

# Special Education Research Grant Program

CFDA Number: 84.324A

U.S. DEPARTMENT OF EDUCATION

*A Product of the National Center for Special Education Research*

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| <b>Letter of Intent Due:</b>           | June 11, 2020                                 | <a href="https://iesreview.ed.gov/LOI/LOISubmit">https://iesreview.ed.gov/LOI/LOISubmit</a>                         |
| <b>Application Package Available:</b>  | June 11, 2020                                 | <a href="https://www.grants.gov/">https://www.grants.gov/</a>   |
| <b>IES Submission Guide Available:</b> | April 1, 2020                                 | <a href="https://ies.ed.gov/funding/pdf/submissionguide.pdf">https://ies.ed.gov/funding/pdf/submissionguide.pdf</a> |
| <b>Application Deadline:</b>           | 11:59:59 p.m. Eastern Time on August 20, 2020 | <a href="https://www.grants.gov/">https://www.grants.gov/</a>   |
| <b>Possible Start Dates:</b>           | July 1 - September 1, 2021                    |   |

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## Part I: Overview and Eligibility

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### A. Introduction

The Institute of Education Sciences (IES) provides scientific evidence to improve education practice and policy and shares that evidence in a way that can be used by educators, parents, policymakers, researchers, and the public.

Within IES, the National Center for Special Education Research (NCSEER) supports research to

- (1) Expand knowledge and understanding of the needs of infants, toddlers, and children with disabilities in order to improve the developmental, education, and transition outcomes of such individuals
- (2) Improve services provided under, and support the implementation of, the Individuals with Disabilities Education Act (20 U.S.C. 1400 et seq.)

#### ***1. Special Education Research Grants Program (CFDA 84.324A)***

In this Request for Applications (RFA), IES invites applications that will significantly advance teaching and learning for students with disabilities from birth through postsecondary education. As an applied science agency, NCSEER invites applications that address practical problems facing the education of children and youth with disabilities. We encourage applicants to propose new and different structures or ways of thinking about teaching and learning and the educational systems that support students.

Projects should yield outcomes and products that are meaningful, inform stakeholders about the cost and practical benefits and effects that programs, policies, and practices have on relevant outcomes for children and youth with disabilities, and contribute to scientific knowledge and theory of teaching, learning, and organizing education systems. NCSEER expects researchers receiving funding through this program to disseminate evidence in a way that is useful to and accessible by educators, parents, policymakers, researchers, and the public.

All research supported under CFDA 84.324A must address student outcomes that are important for success in school and afterwards for children and youth with disabilities. Eligible outcomes (described in more detail in [Part II](#)) include developmental, school readiness, academic, social/behavioral, functional, secondary/transition, and postsecondary outcomes.

To ensure rigorous education research that is transparent, actionable, and focused on consequential outcomes, all applications to the FY 2021 Special Education Research Grants program (CFDA 84.324A) are expected to follow the principles outlined in the IES-wide Standards for Excellence in Education Research (SEER; <https://ies.ed.gov/seer>), as applicable. These principles include

- Pre-registering studies
- Making research findings, methods, and data available to others
- Identifying core components
- Documenting intervention implementation to inform use in other settings
- Analyzing costs
- Focusing on outcomes meaningful to learners' success

- Facilitating generalization of study findings
- Conducting research in a way that informs the future scaling of interventions

## **2. Eligibility Information**

Institutions that have the ability and capacity to conduct rigorous research are eligible to apply. Eligible applicants include, but are not limited to, non-profit and for-profit organizations and public and private agencies and institutions, such as colleges and universities.

**Broadening Participation in the Education Sciences:** IES is interested in broadening institutional participation in its research grant programs. IES encourages applications from minority-serving institutions (MSIs), alone or in combination with other institutions, that meet the eligibility criteria for this RFA. MSIs include Alaska Native and Native Hawaiian-Serving Institutions, American Indian Tribally Controlled Colleges and Universities, Asian American and Native American Pacific Islander-Serving Institutions, Hispanic-Serving Institutions, Historically Black Colleges and Universities, Predominantly Black Institutions, and Native American-Serving, Nontribal Institutions.

**The Principal Investigator:** The applicant institution is responsible for identifying the principal investigator (PI) on a grant application and may elect to designate more than one person to serve in this role. The PI is the individual who has the authority and responsibility for the proper conduct of the research, including the appropriate use of federal funds and the submission of required scientific progress reports.

- If more than one PI is named, the institution identifies these PIs as sharing the authority and responsibility for leading and directing the research project intellectually and logistically. All PIs will be listed on any grant award notification. However, institutions applying for funding must designate a single point of contact for the project. The role of this person is primarily for communication purposes on the scientific and related budgetary aspects of the project, and this person should be listed as the PI. All other PIs should be listed as co-principal investigators.

## **3. Technical Assistance for Applicants**

IES provides technical assistance to applicants that addresses the appropriateness of project ideas for this competition and methodological and other substantive issues concerning research in education settings. IES program officers work with applicants through a variety of formats up until the time of Grants.gov submission. If you submit a letter of intent (LOI) on the IES Review webpage (<https://iesreview.ed.gov/LOI/LOISubmit>), a program officer will contact you regarding your proposed project. IES also provides funding opportunities resources, including webinars (<https://ies.ed.gov/funding/webinars/index.asp>) that include advice on choosing the appropriate competition, grant writing, and submitting your application.

## **B. Getting Started**

### **1. Documents Needed**

In order to submit a compliant, responsive, and timely application, you will need to review two documents:

1. *This RFA* - to learn how to prepare an application that is compliant and responsive to the requirements. [Part VI](#) of the RFA provides a checklist that you can use to ensure you have included all required application elements to advance to scientific peer review
2. *The IES Application Submission Guide* (<https://ies.ed.gov/funding/pdf/submissionguide.pdf>) - for important information about on-time submission procedures and IES-specific guidance and recommendations to help you ensure your application is complete and received on time without errors through Grants.gov

We strongly recommend that both the PI and the authorized organization representative (AOR) read these documents, whether submitting a new or revised application.

## ***2. Ensuring Your Application is Forwarded for Scientific Peer Review***

**Only compliant and responsive applications received before the date and time deadline are peer reviewed for scientific merit.** The PI and the AOR should work together to ensure that the application meets these criteria.

### *(a) On-time submission*

See the separate IES Application Submission Guide (<https://ies.ed.gov/funding/pdf/submissionguide.pdf>).

- Received and validated by Grants.gov **no later than** 11:59:59 p.m. Eastern Time on August 20, 2020

### *(b) Compliance*

- Includes the required project narrative (see RFA [Part III](#))
- Adheres to all formatting requirements (see RFA [Part IV](#))
- Adheres to all page limit maximums for the project narrative and appendices. IES will remove any pages above the maximum before forwarding an application for peer review
- Includes all required appendices (see RFA [Part IV](#))
  - [Appendix A: Dissemination History and Plan](#) (All applications)
  - [Appendix B: Response to Reviewers](#) (Resubmissions only)
  - [Appendix F: Data Management Plan](#) (Exploration and Initial Efficacy and Follow-Up applications only)

### *(c) Responsiveness*

- Meets requirements for all applications (see RFA [Parts I, II, and III](#))
  - Children and Youth with or At-Risk for a Disability
  - Education Setting
  - Student Outcomes
  - IES Project Type
- Meets Project Narrative Requirements for the selected *IES Project Type* (see RFA [Part III](#))

## C. Changes to the FY 2021 RFA

Major changes to the Special Education Research Grants program (CFDA 84.324A) competition in FY 2021 are listed below and described fully in relevant sections of the RFA.

1. **Page limits, including reduction in project narrative length, and formatting requirements.** The project narrative is now limited to 22 pages. Some appendices also have page limits. If the project narrative or an appendix exceeds the limits discussed in this RFA, IES will remove any pages after the stated maximum. IES also has formatting guidelines, as discussed in [Part IV.B, to which](#) applicants must attend.
2. **Change in Topics.** Stakeholder feedback indicated that the topic descriptions may have unnecessarily limited the kinds of work that applicants proposed and implied eligibility restrictions NCSER never intended. For example, projects that included multiple age groups such as preschoolers and early elementary learners or that focused across multiple content areas/topics such as math and reading were sometimes seen as ineligible by applicants based on our topic structure. Furthermore, although the topic descriptions were intended to be broad to encompass a variety of research, if an applicant's research interest were not specifically addressed in the topic name or description, it could affect a researcher's willingness to apply to IES. To address these limitations, for FY 2021 NCSER has eliminated topic descriptions and reduced the number of topics to encourage a wide variety of research under this RFA. We now ask applicants to choose a primary research focus from a listing of research topics. Our intent is to encourage a wide variety of research within each topic area while allowing us to continue to provide quality technical assistance and facilitate the scientific peer review of your application by the appropriate peer review panel.
  - a. **The reduction in the number of topic names is no indication of a change in IES interest in funding research in those areas** and only reflects NCSER streamlining of the RFA for clarity. For example, prior RFAs included the topic "Autism Spectrum Disorders", but projects focused on students with autism were funded under many other topic areas. In FY 2021, 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 on their research. For example, an applicant interested in literacy instruction in juvenile justice systems would apply under "Reading, Writing, and Language." An applicant interested in communication and social skills for students with autism would pick either "Reading, Writing, and Language" or "Social, Emotional, and Behavioral Competence," depending on the main emphasis of the research.
  - b. **Postsecondary Outcomes are allowed under all topics.** For FY 2021, research on postsecondary outcomes is no longer restricted to a limited number of topics. Researchers may examine postsecondary outcomes under any of the research topics.
3. **Changes to the dissemination plan and a new dissemination review criterion.** A dissemination history is now required in addition to the dissemination plan in [Appendix A:](#)

[Dissemination History and Plan](#). The peer reviewers will now consider Dissemination as a separate review criterion. Reviewers will consider team members' experience disseminating research findings and products from past projects to a range of audiences in addition to applicants' plans for disseminating the findings of the proposed study.

4. **Reordering of Project Types.** IES has reordered the presentation of the Project Types. We now list Measurement as the first project type to reinforce the foundational nature of measurement work and measurement tools to education research. By listing Measurement as the first Project Type, IES encourages applicants to focus more carefully on the opportunities afforded to education researchers through Measurement projects and to be more mindful of the fact that high-quality exploration, development, and efficacy research can only be done with high-quality instruments and measures.
5. **Cost analysis clarification for Measurement, Development and Innovation, and Initial Efficacy and Follow-up grants.** IES has clarified requirements for cost analyses for Development and Innovation and Initial Efficacy and Follow-Up projects to provide helpful information about the cost of implementing interventions. Cost analysis was removed from the requirements for Measurement projects, but applicants are encouraged to propose a cost analysis when appropriate.
6. **Data Management Plan now required for Exploration projects.** A data management plan is now required for Exploration projects in addition to Initial Efficacy and Follow Up projects.
7. **IES has increased the maximum award amounts across all project types.** These changes were made due to IES's recognition that as new requirements have been added, funding should increase to support these additional activities.
8. **Length of Abstract has increased.** IES now requests a two-page abstract instead of a one-page abstract. See [Part IV.D.1](#) for details about what to include in your abstract.
9. **Changes due to COVID-19.** IES encourages applicants to submit letters of agreement to participate in the proposed research from education setting partners as an appendix to the required project narrative. IES understands that, due to school closings associated with COVID-19, you may have difficulty providing letters from schools, districts, and other education sites that would participate in or provide data for the proposed research. If you are unable to provide these letters in your application, 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. NOTE: Special conditions may be placed on the grant awards if these letters are not received before the award date. Reviewers will be instructed to not penalize applicants for failure to include letters of agreement due to the coronavirus pandemic.

## **Part II: Program Description and General Requirements**

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### **A. Purpose and Description**

The purpose of the Special Education Research Grants Program (CFDA 84.324A) is to foster solutions to pressing problems faced by students with or at risk for disabilities, their families, and education systems. IES intends for this program to (1) develop new approaches to teaching, learning, and assessment, as well as encourage the rethinking of education finance, policies, and systems-level programs that support students with disabilities from birth through postsecondary education; and (2) build the evidence base necessary to better assess, intervene, and support learners with disabilities to improve their education and post-school outcomes.

IES seeks applications that will significantly improve education programs, policies, and practices and that have the potential to lead to marked improvements in outcomes for students with disabilities. Although NCSER-funded researchers have made many advances in the past decade, students with disabilities continue to lag behind their peers without disabilities on nearly all education and post-school outcome measures. Researchers should clearly articulate how and why their research will change the status quo in ways that can lead to advancement in teaching, learning, and/or education systems and why results will be important to disseminate to researchers, policymakers, and practitioners.

A wide range of research is supported through this program, including, but not limited to, programs to improve child development and school readiness; academic and/or behavioral interventions; instructional practices and/or professional development programs for teachers and other school-based personnel; strategies for improving the family support and engagement critical to the success of students with disabilities; as well as policies and systems-level interventions and programs to address school finance, school-community collaborations, or school structures that affect educational progress for students with disabilities.

#### ***Examples of Needed Research***

Below are examples of pressing problems in education, but applicants are encouraged to think broadly about the needs of students, as well as potential avenues for exploration, intervention development, efficacy testing, and assessment.

There has been an increasing number of infants, toddlers, and preschoolers served under IDEA over the past decade, and these young children need high-quality interventions and supports to improve their developmental outcomes and school readiness. Research demonstrates that early math skills and vocabulary are strong predictors of later achievement. Young students must also arrive at school ready to learn in broader ways, including demonstrating self-regulation, positive interactions, and other important socio-emotional and behavioral skills. More research is needed to determine which practices, programs, assessment tools, and systems are most effective for supporting young learners with disabilities, and for which young learners, so that they can arrive at school ready to learn and succeed.

According to the most recent findings from the National Assessment of Educational Progress (NAEP), students with disabilities continue to struggle with academic knowledge and skills compared to their peers without disabilities. There is a wide achievement gap between students with and without disabilities, and we have made little progress over the recent decades in closing this gap. The NCSER-funded National Center on Assessment and Accountability for Special Education (NCAASE) found that students across the disability categories make annual achievement gains in reading and math that are similar to students without disabilities, yet gaps in achievement levels were already evident at Grade 3 and did not narrow over time. This suggests that more intensive instruction is needed to reduce these gaps for students with disabilities.

Research has also shown that cognitive skills—including executive functions such as attention, working memory, and inhibitory control—are essential for learning and promoting positive social skills and behavior. Many students with or at risk for disabilities, however, demonstrate impairments in such skills, making it important to better understand their relation to education outcomes and to identify interventions to improve them.

Students with or at risk for disabilities may also struggle with emotion and behavior management, show lower levels of prosocial behavior, or experience greater psychological distress and poorer mental health than their peers without disabilities. Students with disabilities may be at an increased risk of being bullied, as well as demonstrating bullying behavior, relative to their peers without disabilities. Interventions to promote learners' social, behavioral, and mental health can improve their school functioning, social relationships, and academic outcomes.

Systems-level factors, including organizational resources and priorities at the school, district, and state levels also play a key role in the implementation, sustainability, and coordination of education interventions for all students, including those with or at risk for disabilities. In addition, more research is needed to better understand how state and local policies and practices influence student achievement and post-school success, such as the proliferation of school choice programs, changing discipline practices and efforts to address disproportionality in discipline and special education identification, inclusion practices, and policies and practices concerning alternate diplomas and assessments for students with significant cognitive disabilities. A better understanding is also needed of special education teacher certification policies and programs and their relationship to education outcomes for students with disabilities.

Despite more than two decades of federal legislation regarding support for the transition of youth with disabilities from secondary to postsecondary education, career, and independent living, youth with disabilities continue to demonstrate poor secondary and postsecondary outcomes compared to their peers without disabilities. According to the National Transition Longitudinal Study -2 (NLTS-2), when asked at 8 years post-high school completion, only one-third of students with disabilities who attended 4-year schools had graduated, and only 41 percent who attended 2-year colleges completed their programs. These graduation rates are significantly lower than the graduation rate for their peers without disabilities.

You may consider these issues in developing your application, but you should not feel limited by them. You are encouraged to think broadly about concerns and issues faced by students, their families, and the systems that support them.

## **B. Program Requirements**

Applications under the Special Education Research Grants program must meet the requirements set out in this section in order to be sent forward for scientific peer review.

### ***1. Children and Youth with or At-Risk for a Disability***

**Requirement:** All research supported under the Special Education Research Grants program **must** focus on children and/or youth with or at risk for disabilities.

For the purpose of this RFA, a child or youth with a disability is defined in Public Law 108-446 (<https://sites.ed.gov/idea/statute-chapter-33/subchapter-i/1401>). Risk for a disability is identified on an individual basis. You should clearly identify the disability or disability categories that your sample is at risk of developing and present research-based evidence of an association between risk factors in your proposed sample and the potential identification of specific disabilities.

- The determination of risk may include, for example, factors used for moving children and youth to higher tiers in a Response-to-Intervention model. Evidence consisting only of general population characteristics such as labeling children and youth as “at risk for disabilities” because they are from low-income families or are English language learners is not sufficient for this purpose.

IES encourages research on low-incidence disabilities across all topics and project types.

Across all topics, 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. Learners without disabilities could also be part of the comparison population, or part of the research sample for assessment development and validation.

### ***2. Education Setting***

**Requirement:** Proposed research **must** be relevant to education in the United States and **must** address factors under the control of U.S. education systems.

Education for learners with disabilities in the U.S. is delivered in a wide range of settings, including homes, natural settings for early childhood special education services, childcare centers, preschools, public and private K-12 schools and alternative schools and settings (such as juvenile justice and residential treatment facilities), and colleges/universities. In addition, there are also formal programs under the control of education agencies that take place outside of school including after-school, distance learning, or online programs. IES does not support research that occurs in informal contexts outside of U.S. education systems.

Contact an IES program officer if you have questions about the education setting you have identified for your proposed research.

### **3. Student Outcomes**

**Requirement:** All research supported under the Special Education Research Grants program **must** focus on and include measures of one or more of the following student outcomes that support success in school and afterwards:

- **Developmental:** cognitive, communicative, linguistic, social, emotional, adaptive, functional, and/or physical development
- **School readiness:** pre-reading, language, vocabulary, early STEM (science, technology, engineering, and/or mathematics) knowledge, and social and behavioral competencies (including self-regulation and executive function)
- **Literacy:** reading, writing, and/or language development
- **STEM:** science (including computer science), technology, engineering, and/or mathematics
- **Social/Emotional/Behavioral:** social skills, attitudes, behaviors, and mental health important to learners' education and post-school success
- **Functional:** behaviors and skills across domains that learners need to participate in developmentally appropriate routines and activities in the context of everyday living
- **Secondary/Transition:** persistence and completion of high school course credits in content areas, high school graduation, certificates, and successful transition from high school to work settings, independent living, or postsecondary education and training
- **Postsecondary:** access to, persistence in, progress through, and completion of postsecondary education; or learning, achievement, and higher order thinking in postsecondary courses. In addition to these outcomes, applicants should consider employment and earnings outcomes such as hours of employment, job stability, wages, and benefits.

### **4. Research Topics**

**Requirement:** To provide better technical assistance and to facilitate review of your application by the appropriate peer review panel, you **must** indicate on the SF 424 form the **primary** focus of your research:

1. **Cognition and Student Learning**
2. **Early Intervention and Early Learning**
3. **Educators and School-Based Service Providers**
4. **Families of Children with Disabilities**
5. **Reading, Writing, and Language**
6. **Science, Technology, Engineering, and Mathematics (STEM)**
7. **Social, Emotional, and Behavioral Competence**
8. **Systems, Policy, and Finance**
9. **Transition to Postsecondary Education, Career, and/or Independent Living**

The topics do not have additional descriptive information beyond the title to allow for, and encourage, a broad range of research under these general topics. IES recognizes that research studies may have more than one research focus (e.g., reading and behavior). In general, your primary topic should be the one that most closely aligns with the main purpose of the research you propose. When determining this, consider your areas of expertise and your intended targets for intervention, assessment, or dissemination. You may also choose a secondary topic to reflect research that has more than one

research focus. If you choose a secondary topic it must also be included on the SF 424 form (see [Part VII](#) for additional information). This information will be particularly helpful for assigning to peer reviewers who have the appropriate area of expertise.

**Please note, all research that was eligible for submission under prior RFA's "Topics" and "Special Topics" will still be eligible under these research topics.** Technology applications, for example, would choose a primary emphasis of their technology development or evaluation, such as STEM for technology products that aim to improve math learning. Your choice of topic may align with your chosen student outcomes, but please be aware that you may address multiple domains of student outcomes under any given topic.

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.

Contact an IES program officer (see [Part VIII](#)) if you have questions about the research topic for your project.

## ***5. Dissemination History and Plan***

**Requirement:** All applicants **must describe** their history with disseminating results from past research and present a plan to disseminate project findings in [Appendix A: Dissemination History and Plan](#) of the application.

IES is committed to making the results of IES-funded research available to a wide range of audiences (see IES Policy Regarding Public Access to Research; <https://ies.ed.gov/funding/researchaccess.asp>). Therefore, peer reviewers will score Dissemination as a separate criterion in the review process.

**Applications that do not contain a Dissemination History and Plan in Appendix A will not be peer reviewed.**

## ***6. Project Types***

IES supports the development and validation of measures for use by educators and education researchers, exploratory research, development and pilot testing of interventions, and 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.

**Requirement:** For FY 2021 your application **must** be directed to one of the following four project types:

[Measurement](#)

[Exploration](#)

[Development and Innovation](#)

[Initial Efficacy and Follow-Up](#)

See the project type descriptions in [Part III](#) for more information about each type's unique purpose, requirements that you must address in your application, and recommendations for a strong application. Program officers can offer advice on which project type provides the right fit for your

proposed project. In general, you should select the project type that most closely aligns with the purpose of the research you propose, regardless of the specific methodology you plan to use. IES encourages combining complementary quantitative and qualitative methods, as appropriate, to inform the research process for each project type.

IES may invite researchers funded through this competition to apply at a later date for funding to extend the data collection period in order to collect follow-up data on study participants. Applicants should plan for this possibility by proposing procedures to maintain contact with participants and ensuring IRB protocols are written to allow researchers to follow participants over time.

The peer reviewers will consider the quality of your application according to the recommendations for strong applications that are provided for each project type by section (Significance, Research Plan, Personnel, and Resources) of the project narrative. The peer reviewers will also evaluate Dissemination under a separate review criterion.

If you propose a to evaluate an intervention with prior evidence of efficacy, you **must** apply under the separate Systematic Replication competitions offered through the National Center for Special Education Research (CFDA 84.324R; [https://ies.ed.gov/funding/ncser\\_rfas/ncser\\_systematic\\_replications.asp](https://ies.ed.gov/funding/ncser_rfas/ncser_systematic_replications.asp)), or National Center for Education Research (CFDA 84.305R; [https://ies.ed.gov/funding/ncr\\_rfas/systematic\\_replications.asp](https://ies.ed.gov/funding/ncr_rfas/systematic_replications.asp)).

## 7. Award Limits

**Requirement:** Applications to the Special Education Research Grants program **must** conform to the following limits on award duration and cost by project type. 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 commensurately.

| IES Project Type               | Maximum Duration          | Maximum Cost |
|--------------------------------|---------------------------|--------------|
| Measurement                    | 4 years                   | \$2,000,000  |
| Exploration                    | 4 years                   | \$1,700,000  |
| Development and Innovation     | 4 years                   | \$2,000,000  |
| Initial Efficacy and Follow-Up | Initial Efficacy: 5 years | \$3,800,000  |
|                                | Follow-Up: 3 years        | \$1,500,000  |

## **Part III: Project Type Requirements and Recommendations**

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### **A. Applying Under a Project Type**

For the FY 2021 Special Education Research Grants program, you **must** submit under one of four project types: Measurement, Exploration, Development and Innovation, and Initial Efficacy and Follow-Up. If you propose a to evaluate an intervention with prior evidence of efficacy, you **must** apply under the separate Systematic Replication competitions offered through the National Center for Special Education Research (CFDA 84.324R; [https://ies.ed.gov/funding/ncser\\_rfas/ncser\\_systematic\\_replications.asp](https://ies.ed.gov/funding/ncser_rfas/ncser_systematic_replications.asp)) or the National Center for Education Research (CFDA 84.305R; [https://ies.ed.gov/funding/ncser\\_rfas/systematic\\_replications.asp](https://ies.ed.gov/funding/ncser_rfas/systematic_replications.asp)).

You **must** identify your chosen project type on the Application for Federal Assistance SF 424 (R&R) form (Item 4b) of the Application Package (see the IES Application Submission Guide at <https://ies.ed.gov/funding/pdf/submissionguide.pdf> and the project type codes in [Part VII](#)), or IES may reject your application as nonresponsive to the requirements of this RFA.

#### **For each project type—**

- **See the Purpose section** for the types of research appropriate for a given project type. Your research questions should match the purpose of the project type you choose.
- **See the Requirements section** for the specific content that you must address in the project narrative in order to be sent forward for scientific peer review.
- **See the Award Limits section** for duration and cost maximums for each project type.
- **See the Recommendations for Strong Applications section** for recommendations 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. Where appropriate, recommendations are aligned with the SEER principles (<https://ies.ed.gov/seer/>) to ensure that research is transparent, actionable, and focused on meaningful outcomes that have the potential to dramatically improve education.
- IES encourages the use of mixed methods research, defined as the integration of qualitative and quantitative data, for all project types.

## **B. Measurement**

### ***1. Purpose***

Measurement supports both the development and validation of new or modified instruments for use by educators or education researchers. Some Measurement projects will result in instruments that have been validated for use with specific populations in specific contexts to support education practice and policy. Other Measurement projects will result in instruments for use by education researchers. Both types of instruments are needed to ensure that high-quality measurement tools are available to support rigorous exploratory, development, and efficacy research.

Successful Measurement projects will result in the following –

- A fully developed version of the instrument with clear item specifications and procedures and materials for administration, including evidence of usability and feasibility, to support IES's focus on meaningful outcomes (see <https://ies.ed.gov/seer/outcomes.asp>)
- Information about the validity of the instrument for specific purposes, populations, and contexts

### ***2. Requirements***

#### ***(a) Project Narrative***

The project narrative **must** adhere to the formatting guidelines (see [Part IV.B](#)) and be **no more than 22** pages. If the narrative exceeds this page limit, IES will remove any pages after the 22<sup>nd</sup> page of the narrative. The project narrative for a Measurement project application **must** include four sections: Significance, Research Plan, Personnel, and Resources.

#### **(1) Significance**

The purpose of this section is to explain the importance of developing and/or validating the instrument for the proposed context and population and why results will be important to disseminate to researchers, policymakers, and practitioners.

You **must describe** the instrument you propose to develop, refine, and/or validate.

#### **(2) Research Plan**

The purpose of this section is to describe the methodology you will use to develop and/or refine the instrument (if applicable), document its validity, and establish its connection to education outcomes.

You **must describe** the

- characteristics of your sample
- research design, methods, and data analysis plans for the instrument's
  - development and/or refinement, as applicable
  - validation

#### **(3) Personnel**

The purpose of this section is to demonstrate that your team possesses the appropriate training and experience for the research and dissemination you propose and will commit enough time to the project.

You **must describe** your project team.

#### **(4) Resources**

The purpose of this section is to demonstrate that you have the institutional capacity and access to resources needed to execute a project of this size and complexity and appropriately disseminate the findings and products.

You **must describe** your resources to conduct the project.

### **3. Award Limits**

Awards made under Measurement **must** conform to the following limits on duration and cost.

#### *(a) Duration Maximums*

The maximum duration of a Measurement project is **4 years**.

#### *(b) Cost Maximums*

The maximum cost for a Measurement award is **\$2,000,000** (total cost = direct costs + indirect costs).

### **4. Recommendations for Strong Applications**

These recommendations are intended to improve the quality of your application and the peer reviewers are asked to consider these recommendations in their evaluation of your application.

#### *(a) Significance*

Describe the specific need for developing, refining, and/or validating the instrument and the potential market for such an instrument.

- Contrast the instrument with current typical measurement practices. What differentiates it and how does it address shortcomings of other instruments?
- Discuss the potential markets where the new/refined measurement tool will be offered and examples of how it will be used. Describe your strategy for bringing the instrument to those markets and users.
- For projects that propose further validation activities only, explain why any prior validation evidence is not satisfactory for the proposed purpose(s), context(s), or population(s).

Describe the construct or education outcome the proposed instrument will measure.

Identify the age range, if applicable, the proposed instrument will be used with.

Describe the intended users of the instrument (for example, researchers, teachers, learners) and the intended uses of the data collected with it.

Discuss the significance of your proposed work. How will the proposed instrument(s) address the Special Education Research Grants program's intended outcomes? How will the proposed instrument(s) improve education research, education policy, and/or classroom teaching?

Describe any partnerships with education agencies to carry out the proposed work. Including education agencies as partners ensures that researchers focus on outcomes that are meaningful to education practitioners and policymakers.

Describe the instrument framework and explain how the proposed validation activities will produce evidence to support the claims of the instrument framework.

A strong instrument framework includes the following:

- Operational definition(s) of the construct(s) of measurement
- Theoretical model showing how constructs are related to each other and/or external variables
- Description of how the instrument provides evidence of the construct(s) identified in the rationale
- Description of the rationale for how and why a respondent's score on the instrument supports inferences or judgments regarding the construct(s) being measured
- Description of the intended use(s) and population(s) for which the instrument is meant to provide valid information

If you are applying for a second Measurement award to further develop or validate an instrument that was the focus of a previous Measurement award, justify the need for a second award. Describe the results and outcomes of the previous award, including the status of the instrument, its validation, and whether it is currently being used in the field. If it is not being used, explain why.

In [Appendix A](#), discuss how you will make the results of your proposed research available to a wide range of audiences in a manner that reflects the purpose of this Measurement study.

### *(b) Research Plan*

Specify the research questions and how they are motivated by the information provided in your Significance section.

Provide a timeline for each step in your project, including such actions as item development and item calibration (if proposing new or modified items), sample recruitment, data collection, validation activities, data analysis, and dissemination. Timeline tables or figures may be placed in either the project narrative or [Appendix C: Supplemental Charts, Tables, and Figures](#), but discussion of the timeline should be included only in the project narrative.

#### **(1) Sample and Setting**

Discuss the procedure you will use to recruit a sample that represents your target population.

Describe the setting(s) in which the research will take place (provide letters of agreement in [Appendix E](#)) and discuss how they will allow you to draw conclusions about the education settings your research is intended to inform.

Describe and justify exclusion and inclusion criteria and discuss how they will affect your ability to generalize to the target population.

Describe strategies to reduce attrition, if applicable.

## **(2) Research Design and Methods**

Describe the research design with enough detail to demonstrate that it will address the research questions.

### *Iterative development process:*

If you propose to develop a new instrument or to refine an existing instrument, then describe the following:

- The procedures for scoring the instrument, including justification for the scoring rubric and any weighting involved in calculating the score
- The iterative procedures for developing, field testing, and selecting items to be used in the instrument and for obtaining representative responses to items
- The statistical procedures for demonstrating that items adequately measure the intended construct(s) (for example, via factor analysis) and that the items measure only the intended construct(s)
- The procedures for establishing whether the items and the instrument as a whole are biased against groups within the intended population of use (that is, tests for differential item functioning, differential test functioning, and corresponding follow-up tests for bias)
- The process of determining the administrative procedures for using the instrument, such as mode of administration, whether accommodations like alternative administrative conditions will be allowed, and whether administration is feasible in the intended context(s)
- The procedures for establishing the equivalency of the forms, if developing alternate forms
- The procedures for statistically evaluating the validity of each subscale, if subscales are part of the assessment framework
- The procedures for establishing an instrument that is vertically equated, if the proposed instrument is used to measure growth

### *Validation activities:*

Describe the proposed validation activities with enough detail to demonstrate that they will provide evidence to address the claims of the instrument framework.

Identify the types of validity evidence to be collected, such as construct validity, concurrent validity, and discriminant validity. Provide justification for the adequacy of the selected types of evidence to support use of the instrument for the proposed purpose(s), population(s), and context(s).

### *Cost analysis plan:*

If the instrument you propose to develop is intended for use by educators and education systems, you are encouraged to develop a cost analysis plan ([https://ies.ed.gov/seer/cost\\_analysis.asp](https://ies.ed.gov/seer/cost_analysis.asp)) that describes how you will estimate the costs for educators and education systems to implement the fully developed and/or validated instrument.

You may already have an estimated cost for your instrument, or you may plan to make your instrument available to schools at no cost. Regardless, you should consider including a plan for determining the cost of the instrument. The plan should include a discussion of how you will do the following:

- Determine the resources used by the instrument—whether these resources are related to personnel, facilities, equipment, materials, training, or other things—and describe the resources' characteristics (quality) and quantity.

- Price each resource - determine their actual or estimated cost. If any entity, including the project, will provide a resource for free or at a reduced cost, you should use the resource's real cost (what it would cost if there were no subsidy).
- Calculate the cost of the fully developed instrument (total the cost of the resources).
- Test your assumptions (sensitivity analysis).

If you already have an estimate of the cost of the instrument, you should still include a plan to calculate the actual costs when implemented.

If you intend to offer the instrument free of charge, you should still include a cost analysis plan.

*Data analysis plan:*

Describe the statistical models and analyses that will be used, including how they address the multilevel nature of education data and how well they control for selection bias.

Discuss how you will address missing data.

Propose to conduct sensitivity tests to assess the influence of key procedural or analytic decisions on the results.

Describe statistical power for all proposed inferential analyses for which decisions will be based on statistical significance.

Describe any subgroup analyses that will be conducted to examine learners from diverse backgrounds and experiences within your sample and what your findings will mean for the heterogeneity of the target population you have identified.

*(c) Personnel*

Identify and describe the expertise and qualifications of the project team at the primary applicant institution and any subaward institutions.

In its research grant programs, IES is interested in including individuals from groups that have typically been underrepresented in the education sciences. Describe the backgrounds and experiences of project team members in light of this.

Describe how the background and experience of the project team supports the successful conduct of the proposed work.

Describe which members of the project team will carry out your plans to disseminate results as described in the required Dissemination Plan in [Appendix A: Dissemination History and Plan](#).

Provide a plan for how key personnel will maintain their objectivity in conducting the proposed research and dissemination activities.

Identify the management structure and procedures that will be used to keep the project on track and ensure the quality of its work, including

- Roles and responsibilities of personnel on the project

- Proportion of time personnel will devote to the project, expressed as percent effort over a 12-month calendar year

*(d) Resources*

Describe your institution's capacity to manage a grant of this size.

Describe your access to resources available at the primary institution and any subaward institutions.

Describe your plan for acquiring any resources that are not currently accessible, will require significant expenditures, and are necessary for the successful completion of the project, such as equipment, test materials, curriculum, or training materials.

Describe your access to the settings in which the research will take place. Include letters of agreement in [Appendix E](#) documenting their participation and cooperation. Convincing letters convey that the organizations understand what their participation in the study will involve, such as annual surveys, assessments, and/or classroom observations. Include information about incentives for participation, if applicable.

Describe your access to any necessary datasets. Include letters of agreement, data licenses, or existing Memoranda of Understanding in [Appendix E](#) to document that you will be able to access those data for your proposed use.

IES is interested in using platforms to develop and validate new measurement tools. Letters of agreement from platform developers are strongly recommended if using platforms.

Describe your resources, including access to specific offices and organizations, to carry out your plans to disseminate results as described in the required Dissemination Plan in [Appendix A: Dissemination History and Plan](#).

## C. Exploration

### 1. Purpose

Exploration supports projects that identify relationships between learner-, educator-, school-, and policy-level characteristics and meaningful education outcomes (see <https://ies.ed.gov/seer/>). Findings from Exploration projects point out potentially fruitful areas for further investigation from researchers, policymakers, and practitioners, rather than providing strong evidence for adopting specific interventions or measurement tools. Exploration projects should inform future work to determine what works, for whom, and under what conditions.

Successful Exploration projects will result in a conceptual framework that identifies one or more of the following –

- A relationship between learner-, educator-, school-, and policy-level characteristics and learner education outcomes
- Factors that influence this relationship

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. If you plan to develop or evaluate an intervention or assessment, you must apply under one of the other project types or your application will be deemed nonresponsive and will not be forwarded for scientific peer review.

### 2. Requirements

#### (a) Project Narrative

The project narrative **must** adhere to the formatting guidelines (see [Part IV.B](#)) and be **no more than 22 pages**. If the narrative exceeds this page limit, IES will remove any pages after the 22<sup>nd</sup> page of the narrative. The project narrative for an Exploration project application **must** include four sections: Significance, Research Plan, Personnel, and Resources.

#### (1) Significance

The purpose of this section is to explain why it is important to study the factors and their potential association with learner outcomes and why results will be important to disseminate to researchers, policymakers, and practitioners.

You **must describe** the factors you will study.

#### (2) Research Plan

The purpose of this section is to describe your research design and methods and demonstrate how they will allow you to address your research questions. A variety of approaches are appropriate under Exploration including (1) primary data collection and analyses, (2) secondary data analyses, (3) meta-analyses that go beyond a simple identification of the mean effect of interventions, or (4) some combination of these three approaches.

You **must describe** the

- characteristics of your sample
- research design and methods
- data analysis plan

### **(3) Personnel**

The purpose of this section is to demonstrate that your team possesses the appropriate training and experience for the research and dissemination you propose and will commit enough time to the project.

You **must describe** your project team.

### **(4) Resources**

The purpose of this section is to demonstrate how you have the institutional capacity and access to resources needed to execute a project of this size and complexity and appropriately disseminate the findings and products.

You **must describe** your resources to conduct the project.

#### *(b) Data Management Plan*

All Exploration applications **must** include [a data management plan \(DMP\) placed in Appendix F](#). Your DMP describes your plans for making the final research data from the proposed project accessible to others. IES program officers will be responsible for reviewing the completeness of the proposed DMP, and it is not considered in the review of scientific merit of your application. If your application is being considered for funding based on the scores received during the scientific peer review process but your DMP is determined incomplete, you will be required to provide additional detail regarding your DMP. See the Recommendations for Strong Applications section below for additional detail regarding your DMP.

### **3. Award Limits**

Awards made under Exploration **must** conform to the following limits on duration and cost. If you propose research that relies on analysis of existing data sets and will not involve primary data collection, the proposed budget should be reduced commensurately. For the purposes of this RFA, primary data collection includes the collection and coding of quantitative or qualitative data as well as the coding of already collected, unstructured data such as video files, audio files, transcripts, and observations. Secondary data analysis includes analyzing structured data files that do not require coding prior to analysis.

#### *(a) Duration Maximums*

The maximum duration of an Exploration award is **4 years**.

#### *(b) Cost Maximums*

The maximum cost for an Exploration award is **\$1,700,000** (total cost = direct + indirect costs).

#### ***4. Recommendations for Strong Applications***

These recommendations are intended to improve the quality of your application and the peer reviewers are asked to consider these recommendations in their evaluation of your application.

##### ***(a) Significance***

Describe how the factors you propose to study are under the control of education agencies and the relationships you expect them to have with learner outcomes. Identify aspects of the education setting and characteristics of learners or educators that may change the nature of the relationship between the factors of interest and learner outcomes.

Discuss the significance of your proposed work. How will the proposed study address the Special Education Research Grant program's intended outcomes? How will the results affect policy or practice? How will the results inform future education research?

Describe any partnerships with education agencies to carry out the proposed work. Including education agencies as partners ensures that researchers focus on outcomes that are meaningful to education practitioners and policymakers.

In [Appendix A](#), discuss how you will make the results of your proposed research available to a wide range of audiences in a manner that reflects the purpose of Exploration.

##### ***(b) Research Plan***

Specify your research questions and describe how they are motivated by the information provided in your Significance section.

Provide a timeline for each step in your project, including sample recruitment, data collection, data analysis, and dissemination. Timeline tables or figures should be placed in either the project narrative or [Appendix C: Supplemental Charts, Tables, and Figures](#), but discussion of the timeline should be included only in the project narrative.

##### **(1) Sample and Setting**

Discuss the procedure you will use to recruit a sample that represents your target population.

Discuss the setting(s) in which the research will take place (provide letters of agreement in [Appendix E](#)) and discuss how they will allow you to draw conclusions about the education settings your research is intended to inform.

Describe and justify exclusion and inclusion criteria and discuss how they will affect your ability to generalize to the target population.

Describe the population of learners that your sample represents. Explain how your work with this sample will contribute to a larger body of knowledge on what works, for whom, and under what conditions, and how learners from diverse backgrounds and experiences, including those in your proposed study, will be represented in this larger knowledge base. IES does not expect individual projects to be generalizable to the U.S. population as a whole; instead, your target population may

represent a very narrow segment of the larger U.S. population. Describe strategies to reduce attrition, if applicable.

For all quantitative inferential analyses, demonstrate that the sample provides enough power to address your research questions.

## **(2) Research Design and Methods**

Describe your research design with enough detail to demonstrate it will address your research questions.

Identify all measures and discuss their validity and reliability for the intended purpose and population.

For primary data collection projects:

- Describe procedures for data collection.
- Describe processes for transforming or recoding raw data into another format or structure.
- Describe any qualitative data collection and coding protocols including the procedures for monitoring and maintaining inter-rater reliability and the mechanism for quantifying the data if needed.

For meta-analysis projects:

- Describe and justify the criteria for including or excluding studies.
- Describe the search procedures for ensuring that a high proportion of eligible studies, both published and unpublished, will be located and retrieved.
- Describe the coding scheme and procedures that will be used to extract data from the respective studies and the procedures for ensuring the reliability of the coding.
- Demonstrate that sufficient numbers of studies are available to support the meta-analysis and that the relevant information is reported frequently enough and in a form that allows an adequate dataset to be constructed.

For secondary data analysis projects:

- Note the response rate or amount of missing data for each measure.
- Describe the process for transforming the data to create any of the key variables, if applicable.

## **(3) Data Analysis Plan**

Describe how you will determine whether the findings from your sample represent the larger population by contrasting your sample's characteristics with the characteristics of the target population. Describe your plans for adjusting for any mismatch between your sample and the target population. IES does not expect individual projects to be generalizable to the U.S. population as a whole; instead, your target population may represent a narrow segment of the U.S. population.

Describe and justify the statistical models to be used, including how they address the multilevel nature of education data and how well they control for selection bias.

Discuss analyses to explore alternative hypotheses.

Discuss how you will address exclusion from testing and missing data. Describe sensitivity tests to assess the influence of key procedural or analytic decisions on the results.

Provide separate descriptions for all analyses of factors that mediate or moderate the relationships of interest and provide information about the statistical power for each analysis.

Describe any subgroup analyses that will be conducted to examine learners from diverse backgrounds and experiences within your sample and what your findings will mean for the heterogeneity of the target population you have identified

Provide enough detail for reviewers to be able to judge the feasibility of any plans to link multiple datasets.

For meta-analysis projects, define the effect-size statistics to be used, along with the associated weighting function, procedures for handling outliers, procedures for handling effect size heterogeneity, and any adjustments to be applied, such as reliability corrections.

### *(c) Personnel*

Identify and describe the expertise and qualifications of the project team at the primary applicant institution and any subaward institutions.

In its research grant programs, IES is interested in including individuals from groups that have typically been underrepresented in the education sciences. Describe the backgrounds and experiences of project team members in light of this.

Describe how the background and experience of the project team supports the successful conduct of the proposed work.

Describe which members of the project team will carry out your plans to disseminate results as described in the required Dissemination Plan in [Appendix A: Dissemination History and Plan](#).

Provide a plan for how key personnel will maintain their objectivity in conducting the proposed research and dissemination activities.

Identify the management structure and procedures that will be used to keep the project on track and ensure the quality of its work, including

- Roles and responsibilities of personnel on the project
- Proportion of time personnel will devote to the project, expressed as percent effort over a 12-month calendar year

### *(d) Resources*

Describe your institution's capacity to manage a grant of this size.

Describe your access to resources available at the primary institution and any subaward institutions.

Describe your plan for acquiring resources that are not currently accessible, will require significant expenditures, and are necessary for the successful completion of the project, such as equipment, test materials, curriculum, or training materials.

Describe your access to the settings in which the research will take place. Include letters of agreement in [Appendix E](#) documenting their participation and cooperation. Convincing letters convey that the organizations understand what their participation in the study will involve, such as annual surveys, assessments, and/or classroom observations. Include information about incentives for participation, if applicable.

Describe your access to any necessary datasets. Include letters of agreement, data licenses, or existing Memoranda of Understanding in [Appendix E](#) to document that you will be able to access those data for your proposed use.

Describe specific team members, offices, or organizations that will support dataset documentation and execution of the data management plan.

IES is interested in using platforms to conduct exploratory studies. Letters of agreement from platform developers are strongly recommended if using platforms.

Describe your resources, including access to specific offices and organizations to carry out your plans to disseminate results as described in the required Dissemination Plan in [Appendix A: Dissemination History and Plan](#).

#### *(e) Data Management Plan (DMP)<sup>1</sup>*

When the PI and the AOR sign the cover page of the grant application, they will be assuring compliance with IES policy on data sharing as well as other policies and regulations governing research awards. Once the DMP is approved by IES, the PI and the institution are required to carry it out and to report progress and problems through the regular reporting channels. Compliance with IES data sharing requirements is expected even though the final dataset may not be completed and prepared for data sharing until after the grant has been completed. In cases where the PI/grantee is non-compliant with the requirements of the data sharing policy or DMP, subsequent awards to individuals or institutions may be affected. By addressing the items identified below, your DMP describes how you will meet the requirements of the IES policy for data sharing.

The DMP should include the following:

- Identification of the data repository where you will pre-register your study within the first year of the project, following the Standards for Excellence in Education Research (SEER; <https://ies.ed.gov/seer/preregistration.asp>)
- Type of data to be shared
- Procedures for managing and for maintaining the confidentiality of Personally Identifiable Information
- Roles and responsibilities of project or institutional staff in the management and retention of research data, including a discussion of any changes to the roles and responsibilities that will occur should the project director/principal investigator and/or co-project directors/co-principal investigators leave the project or their institution

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<sup>1</sup> Resources that may be of interest to researchers in developing a data management plan can be found at <https://ies.ed.gov/funding/researchaccess.asp>.

- Expected schedule for data sharing, including how long the data will remain accessible (no later than publication of findings in a peer-reviewed publication and available for at least 10 years) and acknowledgement that the timeframe of data accessibility will be reviewed at the annual progress reviews and revised as necessary
- Format of the final dataset
- Dataset documentation to be provided, including any decisions made about the data that would be important in replicating the results
- Method of data sharing, such as through a data archive, and how those interested in using the data can locate and access them
- Whether or not users will need to sign a data use agreement and, if so, what conditions they must meet
- Any circumstances that prevent all or some of the data from being shared. (This includes data that may fall under multiple statutes and, hence, must meet the confidentiality requirements for each applicable statute including data covered by Common Rule for Protection of Human Subjects, FERPA, and HIPAA.)

The costs of the DMP can be covered by the grant and should be included in the budget and explained in the budget narrative. IES program officers will be responsible for reviewing the completeness of the proposed DMP. If your application is being considered for funding based on the scores received during the scientific peer review process but your DMP is determined incomplete, you will be required to provide additional detail regarding your DMP.

## D. Development and Innovation

### 1. Purpose

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.

Successful Development and Innovation projects will result in (see <https://ies.ed.gov/seer/>) -

- A fully developed version of the intervention with clear specifications of core components and all procedures and materials, including fidelity measures and evidence of usability and feasibility, to support testing and scaling of promising results
- Pilot data that speak to the intervention's promise for generating meaningful outcomes
- Information about the costs associated with implementing the fully developed intervention

If you propose only minor development activities and are mainly focused on testing the intervention's impact, you **must** apply under Initial Efficacy and Follow-Up or your application will be deemed nonresponsive and will not be forwarded for scientific peer review.

### 2. Requirements

#### (a) Project Narrative

The project narrative **must** adhere to the formatting guidelines (see [Part IV.B](#)) and be **no more than 22 pages**. If the narrative exceeds this page limit, IES will remove any pages after the 22<sup>nd</sup> page of the narrative. The project narrative for a Development and Innovation project application **must** include four sections: Significance, Research Plan, Personnel, and Resources.

#### (1) Significance

The purpose of this section is to explain why it is important to develop the intervention and why results will be important to disseminate to researchers, policymakers, and practitioners.

You **must describe** the intervention you propose to develop or revise.

#### (2) Research Plan

The purpose of this section is to describe the methods you will use to develop or modify the intervention, document its feasibility, and determine its promise for improving the targeted learner outcomes, including measuring the costs to implement at the level of fidelity necessary to achieve those outcomes.

You **must describe** the

- Characteristics of your sample
- Research design, methods, and data analysis plans
  - For developing the intervention
  - For determining the intervention's usability and feasibility
  - For determining the fully developed intervention's promise for generating beneficial learner outcomes through a pilot study
- Cost analysis plan for determining the costs associated with implementing the fully developed intervention in the context of the pilot study

### **(3) Personnel**

The purpose of this section is to demonstrate that your team possesses the appropriate training and experience for the proposed research and dissemination activities and will commit enough time to the project.

You **must describe** your project team.

### **(4) Resources**

The purpose of this section is to demonstrate how you have the institutional capacity and access to resources needed to execute a project of this size and complexity and appropriately disseminate the findings and products.

You **must describe** your resources to conduct the project.

## ***3. Award Limits***

Awards made under Development and Innovation **must** conform to the following limits on duration and cost.

### *(a) Duration Maximums*

The maximum duration of a Development and Innovation award is **4 years**.

### *(b) Cost Maximums*

The maximum cost for a Development and Innovation award is **\$2,000,000** (total cost = direct + indirect costs).

To ensure that Development and Innovation projects focus on the development process, **a maximum of 35 percent** of project funds (direct and indirect funds) should be used for the pilot study, including intervention implementation, data collection, and analysis of pilot data.

## ***4. Recommendations for Strong Applications***

These recommendations are intended to improve the quality of your application and the peer reviewers are asked to consider these recommendations in their evaluation of your application.

### *(a) Significance*

Describe your proposed intervention, its key components, and how it will be implemented.

If you are proposing an adaptive intervention, clearly identify and present a rationale for decision points, tailoring variables, decision rules, and intervention options.

Describe the population of learners and educators intended to benefit from this intervention.

Describe the scale up potential of your intervention to different populations and contexts.

Describe the specific need for developing or refining the intervention, the potential market for the intervention, the resources and organizational structure necessary for the wide adoption and implementation of the intervention, and the potential commercialization of the intervention.

- Contrast the intervention with current practice. What differentiates it and how does it address shortcomings of other interventions?

Clearly describe your initial theory of change, illustrating how and why the desired change in learner outcomes is expected to happen as the result of the intervention.

- Include the theoretical justifications and empirical evidence to support your theory of change.
- Specify the core components of the planned intervention as well as conditions that must be in place that will lead to the desired change in education outcomes.
- Include a visual representation of your theory of change in [Appendix C: Supplemental Charts, Tables, and Figures](#).

Discuss the significance of your proposed work. How will the proposed study address the Special Education Research Grant program's intended outcomes? How will the results inform education research? Will the results have implications for practitioners and policymakers?

Describe any partnerships with education agencies to carry out the proposed work. Including education agencies as partners ensures that researchers focus on outcomes that meaningful to education practitioners and policymakers.

If you are applying for a Development and Innovation award to further develop an intervention that was the focus of a previous IES grant, you should (1) justify the need for another award, (2) describe the results and outcomes of prior or currently held awards to support the further development of the intervention, and (3) indicate whether what was developed has been (or is being) evaluated for efficacy. Describe any available evaluation results and discuss their implications for the proposed project.

### *(b) Research Plan*

Specify your research questions and how they are motivated by the information provided in your Significance section.

Provide a timeline for each step in your project, including such actions as intervention development or refinement, sample recruitment, data collection, data analysis, cost analysis, and dissemination. Timeline tables or figures may be placed in either the project narrative or [Appendix C: Supplemental Charts, Tables, and Figures](#) but should be discussed only in the project narrative.

#### **(1) Sample and Setting**

Discuss the procedure you will use to recruit a sample that represents your target population.

Describe the setting(s) in which the research will take place (provide letters of agreement in [Appendix E](#)) and discuss how they will allow you to draw conclusions about the education settings your research is intended to inform.

Describe and justify exclusion and inclusion criteria and discuss how they will affect your ability to generalize to the target population.

Describe the population of learners that your sample represents. Explain how your work with this sample will contribute to a larger body of knowledge on promising interventions and how learners from diverse backgrounds and experiences, including those in your proposed study, will be represented in this larger knowledge base. IES does not expect individual projects to be generalizable to the U.S. population as a whole. Instead, your target population may represent a very narrow segment of the larger U.S. population.

Describe strategies to reduce attrition, if applicable.

Describe the settings in which the different phases of the development work (iterative development, usability and feasibility testing, pilot testing) will take place, including the size and characteristics of the schools (or other education settings), intervention sites, and/or the surrounding community, and how this will help better identify the learners or settings for which the intervention is most likely to work.

Describe how you will determine whether the findings from your sample represent the larger population by contrasting your sample's characteristics with the characteristics of the target population. Describe your plans for adjusting for any mismatch between your sample and the target population.

## **(2) Research Design and Methods**

Describe your research design with enough detail to demonstrate it will address your research questions.

### *Iterative development process:*

Describe how you will iteratively develop the intervention. Explain how your plan allows you to refine and improve upon the initial version of the intervention by implementing all or component parts, observing how well the intervention is functioning, and making necessary adjustments to ensure usability and feasibility when implemented by education personnel.

Identify the core components of the intervention and how you will determine which components are critical for improving outcomes.

- IES does not require or endorse any specific model of iterative development or suggest an ideal number of iterations (revise, implement, observe, revise). Explain why the iterative development approach you will use is appropriate for the intervention you wish to develop or refine. IES is interested in using digital learning platforms to develop interventions.

### *Feasibility of implementation:*

Describe your plan to collect feasibility data in the type of setting and with the education personnel who will implement the intervention with the target learner population.

### *Pilot study:*

Describe your plan for the pilot study. Provide a rationale for your plan and explain why the research design you are choosing is the most rigorous design you can implement given the type of intervention, the education personnel who will implement it, and the need to stay within the maximum 35 percent of grant funds for the pilot study. Pilot studies may use experimental group or single-case designs, or quasi-experimental designs. IES is interested in using digital learning platforms to test interventions.

Identify the measures you will use to assess the outcomes included in your theory of change.

For interventions designed to directly change the teaching and learning environment and, in doing so, affect education outcomes, provide measures of these intermediate outcomes such as educator or leader behaviors or education system characteristics that are hypothesized to be directly linked to the intervention.

- Describe how you will measure fidelity of implementation of the intervention and any accompanying training.
- Describe the comparison group and how you will monitor whether the treatment and comparison groups are different enough to expect the predicted education outcomes.

*Cost analysis plan:*

Describe how you will determine the cost of the fully developed intervention and its implementation during the pilot study (for an introduction, see the *IES Cost Analysis Starter Kit* at [https://ies.ed.gov/seer/cost\\_analysis.asp](https://ies.ed.gov/seer/cost_analysis.asp)). You may already have an estimated cost for your intervention, or you may plan to make your intervention available to schools at no cost. Regardless, your application must include a plan for determining the cost during the pilot study. The plan should include a discussion of how you will do the following:

- Determine the resources used by the intervention—whether these resources are related to personnel, facilities, equipment, materials, training, or other things—and describe the resources' characteristics (quality) and quantity.
- Price each resource - determine their actual or estimated cost. If any entity, including the project, will provide a resource for free or at a reduced cost during the pilot study, you should use the resource's real cost (what it would cost if there were no subsidy).
- Calculate the cost of the fully developed intervention (total the cost of the resources).
- Test your assumptions (sensitivity analysis).

If you already have an estimate of the cost of the intervention, you still must include a plan to calculate the actual costs when implemented during the pilot study.

If you intend to offer the intervention free of charge, you must still include a cost analysis plan as part of the pilot study.

*Measures:*

Identify all measures and discuss their validity and reliability for the intended purpose and population.

Your measures should address usability, feasibility, fidelity of implementation, education outcomes, and expected intermediate outcomes. We encourage the use of widely used common measures of learner outcomes to facilitate the field's ability to synthesize findings across studies.

Describe your plan to develop and test implementation fidelity measures for all relevant components of the intervention, including any associated training for the education personnel responsible for implementing the intervention.

If needed, you can propose devoting a short period of time (fewer than 6 months) to develop a measure. You should describe what will be developed, why it is necessary, and how it will be developed.

*Data analysis plan:*

Describe how you will measure the generalizability of your findings by contrasting your sample's characteristics with the characteristics of the target population. Describe your plans for adjusting for any mismatch between your sample and the population.

Describe any subgroup analyses that will be conducted to examine outcomes for learners from diverse backgrounds and experiences.

Provide separate descriptions of each qualitative and quantitative analysis proposed.

Explain how the qualitative and quantitative analyses will inform one another.

For qualitative analyses, identify any software that will be used to conduct the analyses and how coding decisions will be made and verified.

Describe and justify the statistical models to be used, including how they address the multilevel nature of education data.

Describe how you will identify key processes that may affect the implementation of your intervention in other venues.

Discuss how you will address exclusion from testing and missing data. Propose to conduct sensitivity tests to assess the influence of key procedural or analytic decisions on the results.

Provide separate descriptions for mediator and moderator analyses and provide information about statistical power.

Explain how you will report effect sizes in ways that policymakers and practitioners can readily understand.

*(c) Personnel*

Identify and describe expertise and qualifications of the project team at the primary applicant institution and any subaward institutions.

In its research grant programs, IES is interested in including individuals from groups that have typically been underrepresented in the education sciences. Describe the backgrounds and experiences of project team members in light of this.

Describe how the background and experience of the project team supports the successful conduct of the proposed work. Identify and describe the expertise of the key personnel responsible for

- the iterative design process
- the usability and feasibility study
- the pilot study
- the cost analysis

Provide a plan for how key personnel will maintain their objectivity in conducting the proposed research and dissemination activities.

Describe which members of the project team will carry out your plans to disseminate results as described in the required Dissemination Plan in [Appendix A: Dissemination History and Plan](#).

Identify the management structure and procedures that will be used to keep the project on track and ensure the quality of its work, including

- Roles and responsibilities of personnel on the project
- Proportion of time personnel will devote to the project, expressed as percent effort over a 12-month calendar year

*(d) Resources*

Describe your institution's capacity to manage a grant of this size.

Describe your access to resources available at the primary institution and any subaward institutions.

Describe your plan for acquiring resources that are not currently accessible, will require significant expenditures, and are necessary for the successful completion of the project, such as equipment, test materials, curriculum, or training materials.

Describe your access to the settings in which the research will take place. Include letters of agreement in [Appendix E](#) documenting their participation and cooperation. Convincing letters convey that the organizations understand what their participation in the study will involve, such as annual surveys, assessments, and/or classroom observations. Include information about incentives for participation, if applicable.

Describe your access to any necessary datasets. Include letters of agreement, data licenses, or existing Memoranda of Understanding in [Appendix E](#) to document that you will be able to access those data for your proposed use.

IES is interested in using platforms to develop and test new interventions. Letters of agreement from platform developers are strongly recommended if using platforms.

Describe your resources, including access to specific offices and organizations, to carry out your plans to disseminate results as described in the required Dissemination Plan in [Appendix A: Dissemination History and Plan](#).

## E. Initial Efficacy and Follow-Up

### 1. Purpose

Initial Efficacy and Follow-Up supports initial efficacy studies of education interventions predicted to have a meaningful effect on important education outcomes using designs that meet the IES What Works Clearinghouse (WWC) design standards<sup>2</sup> (<https://ies.ed.gov/ncee/wwc/Handbooks>) 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, and its contribution to 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.

Successful Initial Efficacy and Follow-Up projects will result in the following (see <https://ies.ed.gov/seer/>) -

- Evidence regarding the impact of a fully developed intervention on learner outcomes relative to a comparison condition
- Documentation of the core components of an intervention, including its essential practices, structural elements, and the contexts in which it was implemented and tested
- Documentation of treatment implementation and contrast
- Analysis of intervention costs relative to the comparison condition
- Plans to support additional long term follow up of intervention impacts

If the intervention you propose to evaluate is not fully developed, you must apply under Development and Innovation or your application will be deemed nonresponsive and will not be forwarded for scientific peer review. If you need more than 6 months to develop and validate appropriate instruments for the proposed evaluation, you must apply under Measurement to support that work or your application will be deemed nonresponsive and will not be forwarded for scientific peer review. If you propose to evaluate an intervention with prior evidence of efficacy, you **must** apply under the separate Systematic Replication competitions offered through the National Center for Education Research (CFDA 84.305R; [https://ies.ed.gov/funding/ncer\\_rfas/systematic\\_replications.asp](https://ies.ed.gov/funding/ncer_rfas/systematic_replications.asp)) or the National Center for Special Education Research (CFDA 84.324R; [https://ies.ed.gov/funding/ncser\\_rfas/ncser\\_systematic\\_replications.asp](https://ies.ed.gov/funding/ncser_rfas/ncser_systematic_replications.asp)), as appropriate. If IES determines that the intervention has been previously rigorously evaluated and is thus not eligible for initial efficacy, the application will be deemed nonresponsive and will not be forwarded for scientific review.

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<sup>2</sup> Applications will be reviewed against the WWC design standards in effect at the time of RFA publication.

## **2. Requirements**

### **(a) Project Narrative**

The project narrative **must** adhere to the formatting guidelines (see [Part IV.B](#)) and be **no more than 22 pages**. If the narrative exceeds this page limit, IES will remove any pages after the 22<sup>nd</sup> page of the narrative. The project narrative for an Initial Efficacy and Follow Up project application **must** include four sections: Significance, Research Plan, Personnel, and Resources.

#### **(1) Significance**

The purpose of this section is to explain why it is important to test the impact of the intervention on learner outcomes under the proposed conditions and with the identified sample and why results will be important to disseminate to researchers, policymakers, and practitioners.

You **must describe** the intervention you propose to evaluate. For a Follow-Up study, you **must also** describe the evidence of intervention impact in the original evaluation for the specific sample you intend to follow.

#### **(2) Research Plan**

The purpose of this section is to describe your proposed plan to evaluate the intervention.

You **must describe** the

- Characteristics of your sample
- Research design and methods
- Power analysis
- Data analysis plan

In addition, **for an Initial Efficacy Study**, you **must describe** your

- Cost analysis plan
- Cost-effectiveness analysis plan or a rationale for why a cost-effectiveness analysis cannot be done

#### **(3) Personnel**

The purpose of this section is to demonstrate that your team possesses the appropriate training and experience for the research and dissemination you propose and will commit enough time to the project.

You **must describe** your project team.

#### **(4) Resources**

The purpose of this section is to demonstrate how you have the institutional capacity and access to resources needed to execute a project of this size and complexity and appropriately disseminate the findings and products.

You **must describe** your resources to conduct the project.

### *(b) Data Management Plan*

All Initial Efficacy and Follow-Up applications **must** include a [data management plan \(DMP\) placed in Appendix F](#). Your DMP describes your plans for making the final research data from the proposed project accessible to others. IES program officers will be responsible for reviewing the completeness of the proposed DMP, and it is not considered in the review of scientific merit of your application. If your application is being considered for funding based on the scores received during the scientific peer review process but your DMP is determined incomplete, you will be required to provide additional detail regarding your DMP. See the Recommendations for Strong Applications section below for additional detail regarding your DMP.

### **3. Award Limits**

Awards made under Initial Efficacy and Follow-Up **must** conform to the following limits on duration and cost.

#### *(a) Duration Maximums:*

The maximum duration of an Initial Efficacy award is **5 years**.

The maximum duration of a Follow-Up award is **3 years**.

#### *(b) Cost Maximums:*

The maximum cost for an Initial Efficacy award is **\$3,800,000** (total cost = direct + indirect costs).

The maximum award for a Follow-Up award is **\$1,500,000** (total cost = direct + indirect costs).

Grant funds for Follow-Up projects cannot be used for implementation of the intervention.

### **4. Recommendations for Strong Applications**

These recommendations are intended to improve the quality of your application and the peer reviewers are asked to consider these recommendations in their evaluation of your application.

#### *(a) Significance*

Describe the intervention that you propose to evaluate, including the

- Core intervention components
- Processes and materials to support implementation such as manuals, websites, training, or coaching
- Overall practical importance of the intervention for education personnel or policymakers
- The anticipated size of the effect of the intervention
- Potential market for the intervention, including the resources and organizational structure necessary for its wider adoption and implementation and its potential to be commercialized

Describe and justify the size of the effect you anticipate from the intervention.

Describe the theory of change for the intervention and the theoretical and empirical evidence that supports it.

- The theory of change should make clear why the intervention is likely to produce better education outcomes relative to current practice.
- Specify the core components of the intervention as well as conditions that must be in place for the desired change in education outcomes to occur.
- Include a visual representation of your theory of change in [Appendix C: Supplemental Charts, Tables, and Figures](#).

Discuss the significance of your proposed work. How will the proposed study address the Special Education Research Grant program's intended outcomes? How will the results affect policy or practice? How will the results inform future education research?

Describe the population intended to benefit from this intervention and how your sample does or does not represent this larger population, including

- The learners who should benefit, either directly or indirectly, from this intervention
- The education personnel who will implement the intervention and how they will implement it
- The heterogeneity of the sample you propose compared to the target population

Describe the setting and implementation conditions for the proposed evaluation of this intervention. You may propose to provide enhanced implementation support to ensure adequate fidelity of implementation, or you may propose to test the intervention under real-world conditions with the type and level of implementation support that would take place if no study was being conducted.

For an **Initial Efficacy study**, provide evidence showing the intervention's readiness for evaluation, including data on feasibility and fidelity of implementation, promise for achieving intended learner outcomes, and cost to implement. Describe any prior studies of the intervention, note their findings, and discuss how your proposed study would improve on past work.

For an **Initial Efficacy study of a widely used intervention**, which may lack an explicit theory of change and evidence of implementation feasibility and fidelity, provide evidence that the intervention is currently in such widespread use that it would be important to find out if it is indeed a beneficial education intervention. If the program was developed several decades ago, provide compelling evidence that it is still being widely used today and, therefore, should be evaluated.

For an **Initial Efficacy study that involves solely secondary data** analysis, discuss how widespread the intervention is and justify the importance of evaluating the intervention and its implications for current education practice and policy.

- Describe what you will and will not be able to address using the existing data, including what is known or could be determined about the intervention's fidelity of implementation and comparison group practice.

For a **Follow-Up study**, describe the intervention's beneficial impact on education outcomes for the sample from the previous rigorous evaluation. Describe this sample along with the design, measures, implementation fidelity, analyses, and results of this previous study so that reviewers have enough information to judge its quality.

- Explain why the impacts from that study would be expected to continue. If this requires revising the original theory of change, explain why.

In [Appendix A](#), describe how you will make the results of your proposed research available to a wide range of audiences in a manner that reflects the purpose of an Initial Efficacy and Follow-Up study.

### *(b) Research Plan*

Specify your research questions and describe how they are motivated by the information provided in your Significance section.

Provide a timeline for each step in your evaluation, including sample recruitment, baseline data collection, intervention implementation, ongoing data collection, assessing fidelity of implementation and comparison group practice, impact analysis, implementation analyses, moderator and mediator analyses, cost and cost-effectiveness analyses, and dissemination. Timeline tables or figures may be placed in either the project narrative or [Appendix C: Supplemental Charts, Tables, and Figures](#) but should be discussed only in the project narrative.

#### **(1) Setting and Sample**

Describe the setting in which the study will take place, including the size and characteristics of the setting and/or the surrounding community, and how this will help better identify the learners or settings for which the intervention is most likely to work.

Detail the procedure that will be used to recruit a specific sample that represents a target population in need of the proposed intervention.

Define and enumerate who would benefit from the intervention. IES does not expect individual projects to be generalizable to the U.S. population as a whole; instead, your target population may represent a narrow segment of the larger U.S. population.

Explain how your work with this sample will contribute to a larger body of knowledge on promising interventions and how learners from diverse backgrounds and experiences, including those in your proposed study, will be represented in this larger knowledge base.

Identify factors that might lead to the effect of the intervention varying across the learners and settings in your target population and the variables available to measure these factors.

Identify the inclusion/exclusion criteria you will use during sample recruitment. Discuss how these may narrow the target population studied and influence the generalizability of the results to the target population.

Describe the sample recruitment procedure that will be used to ensure similarity between the sample and target population. Discuss how you will measure similarity between the two and make adjustments if needed.

Describe the setting(s) in which the research will take place (provide letters of agreement in [Appendix E](#)) and discuss how they will allow you to draw conclusions about the education settings your research is intended to inform.

Describe strategies to reduce attrition, if applicable.

Describe strategies to increase the likelihood that participants (for example, schools, educators, and/or learners) will join the study and remain in the study over the course of the evaluation.

*For a Follow-Up study:*

Describe attrition in the prior study and your ability to follow sample members, including educators and learners, in the proposed follow-up. Include a CONSORT flow diagram showing the numbers of participants at each stage of the prior study. Discuss what steps you will take to minimize attrition in the follow-up study.

For follow-up studies of education personnel, explain how you will determine whether the learners in the follow-up study are like the learners in the original study.

## **(2) Research Design and Methods**

Describe the conditions you are comparing in your study.

- Describe and justify the counterfactual condition(s) in your evaluation. Describe your plan for documenting the counterfactual condition(s), including measuring of essential elements of the treatment contrast between participants in the treatment and control conditions as identified by an intervention's core components.
- Describe strategies or existing conditions that will reduce potential contamination between treatment and comparison groups.
- Indicate procedures to guard against bias entering the data collection process such as differential timing of assessments for treatment and control groups.

IES encourages you to measure education outcomes beyond the intervention end point to determine if short-term changes in education outcomes are sustained over time. Actively plan for the possibility of assessing longer-term impacts, such as determining how you will maintain contact with schools and study participants and ensure your IRB protocols are written to allow researchers to follow participants beyond your current grant time period.

IES recommends using randomized controlled trials because they have the strongest internal validity for causal conclusions. If you propose a randomized controlled trial, describe the following:

- The unit of randomization and your rationale for randomizing at that level
- Procedures for implementing and maintaining random assignment to condition
- The process for documenting baseline equivalence between treatment and comparison groups at the start of the study
- Procedures for documenting the level of bias occurring from overall and differential attrition rates
- How your study will meet WWC design standards (<https://ies.ed.gov/ncee/wwc/handbooks>) with or without reservations<sup>3</sup>

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<sup>3</sup> Applications will be reviewed against the WWC design standards in effect at the time of RFA publication.

Sequential, Multiple Assignment, Randomized Trials (SMARTs) represent one type of a randomized controlled trial that can be used to evaluate the sequence of interventions in an adaptive intervention.

For SMARTs, provide the following:

- Identification and rationale for each stage of the SMART, including the critical decision point for each stage and the randomization process that subsequently takes place at each critical decision point

Single-case experimental designs are intended to demonstrate a causal or functional relationship between two variables using a small number of cases, including students, classrooms, or schools.

Single-case experimental designs are not descriptive case studies. If you propose a single-case experimental design, describe the following:

- A rationale supporting the use of a single-case experimental design as opposed to a randomized controlled trial (for example, the intervention targets students with low-incidence disabilities)
- Quantitative analyses, in addition to visual analysis, for analyzing the resulting data
- How your study will meet WWC design standards (<https://ies.ed.gov/ncee/wwc/handbooks>) with or without reservations<sup>4</sup>

Regression discontinuity designs can provide unbiased estimates of the effects of education interventions when there is a clear cutoff point on a standardized test or other instrument used to assign units to an intervention. If you propose a regression discontinuity design, describe the following:

- The appropriateness of the assignment variable, the assignment variable's resistance to manipulation, the level of independence of the cutoff point from the assignment variable, and the policy relevance of the cutoff point
- The sensitivity analyses and robustness checks you will use to assess the influence of key procedural or analytic decisions such as functional forms and bandwidths on the results
- Plans for determining that there is a true discontinuity at the cutoff point and not at other points where a discontinuity would not be expected
- Plans to determine that no manipulation of the assignment variable has occurred
- Plans to determine that the treatment and comparison groups have similar baseline characteristics, especially around the cutoff point, to rule out selection bias
- There are high levels of compliance to assignment with most treatment group members receiving the intervention and most comparison group members not
- How your study will meet WWC design standards (<https://ies.ed.gov/ncee/wwc/handbooks>) with or without reservations

If you propose a quasi-experimental design other than regression discontinuity, describe the following:

- Plans to ensure that the proposed design permits drawing causal conclusions about the effect of the intervention on the intended outcomes
- The procedure for minimizing selection bias
- The plan to address threats to internal validity
- How your study will meet WWC design standards (<https://ies.ed.gov/ncee/wwc/handbooks>) with reservations, as this is the highest standard that quasi-experimental designs can meet

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<sup>4</sup> Applications will be reviewed against the WWC design standards in effect at the time of RFA publication.

*Power analysis*<sup>5</sup>:

Provide a separate power analysis for each causal analysis you propose to demonstrate the statistical power of the research design to detect a reasonably expected and minimally important effect of the intervention on the focal learner outcomes.

- Justify why this level of effect would be expected and explain why this would be a practically important effect.
- Consider how the clustering of participants such as learners in classrooms or schools will affect statistical power.
- Detail the procedure used to calculate either the power for detecting the minimum effect or the minimum detectable effect size. Include the following:
  - The statistical formula you used
  - The parameters with known values, such as number of clusters or number of participants within clusters
  - The parameters whose values are estimated and how those estimates were made such as those for intraclass correlations or covariates
  - Other aspects of the design and how they may affect power such as the use of repeated observations or stratified sampling or blocking
  - Predicted attrition and how it was addressed in the power analysis
- For SMART designs, clearly identify your power to detect differences at each level of randomization as appropriate for your research questions.

Provide a similar discussion regarding power for any causal analyses to be done using subgroups of the proposed sample and any tests of mediation or moderation, even if those analyses are considered exploratory/secondary.

*Outcome measures:*

Describe the importance, reliability and validity of all outcome measures proposed, including learner outcomes, educator and education system characteristics, and implementation outcomes.

*Learner outcomes:*

Demonstrate that the proposed learner outcome measures are appropriately sensitive to the changes expected. We encourage the use of widely used common measures of learner outcomes to facilitate the field's ability to synthesize findings across studies.

*Educator and education system characteristics:*

For interventions designed to directly change the teaching and learning environment and, in doing so, affect education outcomes, provide measures of these intermediate outcomes such as educator or leader behaviors or education system characteristics that are hypothesized to be directly linked to the intervention.

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<sup>5</sup> Power analysis is not necessary for applicants proposing single-case experimental designs.

*Implementation outcomes:*

Describe the measures you will use to document and understand implementation fidelity, including any training or coaching provided to implementers, and other relevant implementation measures of interest.

For Initial Efficacy studies, you should measure implementation fidelity in the treatment group and comparable practices in the control group.

Describe the learner, educator, and/or education setting characteristics that might affect implementation and how you will examine their influence.

Examine treatment contrast early in the evaluation:

- Document all aspects of implementation fidelity, including any training or coaching provided to those education personnel implementing the intervention, if applicable.
- Describe your plan for determining implementation fidelity in the treatment group and the identification of comparable practices in the comparison group.

Note: If needed, you can propose devoting a short period of time (fewer than 6 months) to refining your outcome measures and/or developing or refining measures of intervention fidelity and comparison group practice.

*Data analysis plan:*

Describe how you will measure the generalizability of your findings by contrasting your sample's characteristics with the characteristics of the target population. Describe your plans for adjusting for any mismatch between your sample and the population.

Detail your data analysis procedures for all quantitative and qualitative analyses necessary to address your research questions for the impact study, any subgroup analyses, analysis of baseline equivalence, and implementation fidelity analyses.

- IES encourages the use of mixed methods research, defined as the integration of qualitative and quantitative data, to inform these analyses.
- Proposed subgroup analyses should examine learners from diverse backgrounds and experiences.

Explain how you will measure and report effect sizes in ways that policymakers and practitioners can readily understand.

Address any clustering of learners within classrooms, schools, colleges, districts, states, or other relevant units.

Discuss how exclusion from testing and missing data will be handled in your analyses. If you intend to impute missing data, describe the approach you will use to provide unbiased estimates.

If you intend to link multiple datasets, provide sufficient detail for reviewers to judge the feasibility of the linking plan.

Although not required, the analysis of factors that influence the relationship between the intervention and learner outcomes (mediators and moderators) is an important component of an efficacy study because such analyses are central to the question of what works for whom and why.

Describe your plan for examining fidelity of implementation of the intervention and treatment contrast in relation to your outcomes of interest. The results of such analyses may be used to improve the quality and scalability of the intervention through improvements in design, use, and support.

Describe how you will identify adaptations of the program or policy when implemented by the education personnel in your evaluation. Describe how you will identify the local contexts that lead to adaptations and whether these adaptations are correlated with education outcomes.

Describe how you will identify and examine any variables that might cause the impact of the intervention to vary across students, schools, or districts.

*Cost and cost-effectiveness analysis:*

A cost-effectiveness analysis provides information about the costs to achieve a particular impact when using a particular program, practice, or policy.

- A cost-effectiveness analysis is required only for the primary learner outcome(s). The analysis should be conducted at the level that is most relevant for the intervention being studied, whether the school, classroom, or individual learner level.
- If you are evaluating the impact of any specific component(s) of the intervention—in addition to the overall impact of the intervention—you should provide additional cost-effectiveness analyses for the separate components evaluated.
- If you are unable to conduct a cost-effectiveness analysis, explain why.

Describe how you will determine the cost of the intervention and its implementation (for an introduction, see the *IES Cost Analysis Starter Kit* at [https://ies.ed.gov/seer/cost\\_analysis.asp](https://ies.ed.gov/seer/cost_analysis.asp)), the cost of the comparison condition, and the cost effectiveness of the intervention (the comparison of costs and impacts between the intervention and the comparison condition). The plan should include a discussion of how you will do the following:

- Determine the resources used by the intervention—whether these resources are related to personnel, facilities, equipment, materials, training, or other things—and describe the resources' characteristics (quality) and quantity.
- Price each resource - determine their actual or estimated cost. If any entity, including the project, will provide a resource for free or at a reduced cost during the study, you should use the resource's real cost (what it would cost if there were no subsidy).
- Calculate the cost of the intervention (total the cost of the resources).
- Compare alternative approaches to determining costs:
  - Total cost and incremental cost of the intervention
  - Calculating costs using national average prices and local prices
- Identify different breakdowns of cost:
  - Identify who is responsible for which costs.
  - Identify startup costs and maintenance costs.
  - Identify annual costs if the intervention is multi-year.
- Test your assumptions (sensitivity analysis).

- Following the same process, calculate the cost of the comparison condition.
- Determine the cost effectiveness of the intervention:
  - Describe how you will use the difference in cost and the difference in learner outcomes for the intervention versus the comparison condition to determine the cost per beneficial impact provided by the intervention (if there are any beneficial impacts from the intervention).
  - Focus on the key student outcomes.
- If your study proposes to evaluate any key components of the intervention, you should conduct a separate cost analysis and cost-effectiveness analysis for those components.

If you already have an estimate of the cost of the intervention, you still must include a plan to verify the estimated costs.

If you intend to offer the intervention free of charge, you must still include a cost analysis and cost-effectiveness analysis plan.

Include a plan to conduct a cost analysis for Follow-Up studies. If cost information is not available, explain this.

### *(c) Personnel*

Identify and describe the expertise and qualifications of the project team at the primary applicant institution and at any subaward institutions.

In its research grant programs, IES is interested in including individuals from groups that have typically been underrepresented in the education sciences. Describe the backgrounds and experiences of project team members in light of this.

Describe how the background and experience of the project team supports the successful conduct of the proposed work.

Identify the key personnel responsible for the cost analysis and cost-effectiveness analysis and describe their qualifications to carry out these analyses.

Describe which members of the project team will carry out your plans to disseminate results as described in the required Dissemination Plan in [Appendix A: Dissemination History and Plan](#).

Describe any partnerships with education agencies to carry out the proposed work. Including education agencies as partners ensures that researchers focus on outcomes that meaningful to education practitioners and policymakers.

Provide a plan for how key personnel will maintain their objectivity in conducting the proposed research and dissemination activities. For example, clearly explain who will assign participants to treatment and comparison conditions, who will supervise outcome data collection and coding, and who will analyze outcome data.

Identify the management structure and procedures that will be used to keep the project on track and ensure the quality of the work, including

- Roles and responsibilities of personnel on the project
- Proportion of time personnel will devote to the project, expressed as percent effort over a 12-month calendar year

*(d) Resources*

Describe your institution's capacity to manage a grant of this size.

Describe your access to resources available at the primary institution and any subaward institutions.

Describe your plan for acquiring any resources that are not currently accessible, will require significant expenditures, and are necessary for the successful completion of the project, such as equipment, test materials, curriculum, or training materials.

Describe your access to the settings in which the research will take place. Include letters of agreement in [Appendix E](#) documenting their participation and cooperation. Convincing letters convey that the organizations understand what their participation in the study will involve, such as annual surveys, assessments, and/or classroom observations.

Include information about incentives for participation, if applicable.

Describe your access to any necessary datasets. Include letters of agreement, data licenses, or existing Memoranda of Understanding in [Appendix E](#) to document that you will be able to access those data for your proposed use.

Describe the materials that could support the replication and/or scaling of an intervention by others, such as manuals, toolkits, or implementation guides.

Describe specific team members, offices, or organizations that will support dataset documentation and execution of the data management plan.

IES is interested in using platforms to test interventions. Letters for agreement from platform developers are strongly recommended if using platforms.

Describe your resources, including access to specific offices and organizations, to carry out your plans to disseminate results as described in the required Dissemination Plan in [Appendix A: Dissemination History and Plan](#).

*(e) Data Management Plan (DMP)<sup>6</sup>*

When the PI and the AOR sign the cover page of the grant application, they will be assuring compliance with IES policy on data sharing as well as other policies and regulations governing research awards. Once the DMP is approved by IES, the PI and the institution are required to carry it out and to report

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<sup>6</sup> Resources that may be of interest to researchers in developing a data management plan can be found at <https://ies.ed.gov/funding/researchaccess.asp>.

progress and problems through the regular reporting channels. Compliance with IES data sharing requirements is expected even though the final dataset may not be completed and prepared for data sharing until after the grant has been completed. In cases where the PI/grantee is non-compliant with the requirements of the data sharing policy or DMP, subsequent awards to individuals or institutions may be affected. By addressing the items identified below, your DMP describes how you will meet the requirements of the IES policy for data sharing.

The DMP should include the following:

- Identification of the education repository where you will pre-register your study in the first year of the study, following the Standards for Excellence in Education Research (SEER; <https://ies.ed.gov/seer/preregistration.asp>)
- Type of data to be shared
- Procedures for managing and for maintaining the confidentiality of Personally Identifiable Information
- Roles and responsibilities of project or institutional staff in the management and retention of research data, including a discussion of any changes to the roles and responsibilities that will occur should the project director/principal investigator and/or co-project directors/co-principal investigators leave the project or their institution
- Expected schedule for data sharing, including how long the data will remain accessible (no later than publication of findings in a peer-reviewed publication and available for at least 10 years) and acknowledgement that the timeframe of data accessibility will be reviewed at the annual progress reviews and revised as necessary
- Format of the final dataset
- Dataset documentation to be provided, including any decisions made about the data that would be important in replicating the results
- Method of data sharing, such as through a data archive, and how those interested in using the data can locate and access them
- Whether or not users will need to sign a data use agreement and, if so, what conditions they must meet
- Any circumstances that prevent all or some of the data from being shared. This includes data that may fall under multiple statutes and, hence, must meet the confidentiality requirements for each applicable statute including data covered by Common Rule for Protection of Human Subjects, FERPA, and HIPAA

The costs of the DMP can be covered by the grant and should be included in the budget and explained in the budget narrative. IES program officers will be responsible for reviewing the completeness of the proposed DMP. If your application is being considered for funding based on the scores received during the scientific peer review process but your DMP is determined incomplete, you will be required to provide additional detail regarding your DMP.

## Part IV: Preparing Your Application

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### A. Overview

The application contents—individual forms and their PDF attachments—represent the body of an application to IES. IES encourages you to refer to the IES Application Submission Guide (<https://ies.ed.gov/funding/pdf/submissionguide.pdf>) for additional information about preparing to submit your application and ensuring your application is sufficient.

### B. General Formatting

To ensure that reviewers can read your application and that all applicants have similar expectations for length and space, IES specifies the following formatting conventions. Adherence to type size and line spacing requirements is necessary so that no applicant will have an unfair advantage by using small type or by providing more text in their applications. These requirements apply to the PDF file as submitted, unless otherwise specified. In order for an application to be compliant and sent forward for review, the applicant should ensure that each narrative section follows both the page limit maximums and the formatting guidelines below unless otherwise specified.

#### 1. *Page and Margin Specifications*

For all IES grant applications, a “page” is 8.5 in. x 11 in. on one side only with 1-inch margins at the top, bottom, and both sides.

#### 2. *Page Numbering*

Add page numbers using the header or footer function and place them at the bottom or upper right corner for ease of reading.

#### 3. *Spacing*

Text must be single spaced.

#### 4. *Type Size (Font Size)*

Type must conform to the following three requirements:

- The height of the letters must not be smaller than a type size of 12-point.
- Type density, including characters and spaces, must be no more than 15 characters per inch (cpi). For proportional spacing, the average for any representative section of text must not exceed 15 cpi.
- Type size must yield no more than 6 lines of type within a vertical inch.

You should check the type size using a standard device for measuring type size, rather than relying on the font selected for a particular word processing/printer combination. Small type size makes it difficult for reviewers to read the application; consequently, the use of small type will be grounds for IES to return the application without scientific peer review.

As a practical matter, if you use a 12-point Times New Roman font without compressing, kerning, condensing, or other alterations, the application will typically meet these requirements.

## **5. Graphs, Diagrams, and Tables**

IES encourages you to use black and white in graphs, diagrams, tables, and charts. If color is used, you should ensure that the material reproduces well when printed or photocopied in black and white.

**Text in figures, charts, and tables, including legends, may be in a type size smaller than 12-point but must be readily legible.**

## **C. Required and Optional Appendices**

The required project narrative (Significance, Research Plan, Personnel, and Resources) that is described for each project type (see [Part III: Project Type Requirements and Recommendations](#)) is followed by several appendices. Some of these appendices are required, and some are optional. When you submit your application through Grants.gov, you will create a single PDF file that *contains the project narrative and all appendices* and include it as an attachment in the application package. Include appendices in alphabetical order and simply skip an appendix if it is not required for your application or if you choose not to include one of the optional appendices. See the IES Application Submission Guide (<https://ies.ed.gov/funding/pdf/submissionguide.pdf>) for more information about preparing and submitting your application using the required application package for this competition through Grants.gov (<https://www.grants.gov/>).

The project narrative and appendices are critical parts of the IES application because they include the substantive content that will be reviewed for theoretical and practical significance and scientific merit.

### **1. Appendix A: Dissemination History and Plan (Required)**

You **must** include Appendix A after the project narrative. Appendix A includes two sections: Dissemination History and Dissemination Plan. Appendix A **must** meet the general formatting guidelines and be **no more than three pages**, including one page for the Dissemination History and two pages for the Dissemination Plan. If Appendix A exceeds this three-page limit, IES will remove any pages after the third page of the appendix before it is forwarded for scientific peer review.

#### *(a) Dissemination History*

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 improving academic instruction and lifelong learning. Applicants who have never had an IES grant should focus on dissemination history of related, past projects. Reviewers will use this information to determine whether the project personnel have the experience necessary to carry out the proposed dissemination plan.

The dissemination history should include the following:

- A brief description of the outcomes of prior research, including products developed or tested and how the project's findings and products were disseminated
- For interventions or assessments that were developed through one or more projects and have evidence of impact on learner outcomes or of the validity and reliability of the assessment for intended purposes and learners, an explanation for how it has been made available to users, the number of active users of the product, the number of users of the product during its history, and funding agreements or outside investments for commercialization (if applicable)

- 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

### *(b) Dissemination Plan*

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 (see [Part III](#)).

Identify the audiences that you expect will most likely benefit from your research such as federal and state policymakers and program administrators and local school system administrators, school administrators, educators, parents, learners, and other education researchers.

Discuss the different ways in which you intend to reach these audiences through the publications, presentations, and products you expect to produce.

IES-funded researchers are expected to publish and present in venues designed for policymakers and practitioners in a manner and style useful and usable to this audience. For example -

- Report findings to the education agencies and schools that provided the project with data and data-collection opportunities.
- Give presentations and workshops at meetings of professional associations of teachers and leaders.
- Publish in practitioner journals.
- Engage in activities with relevant IES-funded Research and Development (R&D) Centers (<https://ies.ed.gov/ncser/research/randdCenters.asp>), Research Networks (<https://ies.ed.gov/ncser/research/researchNetworks.asp>), or Regional Educational Laboratories (RELs) (<https://ies.ed.gov/ncee/edlabs/>).
- Engage in activities with relevant Department of Education, Office of Special Education Programs (OSEP)-funded Technical Assistance Centers (<https://osepideasthatwork.org/find-center-or-grant/find-a-center>).

IES-funded researchers who create products for use in research and practice as a result of their project (such as curricula, professional development programs, measures and assessments, guides, and toolkits) are expected to make these products available for research purposes or (after evaluation or validation) for general use. IES encourages researchers to consider how these products could be brought to market to increase their dissemination and use.

IES-funded researchers are expected to publish their findings in scientific, peer-reviewed journals and present them at conferences attended by other researchers.

Your dissemination plan should reflect the purpose of your project type.

- [Measurement](#) projects support the development and validation of new or modified instruments for use by educators or education researchers for specific purposes, contexts, and populations. Dissemination of findings should clearly identify the psychometric properties of the assessment and the specific uses and populations for which the assessment was validated. Should a project fail to validate an assessment for a specific use and population, these findings are important to

disseminate in order to support decision making regarding the assessment's current use and further development. As appropriate, the cost of administering the assessment should be determined and communicated as part of dissemination work.

- [Exploration](#) projects identify relationships between individual-, educator-, school-, and policy-level characteristics and education outcomes and factors outside of education settings that may influence or guide those relationships. Findings from Exploration projects are most useful in pointing out potentially fruitful areas for further attention from researchers, policymakers, and practitioners rather than providing strong evidence for adopting specific interventions or assessments.
- [Development and Innovation](#) projects develop new or revise existing interventions and pilot them to provide evidence of promise for improving education outcomes. For example, if the results of your pilot study indicate the intervention is promising, dissemination efforts should focus on letting others know about the availability of the new intervention for more rigorous evaluation and further adaptation. Dissemination efforts from these projects could also provide useful information on the design process, how intervention development can be accomplished in partnership with practitioners, and the types of new practices that are feasible or not feasible for use by practitioners. The cost of implementing the intervention needs to be measured and communicating the cost of interventions should be part of dissemination work.
- [Initial Efficacy and Follow-Up](#) projects evaluate the impact of an intervention on education outcomes. IES considers all types of findings from these projects to be potentially useful to researchers, policymakers, and practitioners and expects that these findings will be disseminated in order to contribute to the full body of evidence on the intervention and will form the basis for recommendations. The costs of interventions need to be measured and communicating the costs and cost-effectiveness of interventions should be part of dissemination work. **Findings of a beneficial impact on learner outcomes** could support the wider use of the intervention and the further adaptation of the intervention for different conditions. **Findings of no impact on learner outcomes** (with or without impacts on more intermediate outcomes such as a change in teacher instruction) are important for decisions regarding the ongoing use and wider dissemination of the intervention, further revision of the intervention and its implementation, and revision of the theory of change underlying the intervention.

The Dissemination History and Plan is the only information that may be included in Appendix A; all other materials will be removed prior to review of the application.

## ***2. Appendix B: Response to Reviewers (Required for Resubmissions)***

If your application is a resubmission, you **must** include Appendix B. If your application is one that you consider to be new but that is similar to a previous application, you should include Appendix B. Appendix B **must** meet the general formatting guidelines and be **no more than three pages**. If Appendix B exceeds this page limit, IES will remove any pages after the third page of the appendix before it is forwarded for scientific peer review. Note that an application that was previously submitted to a different topic within this competition or to another IES grant competition is still considered a resubmission.

Use Appendix B to describe how the revised application is responsive to prior reviewer comments. If you have submitted a somewhat similar application in the past but are submitting the current

application as a new application, you should use Appendix B to provide a rationale explaining why the current application should be considered a “new” application rather than a “resubmitted” application.

This response to the reviewers is the only information that should be included in Appendix B; all other material will be removed prior to review of the application.

### ***3. Appendix C: Supplemental Charts, Tables, and Figures (Optional)***

Appendix C **must** meet the general formatting guidelines and be **no more than 15 pages**. If Appendix C exceeds this page limit, IES will remove any pages after the 15<sup>th</sup> page of the appendix before it is forwarded for scientific peer review. In Appendix C, you may include figures, charts, or tables with supplementary information like a timeline for your research project, a diagram of the management structure of your project, or examples of measures used to collect data for your project such as individual test items, tests, surveys, and observation and interview protocols.

These are the only materials that may be included in Appendix C; all other material will be removed prior to review of the application.

### ***4. Appendix D: Examples of Intervention or Assessment Materials (Optional)***

Appendix D **must** meet the general formatting guidelines and be **no more than 10 pages**. If Appendix D exceeds this page limit, IES will remove any pages after the 10<sup>th</sup> page of the appendix before it is forwarded for scientific peer review. If you are proposing to explore, develop, evaluate, or validate an intervention or assessment you may include examples of curriculum materials, computer screen shots, assessment items, or other materials used in the intervention or assessment to be explored, developed, evaluated, or validated.

These are the only materials that should be included in Appendix D; all other material will be removed prior to review of the application.

### ***5. Appendix E: Letters of Agreement (Optional)***

There is **no recommended page length** for Appendix E. Use this appendix to provide copies of letters of agreement from schools, districts, platform developers, and/or other settings and data sources that will be a part of the research or provide data for the proposed research and/or individuals who will serve as consultants. Ensure that the letters reproduce well so that reviewers can easily read them. Do not reduce the size of the letters. See the IES Application Submission Guide (<https://ies.ed.gov/funding/pdf/submissionguide.pdf>) for guidance regarding the size of file attachments.

Letters of agreement should include enough information to make it clear that the author of the letter understands the nature of the commitment of time, space, and resources to the research project that will be required if the application is funded. A common reason for projects to fail is loss of participating schools and districts. Letters of agreement regarding the provision of data should make it clear that the author of the letter will provide the data described in the application for use in the proposed research and in time to meet the proposed schedule.

IES understands that, due to school closings associated with COVID-19, you may have difficulty providing letters from schools, districts, and other education sites that would participate in or provide data for the proposed research. If you are unable to provide these letters in your application, 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. NOTE: Special conditions may be placed on the grant awards if these letters are not received before the award date. Reviewers will be instructed to not penalize applicants for failure to include letters of agreement due to the coronavirus pandemic.

These are the only materials that may be included in Appendix E; all other material will be removed prior to review of the application.

### ***6. Appendix F: Data Management Plan (Required for Exploration and Initial Efficacy and Follow-Up)***

If you are applying under [Exploration](#) or [Initial Efficacy and Follow-Up](#) you **must** include Appendix F. Appendix F must meet the general formatting guidelines and be **no more than five pages**. If Appendix F exceeds this page limit, IES will remove any pages after the fifth page of the appendix before it is forwarded for scientific peer review.

Include your data management plan (DMP) in Appendix F. The content of the DMP is discussed under Data Management Plan in [Exploration](#) and [Initial Efficacy and Follow-Up](#).

This is the only material that should be included in Appendix F; all other material will be removed prior to review of the application.

## **D. Other Narrative Content**

In addition to the project narrative (see [Part III: Project Type Requirements and Recommendations](#)) and required and optional appendices (see above), you will also prepare a project summary/structured abstract, a bibliography and references cited, an exempt or non-exempt research on human subjects narrative, and biosketches for key personnel to include as file attachments in your application. See the IES Application Submission Guide (<https://ies.ed.gov/funding/pdf/submissionguide.pdf>) for more information about preparing and submitting your application using the required application package for this competition on Grants.gov (<https://www.grants.gov/>).

### ***1. Project Summary/Structured Abstract***

You **must** submit the project summary/structured abstract as a separate PDF attachment in the application package. If your project is recommended for funding, IES will use this abstract as the basis for the online abstracts that we post when new awards are announced. We recommend that the project summary/structured abstract be two-pages long and follow the format used for IES online abstracts (<https://ies.ed.gov/funding/grantsearch/>).

#### *(a) Title*

- **Title:** Distinct, descriptive title of the project.
- **Topic and Project Type:** Identify the primary and secondary (if applicable) topic and project type to which you are applying (see [Parts II](#) and [III](#)). This information should match the topic(s)

and project type codes entered for Item 4b: Agency Routing Number on the SF 424 Application for Federal Assistance form (see the IES Application Submission Guide (<https://ies.ed.gov/funding/pdf/submissionguide.pdf>) and the topic and project type codes in [Part VII](#) for more information).

### *(b) Project Summary*

The purpose of the project summary is to provide a high-level overview that is accessible to a range of audiences, such as policymakers, practitioners, and the general public. This section should use short, active sentences to briefly describe the significance of the project, project activities, and the intended outcomes.

- **Purpose:** A brief description of the purpose of the project and its significance for improving education in the United States. This should include why the research is important, what this project will do to address the need, and the general expected outcomes of the project.
- **Project Activities:** An overview of the sample, research design, and methods.
- **Products:** A brief description of the expected products of the project, including the intervention or assessment to be developed and the information that will be learned and disseminated.

### *(c) Structured Abstract*

The purpose of the structured abstract is to provide key details about the project activities. This section is most likely to be used by other researchers but should be written in a way that is accessible to anyone who wants more information about the project.

- **Setting:** A brief description of the location (identified at the state level) where the research will take place and other important characteristics of the locale, such as whether it is rural or urban.
- **Population/Sample:** A brief description of the sample including number of participants; the composition of the sample including age or grade level, race/ethnicity, or disability status as appropriate; and the population the sample is intended to represent.
- **Intervention/Instrument/Factors:** For Development and Innovation, Initial Efficacy and Follow-Up, and Measurement projects, a brief description of the intervention or instrument the research team will develop, evaluate, or validate. For Exploration projects, a brief description of the factors that will be examined in relation to learner outcomes.
- **Research Design and Methods:** A brief description of the major features of the design and methodology. For example, specify whether you will use a randomized controlled trial, a quasi-experimental design, or a single case design for an Initial Efficacy and Follow-Up study. As another example, specify the qualitative methods you will use to inform the design process for a Development project. Describe design and methods year by year, in terms of steps or phases as applicable.
- **Control Condition:** If applicable, a brief description of the control or comparison condition, including the participants and what they will experience. If there is no treatment contrast, that can be noted as well.
- **Key Measures:** A brief description of key measures, including what constructs the measures assess and whether those constructs are study outcomes.

- **Data Analytic Strategy:** A brief description of the data analytic strategies that the research team will use to answer the research questions.
- **Cost Analysis:** If applicable, a brief description of the cost and/or cost-effectiveness analyses planned.
- **Related IES Projects:** Indicate whether the proposed research is related to a completed or ongoing IES-funded project by noting the title of the related IES project and providing a link to the online IES abstract.

See our online search engine of funded research grants (<https://ies.ed.gov/funding/grantsearch/>) for examples of the content to be included in your project summary/structured abstract.

## ***2. Bibliography and References Cited***

You **must** submit the bibliography and references cited as a separate PDF attachment in the application package. There is **no recommended page length** for the bibliography and references cited. You should include complete citations, including the names of all authors (in the same sequence in which they appear in the publication), titles of relevant elements such as the article/journal and chapter/book, page numbers, and year of publication for literature cited in the project narrative.

## ***3. Human Subjects Narrative***

You **must** submit an exempt or non-exempt human subjects narrative as a separate PDF attachment in the application package. There is **no recommended page length** for the human subjects narrative. See *Information About the Protection of Human Subjects in Research Supported by the Department of Education* (<https://www2.ed.gov/policy/fund/guid/humansub/overview.html>) for a brief overview of principles, regulations, and policies which affect research involving human subjects in research activities supported by the Department of Education.

Note that the Revised Common Rule is now in effect with changes that will affect Institutional Review Board (IRB) review of your proposed research protocol. Take care to address how changes to exemption and continuing review procedures, and the use of a single IRB, will be addressed should your application be recommended for funding.

The U.S. Department of Education does not require certification of IRB approval at the time you submit your application. However, if an application that involves non-exempt human subjects research is recommended for funding, the designated U.S. Department of Education official will request that you obtain and send the certification to the Department within 30 days of the formal request from the Department.

## ***4. Biographical Sketches for Key Personnel***

You **must** submit a biographical sketch (an abbreviated CV plus information about current and pending support) for each person named as key personnel in your application. You may also submit biographical sketches for consultants (optional). Each biographical sketch with current and pending support information **must be no more than five pages in length** and follow the general formatting guidelines. If a biographical sketch exceeds this page limit, IES will remove any pages after the fifth page before it is forwarded for scientific peer review.

Biographical sketches are submitted as separate PDF attachments in the application package. IES strongly encourages applicants to use SciENcv (<https://www.ncbi.nlm.nih.gov/sciencv/>) where you will find an IES biosketch form. You may also develop your own biosketch format. If you use SciENcv, the information on current and pending support will be entered into the IES biosketch template. If you use your own format, you will need to provide this information in a separate table.

Be sure to include your ORCID number (Open Researcher and Contributor; <https://orcid.org/>) if you have one and consider establishing one if you have yet to do so.

The biographical sketch for the principal investigator, each co-principal investigator, and other key personnel should show how key personnel possess training and expertise commensurate with their specified duties on the proposed project, for example by describing relevant publications, grants, and research experience.

Provide a list of current and pending grants for the principal investigator, each co-principal investigator, and other key personnel, along with the proportion of their time, expressed as percent **effort over a 12-month calendar year**, allocated to each project. Include the proposed IES grant as one of the pending grants in this list.

## **Part V: Competition Regulations and Review Criteria**

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### **A. Funding Mechanisms and Restrictions**

#### **1. Mechanism of Support**

IES intends to award grants pursuant to this Request for Applications.

#### **2. Funding Available**

Although IES intends to support the topics and project types described in this announcement, all awards pursuant to this Request for Applications are contingent upon the availability of funds and the receipt of meritorious applications. IES makes its awards to the highest quality applications, as determined through scientific peer review, regardless of topic or project type.

**The size of the award depends on the project type and scope of the project.** Please attend to the duration and budget maximums set for each project type in [Part III: Project Type Requirements and Recommendations](#).

#### **3. Special Considerations for Budget Expenses**

##### *(a) Indirect Cost Rate*

When calculating your expenses for research conducted in field settings, you should apply your institution's federally negotiated off-campus indirect cost rate. Please note that the Indirect Cost Group (ICG) in the U.S. Department of Education's Office of the Chief Financial Officer will not be available for assistance during the application preparation process. If your institution does not have an indirect cost rate and you receive a grant from IES, the ICG group can help with obtaining an indirect cost rate once the grant is awarded.

Institutions, both primary grantees and subawardees, not located in the territorial United States may not charge indirect costs.

##### *(b) Meetings and Conferences*

If you are requesting funds to cover expenses for hosting meetings or conferences, please note that there are statutory and regulatory requirements in determining whether costs are reasonable and necessary. Please refer to the Office of Management and Budget's (OMB's) Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance), 2 CFR, §200.432 Conferences ([https://www.ecfr.gov/cgi-bin/text-idx?SID=dcd3efbcf2b6092f84c3b1af32bdcc34&node=se2.1.200\\_1432&rgn=div8](https://www.ecfr.gov/cgi-bin/text-idx?SID=dcd3efbcf2b6092f84c3b1af32bdcc34&node=se2.1.200_1432&rgn=div8)).

Federal grant funds cannot be used to pay for alcoholic beverages or entertainment, which includes costs for amusement, diversion, and social activities. In general, federal funds may not be used to pay for food. A grantee hosting a meeting or conference may not use grant funds to pay for food for conference attendees unless doing so is necessary to accomplish legitimate meeting or conference business. You may request funds to cover expenses for working meetings, such as working lunches; however, IES will determine whether these costs are allowable in keeping with the Uniform Guidance

Cost Principles. Grantees are responsible for the proper use of their grant awards and may have to repay funds to the Department if they violate the rules for meeting- and conference-related expenses or other disallowed expenditures.

#### **4. Program Authority**

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

#### **5. Applicable Regulations**

Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance) codified at CFR Part 200. The Education Department General Administrative Regulations (EDGAR) in 34 CFR parts 77, 81, 82, 84, 86 (part 86 applies only to institutions of higher education), 97, 98, and 99. In addition 34 CFR part 75 is applicable, except for the provisions in 34 CFR 75.100, 75.101(b), 75.102, 75.103, 75.105, 75.109(a), 75.200, 75.201, 75.209, 75.210, 75.211, 75.217, 75.219, 75.220, 75.221, 75.222, and 75.230.

## **B. Additional Requirements**

### **1. Pre-Award**

#### *(a) Clarification and Budget Questions*

IES uses the scientific peer review process as the first step in making funding decisions. If your application is recommended for funding based on the outcome of the scientific peer review, an IES program officer will contact you to clarify any issues that were raised by the peer reviewers and to address whether the proposed budget adequately supports the scope of work and meets federal guidelines.

#### *(b) Demonstrating Access to Data and Education Settings*

The research you propose to conduct under a specific topic and project type will most likely require that you have (or will obtain) access to education settings such as classrooms, schools, districts, colleges/universities; secondary datasets; or studies currently under way. In such cases, you will need to provide evidence that you have access to these resources prior to receiving funding. Whenever possible, include letters of agreement in [Appendix E](#) from those who have responsibility for or access to the data or settings you wish to incorporate when you submit your application. Even in circumstances where you have included such letters with your application, **IES will require additional supporting evidence prior to the release of funds.** If you cannot provide such documentation, IES may not award the grant or may withhold funds.

You will need supporting evidence of partnership or access if you are doing any of the following.

#### **(1) Conducting research in or with education settings**

If your application is being considered for funding based on scientific merit scores from the peer review panel and your research relies on access to education settings, you will need to provide documentation that you have access to the necessary settings in order to receive the grant. This means

that if you do not have permission to conduct the proposed project in the necessary number of settings at the time of application, you will need to provide documentation to IES indicating that you have successfully recruited the necessary number of settings for the proposed research before the full first-year costs will be awarded. If you recruited sufficient numbers of settings prior to the application, IES will ask you to provide documentation that the settings originally recruited for the application are still willing to partner in the research.

### **(2) Using secondary datasets**

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

### **(3) Building on existing studies**

You may propose studies that piggyback onto an ongoing study, which will require access to those subjects and data. In such cases, the principal investigator of the existing study should be one of the members of the research team applying for the grant to conduct the new project.

In addition to obtaining evidence of access, IES strongly advises applicants to establish a written agreement, within 3 months of receipt of an award, among all key collaborators and their institutions (including principal and co-principal investigators) regarding roles, responsibilities, access to data, publication rights, and decision-making procedures.

### *(c) Assessment of Past Performance*

IES considers the applicant's performance and use of funds under a previous federal award as part of the criteria for making a funding decision. Performance on previous Department of Education awards is considered as is additional information that may be requested from the applicant, including compliance to the IES Public Access Policy (applicable for all grants funded from 2012 to present; <https://ies.ed.gov/funding/researchaccess.asp>).

## **2. Post Award**

### *(a) Compliance with IES Policy on Public Access to Data and Results*

#### **(1) Access to data**

You must include a [data management plan \(DMP\) in Appendix F](#) if you are submitting an [Exploration](#) application or an [Initial Efficacy and Follow-Up](#) application. The scientific peer review process will not include the DMP in the scoring of the scientific merit of the application. Instead, IES program officers will be responsible for reviewing the completeness of the proposed DMP. The costs of the DMP can be covered by the grant and should be included in the budget and explained in the budget narrative.

**(2) Access to results: Grantee submissions to ERIC**

IES requires all grantees to submit the electronic version of peer-reviewed scholarly publications to ERIC (<https://eric.ed.gov/>), a publicly accessible and searchable electronic database of education research that makes available full-text documents to the public for free. This public access requirement (<https://ies.ed.gov/funding/researchaccess.asp>) applies to peer-reviewed, original scholarly publications that have been supported (in whole or in part) with direct funding from IES, although it does not apply to book chapters, editorials, reviews, or non-peer-reviewed conference proceedings. **As the designated representative for the grantee institution, IES holds the principal investigator responsible** for ensuring that authors of publications stemming from the grant comply with this requirement.

The author's final manuscript is defined as the final version accepted for journal publication and includes all modifications from the peer review process. Submission of accepted manuscripts for public accessibility through ERIC is strongly encouraged as soon as possible **but must occur within 12 months of the publisher's official date of publication.** ERIC will not make the accepted manuscripts available to the public prior to the end of the 12-month embargo period, unless specified by the publisher.

The ERIC website includes a homepage for the Grantee and Online Submission System (<https://eric.ed.gov/submit/>), as well as a Frequently Asked Questions page (<https://eric.ed.gov/?granteefaq>). During the submission process, authors will submit bibliographic information from the publication, including title, authors, publication date, journal title, and associated IES award number(s).

*(b) Pre-Register Exploration and Initial Efficacy Studies*

Grantees must register their studies on a suitable platform within the first year of receiving a new award. There are several options for preregistration including the Registry of Efficacy and Effectiveness Studies (REES; <https://sreereg.icpsr.umich.edu/sreereg/>), the Open Science Framework (OSF; <https://osf.io/>), ClinicalTrials.gov (<https://clinicaltrials.gov/>), The American Economic Association's Registry for Randomized Controlled Trials (AEA RCT Registry; <https://www.socialscienceregistry.org/>), Evidence in Governance and Politics (EGAP; <https://egap.org/content/registration>), Uri Simonsohn's AsPredicted (<https://aspredicted.org/>), and trial registries in the WHO Registry Network (<https://www.who.int/ictrp/network/en/>).

*(c) Special Conditions on Grants*

IES may impose special conditions on a grant pertinent to the proper implementation of key aspects of the proposed research design or if the grantee is not financially stable, has a history of unsatisfactory performance, has an unsatisfactory financial or other management system, has not fulfilled the conditions of a prior grant, or is otherwise not responsible.

*(d) Attendance at the Annual IES Principal Investigators Meeting*

The principal investigator (PI) is required to attend one meeting each year (for up to 3 days) in Washington, DC with other IES grantees and IES staff. The project's budget should include this meeting. PIs who are not able to attend the meeting may designate another person who is key personnel on the research team to attend.

## C. Overview of Application and Scientific Peer Review Process

### 1. Submitting Your Letter of Intent

Letters of intent (LOIs) are submitted online at the IES Peer Review Information Management Online (PRIMO) system (<https://iesreview.ed.gov/LOI/LOISubmit>). **Select the letter of intent form for the competition under which you plan to submit your application.** The online submission form contains fields for each of the seven content areas listed below. Use these fields to provide the requested information. The project description should be single-spaced and is recommended to be no more than one page (about 3,500 characters). The LOI is non-binding and optional but strongly recommended. If you submit an LOI, a program officer will contact you regarding your proposed research. IES staff also use the information in the LOI to identify the expertise needed for the scientific peer review panels and to secure a sufficient number of reviewers to handle the anticipated number of applications.

#### *Elements for the Letter of Intent:*

- Descriptive title
- Primary and if applicable, secondary topic and project type that you will address
- Brief description of the proposed project
- Name, institutional affiliation, address, telephone number, and email address of the principal investigator and any co-principal investigators
- Name and institutional affiliation of any key collaborators and contractors
- Duration of the proposed project (attend to the Duration maximums for each project type)
- Estimated total budget request (attend to the Budget maximums for each project type)

### 2. Resubmissions and Multiple Submissions

If you intend to revise and resubmit an application that was submitted to a previous IES competition but that was not funded, you **must** indicate on the SF 424 Application for Federal Assistance Form in the application package (see IES Application Submission Guide; <https://ies.ed.gov/funding/pdf/submissionguide.pdf>) that the FY 2021 application is a resubmission (Item 8) and include the application number of the previous application (an 11-character alphanumeric identifier beginning “R324” or “R305” entered in Item 4a). Prior reviews will be sent to this year’s reviewers along with the resubmitted application. You **must describe** your response to the prior reviews using [Appendix B: Response to Reviewers](#). Revised and resubmitted applications will be reviewed according to this FY 2021 Request for Applications.

If you submitted a somewhat similar application in the past and did not receive an award but are submitting the current application as a new application, you should indicate on the application form (Item 8) that your FY 2021 application is a new application. In Appendix B, you should provide a rationale explaining why your FY 2021 application should be considered a new application rather than a revision. If you do not provide such an explanation, then IES may send the reviews of the prior unfunded application to this year’s reviewers along with the current application.

You may submit applications to more than one of the FY 2021 IES grant programs and multiple applications within the Special Education Research Grants program. However, you may submit a given application only once for the FY 2021 grant competitions, meaning you may not submit the same

application or similar applications to multiple grant programs. If you submit the same or similar applications, IES will determine whether and which applications will be accepted for review and/or will be eligible for funding.

### ***3. Application Processing***

**Applications must be submitted electronically and received no later than 11:59:59 p.m. Eastern Time on August 20, 2020** through the internet using the software provided on the Grants.gov (<https://www.grants.gov/>) website. You must follow the application procedures and submission requirements described in the IES Application Submission Guide (<https://ies.ed.gov/funding/pdf/submissionguide.pdf>) and on Grants.gov (<https://www.grants.gov/>).

After applications are fully uploaded and validated at Grants.gov, the U.S. Department of Education receives the applications for processing and transfer to the IES PRIMO system (<https://iesreview.ed.gov/>). PRIMO allows applicants to track the progress of their application via the Applicant Notification System (ANS).

Approximately one to two weeks after the application deadline, invitation emails are sent to applicants who have never applied to IES before to create their individual PRIMO ANS accounts. Both the PI and the AOR will receive invitation emails. Approximately four to six weeks after the application deadline, all applicants (new and existing ANS users) will begin to receive a series of emails about the status of their application. See the IES Application Submission Guide (<https://ies.ed.gov/funding/pdf/submissionguide.pdf>) for additional information about ANS and PRIMO.

**Once an application has been submitted and the application deadline has passed, you may not submit additional materials or information for inclusion with your application.**

### ***4. Scientific Peer Review Process***

IES will forward all applications that are compliant and responsive to this Request for Applications to be evaluated for scientific and technical merit. Scientific reviews are conducted in accordance with the review criteria stated below and the review procedures posted on the IES website ([https://ies.ed.gov/director/sro/application\\_review.asp](https://ies.ed.gov/director/sro/application_review.asp)) by a panel of experts who have substantive and methodological expertise appropriate to the program of research and Request for Applications.

Each compliant and responsive application is assigned to one of the IES review panels (<https://ies.ed.gov/director/sro/reviewers.asp>). Applications are assigned to a panel according to the match between the overall expertise of reviewers on each panel and the content and methodological approach proposed in each application.

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

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

### ***5. Review Criteria for Scientific Merit***

The purpose of IES-supported research is to contribute to solving education problems and provide reliable information about the education practices that support learning and improve academic achievement and access to education for all learners. IES expects reviewers to assess the scientific rigor and practical significance of the research proposed in order to judge the likelihood that it will make a meaningful contribution to the larger IES mission. Information about each of these criteria is described in [Part III: Project Type Requirements and Recommendations](#).

#### *(a) Significance*

Does the applicant address recommendations described in the Significance section for the project type under which the applicant is submitting the application?

#### *(b) Research Plan*

Does the applicant address recommendations described in the Research Plan section for the project type under which the applicant is submitting the application?

#### *(c) Personnel*

Does the applicant address recommendations described in the Personnel section for the project type under which the applicant is submitting the application? Do the principal investigator, project director, and other key personnel possess appropriate training and experience and will they commit sufficient time to competently implement the proposed research?

#### *(d) Resources*

Does the applicant address recommendations described in the Resources section for the project type under which the applicant is submitting the application? Does the applicant have the facilities, equipment, supplies, and other resources required to support the proposed activities? Do the commitments of each partner show support for the implementation and success of the project?

#### *(e) Dissemination*

Does the application address recommendations described in Appendix A: Dissemination History and Plan? Does the applicant present a dissemination plan that is tailored to the purpose of the project type and designed to reach a wide range of audiences? Does the applicant describe a dissemination history that demonstrates past success in sharing results of education research widely and appropriately?

### ***6. Award Decisions***

The following will be considered in making award decisions for responsive and compliant applications:

- Scientific merit as determined by scientific peer review
- Performance and use of funds under a previous federal award

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- Contribution to the overall program of research described in this request for applications
- Ability to carry out the proposed research within the maximum award and duration requirements
- Availability of funds

## Part VI: Compliance and Responsiveness Checklist

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Only compliant and responsive applications will be forwarded for scientific peer review. Use these three checklists below to better ensure you have included all required components for compliance, all general requirements, and all required project narrative elements.

See the IES Application Submission Guide (<https://ies.ed.gov/funding/pdf/submissionguide.pdf>) for an application checklist that describes the forms in the application package that must be completed and the PDF files that must be attached to the forms for a successful submission through Grants.gov.

| Compliance   |
|--|
| Have you included a project narrative?   |
| Do the project narrative and other narrative content adhere to all formatting requirements   |
| Do the project narrative and other narrative content adhere to all page maximums as described in the RFA? IES will remove any pages above the maximum before forwarding an application for scientific peer review. |
| Have you included Appendix A: Dissemination History and Plan?  |
| If you are resubmitting an application, have you included Appendix B: Response to Reviewers?   |
| If you are submitting an Exploration or Initial Efficacy and Follow-Up application, have you included Appendix F: Data Management Plan?  |

| General Requirements for Responsiveness  |
|--|
| Have you met all the Requirements for an application?  |
| Is this research relevant to education in the United States, and does it address factors under the control of U.S. education systems?  |
| Have you indicated a primary topic, and if applicable, a secondary topic, for your application?  |
| Have you indicated a single project type for your application?   |
| Does your project narrative include the four required sections and the associated requirements for the selected IES Project Type? Did you describe the elements required for each section as listed below? |

| Required Project Narrative Elements for Responsiveness |   |   |  |  |
|--|---|---|--|--|
|  | <u>Measurement</u>  | <u>Exploration</u>  | <u>Development and Innovation</u>  | <u>Initial Efficacy and Follow-Up</u>  |
| Significance   | <ul style="list-style-type: none"> <li>instrument(s) you propose to develop, refine, and/or validate</li> </ul>   | <ul style="list-style-type: none"> <li>the factors you will study</li> </ul>  | <ul style="list-style-type: none"> <li>the intervention you propose to develop or revise</li> </ul>  | <ul style="list-style-type: none"> <li>the intervention you propose to evaluate</li> <li>for a Follow-Up study, the evidence from the original evaluation</li> </ul>   |
| Research Plan  | <ul style="list-style-type: none"> <li>characteristics of your sample</li> <li>research design, methods, and data analysis plans for                             <ul style="list-style-type: none"> <li>development and/or refinement, as applicable</li> <li>validation</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>characteristics of your sample</li> <li>research design and methods</li> <li>data analysis plan</li> </ul> | <ul style="list-style-type: none"> <li>characteristics of your sample</li> <li>research design, methods, and data analysis plans                             <ul style="list-style-type: none"> <li>for developing the intervention</li> <li>for determining the intervention's usability and feasibility</li> <li>for determining the fully developed intervention's promise for generating beneficial learner outcomes through a pilot study</li> </ul> </li> <li>cost analysis plan for determining the costs of implementing the fully developed intervention in the context of the pilot study</li> </ul> | <ul style="list-style-type: none"> <li>characteristics of your sample</li> <li>research design and methods</li> <li>power analysis</li> <li>data analysis plan</li> </ul> <p>In addition, for an Initial Efficacy study</p> <ul style="list-style-type: none"> <li>cost analysis plan</li> <li>cost-effectiveness analysis plan or a rationale for why a cost-effectiveness analysis cannot be done</li> </ul> |
| Personnel  | <ul style="list-style-type: none"> <li>project team</li> </ul>  | <ul style="list-style-type: none"> <li>project team</li> </ul>  | <ul style="list-style-type: none"> <li>project team</li> </ul>   | <ul style="list-style-type: none"> <li>project team</li> </ul>   |
| Resources  | <ul style="list-style-type: none"> <li>resources to conduct the project</li> </ul>  | <ul style="list-style-type: none"> <li>resources to conduct the project</li> </ul>  | <ul style="list-style-type: none"> <li>resources to conduct the project</li> </ul>   | <ul style="list-style-type: none"> <li>resources to conduct the project</li> </ul>   |

## Part VII: Topic and Project Type Codes

Applications to the **Special Education Research Grants (CFDA 84.324A) program** are submitted under a single primary topic and a single project type. If the focus of your research spans more than one topic area, you may also enter a secondary topic area. You must enter the appropriate primary topic and project type code in Item 4b of the SF 424 Application for Federal Assistance form (for more information about this form, see the IES Application Submission Guide at <https://ies.ed.gov/funding/pdf/submissionguide.pdf>). For example, an application to the Special Education Research Grants program (CFDA 84.324A) under the Early Intervention and Early Learning primary topic and the Development and Innovation project type should have the following entered in the field for Item 4b:

NCSER-EIEL-Development

If your application has a secondary topic focus, such as student behavior, you must enter the secondary topic code (without the project type) as a second and separate line in Item 4b. For example:

NCSER-EIEL-Development

NCSER-SEB

| Topics   | Codes       |
|--|-------------|
| Cognition and Student Learning   | NCSER-CASL  |
| Early Intervention and Early Learning                                    | NCSER-EIEL  |
| Educators and School-Based Service Providers                             | NCSER-Edu   |
| Families of Children with Disabilities                                   | NCSER-Fam   |
| Reading, Writing, and Language   | NCSER-RWL   |
| Science, Technology, Engineering, and Mathematics (STEM)                 | NCSER-STEM  |
| Social, Emotional, and Behavioral Competence                             | NCSER-SEB   |
| Systems, Policy, and Finance   | NCSER-Sys   |
| Transition to Postsecondary Education, Career, and/or Independent Living | NCSER-Trans |

| Project Types                  | Codes            |
|--------------------------------|------------------|
| Measurement                    | Measurement      |
| Exploration                    | Exploration      |
| Development and Innovation     | Development      |
| Initial Efficacy and Follow-up | Initial Efficacy |

## **Part VIII: Program Officer Contact Information**

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Please contact IES program officers with any questions you may have about the best topic(s) and project type for your application. Program officers function as knowledgeable colleagues who can provide substantive feedback on your research idea, including reading a draft of your project narrative.

### **Cognition and Student Learning**

Katherine (Katie) Taylor, Ph.D.  
Email: [Katherine.Taylor@ed.gov](mailto:Katherine.Taylor@ed.gov)  
Telephone: (202) 245-6716

### **Early Intervention and Early Learning**

Amy Sussman, Ph.D.  
Email: [Amy.Sussman@ed.gov](mailto:Amy.Sussman@ed.gov)  
Telephone: (202) 245-7424

### **Educators and School-Based Service Providers**

Katherine (Katie) Taylor, Ph.D.  
Email: [Katherine.Taylor@ed.gov](mailto:Katherine.Taylor@ed.gov)  
Telephone: (202) 245-6716

### **Families of Children with Disabilities**

Jacquelyn Buckley, Ph.D.  
Email: [Jacquelyn.Buckley@ed.gov](mailto:Jacquelyn.Buckley@ed.gov)  
Telephone: (202) 245-6607

### **Reading, Writing, and Language**

Sarah Brasiel, Ph.D.  
Email: [Sarah.Bراسiel@ed.gov](mailto:Sarah.Bراسiel@ed.gov)  
Telephone: (202) 245-6734

### **Science, Technology, Engineering, and Mathematics (STEM)**

Sarah Brasiel, Ph.D.  
Email: [Sarah.Bراسiel@ed.gov](mailto:Sarah.Bراسiel@ed.gov)  
Telephone: (202) 245-6734

### **Social, Emotional, and Behavioral Competence**

Jacquelyn Buckley, Ph.D.  
Email: [Jacquelyn.Buckley@ed.gov](mailto:Jacquelyn.Buckley@ed.gov)  
Telephone: (202) 245-6607

### **Systems, Policy, and Finance**

Katherine (Katie) Taylor, Ph.D.  
Email: [Katherine.Taylor@ed.gov](mailto:Katherine.Taylor@ed.gov)  
Telephone: (202) 245-6716

### **Transition to Postsecondary Education, Career, and/or Independent Living**

Jacquelyn Buckley, Ph.D.  
Email: [Jacquelyn.Buckley@ed.gov](mailto:Jacquelyn.Buckley@ed.gov)  
Telephone: (202) 245-6607