interventions.

The pilot study, however, is meant to be a pilot study. It's not an efficacy study, so it has a limited budget—no more than 30 percent of the grant budget. The purpose here is for you to obtain compelling evidence that you can use to support moving forward into an efficacy evaluation.

Please note that we have maximum awards again. The time period has extended to 4 years, but I want to let everyone know that this does not mean that you can propose to do 3 years of development and 1 year of a pilot study. The additional year is really intended for interventions that are a full year in length that require more than a year to complete a pilot study. So again, if you think you're in this category where 4 years might make sense, please do talk with your Program Officers. They can help you think about whether a 3- or 4-year project makes sense.

I have a bunch of questions that are populating up here around the Development projects.

Question: *"Can you provide guidance on the number of teachers and students that are generally involved in the Development & Innovation goal?"*

Answer: *The number of teachers and students really vary quite tremendously depending upon the scope of work that's being proposed. Often what you'll see is that if you're developing an intervention, the number of teachers involved in developing the curriculum materials in the initial year are a handful. Over time, you may add additional teachers depending upon what the scope of work is. Maybe you want to develop the intervention with a small group of teachers. Then, you want to test feasibility with a different group of teachers. Then in the pilot data, you want to make sure you have a sufficient number of teachers to test it out so that you can make sure any findings that you get are not confounded with the number of teachers. I realize I'm being very vague here and that's of course intentional because of the range and the number of programs that we support and the different types of designs that we support. So, if you're going to use a within-subjects design—for example—the number of students you need is potentially much smaller than if you're testing or developing an intervention that's intended to be delivered at the classroom- or school-level. Again, please talk with your Program Officers. They can really provide you much more specific information.*

Question: *"If you do a Development & Innovation study, do you need to prove that Exploration goals were met?"*

Answer: *You don't need to prove that Exploration goals were met, but you should have good theoretical and empirical evidence—whether it's from your own work or from the work that's available in the extant literature—that what you are proposing to develop makes sense and that there is good theoretical reason for moving forward and that there is empirical evidence to support the development of a new intervention.*

Question: *"Can some of the users be people who have already been engaged with some form of the intervention, or do the users have to be new to the intervention?"*

Answer: *This is a question of research design. I think it depends. If you're refining an intervention and you want to work with individuals who have already been using it, I think that they can certainly be involved in the development process. I think that for pilot testing, you want to make sure you have new users as well as users who are experienced, because their ability to implement the intervention is probably going to be different from folks who have experience with it already.*

Slide 43

At the end of a Development project, you will have a fully-developed version of the intervention that includes: a) a well-specified theory of change and evidence that the intended end users understand and can use the intervention; b) data that demonstrate the feasibility of implementation; and c) pilot data regarding promise, along with fidelity measures and evidence regarding the fidelity of implementation.

Slide 44

We have some questions here. I've been told I only have just over an hour left, and I want to make sure that we get through everything. What I'm going to do is I'm going to go ahead and I'm going to put these questions up here, and then I'm going to answer them myself. But you all can please do play along.

Exercise Question: *So, if your proposal is to develop a ninth-grade biotechnology course over the summer and implement it from September to December and measure student gains in knowledge, would this be appropriate under Development & Innovation?*

Exercise Answer: *It could potentially be a Development & Innovation project, but generally we would expect there to be much more time invested at the front in terms of developing it. So long as you carry out some testing and a pilot study, then that could be appropriate for Development & Innovation.*

Exercise Question: *Give half the students iPads, monitor how they're used, and compare test scores at the end of the year.*

Exercise Answer: *That does not appear to have any development involved in it and perhaps is more appropriately considered under Efficacy.*

Exercise Question: *Develop a new writing program that you would develop with 10 teachers over a single year. You would try out the components in the class and revise accordingly. You would propose to carry out a feasibility test with 10 teachers in year two; then compare the writing scores of students of the 10 teachers to scores of students from 10 other teachers in year three.*

Exercise Answer: *This would be a fully fleshed-out Development project. As you can see, the first two bullets give you pieces of things that could be part of a Development project, but it's only that last bullet that really encompasses the full development process that we envision in our projects.*

Slide 45

What about Efficacy? We talked about Efficacy as being a project for the "*What works*" question. The purpose here is to evaluate whether a fully developed intervention is efficacious—whether it works under limited or ideal conditions. You could also propose to gather follow-up data examining the longer-term effects of an intervention with demonstrated efficacy or you could propose to carry out a replication study where you test to see whether an intervention that already has evidence of efficacy in one condition can be replicated in a new set of conditions.

Slide 46

Under this project, you want to make sure you consider what needs to be implemented under routine practice. You want to reduce the appearance of conflict of interest for developers or evaluators. Developers can be involved in the process, but their role needs to be clearly specified, so that we can be confident in the results of the study. Again, we don't require confirmatory analyses but recommend exploratory ones. If you're proposing to come in under the Special Education Program, please note that you may propose single-case experimental design.

Slide 47

Let me just clarify here that the "*What works*" question can be for two different kinds of interventions—for interventions that are already in wide use or interventions not in wide use as well as a follow-up study. There are different expectations for the kind of

evidence you should include in your application for each of these. The RFA has lots of information about that and I would refer you to the RFA for that information.

Slide 48

Under an Efficacy study, you want to make sure that you include a detailed description of the intervention—reviewers will look for that—that includes a theory of change and empirical evidence as well as the practical importance of the intervention.

Designs that support causal inference are required in Efficacy studies and we have listed here what those include. Random assignments and strong quasi-experimental designs are acceptable when an experiment is not feasible. Under Special Education, you can propose a single-subject method. You want to make sure that you look at the *What Works Clearinghouse* standards, because those specify what kinds of things should be included—what sort of features of the design should be included as you're putting a proposal together.

Slide 49

In your proposal, you want to make sure that you address the power of the design to identify impacts. You want to address the fidelity of implementation of the treatment and comparison groups and address important moderators of the causal impact to the degree that you are able to do so. Make sure you include details in your Research Narrative about measures and the analysis plan. To whatever degree possible, explain to the reviewers how you will avoid apparent conflicts of interest for the evaluation team.

Under Efficacy & Replication, the maximum award is 4 years and $3.5 million.

Question: *"If data has never been collected previously on the application of the intervention, can you apply at this level?"*

Answer: *If there's no information at all available and this intervention is in wide use, then you can come in as an intervention under wide use. If you have an intervention that is, if you will, a "home-grown" intervention that does not have previous data on it, I would invite you to talk to a Program Officer and they can help you think about where the right place might be for you to put your application.*

Slide 50

For those of you who have already carried out an Efficacy study or been part of an Efficacy study and would like to follow students or teachers who have participated in the original experiment and see if intervention effects are sustained, you can apply under a follow-up study, where you can request up to 3 years' worth of funding and $1.2 million.

Slide 51

At the end of an Efficacy study, you should have information about the evidence of the impact of a clearly-specified intervention on student outcomes relative to a comparison condition using a research design that meets the *What Works Clearinghouse* standards. You should have some conclusions about and revisions to the theory of change that guides the intervention.

Slide 52

If beneficial impact is found, then you want to make sure that you've included some information at the end of the study about what supports, tools, and procedures need to be in place for future implementation. On the other hand, if you do not find a beneficial impact, then you should determine whether and what type of further research would be needed to revise the intervention.

Question: *"Are content and methodology studies different grant categories, or does a content area have to be further defined in terms of its methodology?"*

Answer: *Every goal that comes in under the main research RFAs—so the Education Research Grants program or the Special Education Research Grants program—needs to identify both a topic focus and a methodological focus. So you need to have both. We do have a separate program that is focused only on methodology—the Statistics & Methodology Program—that I may or may not have a chance to talk about depending upon our time; it is not restricted by content area. But for all of the stuff that I've been talking about so far, you need to specify both a topic and a research goal. So, it's topic and goal.*

Slide 53

Exercise Question: *Is the random assignment of iPads to treatment and control classrooms an Efficacy study?*

Exercise Answer: *If you believe that the use of iPads is an education intervention and you want to see whether having iPads works—absolutely.*

Exercise Question: *This intervention provides 3 weeks of teacher training, ongoing coaching, and classroom materials.*

If all you're doing is developing that intervention, then that's probably not an Efficacy study.

Exercise Question: *The second one says to match schools who adopted an anti-bullying program to 30 schools who did not based on the percentage of minorities and free and reduced lunch and average test scores.*

Exercise Answer: *This perhaps may not meet the criterion of a well-matched quasi-experimental design in that you'd have to provide a justification that the matching criteria that you have identified are linked to the potential success of an anti-bullying program or not. You'd have to provide a compelling case for that because the schools may be different on an unmeasured variable—those who chose to adopt the program versus those who did not.*

Exercise Question: *Then we have a study here for four districts who agree to take part in a study that will randomly assign a math curriculum to two of them.*

Exercise Answer: *This study includes random assignment, which is great, but I think that the number of districts agreeing to participate in this study is probably too small for us to support strong causal imprints. We would of course need to have a further conversation about it.*

Slide 54

I'm going to talk really quickly about Effectiveness—in part because we see few of these applications that come through and in part because in order for you to be ready to evaluate the effectiveness of a program, you need to have a fully developed intervention with all of the implementation supports and there needs to have been at least two prior studies of the efficacy of that intervention that showed both beneficial and practical impacts.

So, if you have that information, you can propose to come in under Effectiveness.

Slide 55

The criteria for research design for Effectiveness are highly similar to that for Efficacy. The real distinction, however, is that you are implementing this intervention under routine practice without any additional support of the developers. You must include evaluators who are independent of the development and distribution of the intervention, and you should have strong efficacy evidence for the intervention to include in the application.

We don't expect wide generalizability from a single study. This is what distinguishes this from the prior discussion of Scale-Up. These projects are not intended to support Scale-Up, but rather to see whether an intervention is effective under routine practice. That's the real purpose of these projects.

The cost of implementation is limited to a quarter of the budget.

Slide 56

Replications are also allowed in terms of a replication of an Effectiveness study, if you are going to do it with a different population, and the maximum amount of award is 5 years and $5 million.

Slide 57

As for Efficacy, you can propose to do a follow-up study, if you already have information about the effectiveness of an intervention and you'd like to see whether those results are sustained going forward. You can request up to 3 years' worth of funding and $1.5 million.

Slide 58

Like with Efficacy, at the end of the study you will have evidence of the impact. You will have conclusions about and potentially revisions to the theory of change.

Slide 59

If you have a beneficial impact, you want to have information about what supports implementation. If you find that the intervention does not work, then you need to think and propose what else needs to be done. This is at the end of a study.

Slide 60

Under Effectiveness, would these fit?

Study Design Question: *A researcher wants to test a new in-service math teacher training program developed under a Development & Innovation grant in 60 randomly assigned classrooms.*

Would this fit?

Study Design Answer: *It's new. It's been developed under Development & Innovation, but it doesn't look like there's any prior efficacy work. So, that would suggest that this is something that is not ready yet to go to Effectiveness. It perhaps is at a place where you want to apply under Efficacy.*

In another project:

Study Design Question: *A district wants to compare two Algebra 1 curricula, and the companies agree to provide them at cost along with teacher coaching.*

Study Design Answer: *This potentially could be appropriate for Effectiveness, if there's prior evidence of the Algebra 1 curricula or if the curricula are ones that are in wide use.*

Study Design Question: *A charter management company with evidence from 2 small efficacy studies receives funds from a millionaire to take over 40 schools. Eighty schools apply, and the company will randomly select half, if it receives IES funds to do an evaluation.*

Study Design Answer: *It looks like this particular example includes all of the features that are expected under Effectiveness.*

Slide 61

Our final research goal is Measurement. Let me just talk about the expectations for Measurement. Under Measurement, you can propose to develop new assessments, or to refine existing assessments, and validate them. Or you can propose to validate existing assessments for specific purposes, contexts, and populations.

Slide 62

This goal is not intended to support the evaluation of an assessment used as an intervention. The measure is the primary product of this goal. It's not intended to support the creation of a measure as part of a larger study. The Measurement goal is separate from the other studies, although it may be that the measures developed are used in other studies. The Measurement goal, in and of itself, is the support for the development and validation of a measure.

You can apply for up to 4 years' worth of funding at $1.6 million.

Slide 63

Study Design Question: *If your goal is to develop a formative chemistry assessment to help students learn how to balance formulas.*

Could you propose this under Measurement?

Study Design Answer: *So long as you included information and proposed to validate that assessment as well as develop it.*

Study Design Question: *If you wanted to* d*evelop a measure of teacher instruction in fractions and validate it against teacher logs and principal observations.*

Study Design Answer: *You can develop a measure of teacher instruction in fractions, but the validation needs to be not only against teacher logs and principal observations but also student outcomes.*

Study Design Question: *If you wanted to develop a measure of student attention and validate it against student grades as part of a project to evaluate an intervention to increase student time on task.*

Study Design Answer: *This looks like it has all of the components that you would need.*

Slide 64

At the end of a Measurement goal, what would you have? You would have information to develop and refine and validate an assessment. You would have a set of things that would come out at the end of a project. You would describe the assessment; use a description of the processes that you went through—field testing and revision; a well-specified framework; a description of validation activities; and evidence on the reliability and validity of the instrument for specified purposes, populations, and contexts.

Slide 65

To validate an existing assessment, at the end you would provide information about a well-specified conceptual framework, a description of those activities, and evidence on reliability and validity.

Slide 66

The goals build on one another. You can see that Exploration projects can lead to Development & Innovation, which can lead to Efficacy. Development & Innovation could lead to Efficacy, if the intervention is feasible and pilot data is supportive, or Efficacy & Replication may lead to an Effectiveness evaluation, if you have two of those studies and you find impact. Measurement can feed into the other goals.

The idea here is that these goals support one another, and they support one another at different points. A single researcher of course does not need to be responsible for all of them.

Slide 67

As I said before, you can start at any of these goals.

Question: *"If a team has another type of grant, not from IES but funded under NSF, and it's a quasi-experimental design under Development and Implementation with Effectiveness tested over a longitudinal timeframe, could a replication Effectiveness study or follow-up study be submitted to IES?"*

Answer: *You could certainly submit a follow-up study, depending upon if the design that you have used meets the requirements of either Efficacy or Effectiveness. One of the challenges here is to make sure that the terms used by NSF and IES are parallel enough. Again, I would invite you to talk to your Program Officer about that. It is possible. The projects that you would like to build on do not need to have originally been funded by IES.*

Slide 68

To recap, in terms of thinking about which goal your research idea should fall under, think about your research question. Decide under which goal it fits best. If you're still not sure, go back and look at the RFA. Reach out to the appropriate Program Officer. They are associated with topics, so they're familiar with the content area. If your idea straddles several goals, and they often do, consider breaking your application into multiple applications. It may be that in order for you to accomplish the work given time and resources, you want to limit the project. Just put it into a single goal at a time.

The other thing that I want to encourage you to think long and hard about is that you want to make sure you choose the goal that has the best fit—not the one with the most money. Pick the one that makes sense.

Slide 69

There is dissemination expected for all goals. This is actually something that you could use as you're trying to think through the work that you're doing. You're expected to publish. We're hoping that there will be collaborations with practitioners that come out of it. There is now an expectation that you submit final peer review manuscripts to ERIC [Education Resources Information Center].

Slide 70

Question: *"Is there a quota for proposals funded under each goal?"*

Answer: *We don't have any quota under goals. We in fact have been in a fortunate position where we have been able to support all research that our reviewers have*

considered to be of excellent or outstanding quality. You do see different distributions in terms of the number of applications funded under the different goals, but that really reflects the number of applications that come in. In general, nearly half of the work that we have funded has been under Development & Innovation because more than half or about half of the applications that come in are to do that kind of work. There is no quota.

Now, I want to talk through each of the sections of the Research Narrative so you get a sense of what needs to go in each of the sections. I'm not going to go through all of the information on each of the slides in detail. You all can read that.

Slide 71

I want to highlight some of the really important things that you need to pay attention to as you're pulling your Research Narrative together.

The first thing that you need to know is that the Research Narrative—your 25-page, single-spaced Research Narrative—is scored on four criteria. It's scored on the Significance, Research Plan, Personnel, and Resources sections. Each of these sections is scored, and then there is an overall score given by the reviewers as to the quality of the application. The requirements, as you all should know, will vary by topic and goal. You want to make sure that you read the RFA and are familiar with the expectations for topics and goals.

Slide 72

The purpose of the Significance section, which shouldn't surprise you, is to describe the overall project. What is the question you're answering? What are you proposing to develop? It must provide a compelling rationale for the project. That rationale typically involves three components. It will involve a theoretical justification. It will involve an empirical justification. What prior evidence exists to support what you're proposing to do? And it will involve a practical justification. How is this going to help outcomes of students in our schools?

Slide 73

It's really important when you're building your Significance section to remember not to assume that reviewers know the significance of your work. While our reviewers have expertise in general areas, they are not necessarily going to be experts in your exact area. So, you're writing for a general but well-informed audience. You don't want to quote back an RFA on the general importance of a topic. You do, however, want to quote the RFA or include information from the RFA, if there's a specific topic that is highlighted in the RFA and your work will address that topic.

Question: *"Are different sections weighted differently to make the overall score?"*

Answer: *The answer is, "No." There are five independent scores, and reviewers generate the four criterion scores and an overall score. So, the overall score is actually a reverse score, and it's just something that reflects the reviewers overall sense of the scientific merit of the project. The four criterion scores do not directly feed into the overall score.*

Slide 74

Under Exploration, the Significance section has to do with "*What are the malleable factors you're proposing?*" "*What are the moderators and/or mediators you're proposing to examine?*" Like in all of them, you need to justify the importance of those factors.

Under Exploration, it's really important that you provide the reviewers some guidance, so they understand how what you're proposing to do will lead to a useful next step. This is about hypothesis generation, you're not going to know what you're going to find, but you need to do some thought experiments where you can really help the reviewers understand why the work that you're proposing is really going to help move the field—or the area in which you're carrying out your work—to the next step. Don't forget to address overall importance as well.

Slide 75

Under the Significance section for Development, you want to include some different information. You want to include some information about the context for the proposed intervention—"*Why is it needed?*" If you're developing an early literacy curriculum, what is the need you're addressing? There are lots of early literacy curricula that are already out there. Why do we need your particular intervention?

You need to provide as detailed a description of what you're proposing to develop as you can. If you have already developed components, you want to make sure that you clearly identify what's already developed, where there are pieces that are developed, and what you plan to develop. A table can be really helpful here where you can show the pieces. Maybe you've got eight components in your scope and sequence, you've already developed two, you started to develop the next two, and there are four that remain to be developed. Just have a table that clearly lays that out.

Don't overextend yourself. The other question reviewers consider is not only, "Is this good work to be done?" but "Is it practical?" Can you actually get it done given the time and resources you've proposed? Think about that. Development work also requires a theory of change. How are you expecting the intervention you're proposing to make a difference? What prior evidence is out there to support the components of the

intervention? Is this practically important? Are you expecting a meaningful impact? Is it potentially feasible? Is it going to be expensive, whether in terms of human resources or actual finances?

Make sure in your Significance section you answer this question: "*Why will this intervention produce better student outcomes than current practices?*" That's the critical question for the reviewers.

Slide 76

Under Efficacy, you have to include a description of the intervention. Even for an intervention that's in wide use, don't just put the title of the intervention there and expect that the reviewers are going to know what the intervention includes. Make sure that you provide enough information to show that the intervention's fully developed, how it will be implemented, and that it's ready to be evaluated. Again, you need to justify, "*Why do we want to evaluate this intervention?*" "*What's the importance of the problem?*" "*What is the theory of change?*" Then, "*Why do you think this is going to lead to better outcomes?"* This should sound familiar. So, the idea is that all of these pieces need to be there for the reviewers.

Slide 77

Effectiveness is similar to Efficacy, except you also want to provide information about the evidence of meaningful impacts that already exist. So, you need to make sure that you describe the two prior efficacy studies that are supporting your proposal to study the effectiveness of it.

Slide 78

For Measurement, you want to provide a description of the product. What is it that you're proposing to develop? What is the assessment? How is it going to be used? What are the constructs you're proposing this product will measure? What theoretical, empirical, and practical information is available to support it? Is it feasible?

Slide 79

There are two key problem areas under Significance that we see in our review of applications that reviewers raise questions about.

1) **The descriptions of the malleable factor or intervention to be developed or tested is unclear.** You may want to use graphics or tables to help you as you're developing the malleable factor. It's not clear whether the intervention can be implemented to ensure fidelity. Or there's not enough information as to why you would expect an impact, particularly for an Effectiveness or an Efficacy study. It is overly

focused on describing the research actions that are going to be occurring. For instance, you're going to have 10 PD sessions, but not on the content of what's going on in this session; so content matters. Make sure you include sufficient information about that.

Slide 80

2) The other piece where we see applications fall is that **there is not information included about a theory of change**. You need to make sure you have sufficient information provided about the theory of change you're proposing. Describe why a malleable factor should be related to the student outcomes that you're proposing to measure, why the intervention should improve outcomes, and what the pieces are along the way. Specifically, what are the measures you're going to use to try to figure out whether your proposed theory of change is actually taking place? Again, a graphic can be really helpful. A well-specified theory of change makes it easy for a reviewer to then evaluate your research design, because it will tell them what they should expect. So, this is the intervention; here are the things they expect to change—ergo, we should measure them; and here are the outcomes we expect to see. So take the time to develop the sections around theory of change well.

Slide 81

What about the Research Plan?

Slide 82

Now, this is a critically-important part of the application. Again, I'm going to just try to highlight some of the key pieces of this. For the Research Plan, I want to encourage everyone to go back to the RFAs. This is really where there's a wealth of information that describes which pieces need to be included in your application. Make sure, in your Research Plan section, you describe the work that you propose to do. Make sure that the reviewers understand how you're proposing to answer your research question, develop your intervention, evaluate your intervention, or develop and validate your assessment.

Make certain that the plan you develop is aligned to the Significance section. Like what I said in the prior slide, have a well-articulated theory of change that can provide a very strong transition into your research design. You want to make sure that what you talk about in your Significance section maps onto what you talk about in your Research Plan, and vice versa. Timelines can also be really helpful here, too, to help reviewers understand what's going to happen and at what time.

Slide 83

Research plans differ by research goal, but every Research Plan should include information about the following features. You should describe the setting or settings in which you're carrying out your work. In the Development goal, you may find that you describe a different setting for each of the different phases of the work that you're proposing. You should describe the population and the characteristics of the sample that you're going to be working with in the proposed study. You should propose how you're going to define who's going to be in and out of the study. Are you planning to include all students in a school, all students in a classroom, or are you going to exclude the lowest or highest achieving students and why? Provide an explanation for that.

In order to identify sample size, power is important for almost all of the goals. You need to explain to the reviewers how you determined your sample size. For studies where you're planning to follow students over time—whether in Exploration, Efficacy, or Effectiveness—you should include a plan about how you're proposing to handle attrition. The reviewers are going to want to know, and methodologists who review these applications will ask questions about that.

You also want to make sure that your population reflects appropriate characteristics, so that you have external validity for generalization to the degree that is a goal of your work.

Choosing measures is critical. Choosing measures is easier or harder depending upon the research project or the research area you're working in. But across all of them, think about how you're planning to measure your outcomes. Which measures are intended to measure near outcomes or proximal outcomes? Which are intended to measure distal outcomes? How are these measures going to allow you to answer the research questions you care about? What other measures do you need to have? How are you going to measure fidelity? How are you going to measure feasibility? What about this notion of operating as intended or usability? How are you going to make sure that the intervention is working as you hoped it would? How are you going to collect information about feedback from teachers and students or principals?

Both quantitative and qualitative measures can be included, but you need to make sure you describe what those measures are. You need to describe the reliability and validity of those measures over time. You need to describe the relevance of the measures that you've chosen. It may be really important for you to get measures that are sensitive to the outcomes you care about. From a practical point of view, it may also be really important to have measures that are of broad interest—whether those be state-standardized tests or other standardized measures that are used to compare student performance over time.

The other thing you want to make sure you address, particularly for Effectiveness and Efficacy studies, are issues of multiple comparisons. You want to make sure you're not going to get yourself into trouble in terms of drawing incorrect conclusions based upon multiple comparisons.

Slide 84

In the Research Designs, you want to make sure for analysis that your analysis plans are elaborate. I just want to let you all know here that one of the most challenging and somewhat frustrating things for reviewers is when analysis plans are a sentence or two. That is insufficient across all of the goals. So, your analysis section should be detailed. It should include information describing how your research questions are answered. It should address clustering. If you're doing an HLM (hierarchical linear model) include that model in the proposal. Talk about missing data. All of these things that you would include in a research article should be included in your application, so that your expert reviewers have the information they need to know how you're planning to analyze the data that you're proposing to collect.

If you're going to include qualitative data, also make sure you include a description of how you're going to analyze that data and then how you're going to link it to quantitative outcomes.

Slide 85

In the Research Design section, it's often really helpful if you start your Research Design section with the questions you're proposing to answer. Then, the Research Design can answer each of these questions. Just some words of wisdom—do not have your Design section written independently by a methodologist without there being an opportunity for review and crosstalk across the different sections of the application. You really want to make sure that the application holds together as a whole and that each of the sections feed clearly into one another.

Again, problems that people often raise or issues that we see for reviewers are no plans for dealing with attrition and missing data, and no information about how you're going to be getting access and permission to collect or use data.

Question: *"Is it required to submit letters of support in the submission packet from all school districts to be included in the project?"*

Answer: *It's not required that you have letters of support from all school districts but more letters of support will improve the reviewers' sense that you have a strong project and have strong buy-in from all of the districts you need in order to complete your study. I would encourage you to get as many letters as possible.*

Slide 86

Again, the design varies by goal. You can see on your slide that these designs are going to vary as a function of the research question and design that you propose.

Slide 87

Again, there's lots of information in the RFA that talks about the expectations.

For Efficacy & Replication, if you're proposing a strong quasi-experiment, you should justify why an RCT [randomized controlled trial] is not possible.

Slide 88

Under Measurement, you want to make sure that you provide a lot of information about how you propose to carry out your reliability and validity studies as well as any development activities that you're proposing.

Slide 89

Now, the Research Plan is always the longest section of your 25-page Research Narrative. You want to make sure that you don't run out of space. You must include two sections—Personnel and Resources. It is not sufficient for you to say, "*Well, my personnel is described in my CVs that I'm going to include in the appendix.*" That's not sufficient. You must have a section in the Research Narrative that describes the characteristics of the personnel. Similarly for Resources, it's not sufficient to say, "*Well, I talk about that in my Budget Narrative. Isn't that enough?*" No, you must have a separate Resources section within that 25-page narrative.

Slide 90

Under Personnel, you want to make sure that you describe the key personnel. You want to link each person and their expertise to their role in the project. You want to show that every aspect of the project has a person with expertise to do it. The projects that we fund tend to be very complicated. There are a lot of different things happening and the Personnel section is where you can highlight how you have the diverse expertise represented in the people who are participating in your proposed work.

Almost every project will have someone with expertise in methodology. You want to make sure that in your Personnel section you describe their expertise in the particular method that's being used in this study. You want to make sure that you have at least one substantive person for all of the content areas that you're proposing to address in your application.

It is generally not effective to *propose* to hire a key person with identified expertise but not have that person on board already. The reviewers are actually evaluating the individuals who are part of your team. You also want to make sure that your PI has demonstrated adequate project management skills. You want to talk about expertise that's available on your team for that.

You want to give the time contribution for each person. You want to show that every aspect has enough time from an expert.

Question: *"What is the ideal amount of time assigned to the PI in an Efficacy study or even a Effectiveness study?"*

Answer: *That's a great question, and one that depends upon how your project is organized. PIs have different roles across different projects. I think that in order to answer that question, I would need to know the whole layout and design of your project. I will say that if you're proposing to come in with 1 percent of your time for the PI, that will not be sufficient. I would invite you to talk with our Program Officers, who can help you think about how to distribute responsibility across a project.*

Speaking to that, you must make sure that you include the time contribution—the percent effort—for every participant on the project. You want to make sure that every piece of your proposal has enough time from the appropriate expert. So, that's part of the art of putting together a proposal.

Make sure that your short CVs—your biographical sketches—are all similar and that they provide specific information for this project. We all know that everyone's got long CVs, but we only want four pages plus a single page for current and pending funding. Those four pages really need to pinpoint the relevant expertise for the particular project you're proposing.

Question: *"Is it acceptable to indicate that a person has agreed to be part of the study if funded, even if that person is not part of a team already?"*

Answer: *Potentially—if it's someone you want to include as a consultant, or you get a letter of agreement from that person that if funded they will be part of it, that should be sufficient. You want to make sure that the relevant amount of time and expertise is appropriate. Talk with your Program Officer about how to handle that. In general, that is okay.*

What about personnel requirements? Someone asked earlier on whether there was a requirement for there to be Ph.D. level folks to be on the projects.

Slide 91

When reviewers are looking at the personnel requirements, they do look at publication records. So, is your PI active in publishing the findings? There is an expectation that federally funded work becomes publically disseminated. The reviewers want to make sure that if the project is completed that the findings will be shared. One of the ways you do that is you look at a researcher's history of publications.

You want to make sure that if you're proposing to develop an intervention that you discuss past success at getting interventions that you've developed evaluated. So, it's really important that you develop the intervention, but the hope is that those interventions are also evaluated.

If you've received funding for a previous IES grant and it's relevant to the work you're proposing here, make sure you discuss the results. We have standing panels of reviewers, and they've often reviewed in the past and might be aware of it. You certainly don't want them to say, "Hey, I thought this person already received a grant. How come they don't ever talk about that work?" So, make sure you talk about that.

Evaluations require attention to objectivity. Should there be a developer or someone with a financial interest in the project? You want to make sure you've described how that objectivity is going to be maintained, either in Efficacy or Effectiveness.

Who's the right person to identify as the PI?

Slide 92

If you're a senior researcher and you're proposing to be the PI, you do want to make sure you have adequate time to be available to serve as the PI. That person is responsible for the fiscal as well as intellectual management of a project, and you want to make sure you've got enough time. Reviewers will question that if there is no evidence of that.

You want to make sure that your credentials are clear. Again, remember that not all of your reviewers are going to be experts in your particular field. You want to make sure that your expertise is clear to someone who may be well-informed but not someone intimately involved with your work or really familiar with the particular area of science that you're working in. Make sure that your expertise is really evident in the work that you propose. Our panels are interdisciplinary in nature, so you want to make sure that everyone is aware of your expertise.

If you are a junior researcher, someone who is pre-tenure or who is a new researcher at a research organization and you want to be the PI or the project director, you need to make sure that you describe how you have adequate expertise not only to do the work but to manage the project. So that means you need to talk both about your scientific expertise and your management expertise. Reviewers may be more comfortable, if you include senior individuals—individuals with experience managing large grants—on the project either as an advisory board or as consultants or perhaps even as a co-PI, so you have someone you can turn to for advice.

Slide 93

Let me just talk briefly here about Resources. You want to make sure that in your Resources section, you show that the institutions have the capacity to support the work you've proposed. We do not recommend that you use the university boilerplate that talks about how large the library is and how many square feet you have available in your office. That's not the critical information that reviewers want to see. What they really want to know is that you have the specific resources available to carry out your proposed work.

So if you're working in schools, for example, you want to make sure that you have strong letters of support from the schools or the districts who are going to be participating in the work. You want to make sure that it's clear that the roles of every institution who's participating are clearly described—including the schools where you're planning to do your work.

You should also think about including information about alternative strategies. What will you do if you lose schools, students, or districts? How are you going to handle possible problems going forward?

Slide 94

Appendix C, which has no page limit, should back up your Resources section. This is the place where you include detailed letters of support from the research institutions—from states, districts, and schools. It's also a place where you should document permission to use and access confidential data. You want to show familiarity with the data in your Resources section, so that reviewers are confident that you can use the data to do the proposed work. If you're merging datasets, you need to show that it can be done.

Slide 95

There are three appendices that you want to include. There's Appendix A, which has a 15-page limit. In Appendix A, you should include figures, charts, and tables that support the Research Narrative. If you are including measures, you want to include examples of measures—if there are research or development measures that people would like to see. If this is a resubmission, you are required to include up to three pages to address past reviewer comments or to argue that the proposal is a new submission. So, you want to make sure if you are resubmitting that you include that information.

In Appendix B, you can include examples of materials used in an intervention or an assessment.

In Appendix C, there's no page limit. That's where you include letters of agreement from districts, schools, data providers, partners, and consultants.

I have a budget question here that I'm going to address in the context of this. I have a question here, which says:

Question: *"What happens if our proposed budget exceeds the maximum allowed?"*

Answer: *If your budget exceeds the maximum allowed, it will not go forward to review. There is language that says your budget must be at or below the level specified in the RFA. So you do not want to submit an application where your budget exceeds the maximum allowed.*

Slide 96

You want to provide here a clear Budget and Budget Narrative for the overall project and each sub-award. In the Grant Application Submission Guide, we have information about the Budget categories. You want to look at the RFA for the specific budget requirements for goals and programs. You want to make sure that what you talk about in your Research Narrative and what you describe in your Budget and your Budget Narrative all aligned. It can be a problem if you propose to use a certain set of standardized measures in your Research Narrative and then you don't budget to purchase them. So, just make sure that those are all aligned.

Slide 97

Now, I'm going to answer these Personnel questions.

Question: *"Under Personnel, as a junior researcher who doesn't have lots of experience in managing a project, how do I provide the relevant evidence?"*

Answer: *You describe the evidence that you do have. You provide information in your CV about your role on projects that you have been involved in. I want to just let you know that we do have a webinar that's specifically for early career researchers, where we will talk in detail about factors that you need to consider as you're pulling an application together.*

Question: *"How can you include a project manager who has a strong role in fiscal matters and research but does not have a Ph.D.?"*

Answer: *You can identify that person as the Project Director and you can explain that that person is carrying out that role but maintain, as PI, someone with the scientific expertise to oversee the scientific endeavors of the project.*

I have a set of slides that talk about the expectations for other grant writing programs. I am happy to go through those really quickly, but I don't know if people are more interested in hearing a little bit about the review process.

Well, I'll skip ahead to application submission and review. Then, if we have time, we can come back to the other IES grant programs. I included this information in the slides, so you all will have this information if these are areas of interest to you.

Slide 98

(Slide skipped due to time)

Slide 99

For everything, except for the Statistics & Methods programs, there are webinars that will address them in detail. So, if those are programs of interest to you, you should plan to join those webinars.

Our other research grant programs do not use the topic goal structure that I've described in detail here, but are informed by that structure. Even if you think the other projects are ones you want to look at, you need to know the main RFA as well. Statistics & Methods and Evaluation of State & Local follow the Research Narrative guidelines that I just set out. Everything except Statistics & Methods is due in September; Statistics & Methods applications are due in June.

Slide 100

If you want to develop software to support methodological analysis, you should come in under Statistics & Research Methodology in Education program. It's specifically intended to support that kind of work. And you should just follow the Research Narrative information that is included in the RFA.

Slide 101-112

I'm skipping through. My slides are about the different expectations. As you can see here, what I've tried to do is distinguish the kinds of information that need to be included in each of these different sections.

Slide 113

Let me jump ahead to Submission and Review.

Slide 114

(Slide skipped due to time)

Slide 115

In order to submit your application, you've got a couple of things you need to make sure of. The first is that you need to make sure your institution is registered on Grants.gov. If you don't know, check with your Sponsored Grants and Projects Office and make sure that you are. Do that now because it takes time, and you surely don't want to be waiting until right before you upload your application.

To submit your application, you need to complete all of the forms that are at Grants.gov as part of your application package. You want to upload all of the PDFs that you have prepared, including your Research Narrative, your CVs, your Budget Narrative, all the appendices, and any other information that is required. You need to remember, if you are at a university or a research institution, the researcher is not the person who completes the submission process. Rather, it is your authorized representative at your institution.

You want to make sure that you get all of the information they need from you in plenty of time to make sure that the application is submitted by 4:30 p.m., Washington D.C. time on the deadline date. Earlier is safer. You want to make sure that you get it in on time, and those seconds do count. If it is submitted at 4:30 p.m. and ten seconds, it is considered late. So be safe; submit your application several days before the deadline and then you don't have to worry about it.

If, for whatever reason, you encounter problems when you upload, make sure you contact the 1-800 number and get a case number. Then, you'll get three e-mails—two from Grants.gov and one from the Department of Education. Those are the e-mails you should be looking for when you upload.

Slide 116

What happens during review? It's the Standards & Review Office who handles this, and there are a couple of steps. The first is there is a compliance screening process making sure that the font size you used is appropriate, that your margins are the right size, and that you have the right number of pages and that you haven't gone over—that your Research Narrative fits the 25-page, single-space requirements.

Then, there is a review done for a responsiveness screening to program and goal requirements. So there are a set of program and goal requirements that we've gone through to talk about whether you're in the right topic, whether you're in the right research goal.

Then, applications that are both compliant and responsive are assigned to a review panel. Individual applications are typically reviewed by two to three reviewers, who have both substantive and methodological expertise. Applications are assigned those scores that we talked about earlier: Significance, Research Plan, Personnel, and Resources as well as an overall score. If the average overall score is high enough, then your application will be reviewed by the full panel.

Again, when you're writing, make sure that you're being technically specific but that you're writing for a general expert audience. Many of the panelists are going to be generalists with expertise relevant to your topic, but they may not have specific knowledge of your exact area. However, there will be methodological experts in each of the methodological procedures that you propose to use. So, you want to make sure that you are really attentive to methodological details when you pull your application together.

To date, as I noted before, all applications with overall scores of outstanding and excellent have been funded.

The other thing that you want to note is that resubmissions are encouraged. You want to make sure you address reviewer comments. You are not only encouraged but you are *required* to provide feedback to the reviewer comments in Appendix A. You must include information—you don't have to use the full three pages—to let the reviewers know that you have read the reviewer comments and that you have provided feedback. Because our panels are standing panels, it is likely that there will be several people, at

the very least, in the room who have read your application before or heard it discussed. They are going to want to make sure that the concerns that they raised have been considered by the applicant.

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The peer review process information is included on the Standards & Review Office website. This link here should take you directly there: ies.ed.gov. You'll have information there about the peer review procedures, and you will also have the list of peer reviewers who have reviewed for us in the past.

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In terms of notification, people often want to know when they are going to find out and how. All applicants receive an e-mail notification on the status of their application. And all applicants, whether successful or unsuccessful, receive copies of reviewer comments. However, if applicants do not go forward to review—if they're deemed nonresponsive or noncompliant—they don't receive reviewer comments. I just want to be clear about that. They will get an e-mail notification that tells the status of your application, but nothing else.

If you are, however, not granted an award the first time through—and our funding rate hovers around 10 percent—you need to know that you should plan on resubmitting. You should talk to your Program Officer. It is our job to help you as you prepare your resubmission. We can read and provide feedback and help you make sense of reviewer comments if they're not clear.

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Additional webinars are available about the application process. There are Grant Writing Workshops that go into detail on each of the goals. So, I've provided you with a fair amount of information. If you want additional information for each goal, you should sign up for those. We have Grant Writing Workshops that are specifically designed with early career researchers in mind and for researchers who are researchers at minority serving institutions.

We have overviews of our Research Training Programs. If you're at an institution and you're thinking about putting together a training program, I would invite you to join those webinars.

Finally, there are two overviews of NCSER funding opportunities that will provide you with specific information about the Special Education opportunities.

Here's my e-mail.

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But I do just want to make sure everyone has my e-mail address. If you have other questions, you should feel free to send them to me and I will either answer them directly or send them out to the appropriate program staff.

Question: *"What is the numeric score that is high enough?"*

Answer: *The overall score that reviewers do ranges from 1.0 to 5.0, where 1.0 is the outstanding group and 5.0 is the poor group. In general, applications that are funded are scored between excellent and outstanding. I don't actually know in terms of the numeric score. I'm not sure that I can say that right now, so I'm not going to. If you have that question, you can e-mail me, and I will let you know the answer.*

Question: *"If our proposal last year didn't make the final panel review stage, even if we addressed the reviewer critiques, do we realistically have a good chance of getting an award?"*

Answer: *Well, I don't have a crystal ball. It's hard for me to answer that question. I think that you should know that making it through to final panel review, while an important factor, is not the only factor. There are applications that are not reviewed by the full panel one year, resubmitted, and then move into the funding range. What I would recommend you do in that case is that if you've not already reached out to the Program Officer who oversees the topic area or the competition that you're submitting to, that you should reach out to them. They can help you make an assessment about how competitive your application is.*

Question: *"How do we know that the application has made it to the final panel review? Contact the Program Officer?"*

Answer: *You will not know whether your application has made it to the final panel review until you receive notification about the status of your award. The way that you'll know is that when you receive your reviewer comments, you will either receive a numeric score, or you will receive a gray box that says that your application was triaged and did not go forward to the final panel review. The time when you find out about the status of your application and when you receive your reviewer comments, is when you'll get that information.*

I just want to thank everyone for your patience and hope that this was helpful. I know there's a lot of information, and 2½ hours is a long time. I appreciate everyone hanging in there and providing lots of questions on a Friday afternoon—at least for those of us on the East Coast.

Question: *"Does IES support research projects that do not use quantitative models?"*

Answer: *We certainly support research that includes qualitative work. Most of that work that has a strong qualitative focus you'll see under the Exploratory work where you're observing classrooms or you're getting information about instruction as it occurs. It is extremely rare for IES to support work that is only qualitative in nature, although we support a lot of work that includes qualitative work. So, I hope that answered your question.*

Question: *"I submitted a proposal to IES last September, and I have not heard the outcome as yet. Is this usual or unusual?"*

Answer: *This is usual. We are still in the deliberation process for applications that were submitted last September. You will hear prior to the initial start date, which is July 1, 2012. You'll usually hear before then, but it is not unusual to not have heard anything at this point.*

I want to thank everyone again for your time and attention. Please send questions to me, if you have any other questions, and I'll be sure to share them with everyone else.

Thank you.

This concludes today's webinar, the Grant Writing Workshop, part of the Research Funding Opportunities webinar series. Copies of the PowerPoint presentation and a transcript of today's webinar will be available on the IES website shortly. Thank you and have a wonderful day.