IES Grant Writing Workshop

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Transcript

Transcription is provided in order to facilitate communication accessibility and may not be a totally verbatim record of the proceedings.

(Slide 1)

Hi, everyone. Welcome to the Grant Writing Workshop. My name is Katie Taylor, and I'm a program officer at the National Center for Special Education Research. And I will be walking you through the contents of this webinar. I've included my colleague's name here, Erin Higgins, as she is the primary contact for the Education Research Grants Program, or CFDA Number 84.305A.

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The purpose of this workshop is to provide you with information and advice on how you can write a successful and competitive application to our main research grants programs at IES.

In particular, I'll be focusing on two grants programs, the Education Research Grants Program, which is CFDA Number 84.305A, and the Special Education Research Grants Program, CFDA Number 84.324A.

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Grant writing is a process. It starts with an idea and progresses through several stages.

Grant writing tends to be an iterative process since the majority of grants do not receive funding the first time around. Our goal with this webinar is to try to teach you to write the most competitive application you can so that you can be one of the lucky ones to receive funding the first time around. Or if you don't get funded the first time around, you can learn some new information about ways you can improve your application.

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So for this webinar, I'll begin by providing an overview of IES, particularly for those who may not be as familiar with IES or are first-time applicants. Then I'll describe the Requests For Applications (RFAs) for our primary grants programs, as well as some details about the application submission and review process.

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IES is the independent research arm of the U.S. Department of Education authorized by the Education Sciences Reform Act in 2002. We are nonpartisan and are charged with providing rigorous evidence to inform education practice and policy, and sharing this information with educators, parents, policymakers, researchers, and the public.

The overall mission of IES is to describe the condition and progress of education in the United States, identify education practices that improve academic achievement and access to education opportunities, and evaluate the effectiveness of federal and other education programs.

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This graphic represents the organizational structure of IES.

We are led by a Director, who is advised by the National Board for Education Sciences. Our Standards and Review Office oversees the scientific peer review processes for IES grant applications and IES reports. And then IES also has four centers.

The National Center for Education Statistics is the primary federal entity for collecting and analyzing data related to education.

The National Center for Education Evaluation and Regional Assistance conducts unbiased, large-scale evaluations of education programs supported by federal funds, provides technical assistance, and supports the development and the use of research and evaluation.

The National Center for Education Research (NCER), and the National Center for Special Education (NCSER), award research grants. The grant programs I will be discussing today are managed by NCER and NCSER. The program officers, including myself, are housed in these two centers and are available to discuss your research ideas with you.

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The objective of the IES research grants programs is to improve education outcomes for all learners, particularly for those at risk of failure.

The grants programs do this by developing or identifying education interventions that enhance academic achievement and can be widely deployed. By identifying what works and what doesn't, we can encourage further research and innovation, and better understand the processes that underlie the effectiveness of education interventions and the variations in their effectiveness.

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Under the Education Research Grants Program, NCER supports the sustained program of research to build knowledge and understanding of education practice and policy with these four intended outcomes.

(Slide 9)

Under the Special Education Research Grants Program, NCSER invites applications that address practical problems facing the education of children and youth with or at risk for disabilities that will significantly advance teaching and learning for students with or at risk for disabilities from birth through postsecondary education.

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So why would you apply to IES?

You would apply to IES if you are interested in working in education settings, you are interested in improving education outcomes, and you're committed to sharing your research findings with education practitioners.

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So, what makes IES different? At IES, grant funds are to cover research, not program support or service provision, and a good application is a good application. We don't have priorities or competitive preferences that result in extra points for applicants.

Reviewers also have a flexibility to assign points based upon overall scientific merit. We don't ask reviewers to use a rubric as they score.

IES is also unique because it supports rigorous research at all stages, including basic research, iterative research to inform research and development of interventions and measures, pilot studies and larger studies to determine efficacy of interventions.

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This chart lists the three major federal funders of education research: IES, the National Science Foundation, and the National Institutes of Health. IES and NIH are similar in that we have independent scientific review offices that are separate from the program offices. At NSF, the program officers manage the review process. So, this limits the amount of technical assistance they can give applicants since they are directly involved in the review process.

IES is as competitive or even more competitive than other federal funding agencies.

In terms of the types of things we fund, there is some overlap, and certainly, complementary research is happening among the agencies. But there are also key differences.

For instance, NSF is more STEM-focused than IES, though we both fund STEM work. NIH, specifically the National Institute of Child Health and Human Development and the National Institute of Mental Health, supports more foundational research, such as brain-related research and genetics research that we don't fund at IES. Results from this work, however, could certainly inform the work that we do at IES and could guide researchers to develop a grant to IES.

So that was just a quick overview of IES, and now I'll talk about current funding opportunities.

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You can find more information about the funding opportunities available within NCER and NCSER on our website.

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So, let us talk about the basics of the RFAs for the Education and Special Education Research Grants programs. There is much more detail provided in the RFAs, but I'll hit some of the high points here.

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The RFA is your guide to preparing high-quality applications. We provide a great deal of detail in our RFAs about the requirements you must meet as well as recommendations for how to write a high-quality application.

Reviewers also use information in the RFAs to evaluate your application for its scientific merit.

The RFAs cover specific information on what you need to know before writing your application and what you need to include in your application. The sections of the RFA containing this information may differ among RFAs, but they all include this information.

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When preparing a grant application, the first and most important thing to do is read the RFA. Even if you're resubmitting an application and you're pretty familiar with the requirements of the Education and Special Education Research Grants Programs, there are some changes this year, and we want to make sure you are aware of them.

In addition, we think it's important for everyone involved in the preparation of the application, including you as the PI, your team members, such as your Co-PIs, statisticians, methodologists, and developers, to read the RFA. In addition, the sponsored projects officer should also read the RFA since for most institutions and organizations, they are the ones who will be submitting the application for you.

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Your application must meet a set of general requirements to be accepted for review. These requirements are somewhat different for NCER and NCSER. I'll discuss each one in the next few slides.

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Institutions that have the ability and capacity to conduct rigorous research are eligible to apply.

Eligible applicants include, but are not limited to, nonprofit and for-profit organizations and public and private agencies and institutions, such as colleges and universities.

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NCSER and NCER were established by different legislation that set out the specific populations the research they support is to address. Research funded under the Special Education Research Grants Program can address children and/or youth from birth through postsecondary education, with or at risk for disabilities.

Research funded under the Education Research Grants Program can address learners from pre-kindergarten through adult education.

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Under the Special Education Research Grants Program, your research must focus on children and/or youth with or at risk for disabilities, which are defined on this slide.

Learners without disabilities may be included in your sample if appropriate for the research questions. For example, children and youth with and without disabilities may be educated together in inclusive classrooms, part of the comparison population, or part of the research sample for assessment development, and validation.

Research funded under the Education Research Grants Program can include students with or at risk for disabilities, but these students cannot be the focus of the research. In such cases, you should apply to the Special Education Research Grants Program.

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Research must focus on and include measures of learner outcomes. The specific outcomes that IES is interested in differ for the Education and Special Education Research Grants programs.

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All research supported under the Special Education Research Grants Program must focus on and include measures of one or more student outcomes that support success in school and afterwards.

The outcomes that are of interest are described in more detail in the RFA. They include developmental and school readiness outcomes, literacy, STEM, social, emotional, behavioral, functional, secondary, or transition, and postsecondary outcomes. And we encourage employment and earnings outcomes for projects focused on postsecondary and transition where appropriate.

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All research under the Education Research Grants Program must address learner academic outcomes. Even if your research is not directly targeting students, such as projects focused on teacher or principal knowledge and skills, school organization, or district or state programs and

policies, these must be linked to student academic outcomes for your application to be considered for funding by IES.

Research under the social and behavioral topic must also include social and behavioral outcomes. Research seeking to change learner outcomes through changing educators must include examination of the educator outcomes expected to change. And then when relevant, you should also include other outcomes such as labor market outcomes.

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IES is interested in these academic outcomes under the Education Research Grants Program. So, for learners in pre-kindergarten, those include school readiness outcomes that prepare young children for school, including prereading, language vocabulary, early STEM, English language proficiency, digital literacy, and social and behavioral competencies.

For K-12, they include learning and achievement in content areas, like literacy, STEM, and social studies, English language proficiency, CTE attainment, and progression through education systems. Postsecondary outcomes of interest include learning and achievement in postsecondary courses and access to, persistence in, progress through, and completion of programs.

Adult education serves learners at least 16 years old and outside the K-12 system who are preparing for, transitioning into, or currently enrolled in adult education as defined in Title II of the 2015 Workforce Innovation and Opportunities Act, such as Adult Basic Education, adult English literacy programs and preparation programs for high school equivalency exams.

Outcomes of interest for this group include achievement in literacy, English language proficiency and numeracy, and access to, persistence in, progress through, and completion of adult education courses and programs, including the full range of course and program types described in Title II of the Work Innovation and Opportunity Act of 2015.

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Research must be relevant to education in the United States and must address factors under the control of U.S. education systems, which means that your research should take place in, or the data you are analyzing should derive from education settings as set out in the RFAs. These settings differ slightly for the Education and Special Education Research Grants programs because of the different populations you can address under these programs.

Both RFAs acknowledge the wide range of formal settings in which education is delivered and describe these different settings. Across both programs, IES does not support research that occurs in informal contexts outside of U.S. education systems. And if you have questions about the setting you were interested in working in, you should contact a program officer.

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NCER and NCSER use a topic structure to encourage focus programs of research, and to provide opportunities for applicants to consult with program officers who oversee each topic while preparing their applications. Your application must be directed to one of the topics. For the Special Education Research Grants program, you may also select a secondary topic to reflect research that has more than one research focus.

The RFA for the Education Research Grants program provides a discussion of the purpose and needed research under each topic. Those who are familiar with the Special Education Research Grants program will notice that we are handling topics a bit differently this year and that we have streamlined the number of topics and do not have additional descriptive information beyond the topic title to allow for and encourage a broad range of research under these general topics.

This reduction is no indication of a change in IES interest in funding research in those areas. For example, prior RFAs included the topic "Autism Spectrum Disorders," but projects focused on students with autism were funded under many other topic areas. So, in FY2021, we will no longer have separate topics in Autism Spectrum Disorders, Technology for Special Education, Career and Technical Education for Students with Disabilities, English Learners with Disabilities, and Systems-Involved Students with Disabilities.

All applicants interested in these topics are encouraged to apply and may choose one of the existing topics that best fits the main emphasis of their research. Another thing to note is that research on postsecondary students and/or outcomes is also allowed under any of the research topics. For example, applicants who are interested in improving STEM learning and outcomes for college students would apply under the STEM topic.

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IES supports the development and validation of measures for use by educators and education researchers, exploratory research, development and pilot-testing of interventions, and the efficacy trials that build a body of knowledge in the education sciences, along with the practical tools necessary to lead to meaningful change in education practice.

All of these project types are necessary for generating evidence and solutions to improve education practice.

All applications must identify one project type. The four project types are Measurement, Exploration, Development and Innovation, and Initial Efficacy and Follow-Up.

Please note that IES does not accept replication project applications under these two grants programs. If you're interested in carrying out a replication project, you should check out the RFAs for the systematic replication competitions offered through NCER (305R) and NCSER (324R).

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Under the description of each project type, the RFA includes a requirement section for the specific content that you must address in the project narrative in order for the application to be sent forward for review.

In addition, there is a section titled "Recommendations for Strong Applications." These are meant to improve the quality of your application. The peer reviewers are asked to consider these recommendations in their evaluation of the quality of your application. IES strongly encourages you to incorporate the recommendations into your project narrative and relevant appendices.

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Where appropriate, recommendations in the project type sections of the RFAs are aligned with the Standards for Excellence In Education Research, or SEER. Applicants are expected to incorporate the SEER principles outlined in this slide into their proposals, as applicable, in order to ensure that research is transparent, actionable, and focused on meaningful outcomes.

In the following slides, I will go through each project type.

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Measurement supports the development and validation of new instruments or refinement and validation of existing ones for specific purposes, contexts, and populations. A Measurement project will result in a valid instrument that can be used by education personnel or researchers to measure learner outcomes for specific populations and context.

Measurement projects can also address purposes such as measuring educator knowledge, skills, and abilities, guiding instruction, improving educator practice, evaluating educator job performance, or assessing the effectiveness of schools or school systems.

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These are a few examples of funded measurement projects. You can find more examples of funded projects by Project Type on the website by going to Funding Opportunities and clicking on Search Funded Research Grants and Contracts.

Once you're here, you can search by a variety of factors, including goal (or project type), topic, center, year, etc.

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Exploration supports projects that identify relationships between individual-, educator-, school-, and policy-level characteristics and education outcomes, and factors that may influence or guide those relationships.

Findings from exploration projects point out potentially fruitful areas for further attention from researchers, policymakers, and practitioners, rather than providing strong evidence for adopting specific interventions or assessment tools. As this slide shows, a variety of methodological approaches may be used.

Under Exploration, IES does not support work to test the causal impact of a fully developed intervention that is ready to be implemented in education settings. However, it would be appropriate to propose a series of short-term, small-scale controlled experiments to identify core features that should be included in a fully developed intervention.

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On this slide, there are some examples of exploration projects that IES has funded.

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Development and Innovation supports the development and pilot-testing of new or modified education interventions that are intended to produce beneficial impacts on learner outcomes.

A Development and Innovation project will result in a fully developed intervention, evidence of the intervention's theory of change, and data that speak to the intervention's feasibility, fidelity of implementation, and promise for improving learner outcomes.

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Again, these are some examples of funded Development and Innovation projects across both centers.

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Initial Efficacy and Follow-Up supports initial efficacy studies of education interventions, and longer-term follow-up studies of rigorously evaluated interventions. Initial Efficacy projects test interventions that have not been rigorously evaluated previously to examine the intervention's beneficial impact on education outcomes in comparison to an alternative practice, program, or policy.

Follow-up projects test the longer-term impact of an intervention that has been shown to have beneficial impacts on education outcomes in a previous or ongoing evaluation study. Initial Efficacy and Follow-Up projects should provide practical information about the benefits and costs of specific interventions to inform the intervention's theory of change, its implementation, its usefulness for education personnel, and future research.

IES is interested in studies of interventions that can reasonably be expected to have meaningful effects on important education outcomes. IES expects applicants to describe and justify the effect sizes that they anticipate for the interventions they propose to evaluate.

Again, if you intend to replicate an efficacy study, you should apply under one of the Systematic Replication competitions offered by NCER and NCSER.

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And here are some examples of previously funded Initial Efficacy and Follow-Up projects.

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The award parameters, including the maximum duration and the maximum award vary by Project Type.

Applications must conform to these limits. Budgets should align with proposed project activities. For all project types, if you propose research that relies on analysis of existing data sets and will not involve new data collection, the proposed budget should be reduced appropriately.

Also, refer to the RFA for other information about how the funds requested under certain Project Types should be allocated.

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Applications must include a Dissemination History and Plan in Appendix A. The dissemination history component is new this year. Also new this year is that the peer reviewers will consider Dissemination as a separate review criterion.

Specifically, reviewers will consider a team member's experience disseminating research findings and products from past projects to a range of audiences, in addition to applicant's plans for disseminating the findings of their proposed study. For the dissemination plan, you should describe your plan to disseminate the findings from the proposed project.

Dissemination plans should be tailored to the audiences that will benefit from the findings and reflect the unique purposes of the project type. Identify the audiences that you expect will most likely benefit from your research and discuss the different ways in which you intend to reach these audiences through the products you expect to produce.

The dissemination history is intended to demonstrate that the research you have conducted in the past has been disseminated in a way that is consistent with the IES mission to promote scientifically valid research findings that can provide the basis for educational practice. Applicants who have never had an IES grant should focus on dissemination history of related past projects.

The discussion should include the outcomes of prior research, including products developed or tested and how the project's findings and products were disseminated, how products like assessments or interventions have been made available to users, the number of users and commercialization, and other unique dissemination products or notable presentations of research

findings, particularly those that were intended for practitioners, policymakers, parents, students, and/or the general public.

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Now I will talk about the project narrative, which along with the appendices provides most of the critical content of the application.

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The project narrative is composed of four sections: significance, research plan, personnel, and resources. It should be a maximum of 22 pages.

This is a change from previous years. Any additional pages will be removed before review.

The requirements vary by Project Type, so be sure to read the requirements very carefully in the RFA. The requirements are the minimum necessary for an application to be sent forward for scientific peer review.

The recommendations also vary by Project Type, and these are used by reviewers as they score your application and are meant to make your proposal stronger and more competitive.

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The Significance Section describes your overall project. It should describe your research question or questions to be answered, along with the factors, intervention, or instruments that you plan to examine, develop, and/or evaluate.

You need to provide a compelling rationale for the project, which includes a theoretical justification or your Theory of Change. And then you'll also need to include an empirical justification or a description of the evidence that supports your Theory of Change. And then lastly, you should include a practical justification, why others should care about your project. What are the real-world implications, and why would the expected results matter in education practice or policy?

When you're writing the Significance Section, don't assume that the reviewers know the significance of your work. Some of the reviewers might not be in your field, so you need to convince them why your particular question is important.

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Now I want to discuss two key pitfalls when it comes to the Significance Section. The first is related to a lack of clarity in your description of what you're analyzing, be it what it is to be measured in a Measurement project, what is to be explored in an Exploration project, and what is to be developed or evaluated in a Development project or an Initial Efficacy project.

A common comment from reviewers is that it's not clear what is being addressed or whether it is under the control of the education system. If these things aren't clear, then the reviewers may have trouble following the rest of your proposal or finding your research idea relevant to the type of research IES supports.

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The second pitfall is related to the Theory of Change. Including a theory of change helps to make clear the relationships you're proposing to analyze and those that underlie the research you intend to do. If you're applying for an Exploration project and you don't include why a factor is expected to be related to education outcomes, then that is problematic.

The reviewers need to know the theory behind why you think that factor is related to an outcome. And if you're applying for Development and Innovation or Initial Efficacy or Follow-Up, they need to know why the proposed intervention should improve outcomes versus current practice. And then if you're applying for Measurement projects, you need to clearly specify how an instrument will measure a specific factor or outcome, and how you will link this to education outcomes.

So, I do want to stress that all these elements of the theory of change that I'm talking about now should be described in your project narrative, but a graphic can be helpful as well. In your theory of change, you should make clear what you expect to happen in what order and why something is expected to be related to an education outcome.

This could all be represented in the visual graphic but discussing why it should improve outcomes related to current practice would be something that you should describe in more detail in the narrative.

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Your theory of change should describe how the instrument, factor, intervention addresses the outcome that you are targeting, why it should work, and why there is a need for it. Be clear about the target, for instance, learner or teacher knowledge and skills, and how this addresses the need that you specified.

The theory of change for an intervention should also describe the instructional techniques or practices and why they are appropriate for the population and the change you intend to bring about, as well as a description of how the intervention will be delivered.

It's also important to be clear about which aspects are different from the counterfactual and what the intervention's core ingredients are. In other words, which specific aspects of your intervention do you expect will drive the change in education outcomes?

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Here, we have an example of a simple theory-of-change graphic that goes through the process of what is expected to change and why.

In a simple theory of change, you should include the target population, the main components of the intervention, the underlying processes targeted by the intervention that may explain any changes in your proximal and distal outcomes of interest, and then also your outcomes of interest. This is just an example. You could elaborate on this depending on your intervention and research questions. For example, you may want to include factors that affect the relationship between the factor or the intervention of interest and education outcomes in your theory of change as well.

For graphical models of the theory of change, do not overwhelm the reader with an overly complicated model, and do not use color as a key because applications are often reviewed in black and white.

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Moving on to the next section, the Research Plan. In the research plan, you will describe the actual work that you intend to do. You should be very specific about your research questions, and then depending on your project type, you'd want to describe how you intend to examine relationships between factors and education outcomes, develop and pilot-testing intervention, evaluate the efficacy of an intervention, or develop and/or validate an instrument.

It's important to ensure that the application flows across all sections of the narrative. In other words, your research plan should be aligned to your Significance Section, and it helps to have a step-by-step process so that it's really clear to the reviewers what you plan on doing and when. For example, if you're proposing to develop an intervention, the process for iteratively developing it and refining each aspect of it, including collecting and using feedback data should be really clear.

And a timeline is strongly recommended. In fact, if you don't include a detailed timeline in your application and your application is recommended for funding, your program officer will likely ask you for a timeline. So, it's important to go ahead and include this in the application for the reviewers as well.

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In the Research Plan, you should provide a description of the setting where you'll be doing the research, for example, the size and characteristics of the setting, classrooms, school in our surrounding community, as well as the population that you're addressing in your sample.

In describing your sample, you should define your sample and discuss the sampling procedures, including justification for any exclusion or inclusion criteria. You should specify the sample size and demonstrate that it will provide enough power to address each of your research questions.

You should also address attrition, including how likely it will be and any strategies you intend to use to prevent it in the course of the study.

And lastly, you should discuss generalizability, including how the setting that you're working in will affect the generalizability of your findings and the extent to which your sample and sampling procedures will allow you to draw inferences for the population you're addressing. If you're using the secondary data, you should describe the setting population and sample for the data sets that you plan to use.

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Another thing that you need to describe in your research plan is your outcome measures, including both proximal and distal outcome measures. You should include outcome measures that are sensitive to the changes in performance that the intervention is intended to bring about as well as measures that are not strictly aligned with the intervention and could, therefore, capture changes in the control or comparison group.

Your measures should be aligned with your Theory of Change. For instruments, factors, interventions that are designed to directly assess, link to, or change the teaching and learning environment, and in doing so, indirectly affect education outcomes, you should include measures of learners' education outcomes, as well as measures of the intermediate outcomes, like teacher behaviors, that are hypothesized to be directly linked to the intervention.

And you should also include measures that are of practical interest to learners, parents, and educators, such as grades, attendance, tardiness, dropout rates, disciplinary actions, or graduation rates. For Development and Innovation, and Initial Efficacy and Follow-Up projects, we also encourage the use of widely used common measures of learner outcomes to facilitate the field's ability to synthesize findings across studies.

And it's important to justify the use of every measure. So, if you have measures that are not actually linked to your research questions, this will likely be questioned by the reviewers. In your description of your measures, you should also discuss the psychometric properties of each measure, including the reliability and validity. And then finally, consider the issue of multiple comparisons when you're deciding which measure to use and how many.

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You should specify the purpose of all your measures, including non-outcome or process measures. For instance, for a Development and Innovation project, you should specify which measures you will use to inform the iterative development process. These could be things like qualitative data from focus groups or rating scales on the usability of an intervention by an end-user.

They could also be preliminary outcomes, but you'll have to explain how that measure will then feed back into the inner iterative process of development. If you're proposing a Development and Innovation or Initial Efficacy project, you'll also need to include measures to assess the fidelity

of the implementation of the intervention and also note that if the intervention includes a training component, that you should identify measures to assess the fidelity of the training.

So for these measures, you should describe how they'll capture the core components of the intervention, and will allow you to determine whether the intervention is operating as you intended. You should also identify measures of comparison group practices so you can compare the treatment in comparison groups to make sure that the comparison group doesn't receive key elements of the intervention and that the two groups are getting substantially different services.

You want to measure practices that could be happening in either group, but that you hope or assume are only present in the intervention group.

And then depending on the project type you propose, you might also need to include measures of usability and feasibility. This is any type of feedback provided by the users of the intervention, such as teachers about whether the intervention can be used by a teacher and can be implemented within the constraints of an education setting.

For qualitative measures, you should describe the items to be used, the validity, and the procedures for collecting and coding, and for monitoring and maintaining inter-rater reliability.

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Your analyses will depend on your design, but in general, you should describe all planned analyses and describe how these analyses will address each of your research questions.

For qualitative data, you also need to be sure to discuss how you analyze it. For example, coding for common themes, and also how it will address your research questions. For your analysis of quantitative data, you should present your model for each analysis. You should also discuss how you plan to address any clustering or nesting, and how you'll account for missing data.

For causal impact studies, you should also discuss a plan for checking for baseline equivalence on your outcomes of interest across the intervention and control groups, as well as overall and differential attrition. Then you should also propose to conduct sensitivity tests to assess the influence of key procedural or analytic decisions on the results.

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For Measurement projects, you are encouraged but not required to describe how you will estimate the costs for educators and education systems to implement the fully developed and/or validated instrument.

For Development and Innovation projects, you're required to describe a plan for determining the costs associated with implementing the fully developed intervention in the context of the pilot study. For Initial Efficacy and Follow-Up projects, you're required to include a cost analysis plan. You're also required to include a cost-effectiveness analysis plan or a rationale for why a cost-effectiveness analysis cannot be done.

And specific recommendations for the cost and cost-effectiveness analysis plans are provided in the RFAs. IES provides resources to help you plan and conduct a cost analysis. There is also a Cost Analysis Help Desk out of Teachers College, Columbia University.

These resources and the help desk are linked here.

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Now I'm going to move on to the third section of the Project Narrative, the Personnel Section. The purpose of this section is to name each person on your team and describe their relevant expertise, their responsibilities, and their time commitment.

You'll want to include personnel, both of primary and secondary institutions, as well as any consultants. The purpose of this section is to show that your team has the appropriate qualifications to carry out every aspect of the proposed work. This includes the appropriate methodological and content-related expertise, as well as project management skills and experience disseminating to a variety of audiences.

In its research grants programs, IES is interested in including individuals from groups that have typically been underrepresented in the education sciences. So, you should also describe the background and experiences of project team members in light of this. You'll also need to demonstrate that each team member has an appropriate level of effort, given their expertise and project responsibilities.

You'll need to provide CVs for each member of your research team. It's also advisable to make the CVs specific to the project rather than submitting generic ones. And we do recommend that you use SciENcv to create IES biosketches and be sure to include your ORCID numbers in your biosketches if you and your team have them.

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Here are some strategies for writing the Personnel Section if you are a seasoned versus an early career researcher. For experienced researchers, it will be important to highlight that you have enough time to devote to the project. For instance, reviewers are not going to want to see a PI who has only 2% time on the project.

It's also important to adequately describe your credentials because some of the reviewers may not do research in your area and may not be aware of the extent of your experience. If you are an early career researcher, the strategies are different. You'll need to show that you have adequate expertise to do the work and to manage the project.

So, if relevant, you could show how this work is a continuation of the work that you did in graduate school or during your postdoc fellowship. This will help establish your expertise in this area. And then you'll also want to talk about any experiences that you've had that show that you have the appropriate project management skills. And then you should also highlight your

publication record as evidence that you have the appropriate expertise in that particular content area.

Generally, it's advisable to have a senior researcher on your team. Reviewers are typically more comfortable if you have a senior person to turn to for advice as either a co-PI or a co-investigator, even as a consultant or an advisory board of senior researchers. And you just want to make sure to include enough of their time on the grant that it's taken seriously.

So again, if you have someone for 2% time and that's the person whom you're going to go to for advice, it doesn't really look like they're going to be as actively engaged in the project.

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The final section of the Project Narrative is the Resources Section. The purpose of this section is to describe how you have the institutional capacity to conduct a project of the proposed size and complexity, as well as your access to the resources at primary and secondary institutions that you need to successfully complete the project.

In this section, you should also describe your plan for acquiring any resources that are not currently accessible, will require significant expenditures, and/or are necessary for the successful completion of the project. In the Resources Section, you also want to be sure to describe your access to the institutions who will participate in the project and the education settings in which the research will take place.

Then in Appendix E, you can include letters of agreement from each of the institutions involved or from states, school districts, or schools. You want to be sure to show that each of these partners understands their role. So, the letters should be specific and show that your partners know what they'll be asked to do, and how much time is involved.

If you plan to use data from another source, whether it's school records or an existing data set, you want to show that you have access to this data. So, I'll talk more about this in the next slide, but for this round of applications, we recognize that it might be difficult to provide these types of letters because of school closures associated with COVID-19, so there is some flexibility.

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This table shows the required and optional appendices and what information must or should be included in each. These are described in more detail in the RFAs, but I'll discuss them briefly. As I mentioned previously, Appendix A is required for all applications, and it should describe your dissemination history and plans to disseminate the findings from the current project.

Appendix B is only required for resubmissions. This is the place where you would include your response to the previous reviewer's comments, or if your application is one that you considered to be new, but that is similar to a previous application, you should describe why it should be considered a new application. Appendix C is optional, but you can use it to include figures,

charts, and tables that supplement the project narrative as well as give examples of measures to be used in the project.

Appendix D is also optional and can be used for examples of materials to be used in the intervention or instrument that you're focused on. Appendix E is for letters of agreement from school partners and/or data sources, depending on what's applicable for your particular project. If you have consultants on your project, you can also include letters of agreement from each consultant in Appendix E.

One thing to note about Appendix E, IES understands that due to school closings associated with COVID-19, that you may have difficulty providing letters from schools, districts, and other education sites that would participate in or provide data for the proposed research. So if you're unable to provide these letters in your application, you should include a description in Appendix E of why you were not able to obtain letters and your plan for securing them if your application is recommended for funding.

Reviewers will be instructed to not penalize applicants for failure to include letters of agreement due to the coronavirus pandemic. Specific conditions may be placed on the grant awards if these letters are not received before the award date. And then Appendix F is required for Exploration and Initial Efficacy and Follow-Up proposals, and this should include your Data Management Plan.

Please note that this is a new requirement for exploration projects. This plan should describe the process for making the final research data from the proposed project accessible to others. The RFA describes the specific information that you should include in your Data Management Plan, as well as the resources that may be helpful in developing this plan.

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Before I get into discussing the application submission and review process, I just want to provide some general grant writing tips.

When you're writing a competitive grant application, what I typically tell applicants is to think about their proposal as a persuasive essay because you really want to sell your research idea. You want to be able to show that you're the best person to do the research proposed, and you want to be able to build goodwill and trust with the reviewers.

And the best way to do this is by demonstrating that you know what the problem is and that you have the best way to address it. So in the opening paragraph of your project narrative, you should set the scene for the reviewers by showing that what you're doing is important and how you're going to go about doing it. You should organize the information in a very accessible way. You don't want to lose readers right off the bat because they don't understand what you're doing.

So, the opening paragraph is critical in terms of hooking the reviewers and leading them to believe that what you're doing is significant and will improve education outcomes. I also can't emphasize enough the importance of having a clear, and succinct, and detailed application. So

right off the bat, you want to make sure that the Significance Section is not too general in your description of the intervention, the factors, or the instrument that you're proposing to examine.

And you want to clearly specify your research plan, be very detailed, and also your data analysis plan as well. You don't want to have a statement saying that you're going to be conducting HLM analysis and leave it at that. We want you to provide detail about how you'll be analyzing the data and include formulas as appropriate.

Also, try to refrain from using a lot of jargon. IES review panels are pretty diverse in their areas of expertise. So, don't take for granted that they know what you're talking about. Provide context and background, and make sure you're using correct grammar and that everything is spelled correctly.

All that goes a long way because reviewers get frustrated when they can't understand what you're saying because your sentence doesn't make sense. And be careful not to use too many acronyms, making it hard for the reviewers to keep track.

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Let's talk now about the application submission and review process.

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Here are some important dates.

Letters of intent are due June 11, 2020 through iesreview.ed.gov. Applications are due August 20, 2020 at 11:59 PM Eastern through grants.gov, and projects may start July 1st to September 1, 2021.

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The other critical document besides the RFA to use when applying for an IES research grant is the Application Submission Guide.

The guide contains important information about submission procedures and IES-specific guidance and recommendations to help ensure that your application is complete and received on time without errors through the grants.gov website.

Any person involved in the preparation and submission of the application should review the IES submission guide to ensure a complete on-time submission.

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There is an IES application process webinar and in that webinar, IES staff will go into more detail about the application process. You need three things to apply. First, you need the RFA, which contains information for writing your project narrative.

Second, you need the IES Application Submission Guide, which describes information related to submitting your application and provides an overview of the funding process. Lastly, you need the application package, which can be found on grants.gov.

In terms of registration for grants.gov, the first tip and perhaps most important is to start the process early. Initial registration can take more than five business days, and even if you're already registered, the annual update that you have to complete could take more than three days. It's your institution that needs to register. All applications must be submitted electronically through grants.gov and applications received by grants.gov are date and timestamped to the second.

So, your application must be fully uploaded and submitted by the date and time specified in the RFA. IES will not accept late applications.

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As I just mentioned, all applications must be submitted electronically through the grants.gov website.

Grants.gov requires applicants to use the Workspace interface. Grants.gov marks alerts in red, and these should be attended to as failure to follow the grants.gov requirements will result in an unsuccessful application.

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IES uses a scientific peer review process for the review of grant applications. This process is overseen by the IES Standards and Review Office.

First, applications are reviewed for compliance and responsiveness to the RFA. Applications that are compliant and responsive are assigned to a review panel. And then two or three panel members conduct a primary review of each application. There is a triage process so that only the most competitive applications are reviewed by the full panel.

As a result, applicants whose applications were triaged receive the reviewer comments from the primary reviewers, but no scores. Applicants whose applications go to full panel receive the reviewer comments from the primary reviewers, the full panel's review scores, and a summary of the panel's discussion of the application.

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The Applicant Notification System (ANS) is housed at iesreview.ed.gov. After you receive an email notification, you may sign in to ANS to view the status of your application, the reviews of your application, and if your application went to full panel, the review scores in the panel discussion summary.

We encourage you to discuss the reviews with a program officer and consider reapplying.

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Program officer contact information is provided in the RFA. You can email your initial research idea to a program officer or discuss prior reviews with the program officer. As you develop your application, program officers can comment on the content and the framing of your research as well.