
**IES Funding Opportunities Webinar:
Grant Writing Workshop for Early-Career Investigators
U.S. Department of Education
Institute of Education Sciences**

Presented by:

Allen Ruby, Ph.D.

**Associate Commissioner for Policy and Systems
National Center for Education Research**

Amy Sussman, Ph.D.

Program Officer

National Center for Special Education Research

Transcript

April 20, 2012

Slide 1

Good afternoon, I'm Allen Ruby from the National Center for Education Research, and I'm joined by Amy Sussman from the National Center for Special Education Research. Amy will be answering questions online as well as talking about a new grant program, specifically for early career researchers and special education that's going to be a little later in the webinar.

Slide 2

So, today's purpose is to provide advice to early career researchers on submitting funding applications to the Institute of Education Sciences (IES). In addition, we'll go over some of the requirements for applications. The talk is organized so that the first part of the webinar is looking at how early career researchers can succeed in applying to IES and the second part is more on the general requirements for applying to IES for a grant. So, if you sat through the IES basic overview webinar, then you probably heard most of the back end of this webinar already.

Slide 3

The big question we're addressing is, can an early career researcher become a PI on an IES grant? And the answer is, it's not easy, but it is possible, depending on your background and the team you assemble and how well you write your application, including how well you address the objectives of IES grant applications. We'll use this page as our agenda, and work our way through it.

Slide 4

The challenge--and this may sound repetitious as you hear it throughout the talk--is that you need to convince the reviewers that you and your team have the knowledge, skills, and experience to implement what you propose to do, and this is more difficult because you have less of a record than a more experienced researcher.

Slide 5

Let's talk about the background first. Take a look at your own past experience. When our reviewers look at an application, they'll be looking for several different types of experience. One is your substantive work in the topic you want to work in; one is your experience in the methodology you're proposing to use; third is, have you managed a project or been involved with the management of a project before; and fourth, what kind of productivity do you have especially regarding the expected outcomes of your proposed project. Outcomes may be a new intervention or several publications. So, you look back at that —determine how well you would rate yourself on each of these areas. In your application, you'll need to document this experience probably more than an experienced researcher would, and I'll reiterate this point when we go to the personnel section. But an experienced researcher will have a CV with multiple grants and publications that already indicate their expertise. You may need to document this more in the Research Narrative section of the application. It may be work you did as a graduate student or maybe as a post-doc, but you may need to spend more time/space discussing it.

Slide 6

So, let's think about some examples of what would be in a strong background, and many of our early career-PIs have some of these attributes. One is that you've actually done work over a long period of time in a specific topic or in a methodology from your graduate student years up to your early career position; two, that you've published on your own; three, that you've worked on grant projects before and have an understanding of how a grant project is run and how it's managed. This is also important because several of our early career PIs worked on a project and then submitted their own application as a PI for a follow-on project or a project that builds off the first project. So, that was a clear next step since they had experience both in the topic and in managing a similar-type project. Another useful way to build a strong background is becoming an expert on a specific secondary dataset. This provides the foundation for proposing additional new work with you as the PI because you obviously have experience with the dataset. And if this dataset is not widely used, for example, a state or district administrative dataset, some reviewers may see additional value of you proposing to use it for a new work.

Slide 7

So, if you think to yourself, "Well, I don't really have all these areas of experience" then we would suggest doing some things to build up your research record: First, often running smaller projects, maybe internal grants from your institution or smaller external grants, or take a role in somebody else's large external grant. Working on someone else's grant may force you to do work not directly in your immediate interest but it will give you some experience working grants and publications. But, sometimes, you can actually carve out space under another PI's project to do work of your interest, if it's related to the project's goal. We would advise that if you do something like that, get agreement upfront that for anything you publish on your topic, you'll be the lead author or the sole author to ensure that you get credit for that area of the work.

Slide 8

In any of these cases, you should take on roles that will then position you to apply as a PI in the future. That may be as a co-investigator or a co-PI. It may be as a project manager, if you think your management skills are weak; it may be as a data manager to show that, in a future project which is going to have a lot of data, that you can keep track of these things. You want to ensure that you're building your expertise in a specific substantive area, perhaps with a specific design or analytical method or specific dataset.

And we would also suggest that you start building links with practitioners because working with teacher, schools, districts, and states is very important in other types of IES research grants. You want to be able to show that you can work with practitioners and that you can provide information that is useful for them. And then, when you apply as a PI in the future, you'll have these kinds of skills, and you'll also have some of these personal relationships that may be necessary if you want to work with schools or districts. Some of our most successful experienced researchers have developed these long-term linkages with districts or their state education agencies and, as a result, they're able to propose new work with practitioners who are onboard already.

Slide 9

In conjunction with your own background, you'll want to build a good team and so, you should carry out a needs assessment regarding personnel to carry out your research idea. What expertise are you bringing to the project? What expertise do you need for other work under the project? And therefore, what type of folks should you be recruiting to the project? We often see cases where projects are proposed but lack key personnel.

For example, in secondary data analysis, the proposer may be a statistician or econometrician and lack somebody who's really an expert in the topic they're doing the work on. Or it may be the opposite--the PI may be a substantive expert who wants to look at a secondary dataset but clearly doesn't have the methodological skill to do the work on their own.

If you're going to propose data collection, it's important to make sure someone on the team has skills in survey development if you're going to use something new and someone with survey implementation skills with an existing survey you intend to use.

If you're going to be working on a new intervention, are you a curriculum developer? Also, are you going to have develop and provide some teacher professional development to use the intervention? If you're going to carry out an evaluation, how are your design skills? If you're going to be working a measurement project, just like on secondary data, do you have both a psychometrician and a substantive expert in the topic being measured? And for all types of project, how much management experience do you have?

Slide 10

Our webinar includes what we're calling synthetic reviewer comments. These are based on an actual individual reviewer's comments, they've been fuzzed up a little bit so they're not as recognizable, but the content has not been changed. And so, for an example, in this case, the reviewer felt that the applicant was lacking both project management skills and substantive knowledge needed for the proposed work. Now, there may have been a real lack of these skills or it may have been perceived because the applicant did not successfully highlight the work they had done previously.

Slide 11

One other thing to keep in mind is, even if you're coming in with specific skills, many peer reviewers want to be assured that early career researchers have access to more experienced researchers. This may be on project management. It may be in the substantive area that you are working in. It may be in a methodological area that you already have experience in. So, even when you have the expertise to carry out a project, the reviewers are going to be more comfortable if you can put somebody on there with similar expertise, just to have somebody for you turn to if difficulties do arise.

Slide 12

In this illustrative synthetic comment, a very positive one, this application was given a high score and was funded, and you see that what the reviewer said is that, though the investigator is junior and has not managed such a project of this

size before, he has or she has experience with the main methodology and data collection, and he or she will have excellent supervision and support from the other co-investigators who are on the team.

I think the word "supervision" here might lead some early career researchers to bristle, given that they were going to be the PI and it's the PI's job to do the supervision, but I included this comment because I wanted to give you a sense that some reviewers do feel that early career researchers need oversight and that they look more kindly on applications that contain personnel who can provide such oversight.

Slide 13

There are many ways to include more experienced researchers on a project. They can be a co-PI or a co-I. You can develop an advisory panel. You can use them as consultants.

But what you really want to make clear in your application is, one, what is their expertise and how is it supporting each component of the project; two, what their specific responsibilities are, spell these out, and an important one is that they're always accessible for consultation; and three, that they're actually on the project for enough time to do what needs to be done or to provide the consultation that will probably need to be done.

Slide 14

Here's another synthetic comment from a reviewer noting that they were greatly pleased to see this advisory panel because they felt this panel had the expertise need to advise the PI in order to complete all aspects of the project.

Slide 15

Let's turn to the topic of writing clearly. We really push this because reviewers are reading multiple applications in a very short period of time. As a result, they have little patience for unclear writing or for badly written applications, regardless of how strong the applications are in substance and method. And reviewers will often make positive comments on how well written a proposal is and how clear and easy it is to understand.

Lack of detail is a common complaint in regards to unclear writing. IES continues to support a 25-page research narrative in order to allow applicants to spell out the details of their work, and reviewers really want to see this detail. Lack of details often makes it very difficult to understand an intervention, if it's being examined, what is it composed of, how and why is it supposed to work, who is implementing it, or how an intervention is going to be developed or what evaluation design is being used or how the data is going to be analyzed.

For early career researchers reviewers can't give you the benefit of the doubt if you leave out details. They can't say, "Oh, look. This person has published four articles on regression discontinuity design. They obviously understand how to do it. They just didn't put enough detail in the application." They won't be able to do that, so they are going to be looking specifically at the details you provide to make their judgment.

Slide 16

In this synthetic reviewer comment, we see a very common complaint regarding lack of detail regarding the intervention. And so, without knowing what the intervention includes, the reviewer is unable to judge the promise of the intervention for improving student outcomes and, as a result, can also not determine how significant the proposed work really is.

Slide 17

Looking more at the comments on the data analysis plan, this review illustrates two common problems in data analysis sections of applications. First, the failure to link the data analysis to the application's research questions. Often, we see analyses proposed, but they're not justified as actually addressing the purpose of the project.

And then, in the second paragraph, you see a criticism of the lack of discussion of the specifics regarding the method of analysis, in this case, the regression discontinuity design.

Researchers expect very detailed discussion of the analysis, and they get very frustrated, as you can see from these comments, when they're not included.

Slide 18

Some other aspects regarding writing clearly to keep in mind: We often see applications that are written one section at a time, sometimes at different times, and sometimes they're written by different people. For example, the substantive expert may write a significance section while a methodologist writes the research plan.

These differences in style and focus that result are very noticeable especially if there's a lack of agreement between sections, such as I mentioned before concerning the analyses not being directly linked to the research question.

You also should remember you're writing for both specialists in your field and method, but also generalists. And these generalists, while they may be experts in other fields of education, won't be as familiar with your topic. So, you'll want to spell out any underlying assumptions and define all your terms.

For this reason, it's usually helpful to have several people do a read-through of your application to determine its consistency, to see if it's clear--and that's especially for a non-expert, and to see if it's correct, which is the role of the experts' job in both substance and method.

Slide 19

Your opening paragraph is very important. Again, the reviewers are reading a number of applications in a short period of time, so you want to make it very easy for them to understand your application. Use the first paragraph or a little bit more to give a quick overview of the project, what are you proposing to do and why it's important.

Quickly, upfront, the reviewers can then use that information to understand the purpose of your project and they can organize the rest of the information from the application into their review categories. Reviewers often carry a checklist in their mind, and if they know what you're trying to do, they can then check off, "Are you doing everything you need to do in order to carry that out?"

We sometimes see applications with several pages of introduction on the general importance of the issue without ever addressing what this project is going to do. Reviewers get lost in that kind of structure and they get frustrated.

Slide 20

Finally, we suggest addressing some of the issues regarding reviewers. We mentioned this before, that you'll have specialists in your area and educational generalists. The research narrative that I mentioned, the 25 pages, that's the heart of your application and I'll talk about that in a little more detail later, but you're going to write it for these specialists and you're also going to write it for experts in substance and experts in methodology, because on the review panel, there will be an expert in every activity you propose.

In your research design, if you propose a survey, if you propose interviews, if you propose a specific method of analysis, there will be somebody there who will say this is either complete or incomplete. So, you don't want to skimp on the details.

We have seen times where people will propose in two lines of text that they're going to do a survey of teachers. And so, the person on the panel who is a survey expert will get very concerned. How will this survey be done? What will actually be done in it? Who will actually carry it out? And that will cause difficulties with the review.

If you're resubmitting an application--and we have no limits on the number of times you can resubmit and program officers are willing to work with you on each submission, you have to address how you will respond to your last set of reviews. You'll have up to three pages to do so in the Appendix A. First of all, you have to, because reviewers get very angry when there isn't a response or there's a very weak response. Second of all, IES now requires such a response. So, if you don't include such a response, it's quite possible that your application wouldn't be accepted for review.

Slide 21

Just by coincidence, we had a discussion with an early career PI who was recently funded and we asked them, "What kind of advice would you provide to other early career researchers? He provided very similar advice. Try to be a co-PI or key personnel on a previous project and then in your new application highlight your management role. —He noted that he had worked first on a small internal grant up through a larger federal grant.

He noted that he added co-PIs who had received federal grants before and had expertise in certain elements of the project and an advisory board with senior people on his funded project.

As a result, the reviewer feedback did note that the PI was junior but had a strong enough team to make them confident the work would get carried out.

Slide 22

In addition, he had built off prior work, starting from his dissertation that--a piece of which had been published in a journal, then further continued through a small internal grant and then his application to IES was based on this data and the results from both of them.

In addition, he argued for persistence. The first time he did not get funded but he did address the feedback and then was able to get funded the second time.

That finishes the targeted advice I have for early career researchers. If anybody has a question, please send it in on anything we just covered.

Slide 23

What I want to go over now are the specific requirements of the IES grant programs that must be met in order to receive a grant.

This is the remaining agenda, talking a bit about IES and its objectives and outcomes it supports, the specific grant programs, addressing the research narrative portion of your application, and then discussing some of the submission requirements.

Slide 24

A little background on what IES looks like. We have a Director appointed by the President and confirmed by the Senate, advised by a Board for Education Sciences, and there are four centers within IES: National Center for Education Statistics, you're probably familiar with their surveys such as the ECLS-K or the ELS or NAEP and they also run a grant program for state longitudinal data systems.

The National Center for Education Evaluation, which does large-scale evaluations of interventions or programs. Usually, these are chosen by Congress or the administration or IES and carried out by large contractors, and they also oversee the Regional Education Labs.

Then, there are the two grant-making centers, the National Center for Education Research, which I belong to, and the National Center for Special Education Research, which Amy belongs to. These Centers house the program officers, the folks you can talk to about advice for applying, and you should take advantage of us.

And then, separate from us is the Standards and Review Office under the Office of Director, and they're responsible for the peer review process. By keeping the program officers out of the peer review process, it allows us to be much more involved with you, advising you, reading some of your draft applications, and giving you feedback on them, while the Standards and Review office takes responsibility for choosing the peer reviewers and overseeing the peer review process.

Slide 25

The overall objectives for grant-funded research of our two centers can be spelled out in about four statements.

We want to identify what works to improve student educational outcome so we can disseminate it.

We want to identify what doesn't work so we can stop using it.

We want to identify what works for whom and for where so we can use what works with the appropriate people in the appropriate places because we know most education interventions don't work for everyone.

We also want to understand why education interventions work so we can improve education and build on this understanding to create further interventions.

Question: "Is there an advantage to having a senior colleague as a co-PI versus as a consultant?"

Answer: Co-PIs may be seen as more invested in a project than a consultant; however, if you don't think the person needs to be a co-PI, they could also be a co-I or if they are needed only for a very specific purpose then a consultancy may be enough.

If you look at your background and you see, "Maybe my management skills look weak, maybe I should have this person on as a co-PI. They'll be seen as more invested in the project and they will have a stronger role in the management of it.

So, I would say, depending on your background, it may be better to have a co-PI if you see yourself as weaker, a co-I if you see yourself as fairly strong, and a consultant if you're strong.

Question: "If a junior researcher includes co-PIs and other experts who are from another institution, how can you demonstrate effective support and mentorship can be provided remotely?"

Answer: Well, there are several ways. One is to set up regular meetings. These may include a regular phone meeting say every two weeks and a periodic in person meetings – so your travel budget will be a bit larger.

So, I don't think being at different institutions would be considered a drawback to getting support from a co-I or co-PI.

Slide 26

Moving on to the issue that the final outcomes of interest are for students. When we talk about what works or what doesn't work, for IES, that's in terms of student outcomes. Does it improve student outcomes or not, and that's key to writing an application to IES. Our work has to address student outcomes. It can be challenging for folks who are working on what we might call issues upstream of students, e.g., working with school boards or principals, and sometimes even teachers. Even in these cases, you're going to have to link your work to how it affects student outcomes.

For general education, student outcomes start at pre-K, for students who are aged 3 to 5, and special education research can start from children at birth, if children are at risk for a disability or have a disability.

From kindergarten through grade 12, we see for both general education and special education, a focus on academic outcomes in reading, writing, math, and science and the behaviors, social interactions, and social skills that support learning in schools as well as high school graduation. And special education also wants to look at functional outcomes to improve educational results, transitions from employment and independent living and post-secondary education.

Slide 27

For post-secondary education research--and we define that as grades 13 through 16, so, a bachelor's or below-- the primary outcomes are enrollment in post-secondary, persistence or completion.

In addition, we have achievement outcomes in what we call gateway math and science courses that lead to majors in math and science, as well as introductory writing courses.

In adult education, we're focused on reading, writing, and math outcomes. Students in adult education are defined as 16 and older who are not in the K through 12 system, and are involved in adult basic education, which usually covers 8th grade or below, adult secondary education, which reaches 12th grade, and English language learners.

Slide 28

The next issue is making sure you apply to the right grant program. I'll start with the two main grant programs: the Education Research Grant Program, which has a CFDA number 84.305A, and the Special Education Research Grant Program, whose number is 84.324A.

Slide 29

Most of IES' grants are awarded under these two grant programs. When you apply under them, you apply to a research topic and a research goal in conjunction--a combination of topic and goal.

Many ideas can fall between research topics or need to be organized or framed in a way to respond to the topics and goals, and it's worth talking to a program officer ahead of time to discuss how to frame your application.

Slide 30

There are 10 education research topics for the Education Research Grant Program. There are discipline topics such as Reading and Writing and Math and Science Education. There are age-oriented topics such as Early Learning Programs and Policies and Postsecondary and Adult Education. There are student types such as English learners. There are what we might call supporting activities such as Education Technology and Effective Teachers and Effective Teaching and Social and Behavioral Context for Academic Learning. And then, there is also the Cognition and Student Learning topic which is aimed at psychology of learning.

Slide 31

The Special Education Research Grant Program has 11 topics, many of them are very similar to the regular education topics, but a number of them are also specific to special education, for example, Autism Spectrum Disorders, Families of Children with Disabilities, and Transition Outcomes for Secondary Students with Disabilities.

Slide 32

So, you'll want to figure out where your research idea best fits under one of these 21 topics, and then you'll want to think about what goal it addresses. These two grant programs have five research goals: Exploration, Development and Innovation, Efficacy and Replication, Effectiveness, and Measurement.

Slide 33

Under the first goal, Exploration, there are two types of work being done. One is to look at the association between a malleable factor and a student outcome, and the second is to identify mediators and moderators of such a relationship.

Let's define the first term, "malleable factor." That's something that can be changed, such as a student, teacher, or school characteristic, and it is something that can be changed by the education system. So, we're looking for research to identify links between such malleable factors and student learning and achievement or exploring what mediates and moderates those links.

This work can lead to the development or modification of an existing education intervention or a new one, or it may be used to identify a promising intervention for a more rigorous evaluation, or it may be used to create a conceptual framework for an assessment.

Let me just give you a couple of examples to try to flesh out what we mean by "Exploration."

An ongoing study addresses how students learn argumentative writing, so how to make an argument in writing. The researcher has identified classrooms that produce students who do well on argumentative writing outcomes and he's videotaping the high school teachers who are teaching these classrooms to try to identify instructional practices that are linked to their success. So, he's looking at the teachers instructional practices, and he's correlating them to pre to post-test student gains using assessments such as NAEP items and writing samples. That would be an example of trying to find a malleable factor, in this case teacher instruction, with the student outcome of student argumentative writing.

Regarding mediators and moderators, a study was done looking at a mentoring program for Kindergarten to 2nd grade beginning teachers and more experienced

teachers, which had been found to be related to greater student outcomes. After examining mediators, they found that more mentoring time led to a greater gain in student outcomes, and that focusing this time on substantive teaching issues also led to greater gains. Looking at moderators, the project found that beginning teachers who were more self-reflective had greater student gains from mentoring. They also found that there was an association between mentors who were more comfortable in their role as mentors and mentees having greater gains among their students. So, that's an example of the mediator/moderator approach.

An example of a project looking at the relationship of an already-existing intervention with student outcomes, is a project examining the International Baccalaureate (IB) Program. This project noted that IB is a widespread program that has not been causally evaluated, and it's difficult to set up a causal evaluation because students and their families self-select into their program, and schools self-select into offering the program. The project argued that, in the short-term, there is quite a bit of data on students who have gone through the program so a descriptive examination of the relationship between the program and student outcomes regarding college-going can be done.

Slide 34

Our second research goal is Development and Innovation. Under this goal, you develop a new or improve on an existing education intervention (which we've broadly defined as instructional practices, curricula, teacher professional development, actual education programs or policies), you demonstrate their feasibility in an authentic education delivery setting, and you collect pilot data on the promise of the intervention to improve student academic outcomes.

The focus of this grant is on the development process. We expect most of the time and funding to go into development work and we expect an iterative development process to be used in which you start development of the intervention, try it out with the intended end users, learn some lessons, come back and continue development, and keep doing this cycle until it's clear that the end users can use it. In addition, you check if the intervention can be feasibly used in an actual education setting, e.g., a classroom, or school. And then, you move on to collect pilot data to see if there's a relationship between the intervention and student outcomes. You can look for a causal relationship or you can look for just an association between the intervention and student outcomes.

Slide 35

The next research goal is Efficacy and Replication. Under this goal you causally test whether or not a fully developed intervention leads to beneficial student outcomes. It can be under specified conditions, for example, ideal conditions where perhaps more support is being given to implement the intervention than would normally be used or the population you're using is very homogeneous. It doesn't have to be done under ideal conditions, but it can be done that way.

Efficacy studies can be done on widespread--widely used interventions that have never been evaluated, for example, the International Baccalaureate Program that I mentioned before, or they can be used on something brand new, such as an intervention developed under the Development and Innovation goal, where there's some evidence of promise that the intervention could improve student outcomes.

In addition, you can do two other types of Efficacy studies. You can do a replication study where an intervention has been evaluated once before under an efficacy study but you want to try it out with a different population--so, for example, you found it worked in urban schools under an efficacy study, you might want to see if it has the same impacts in rural schools. Or you might want to test a slightly different intervention, e.g., adjusting the intervention because you found a cheaper way or you found what you think is a more effective way to run the intervention, or with a different level of implementation for the intervention.

Here's an example of both an efficacy study and a replication study. A project evaluated a program called "SOURCE" in California, which was an 11th grade mentoring program. It helped low-income college-eligible students complete the

college application and financial aid application. 2,500 students were randomly assigned to receive the program or not, and a modest but statistically significant beneficial effect was found on enrollment in college and obtaining financial aid. The mentoring program cost about \$1,000 per student because there was a lot of in-person mentoring. A second project was funded to do a replication study primarily implementing the mentoring program through a virtual program which cut the costs by 60 percent.

In addition, you can also propose to do a follow-up study to see if there's a longer-term impact of an intervention. So, if you evidence that an intervention is having a beneficial impact on student outcomes, you can either propose to follow the students for another three years to see if the program has longer-term student impacts or follow the teachers or the schools to see if they continue to implement the intervention and if the student impacts continue as well.

Question: *"What is the scope of work, sample size, number of schools that IES considers for Development versus Efficacy projects?"*

Answer: *Well, let me start with the Efficacy side. IES and the reviewers are looking for a power of about .8. And so, you should propose to include the number of students, classrooms, and/or schools that will provide your study with the ability to detect the effect size you think is reasonable to expect with a power of .8. By doing this, you're more certain that if you don't find an effect, it's not because you didn't have a large enough sample size.*

Under Development--, you need enough schools or teachers or individuals to be able to develop the intervention that would be usable by teachers or schools.

Because the pilot study can run the gamut from a fully powered experiment to an under powered experiment to a quasi-experiment, you'll choose a sample size to fit the type of pilot study you propose.

Slide 36

The fourth research goal is Effectiveness and it entails a further causal evaluation of an intervention. Implementation of the intervention must be done under routine practice rather than the ideal conditions allowed under the Efficacy and Replication goal. The intervention should also be shown to have an impact on student outcomes in two efficacy studies. In addition, the evaluation team is to be independent of the development or distribution of the intervention.

Under the Effectiveness goal, you can also apply for a follow-up project to follow the students three years after they receive the intervention under an Effectiveness project to see if there are longer-term student impacts.

Slide 37

The fifth research goal is Measurement. Under Measurement you can propose to develop a new assessment (or refine an existing assessment) and then validate it,

or you may propose to validate a widely used and existing assessment for a specific purpose, context, or population. Examples of these assessments include screening, progress monitoring, credentialing, accountability systems, formative, and summative assessments.

Slide 38

Projects for each of the research goals have maximums for how long they can last and how large a budget can be proposed. Applications that exceed either the maximum time for a project or the maximum funding will not be accepted for review. So, it's important to stay within these maximums.

This slide lists the maximum time and maximum grant size. For example, under exploration, if you're doing secondary data analysis only, the maximum time is two years and the maximum grant is \$700,000, which includes your direct and indirect costs.

If you're collecting primary data and/or doing primary and secondary data analysis, you can apply for a project of up to four years and maximum of \$1.6 million. The slide lists the limits for the other research goals including for the follow-up studies under Efficacy and Replication, and Effectiveness.

Slide 39

That concludes the discussion of the two primary grant programs, 84.305A and 84.324A, and now we'll discuss some of the other research grant programs that may be of interest to you.

In our research grant programs, we do not have separate early career categories, but we do have a set of research training programs, and I'm going to let Amy discuss one of them because it is specifically for early career researchers.

Slide 40

Dr. Sussman: Hi. As Allen mentioned earlier, I am with the National Center for Special Education Research, and we have a new RFA this year called Research Training Program in Special Education: Early Career Development and Mentoring. This new competition is a training grant, but in addition to being a training grant, it also requires a research project, and these two aspects of it, the training and the research, need to be integrated.

In other words, whatever you are proposing for your training – or what we're calling "career development" – that must be used to support the actual research that you're proposing. I'm going to go over some things about this RFA very briefly.

Slide 41

To be eligible for this, first of all, as this is for special education research, you have to have a focus of research on infants, toddlers, children, or youth with or at risk for disabilities.

You must have a need for additional training, not just the money for the project. There needs to be some aspect of your training, content or methodological, that requires some additional training even though you've finished graduate school and possibly even a post-doctoral training program.

So, you need to have finished this training, whether it's a doctoral degree or your post-doctoral training, within three years of the application due date, and we're being strict about this criterion. We want it to be fair for everyone who's read the RFA to have the same criteria. For example, if you got your Ph.D. in May of 2009, and this is due in September, unfortunately, in that scenario, that's over three years, so you would not be eligible. But any time within three years you would be eligible.

Another criterion is that you need to be in a tenure track position, and this must actually be tenure track, not anything equivalent. So, in most cases, though maybe not all, this would be an assistant professor type of position.

And the final eligibility criterion is that you should have no previous awards as a principal investigator or co-principal investigator. This competition is meant to boost and support early career investigators starting their academic careers. And the idea behind this is that if you already have been a PI or co-PI on an IES award, then you probably don't need this boost to get started, as somebody who has not yet received such an award as the principal investigator would need.

Slide 42

Briefly, the components of this, as I mentioned, are the research plan and the career development plan.

The research plan must correspond to the NCSER topic and goal structure, which Allen covered earlier--so, you need to pick a project that fits under one of those topics that we cover and one of the goals that we cover.

And with the career development plan, there are two parts. First is mentoring: the unique part of this new competition is that you need to have a mentor that is more senior, more experienced, in the areas in which you need training. You need to have at least one primary mentor, and you may also have co-mentors. So, it could be that you have a primary mentor with expertise in the topic area that you'll want to study, such as autism, for example. But you might have a co-mentor because you want to run a certain type of analysis. You need methodological expertise, so then you might have a co-mentor with that expertise.

The second part of the career development plan is the additional training component. That involves everything outside the mentorship itself. So, that could involve taking workshops or courses. You might want to go to an IES-sponsored summer institute -- anything that helps you get the training that you need to accomplish your research.

And as I mentioned earlier, these plans need to be integrated. So, the career development plan needs to support the actual program of research that you are proposing.

This was a very brief overview, but if any of you are eligible and interested, next week on Wednesday morning, we will be conducting a webinar specifically on this competition. So, you can learn more about it and ask more questions then.

Dr. Ruby: Thank you, Amy. Amy is the Program Officer for this grant program, and you'll have her email at the end of this presentation. So, do feel free to contact her if you have any questions about it.

Slide 43

The next grant program I wanted to mention is the Statistical and Research Methodology and Education Program, whose purpose is to expand and improve the methodological and statistical tools available for use by mainstream education researchers.

This is a very early career-friendly grant program. We have a number of early career researchers who are building off their dissertations and post-doc work to be the PI on these types of grants. They show their own expertise in the past work and often have an experienced co-PI or co-I or an advisory board on the project.

Projects are addressing such issues as missing data and its imputation in multilevel modeling, improving value-added models, improving regression discontinuity designs and analysis and interrupted time series design, use of instrumental variables, and single-case experimental designs and analysis, and trying to come up with new effect-size metrics with more obvious substantive meaning.

This is a fairly wide-open grant program —under which if you can show you can do the work, the reviewers are quite pleased to support you, regardless of the length of your career.

Slide 44

Another grant program is the Evaluation of State and Local Education Programs and Policies. These projects evaluate programs and policies run by state or district education agencies so they are somewhat like an effectiveness study.

They require collaboration with state or district agency personnel, and that's part of what I was referring to earlier while I was promoting your experience working with such organizations.

They do offer opportunities for early career researchers. When they are prospective studies, watching a program roll out and seeing its effect across the state or district, they have multiple components, both qualitative and quantitative, and we've seen under our existing grants that often early career researchers can have a specific component that they are in charge of.

Some of them are secondary analysis of retrospective data. So, they're much smaller projects and, again, early career researchers can take on large roles in analyzing that data and in running the project.

One example is a project evaluating the impact of Massachusetts' high school exit exams which has found that low-income students who fail them are less likely to retake them than high-income students and, as a result, are less likely to graduate. Another study has found beneficial student outcomes for students enrolled in the TN voluntary pre-K program.

Slide 45

A new grant program just starting this year is the Researcher-Practitioner Partnerships in Education Research. Its purpose is to give time for researchers and state and local education agencies to create a partnership and to develop a research project.

Up to two-years can be spent creating the partnership, doing some initial analysis of data to try to identify what kind of work should be done and then the final outcome is to produce an application for an IES grant, probably under the Education Research Grant or Special Education Research Grant programs. This is another example of the type of work IES is supporting to support researchers working with practitioners.

Slide 46

The National Center for Special Education Research has a new research initiative called "Accelerating the Academic Achievement of Students with Learning Disabilities," and it's going to fund up to three large centers that will last about five years to address students with learning disabilities or at risk of learning disabilities, who have the most intractable learning problems in grades 3 through 8. These centers are to develop reading and math interventions and evaluate them. And a secondary purpose is to create a linked network of researchers across a variety of disciplines.

So, if this is an area you're interested in working in, trying to join one of these centers would be very helpful because, again, there will be plenty of room within to carve out an area of research and to take on some leadership roles.

Slide 47

The slide shows the maximum years and maximum grant size for these grant programs.

Slide 48

Let me move on now to addressing the research narrative of the application. The narrative is the heart of your application. It covers the substance of your work and it's what the peer review panel will focus on.

Slide 49

It's composed of these four parts: the significance, the research plan, the personnel, and the resources, and I'm going to give a fairly cursory overview of these four sections because they do differ by the grant program you're applying to and if you're in education research grants or special education research grants, by the topic and by the goal you're applying under.

This is another reason to read the Request for Applications and then talk to your program officer to make sure you're meeting the requirements for each of these sections.

Slide 50

The overall purposes of the significance section are to describe your project, lay out the research questions you intend to answer, and then provide a compelling rationale for the importance of the project.

Slide 51

Your research plan provides details on the project's design, the activities, the methods, and the analyses. As we saw earlier, in the section with the reviewer comments, you want to provide all the details to show that you know what you're doing and that you're capable of doing it.

Make sure you've linked your analysis to the research questions that you described in the significance section. If you're proposing to use secondary data, it's very important to show you understand the data, that you know the dataset (e.g., how much missing data is there, are there enough cases to do subgroup

analyses, can it be linked to other proposed datasets), that you've worked with it, and maybe provide some preliminary results from it.

Slide 52

In the personnel section, you want to describe all the key personnel, —and you don't want to just say "So-and-so has so many grants and so many publications." You want to show how each person's expertise links to their job on the project.

In this way, you're showing that every aspect of the project has somebody capable of carrying it out.

So, when you discuss your methodologist, show they have expertise in the methods you're proposing to use. When you have substance person, show they're addressing the specific topic that's going to be addressed in your project.

Never say, "I'm going to hire a key person with this expertise." That's just not acceptable. The peer review panel wants to be able to evaluate every key person on the project.

And discuss who has the project management skills to be overseeing the project.

You want to give the time contribution for each of these people so that the review panel is assured that they have enough time to complete the work they're intending to do. For the more experienced researchers on your project you should focus the writing on only those things they've worked on before that are directly relevant to this project.

For describing yourself, you may need to spend a little more space than an experienced person on describing your background. You may not have as many past grants or publications for the reviewers to look at, so you may want to spend a page or more discussing, "I've done this work as a graduate student. I've done this work as a post-doc. I've done this work in my early career," to show that you have the expertise you're arguing that you have.

Traditionally, experienced PIs often spend a third or half-a-page about themselves, but you may need more just because not everything will show up in your CV.

Slide 53

The resources section is where you show that all the institutions involved have the capacity to support the work. So, don't use the boilerplate of your institution. Specifically talk about the strength of your research institution to support the proposed work, and you also want to show here that every one, every organization involved, understands and agrees to their roles in the project.

This is very important if you're including schools and districts. A number of projects have failed or gone through great difficulties when schools and districts have dropped out. So, we ask for very detailed letters of support, from the research institutions, from the consultants, and from states and districts that show that everyone knows what they're getting involved in.

So, if you're going to do an annual survey within the school, your letter from the principal of the school should say, "We understand that there will be two surveys done every year and that this much time is required to do these surveys." That will assure the panel that, when it comes time to do the surveys, the schools don't balk and say, "We don't have time to do such a long survey."

If you're going to be using data, especially confidential data from a district or from a national dataset, you want to have a letter of support that you're going to be allowed to use that data.

We realize that some states will not give you the right to use data until you've received the grant, but in most cases, they'll give you a letter that says, "Should you receive the grant and should you meet these requirements of ours, we will provide you with the data." So, you want to have something like that.

Slide 54

In addition to the 25-page research narrative, there is additional space provided for appendices.

Appendix A, with a 15-page limit, is for figures, charts, and tables. You don't want to put any text here, but you can put things like timelines for the project. You could put a chart or personnel and their expertise. You could put past research results here to save room in the research narrative.

If your application is a resubmission, you must include your responses to the past reviewer comments or, if you're arguing that your application is really so different than the past one it should be considered a new submission, you have to make that argument here.

If you're going to be evaluating an intervention or validating an assessment, you can put in examples of materials used in that intervention or the assessment in Appendix B which is limited to 10 pages.

Appendix C has no page limit. Appendix C is for all your letters of agreement, and you should have as many as you can in there to show that everybody's signed on. Do not use boilerplate letters of agreement. If you have two or three schools putting in the same general letter, that's going to provide less evidence that you're actually going to be able to carry out the work.

Slide 55

You have to write a clear budget and budget narrative. There should be a budget for the overall project, and if you have any subawards, you'll need separate sub budgets for each of those subawards, and then a budget narrative for each of them describing what the budget is to be used for.

We have an Application Submission Guide on our website which describes all the budget categories if you haven't done one before.

In the Request for Application, there may be specific budget requirements for each of the goals and for the grant programs.

It's important to ensure agreement among the research narrative, the budget, and budget narrative. I'll just give you an example: We've had projects come in where the PI says, "We're going to do a survey of the teachers in year three, and this is what the survey will cover," but if you look at the budget for year three, there's no money there for a survey. And of course, the panel is then very skeptical that such a survey will be carried out. So, have someone look through and make sure there is agreement.

Slide 56

The next part of the webinar addresses the submission requirements.

Slide 57

On this slide you can see that we have two deadlines this year, one on June 21st and one on September 20th. Only two of our grant programs have both deadlines - for the Education Research or Special Education Research Grant programs, you can apply to either the June or the September date. If you're interested in one of the other programs, you can only apply at the one date specified.

The application package is posted on a different website, grants.gov, which is a government-wide application website. The application for the June deadline is posted already. The application for the September deadline won't be posted to July, and that's to avoid people using the wrong application. We won't put it up until the first deadline has passed.

As you write your application, consider what is a good start date. The earliest start date for the June deadline is March 1, but you can start as late as September. The earliest start date for the second deadline is July 1, 2013.

We sometimes find people want to start at the first possible date and then, if they get the grant, they realize that's not a good date, especially that March date. Many applications want to have post-docs or use graduate students and March is probably not the best time to find those people. So, we ask you to consider

whether you're going to be hiring some non-key personnel to do much of the work. If so, think about when they'll be available for you to hire.

Slide 58

These are the three things you should be using as you fill out your application.

First are the Requests for Applications, which describe the requirements for applying to a grant program. There is a specific Request for Applications for each grant program.

The Submission Guide walks you through how to submit an application, and that was posted already.

And then, there's the actual submission package that you get from grants.gov, and that has also been posted already.

Additional information is available on the IES website.

Slide 59

You can sign up for the Newsflash, which will give you information on future grant opportunities and training opportunities.

Please do contact the program officers of the relevant grant program and your topic of interest.

Slide 60

So, this is a screenshot of our main page. And you can see under "News and Events," under "News," the second category down is the Newsflash. So, if you want to sign up for the Newsflash, that's where you would go to do it. That would tell you when new Requests for Application have been released and when grants have been awarded.

Slide 61

If you want to go to the funding page, you would click on the funding opportunities, and this will take you to the funding page. You can click under "Webinars" to see what our future webinars are available, or it will take you the third category to our search engine where you can look at what other projects we have funded and provide you with their abstract.

Slide 62

Here is a screenshot of the funding page. You can see under number two you can register for webinars here. Number three, you can go directly to the Requests for Application, you can go directly to the Application Submission Guide, or it will take you over to the application package on the grants.gov.

Under number four, you can submit your Letter of Intent; number five, it will take you to grants.gov where you can submit your application.

Slide 63

Our job is to work with applicants. Please do contact us. You can ask us to review your ideas. You can ask us to review drafts if you get them to us early enough before the deadline.

Our contact information is on the website. It's also in the Requests for Application at the end of the request, and also in the topics under--for the Education Research grants and Special Education Research grants.

Slide 64

We also have a webpage titled Resources for Researchers where you can look at past webinars and where there are a set of methodology videos. We have funded a set of training sessions. These include a two-week summer training program on RCTs, a one-week workshop on quasi-experimental methods and a single-case design training program. There are videos from these programs posted. So, if you aren't able to attend them, you can see the presentation and download the PowerPoint slides from them.

Slide 65

This is a screenshot showing you the researchers' page where you can go to the webinars, the video presentations, and you can learn more about the peer review process.

Slide 66

The Letter of Intent is submitted electronically, and I showed you I could go directly from the funding page to the submission website or you can directly to the website provided here.

Letters of Intent are requested, strongly requested, but not required. We use them in two ways. The Standards and Review Office uses them to get an idea of

how many applications will be submitted so they can start contacting potential reviewers. The program officers will review them and then send you a response inviting you to contact the program officer and if they think you're not in the right grant program or grant topic, they may respond to you saying, "We should talk about this to make sure that you're in the right place."

Now, we passed the deadline for the Letters of Intent for the June application deadline, but you can send an email directly to the relevant program officer saying, "Here's my idea, what do you think of it?" And you'll see that the July 19th is the deadline for the September application due date.

Just to reiterate, if you didn't submit a Letter of Intent for June, you can still submit an application for June. The Letters of Intent are not seen by the reviewers who only see your application.

Slide 67

And when you submit your grant, most of you are probably at institutions that are already registered on grants.gov, but if you're at a smaller institution or one that does not traditionally apply for federal grants, it is a process to get registered. You probably should start the process at least 20 to 30 days before the application deadline.

Your authorized representative will do the final sending of the application and there is a strict deadline of 4:30:00 seconds Eastern Time to submit. It sounds silly but people have submitted it at 4:31 or 4:30:30, and because we have to treat everyone the same, those applications are considered late and they're not accepted for review. So, we always stress: Submit earlier.

You can imagine, on that day, the grants.gov server gets very busy and can get very slow. If you have any problems uploading, grants.gov does have a help line, and you should always get a case number, because if it's a server problem and you submit late because of the grants.gov problem, you can then appeal to us using the case number. We trace it back. If it was indeed a server problem, then we'll accept your application.

However, if it was not a server problem, if it was just because the server was slow, in that case, we don't accept it.

You should get three emails: One saying that your application has been received, giving you a grants.gov number; a second email from grants.gov saying your application was validated, but it may also say it was rejected because you uploaded something incorrectly. This second email can take up to one or two days to get. Another reason to submit early, is that if you get such an email you can resubmit in time.

Finally, you'll get an email from the Department of Education. It will assign you the grant number we use in the peer review process that starts with an R305 or R324.

Slide 68

These applications go to the Standards and Review Office for the peer review. They'll do a compliance screening to make sure you've met the format requirements. So, if your research narrative is over 25 pages, they'll probably cut off the extra pages, that your appendices include the right information and are the right length, and that you're using a font of the correct size. A typical font would be Times New Roman, 12 point.

Next is a responsiveness screening to ensure that you meet the grant program requirements, and that if you apply to Education Research grants or Special Education Research grants you've met the goal and topic requirements.

Your application will then be assigned to a review panel and two or three reviewers will do an initial review: one will be a substantive expert, and one will be a methodologist. If your score is high enough, your application be reviewed by the full panel. As I mentioned, there will be experts and generalists regarding your topic.

You'll get an overall score plus scores on each of the four sections of the research narrative.

Currently, we've been able to use an absolute criteria. So, if you're scored at outstanding or excellent, we've been able to fund applications that are scored at that level. So, you're not in competition with each other like some other grant agencies. That's how it's been in the past.

We do encourage resubmissions and you should talk to the program officer and address the reviewer comments.

Slide 69

If you want more information on the peer review process, here is the website for that.

Slide 70

You will then be notified. Notification does take time. For the June submission deadline, notification can be as late as March 1, 2013, although it's usually earlier. If you submit in September, it can be as late as July 1, 2013, but it is normally earlier.

You will then receive the copies of the reviewer comments and please do consider resubmitting if the reviewer comments are positive and talk to your program officer about how best to resubmit.

Slide 71

For more information, please feel free to contact me or Amy and, of course, much of this information is available on the website.

So, I'll just have a few questions here that I'll go over, and if you have any more questions, please feel free to send them in.

Question: *So, this is a question that came in about the early career program competition through NCSEER, and the basic idea is: "What if your primary mentor is at another institution but not your own institution?"*

Answer: *Dr. Sussman: And that's okay. That's another scenario in which you can have a co-mentor. In this case, the co-mentor would be someone at your institution who would understand the rules of the university, -- how to apply for grants through that research office, rules for tenure and promotion. So, they could help you with that while your primary mentor might be more focused on the same topic as your research. They can be at a different institution. And I also just want to mention, because I think there might have been some confusion about this, the early career program competition -- the specific competition I spoke about -- is separate from the rest of this whole talk. So, the PI eligibility requirements were very specific to that competition, not other IES programs.*

Dr. Ruby: Thank you, Amy.

Question: *There was another question that asked, "If you had PI-type skills or experience from the corporate world rather than from the academic world, how would that be perceived?"*

Answer: *I think if we're talking about management skills, and, if so, you can make a case that managing a corporate research project carries over to academic research projects.*

Question: *Where can I find information about the IES summer institutes?*

Answer: *The videos for the past institutes are under the Resources for Researchers webpage. Information on the upcoming sessions is under the News and Events webpage.*

Let me thank you for coming by today, I appreciate your time, and do feel free to contact Amy or me or any of the other program officers.