

# Education Research Grants Program

Assistance Listing Number (ALN): 84.305A

U.S. DEPARTMENT OF EDUCATION

*A Product of the National Center for Education Research*

<b>Letter of Intent Due:</b>	August 10, 2023	<a href="https://iesreview.ed.gov/LOI/LOISubmit">https://iesreview.ed.gov/LOI/LOISubmit</a>
<b>Application Package Available:</b>	July 20, 2023	<a href="https://www.grants.gov/">https://www.grants.gov/</a>
<b>Application Due:</b>	No later than 11:59:59 p.m. Eastern Time on September 21, 2023	<a href="https://www.grants.gov/">https://www.grants.gov/</a>
<b>Possible Start Dates:</b>	July 1 – September 1, 2024	

See the companion IES Application Submission Guide ([https://ies.ed.gov/funding/submission\\_guide.asp](https://ies.ed.gov/funding/submission_guide.asp)) for guidance on preparing and submitting applications through Grants.gov.

# Table of Contents

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<b>Part I: Overview and Requirements</b> .....	<b>1</b>
A. Purpose of the Education Research Grants Program.....	1
B. Requirements .....	1
1. Eligible Study Populations .....	2
2. Research Topics and Education Outcomes.....	2
3. Education Settings .....	3
4. Project Types.....	3
5. Dissemination History and Plan .....	4
6. Award Limits .....	4
C. Getting Started.....	5
1. Technical Assistance for Applicants .....	5
2. Eligible Applicants .....	5
3. Building Your Project Team .....	6
4. RFA Organization and the IES Application Submission Guide.....	6
5. Ensuring Your Application is Forwarded for Scientific Peer Review .....	6
D. Changes in the FY 2024 Request for Applications .....	7
<b>Part II: Research Topics</b> .....	<b>9</b>
A. Applying to a Topic .....	9
1. Career and Technical Education.....	11
2. Civics Education and Social Studies.....	12
3. Cognition and Student Learning.....	13
4. Early Learning Programs and Policies.....	14
5. Improving Education Systems.....	15
6. Literacy .....	16
7. Policies, Practices, and Programs to Support English Learners.....	17
8. Postsecondary and Adult Education.....	18
9. Science, Technology, Engineering, and Mathematics (STEM) Education.....	19
10. Social, Emotional, and Behavioral Context for Teaching and Learning.....	20
11. Teaching, Teachers, and the Education Workforce.....	21
<b>Part III: Project Type Requirements and Recommendations</b> .....	<b>22</b>
A. Applying Under a Project Type.....	22
B. Measurement.....	23
1. Purpose.....	23
2. Award Limit.....	23
3. Requirements.....	23
4. Recommendations for Strong Applications.....	24
C. Exploration .....	29
1. Purpose.....	29
2. Award Limit.....	29
3. Requirements.....	29
4. Recommendations for Strong Applications.....	30

D. Development and Innovation.....	36
1. Purpose.....	36
2. Award Limit.....	36
3. Requirements.....	36
4. Recommendations for Strong Applications.....	37
E. Impact .....	43
1. Purpose.....	43
2. Award Limit.....	43
3. Requirements.....	43
4. Recommendations for Strong Applications.....	44
<b>Part IV: Preparing Your Application .....</b>	<b>55</b>
A. Overview.....	55
B. General Formatting.....	55
1. Page and Margin Specifications.....	55
2. Page Numbering.....	55
3. Spacing .....	55
4. Type Size (Font Size).....	55
5. Citations.....	55
6. Graphs, Diagrams, and Tables.....	56
C. Required and Optional Appendices .....	56
1. Appendix A: Dissemination History and Plan (Required).....	56
2. Appendix B: Response to Reviewers (Required for Resubmissions).....	58
3. Appendix C: Supplemental Charts, Tables, and Figures (Optional).....	58
4. Appendix D: Examples of Program, Practice, Policy, or Assessment Materials (Optional).....	58
5. Appendix E: Letters of Agreement (Optional).....	59
6. Appendix F: Data Sharing and Management Plan (Required for Exploration and Impact).....	59
D. Other Narrative Content.....	59
1. Project Summary/Structured Abstract .....	59
2. Bibliography and References Cited.....	61
3. Human Subjects Narrative .....	61
4. Biographical Sketches for Key Personnel.....	61
<b>Part V: Competition Regulations and Review Criteria .....</b>	<b>63</b>
A. Funding Mechanisms and Restrictions .....	63
1. Mechanism of Support .....	63
2. Funding Available .....	63
3. Special Considerations for Budget Expenses.....	63
4. Program Authority.....	64
5. Applicable Regulations .....	64
B. Additional Requirements .....	64
1. Pre-Award .....	64
2. Post-Award .....	65
C. Overview of Application and Scientific Peer Review Process.....	66
1. Submitting Your Letter of Intent.....	66

2. Resubmissions and Multiple Submissions.....	67
3. Application Processing .....	67
4. Scientific Peer Review Process.....	68
5. Review Criteria for Scientific Merit.....	68
6. Award Decisions .....	69
<b>Part VI: Compliance and Responsiveness Checklist.....</b>	<b>70</b>
<b>Part VII: Required Codes for Item 4b of the SF 424 Cover Sheet.....</b>	<b>72</b>

## Part I: Overview and Requirements

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### A. Purpose of the Education Research Grants Program

Through its National Center for Education Research (NCER), the Institute of Education Sciences (IES) supports a program of field-initiated research to build knowledge and understanding of education practice and policy. IES was established by the Education Sciences Reform Act of 2002 (ESRA – P.L. 107-279), in part to improve academic achievement and attainment and access to educational opportunities for all learners (ESRA, § 111.b.1.B), with a particular focus on low-performing learners (ESRA, § 115.a.1) and those lacking access to high-quality educational opportunities (ESRA, § 115.a.2.A and 115.a.2.B). In carrying out this mission, we are committed to ensuring that our work is objective, secular, neutral, and nonideological; free of partisan political influence; and free of racial, cultural, gender, or regional bias (ESRA, § 111.b.2.B).

In this request for applications (RFA), NCER invites applications for research to help improve education experiences and outcomes for learners in the United States. To encourage rigorous education research that is transparent, actionable, and focused on meaningful outcomes, all applicants are expected to incorporate the IES Standards for Excellence in Education Research (SEER; <https://ies.ed.gov/seer/>) into their proposed research, as applicable. SEER recommends that researchers:

- Pre-register studies
- Make findings, methods, and data open
- Address inequities in learners' opportunities, access to resources, and outcomes
- Identify interventions' components
- Document treatment implementation and contrast
- Analyze interventions' costs
- Use high-quality outcome measures
- Facilitate generalization of study findings
- Support scaling of promising interventions

Through this program, IES supports both basic and applied research that contributes to scientific knowledge and theory of teaching, learning, and organizing education systems; yields outcomes and products that are useful to learners and the educators and education institutions that serve them; and informs stakeholders about the cost and practical benefits and effects of programs, practices, and policies on relevant outcomes for learners across the lifespan (ESRA, § 112.1).

NCER expects researchers receiving funding through this program to disseminate evidence in a way that is useful to and accessible by learners, educators, parents, policymakers, researchers, and the public (ESRA, § 112.2). To support accessibility to all stakeholders, IES grantees must comply with the IES Policy Regarding Public Access to Research (<https://ies.ed.gov/funding/researchaccess.asp>) and adhere to other open science practices and SEER principles (<https://ies.ed.gov/seer/>) where applicable.

NCER program officers (<https://ies.ed.gov/ncer/staff/stafflist.asp> and [listed by research topic in Part II](#)) are available to help applicants refine their project ideas and optimize their proposed research. Contact NCER program officers at any point in the application planning and preparation process prior to submission of your application to discuss your research idea and whether it is a good fit for this or any other IES research grant program.

### B. Requirements

Applications to the Education Research Grants program **must meet these requirements** to be sent forward for scientific peer review.

## 1. Eligible Study Populations

NCER funds education research that addresses the needs of learners from prekindergarten through postsecondary and adult education.<sup>1</sup>

If you are proposing research that is focused *solely* on the needs of learners with or at risk for disabilities from birth through postsecondary education, you **must** apply to the separate grant programs run by the National Center for Special Education Research (NCSER; <https://ies.ed.gov/ncser>). The only exception is for research focused on learners with or at risk for disabilities in adult education settings which you **must** submit to this competition rather than the parallel NCSER competition.

## 2. Research Topics and Education Outcomes

Your application must be directed to one of the 11 research topics in the Education Research Grants program accepting applications in FY 2024. These topics are intentionally broad to encourage a wide range of innovative ideas and research questions. Research proposed under each topic may address questions about the education outcomes of learners at any developmental or school level from prekindergarten through postsecondary and adult education. See the topic descriptions in [Part II Research Topics](#) for more about the purpose and IES-identified research needs for each. Contact the program officers listed by topic for advice on which topic provides the best fit for your proposed research.

All applications to this grants program **must** propose research that measures academic outcomes of learners. Two topics – “Social, Emotional, and Behavioral Context for Teaching and Learning” and “Teaching, Teachers, and the Education Workforce” – require additional education outcomes that are described below.

### (a) Academic Outcomes – Required for All Applications

IES supports research on a diverse set of academic outcomes that reflect **learning and achievement** in content domains, as well as learners’ **successful progression** through education systems. IES is interested in the following academic outcomes:

- For **prekindergarten** – school readiness outcomes, including pre-reading, language, vocabulary, early-STEM (science, technology, engineering, and/or mathematics) knowledge, English language proficiency, digital literacy, and social, emotional, and behavioral competencies (including self-regulation and executive function) that prepare young children for school
- For **kindergarten through Grade 12** – learning, achievement, and higher order thinking in the academic content areas of literacy, STEM, and social studies;<sup>2</sup> English language proficiency; career and technical education (CTE) attainment;<sup>3</sup> digital literacy; and progression through education systems as indicated by course and grade completion, retention, high school graduation, and dropout
- For **postsecondary education** – learning, achievement, and higher order thinking in postsecondary courses; and access to, persistence in, progress through, and completion of postsecondary education, which includes developmental education and corequisite support courses, bridge programs, for-credit and non-credit programs that lead to occupational credentials and certificates, and for-credit programs that lead to associate’s or bachelor’s degrees

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<sup>1</sup> For the purposes of this RFA, *adult education* refers to the system and authorized providers that serve learners at least 16-years old who are not enrolled in the standard K-12 system but are or could be preparing for, transitioning into, or currently enrolled in adult literacy programs, as defined in Title II, the “Adult Education and Family Literacy Act”, of the 2015 Workforce Innovation and Opportunities Act (WIOA), such as Adult Basic Education, Adult Secondary Education, Integrated Education Training, Family Literacy, Integrated English Language and Civics.

<sup>2</sup> Social studies outcomes are defined as a learner’s understanding of government structures and processes and how to be an engaged and knowledgeable citizen through skills and knowledge in civics, citizenship, geography, history, and economics.

<sup>3</sup> CTE attainment is defined as an indicator of mastery of CTE content or skills such as CTE course grades or credits earned, technical skills, assessment scores, industry certification, or employment outcomes in a field related to the CTE training.

- For **adult education** – achievement in literacy, English language proficiency, and numeracy, as well as access to, persistence in, progress through, and completion of adult education courses and programs including the full range of course and program types described in Title II of the Workforce Innovation and Opportunity Act of 2015 (WIOA; <https://www.dol.gov/agencies/eta/wioa>)

*(b) Educator Outcomes – Required for Teaching, Teachers, and the Education Workforce Applications*

IES supports research that addresses the role of educators in improving learners' academic outcomes. If you are applying under the [Teaching, Teachers, and the Education Workforce](#) topic, you **must** propose to measure educator knowledge, skills, beliefs, behaviors, and/or practices in addition to the required measures of learners' academic outcomes. If you are proposing research focused on pre-service preparation, you **must** propose to measure the outcomes of the pre-service educators as well as the outcomes of the learners they ultimately teach.

*(c) Social, Emotional, and Behavioral Competencies – Required for Social, Emotional, and Behavioral Context for Teaching and Learning Applications*

IES supports research on social and emotional skills and behaviors that are important to learners' success in school and beyond. If you are applying under the [Social, Emotional, and Behavioral Context for Teaching and Learning](#) topic, you **must** propose to measure learners' social, emotional and/or behavioral competencies in addition to the required measures of learners' academic outcomes.

*(d) Employment and Earnings Outcomes – As Appropriate*

IES supports research on **employment and earnings outcomes** such as hours of employment, job stability, and wages and benefits. Include these outcomes in addition to the required academic outcomes when appropriate.

### **3. Education Settings**

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

Formal education in the United States includes but is not limited to center-based prekindergarten programs, public and private K-12 schools, community colleges, technical colleges, and 4-year colleges and universities. In addition, there are also formal programs under the control of education agencies that take place out of school including after-school, distance learning, and online. Additionally, adult education programs can be operated by community-based organizations, libraries, and other entities receiving support from government education agencies and occur in a variety of settings. Contact an IES program officer [listed by research topic](#) if you have questions about the setting you have identified for your proposed research and whether it is responsive to the requirements of this program.

### **4. Project Types**

IES supports the development and validation of assessments to support education research and practice; exploratory research to build conceptual frameworks and generate hypotheses to guide future applied research; the development and pilot testing of innovative programs, practices, and policies; and impact studies – initial efficacy, replication, and follow-up studies -- to determine the benefits of programs, practices, and policies for learner education outcomes. Collectively, this research investment across project types builds knowledge in the education sciences, along with practical tools necessary to lead to meaningful change in education practice.

For FY 2024, your application **must** be directed to one of the following four project types:

[Measurement](#)

[Exploration](#)  
[Development and Innovation](#)  
[Impact](#)

See the [project type descriptions in Part III](#) for more information about each type's purpose, requirements that you must address in your application, and recommendations for a strong application. Program officers ([listed by research topic](#)) can advise 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. For all project types, IES encourages using a mixed methods approach that combines complementary quantitative and qualitative methods, as appropriate.

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 longitudinally.

IES expects reviewers to assess the scientific rigor and practical significance of the research proposed to judge the likelihood that it will make a meaningful contribution to IES's mission of improving education outcomes across the lifespan. The peer reviewers score each section of the project narrative (Significance, Research Plan, Personnel, and Resources) by considering whether you have thoughtfully incorporated the recommendations for strong applications that are offered for each project type.

## 5. Dissemination History and Plan

IES is committed to making the results and implications of IES-funded research available to a wide range of audiences (see the IES Policy Regarding Public Access to Research; <https://ies.ed.gov/funding/researchaccess.asp>). To ensure that findings from the Education Research Grants program are available to all interested audiences, IES **requires** applicants to present a plan to disseminate project findings. This includes dissemination that is tailored to the audiences that will benefit from the findings and reflect the purpose of the project. A wide range of dissemination strategies, techniques, and platforms may be appropriate to engage learners, educators, policymakers, parents, and other public audiences. Applicants are also asked to describe their dissemination history to demonstrate their ability and capacity to disseminate research findings transparently and accessibly.

To support scholarly dissemination, and in keeping with IES's commitment to open science best practices and the IES Policy Regarding Public Access to Research, applicants are encouraged to plan and budget for: 1) preregistration of their research, 2) curation of data and analysis codes to facilitate ease of data sharing, and 3) publication of findings in open access journals. IES grantees must comply with the IES Public Access Policy by ensuring that the full text of their accepted peer-reviewed scholarly publications are available in ERIC (Education Resources Information Center; <https://eric.ed.gov/>).

Peer reviewers will score Dissemination as a separate criterion in the review process.

## 6. Award Limits

Applications to the Education Research Grants program may not exceed the following limits on award duration and cost by project type and **should reflect the actual time and amount of funding necessary to conduct your proposed scope of work**, rather than the maximums allowable by IES.

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
Impact	5 years	\$4,000,000

In your application, provide a detailed budget justification that explains how the requested costs are allowable, allocable, and reasonable (see 2 CFR 200, Subpart E; <https://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&SID=7231b530d56ee549812e4d9a6e6aa9f2&mc=true&n=sp2.1.200.e&r=SUBPART&ty=HTML>) and reflect the proposed scope of work.

## C. Getting Started

### 1. 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 can work with applicants through a variety of formats at any time up until the time of Grants.gov submission.

If you submit a letter of intent (LOI) on the IES Peer Review website (<https://iesreview.ed.gov/LOI/LOISubmit>), a program officer will contact you regarding your proposed project. IES also offers webinars (<https://ies.ed.gov/funding/webinars/index.asp>) and virtual office hours (<https://ies.ed.gov/funding/technicalassistance.asp>) for general guidance on grant writing and submitting your application and choosing the appropriate competition, topic, and project type. Contact NCER program officers (<https://ies.ed.gov/ncer/staff/stafflist.asp>) at any point in the application planning and preparation process prior to submission to discuss your research idea and whether it is a good fit for this or any other IES research grant program.

### 2. Eligible Applicants

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<sup>4</sup>:** IES is committed to broadening institutional participation in its research grant programs. IES encourages applications from minority-serving institutions (MSIs) 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.

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<sup>4</sup> Section 114 of the Education Science Reform Act of 2002 charges IES with undertaking “initiatives and programs to increase the participation of researchers and institutions that have been historically underutilized in Federal education research activities of the Institute, including historically Black colleges or universities or other institutions of higher education with large numbers of minority students.”

### **3. Building Your Project Team**

The Principal Investigator (PI) 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, and is the primary point of contact with IES. The PI is designated by the institution submitting the application. Other personnel having authority and responsibility for the research and use of grant funds should be designated as co-Principal Investigators (co-PIs). Even if two or more people will share the authority and responsibility for leading and directing the proposed research intellectually and logistically as co-PIs, only one of them may be identified as the PI for the purposes of making a grant award.

IES strives to ensure that the researchers we fund are drawn from the entire pool of talented individuals who bring different backgrounds, perspectives, interests, and experiences to address complex education problems (<https://ies.ed.gov/aboutus/diversity.asp>).

### **4. RFA Organization and the IES Application Submission Guide**

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

1. *This RFA* provides information on how to prepare an application that is compliant and responsive to the requirements. [Part I](#) sets out the requirements for a grant application. [Parts II](#) and [III](#) provide further detail on two of those requirements, research topics and project types, respectively. [Part IV](#) provides information about general formatting and the other narrative content for the application, including required appendices. [Part V](#) provides general information on competition regulations and the review process. [Part VI](#) provides a **checklist that you can use to ensure you have included all required application elements to advance to scientific peer review**. [Part VII](#) provides the codes that you will enter in Item 4b of the SF 424 Application for Federal Assistance form.
2. *The IES Application Submission Guide* ([https://ies.ed.gov/funding/submission\\_guide.asp](https://ies.ed.gov/funding/submission_guide.asp)) provides important information about submission procedures and IES-specific guidance and recommendations to help you ensure your application is complete and received without errors on time through Grants.gov.

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

### **5. 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 and practical significance.** 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/submission\\_guide.asp](https://ies.ed.gov/funding/submission_guide.asp) - Received and validated by Grants.gov no later than 11:59:59 p.m. Eastern Time on September 21, 2023

#### *(b) Compliance*

- Includes the **required project narrative** (see [Part III](#))
- Adheres to all formatting requirements (see [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 scientific peer review
- Includes all **required appendices** (see [Part IV](#))
  - [Appendix A: Dissemination History and Plan](#) (All applications)
  - [Appendix B: Response to Reviewers](#) (Resubmissions only)
  - [Appendix F: Data Sharing and Management Plan](#) (Exploration and Impact applications only)

*(c) Responsiveness*

- Meets **requirements** for all applications (see Parts I, II, and III)
  - [Education Outcomes \(by Research Topic\)](#)
  - [Education Settings](#)
  - [IES Project Type](#)
- Meets **Project Narrative Requirements** for the selected *IES Project Type* (see [Part III](#)).

## D. Changes in the FY 2024 Request for Applications

Everyone involved in preparing and submitting an application, whether new or revised, should carefully read all relevant parts of this RFA. Major changes to the Education Research Grants program (ALN 84.305A) competition in FY 2024 are listed below and described fully in relevant sections of the RFA.

**Impact Project Type** – we are changing the name of the Initial Efficacy and Follow-Up project type and expanding its purpose. This project type is now called **Impact** and includes all studies that propose to examine the impact of a program, practice, or policy on learner outcomes using designs that could meet IES What Works Clearinghouse (WWC) design standards (<https://ies.ed.gov/ncee/wwc/Handbooks>). The Impact project type will continue to support initial efficacy and follow-up studies, and will also reincorporate replication research that since FY 2020 has been supported under a different competition called Research Grants Focused on Systematic Replication (ALN 84.305R; <https://ies.ed.gov/funding/grantsearch/program.asp?ID=2113>). There is also a new emphasis on studying implementation in Impact studies to better understand the strategies and support needed for high fidelity implementation of programs, practices, and policies.

**Research that reflects the needs of key stakeholders** — we added language throughout the RFA to encourage researchers to describe how they will consider input from learners, community members, educators, and/or other key stakeholders when conceptualizing, designing, and reporting the results of their research, and when considering issues critical for implementation and scaling of programs, practices, or policies.

**Increased Emphasis on Open Science Principles** – throughout the RFA, we highlight IES requirements that support the goals of open science and the various opportunities afforded to IES grantees to share their research findings broadly and to encourage transparency in education research.

- **Requirement for Grantees to Use Persistent Identifiers (PIDs)** – in August 2022, the Office of Science and Technology Policy (OSTP) issued a Memorandum on Ensuring Free, Immediate, and Equitable Access to Federally Funded Research (<https://www.whitehouse.gov/wp-content/uploads/2022/08/08-2022-OSTP-Public-Access-Memo.pdf>). This updated open access policy will go into effect by December 31, 2025. In anticipation of these changes and consistent with National Security Presidential Memorandum 33 (NSPM-33; see <https://www.whitehouse.gov/wp-content/uploads/2022/01/010422-NSPM-33-Implementation-Guidance.pdf>) that establishes policies for federal funding agencies that protect national security while supporting open science, we are requiring that all key personnel for funded projects obtain a PID such as ORCID iD (Open Researcher and Contributor Identification; <https://orcid.org/>) prior to award.
- **Recommendations to Incorporate Additional Open Science Practices** – where appropriate, we have added information throughout the RFA to encourage other open science practices, including pre-registration of projects, planning and budgeting to support curation of data and analysis codes to facilitate ease of data sharing, and budgeting for publication of findings in open access journals.
- **Updated guidance for applicants subject to the Data Sharing Requirement component of the IES Policy Regarding Public Access to Research** – if you are proposing exploratory or impact research, you are required to include a plan in [Appendix F](#) that describes how you will manage project data and ultimately share a final research data set as required by the IES Public Access Policy

<https://ies.ed.gov/funding/researchaccess.asp>. We have updated our guidance on this IES requirement and made a change to the name of this plan: what was previously called the Data Management Plan is now called the Data Sharing and Management Plan to emphasize the need to anticipate sharing when collecting and curating data. When selecting a repository for data sharing, you are encouraged to select among public repositories that align with the characteristics described in the National Science and Technology Council document entitled “Desirable Characteristics of Data Repositories for Federally Funded Research” (<https://repository.si.edu/handle/10088/113528>) whenever feasible.

**Research Topics** – we changed the names of some of our research topics to provide a more accurate description of the research each topic area supports.

- **Effective Instruction** is now called **Teaching, Teachers, and the Education Workforce**
- **English Learners** is now called **Policies, Practices, and Programs to Support English Learners**
- **Social and Behavioral Context for Academic Learning** is now called **Social, Emotional, and Behavioral Context for Teaching and Learning**

## Part II: Research Topics

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### A. Applying to a Topic

For the FY 2024 Education Research Grants program, you **must** submit to one of the 11 research topics described in this section. You **must** identify your chosen topic on the Application for Federal Assistance SF 424 form (Item 4b) of the Application Package (see the IES Application Submission Guide ([https://ies.ed.gov/funding/submission\\_guide.asp](https://ies.ed.gov/funding/submission_guide.asp)) and the [topic codes in Part VII](#)) to ensure that your application is assigned appropriately for scientific peer review.

Across all topics, to **be sent forward for scientific peer review, you must meet**

- **The requirements** outlined in [Part I.B. Requirements](#)
- **The relevant project type requirements** listed under [Part III: Project Type Requirements and Recommendations](#)

Each topic includes a link to the IES website, where you can find more information about the topic and view the abstracts of previously funded projects, as well as contact information for the program officers.

**See the Purpose section** of each topic for descriptions of research appropriate for a given topic. You should consider the key learner outcomes and age range(s) of target learners when choosing a topic.

**See the Needed Research section** to find examples of IES-identified research needs in the field. 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 learners, their families, and the educators and education systems that support them. Please feel free to propose research that addresses other needs beyond those we identify under each topic. Other potential sources of needed research include, but are not limited to:

- The Department of Education's Learning Agenda (see <https://www.evaluation.gov/agencies/department-of-education/>)
- Consultation with state education agencies, local education agencies, institutions of higher education, and other education stakeholders and
- Input from the learners, educators, and/or other key stakeholders who are the focus of your proposed research.

Peer reviewers may consider the IES-identified research needs in their evaluation of the Significance of the proposed project.

Across all topics, you are encouraged to address the needs of learners from different sociodemographic backgrounds and contexts, and when appropriate, you should propose to examine differences among groups of learners within your sample. Unpacking heterogeneous effects observed across different groups of learners is one way to identify what works, for whom, and under what conditions.

For the FY 2024 Education Research Grants program, NCER is particularly interested in applications that identify and evaluate programs and policies designed to address learning acceleration and recovery for historically underserved learners who were disproportionately affected by COVID-19.

Most applications to the Education Research Grants Program are reviewed by one of six standing peer review panels (<https://ies.ed.gov/director/sro/reviewers.asp>). Additional panels are developed each year as needed to provide the most appropriate review for the applications we receive.

- Basic Processes
- Early Intervention and Early Childhood Education

- Education Systems and Broad Reform
- Science, Technology, Engineering, and Mathematics (STEM)
- Reading, Writing, and Language Development
- Social and Behavioral

Some topics have an obvious one-to-one alignment with the standing panels while others do not. Applications are assigned to panel according to the match between the overall expertise of reviewers on each panel and the content and methodological approach proposed in each application. See the Procedures for Peer Review of Grant Applications ([https://ies.ed.gov/director/sro/application\\_review.asp](https://ies.ed.gov/director/sro/application_review.asp)) and [Part V.C.4. Scientific Peer Review Process](#) for more information.

If you propose to conduct research focused on learners with or at risk for disabilities from birth through K-12 or in postsecondary education, you **must** apply to the separate grant programs run by the National Center for Special Education Research (NCSEER; <https://ies.ed.gov/ncser>). For research focused on learners with or at risk for disabilities in adult education settings, you **must** apply to a topic within this competition.

Please contact the program officer(s) listed for the research topic that seems most relevant to your proposed research project to discuss your choice of topic and project type and to address other questions you may have.

## **1. Career and Technical Education**

*Program Officer:* Dr. Corinne Alfeld (202-987-0835; [Corinne.Alfeld@ed.gov](mailto:Corinne.Alfeld@ed.gov))

### *(a) Purpose*

Career and Technical Education (CTE; <https://ies.ed.gov/ncer/projects/program.asp?ProgID=100>) supports research on the implementation and effects of CTE programs and policies on education and career outcomes. Research on CTE is needed to answer questions about the promise of CTE for increasing the relevance of education for future careers and lifelong learning. Research under this topic addresses CTE policies, programs, curricula, and instructional practices, including career pathways; learners' exposure to and experience with CTE opportunities, including work-based learning (WBL) connected to [a formal education program](#); and the effects of participation in different types of CTE programs on a variety of learner outcomes including mastery of CTE content or skills as indicated by course grades or credits earned, technical skills, assessment scores, industry certification, or associated labor market outcomes in a field related to the CTE training.

### *(b) Needed Research*

Below are examples of research that have the potential to lead to advances in the field.

- Development of reliable and valid assessments of technical, occupational, and career readiness skills
- Exploration of the associations between the qualifications, recruitment, professional development, and retention of CTE teachers and faculty and learner outcomes, including labor market success
- Impact studies of new initiatives, such as career pathways and apprenticeship programs, on CTE achievement, attainment, and labor market success
- Exploration of how competency-based education and middle school CTE programs might support CTE achievement and academic attainment

## **2. Civics Education and Social Studies**

*Program Officer:* Dr. Vinita Chhabra (202-245-7262; [Vinita.Chhabra@ed.gov](mailto:Vinita.Chhabra@ed.gov))

### *(a) Purpose*

Civics Education and Social Studies (<https://ies.ed.gov/ncer/projects/program.asp?ProgID=111>) supports research to improve learning and achievement in civics, geography, economics, and history. The Every Student Succeeds Act (2015) encouraged states to expand their curricular focus to include instruction on these topics, but the most recent National Assessment of Educational Progress (NAEP, 2022) shows declines in Civics (<https://www.nationsreportcard.gov/civics/>) and U.S. History scores for 8<sup>th</sup> graders (<https://www.nationsreportcard.gov/ushistory/>) as compared to the scores of 8<sup>th</sup> graders assessed in 2018. To better support learning and achievement in these areas, research is needed to identify ways of increasing student understanding of social studies and civics topics as well as the skills that underlie success in these areas.

### *(b) Needed Research*

Below are examples of research that have the potential to lead to advances in the field.

- Development and validation of assessments for use in social studies and civics education programs
- Development of experiential and collaborative activities that can be incorporated into civics and social studies instruction and curricula to determine if they lead to better academic outcomes
- Exploration of how new forms of technology can be integrated into social studies programs and civics education to support all learners in becoming digitally literate citizens in the 21<sup>st</sup> century



### ***3. Cognition and Student Learning***

*Program Officer:* Dr. Lara Faust (202-245-6532; [Lara.Faust@ed.gov](mailto:Lara.Faust@ed.gov))

#### ***(a) Purpose***

Cognition and Student Learning (<https://ies.ed.gov/ncer/projects/program.asp?ProgID=5>) supports research that connects the science of how people learn with education practice to improve academic outcomes. Research on how people learn is valuable for developing and testing innovations in study strategies, instructional approaches, curricula, education technologies, and assessments that address educators' most pressing needs. This research is also useful for identifying the cognitive processes that underlie acquisition of English language proficiency, knowledge and skills in literacy and STEM, and successful progression through education systems. Due to the recent surge in interest in artificial intelligence (AI), and specifically large language models (LLMs), the learning sciences are particularly important for providing insights about how AI can optimally support learning for all students.

#### ***(b) Needed Research***

Below are examples of research that have the potential to lead to advances in the field.

- Identification of how AI applications in education can leverage student characteristics, contextual information, and other factors related to learner outcomes available in large data sets to better personalize learning
- Exploration of how learning processes might be changing with increased availability and use of education technology and AI
- Development and validation of scalable AI- and technology-based measurement tools that reliably capture cognitive skills that underlie reading, writing, and STEM achievement
- Impact studies of existing education practices or interventions based on cognitive science principles for improving learner outcomes, particularly in science education

#### **4. Early Learning Programs and Policies**

*Program Officer:* Dr. Caroline Ebanks (202-804-7492; [Caroline.Ebanks@ed.gov](mailto:Caroline.Ebanks@ed.gov))

##### ***(a) Purpose***

Early Learning Programs and Policies (<https://ies.ed.gov/ncer/projects/program.asp?ProgID=7>) supports research on school readiness for 3- to 5-year-olds in center-based education settings, including preschools, Head Start programs, child-care centers, nursery schools, and public prekindergarten (PreK). Early childhood experiences have immediate and lasting consequences for children's development, learning, and school achievement. Early learning programs and policies can help reduce disparities and learning opportunity gaps and address structural, contextual, and sociodemographic factors that influence children's learning and development. Through this topic, IES supports research on children's immediate outcomes from center-based early learning programs and policies as well as longer-term outcomes of early learning interventions.

##### ***(b) Needed Research***

Below are examples of research that have the potential to lead to advances in the field.

- Identification of policies and practices that support high-quality learning opportunities and experiences in the transition from PreK to kindergarten that are aligned with one another
- Identification of policies and practices that achieve equitable access to preschool programs and practices that support children's learning and development, especially for children from historically underserved groups
- Impact studies of early childhood policies, such as those governing educator preparation, development, and compensation, on early learning and later achievement
- Exploration of the associations between characteristics of the early childhood educator workforce such as salary, mental health, attitudes, and beliefs and educator and learner outcomes including teacher wellbeing, the use of evidence-based instructional practices, the quality of relationships with children and families, high-quality learning opportunities and children's school readiness

## **5. Improving Education Systems**

*Program Officer:* Dr. Corinne Alfeld (202-987-0835; [Corinne.Alfeld@ed.gov](mailto:Corinne.Alfeld@ed.gov))

### *(a) Purpose*

Improving Education Systems (<https://ies.ed.gov/ncer/projects/program.asp?ProgID=76>) supports research to understand education policies and systems and the mechanisms that support their successful implementation to benefit all learners. Research supported through this topic examines variations in treatment effects across contexts and learners, the conditions that support systemic improvements, and the factors that enhance or impede systems-level change.

### *(b) Needed Research*

Below are examples of research that have the potential to lead to advances in the field.

- Identification of district responses to the COVID-19 pandemic that accelerated and improved learner outcomes and that provide information as to how education systems can become more flexible and adaptable to future disruptions to schooling
- Identification of how states, districts, and education leaders allocate school and student funding and track programmatic spending to determine which allocation and spending strategies are associated with improved education outcomes
- Impact studies of the benefits of community schools and wraparound service models for learner outcomes
- Impact studies of professional development programs and practices that improve school leader outcomes (such as instructional leadership, creating a positive and effective school climate for students and teachers, reducing teacher turnover), and subsequently improve learner outcomes

## **6. Literacy**

*Program Officer:* Dr. Vinita Chhabra (202-245-7262; [Vinita.Chhabra@ed.gov](mailto:Vinita.Chhabra@ed.gov))

### *(a) Purpose*

Literacy (<https://ies.ed.gov/ncer/projects/program.asp?ProgID=18>) supports research on the range of English language-based skills required for learning. Reading has been the dominant focus of literacy research for over 50 years, yet many U.S. students and adults are not proficient readers. The COVID-19 pandemic disrupted the development of literacy skills, including writing, speaking, and listening. At the same time, advances in the use of artificial intelligence (AI) tools such as search engines, generative AI, such as Chat Generative Pre-training Transformer (ChatGPT), and large language models (LLMs) are expanding and challenging our understanding of what literacy means and what specific literacy skills learners must acquire to interact with these AI tools in ways that support their learning. Research is needed to address these changes.

### *(b) Needed Research*

Below are examples of research that have the potential to lead to advances in the field.

- Identification of programs, practices, and policies that can accelerate the mastery of traditional and digital literacy skills for learners of all ages whose learning was disrupted during the COVID-19 pandemic
- Exploration of how and whether AI tools can be effectively leveraged as scalable instructional tools for reading, writing, and digital literacy
- Development and testing of programs and practices that prepare learners to use AI tools to synthesize information while reading and writing

## **7. Policies, Practices, and Programs to Support English Learners**

*Program Officer:* Dr. Helyn Kim (202-987-1255; [Helyn.Kim@ed.gov](mailto:Helyn.Kim@ed.gov))

### ***(a) Purpose***

Policies, Practices, and Programs to Support English Learners

(<https://ies.ed.gov/ncer/projects/program.asp?ProgID=59>) supports research that considers how policies, practices, programs, and other resources can be leveraged to improve academic outcomes, reduce the academic achievement gap, and address inequities in education for English learners. IES uses the term *English learner* (EL) to encompass learners whose home language is not English and whose English language proficiency hinders their ability to meet learning and achievement expectations for their level of schooling. ELs participate in U.S. education at all levels, including about 5 million students in the K-12 system and over 1 million in postsecondary institutions.

### ***(b) Needed Research***

Below are examples of research that have the potential to lead to advances in the field.

- Development and testing of scalable materials, programs, interventions, and/or practices that educators can use to support the learning needs of the culturally and linguistically diverse ELs in the United States
- Identification of new and unique challenges facing rural schools associated with educating ELs, and of how educators, schools, and districts can address the needs of ELs given the limited resources often found in rural districts
- Exploration of the policies and/or systems-level approaches that have the potential to reduce the achievement and opportunity gaps that exist for ELs
- Development and validation of classroom-based measures of ELs' academic content knowledge (see [Part I.B.2.a](#)) and tools and practices that leverage assessment data teachers can use to inform their instruction to meet the needs of ELs

## **8. Postsecondary and Adult Education**

*Program Officers:* Dr. James Benson (202-245-8333; [James.Benson@ed.gov](mailto:James.Benson@ed.gov))  
Dr. Meredith Larson (202-804-7451; [Meredith.Larson@ed.gov](mailto:Meredith.Larson@ed.gov))

### *(a) Purpose*

Postsecondary and Adult Education (<https://ies.ed.gov/ncer/projects/program.asp?ProgID=15>) supports research to improve access to, persistence in, progress through, and completion of postsecondary education (sub-baccalaureate credentials, occupational and transfer-oriented associate's degrees, bachelor's degrees), and adult education (see Title II of the Workforce Innovation and Opportunity Act [WIOA]; <https://www.dol.gov/agencies/eta/wioa>).

### *(b) Needed Research*

Below are examples of research that have the potential to lead to advances in the field.

- Assessments of labor market returns associated with the completion of existing postsecondary instructional programs
- Development and testing of scalable initiatives designed to help all learners complete marketable degrees and credentials and transition into rewarding occupations
- Identification of instructional practices and programs that are associated with improved education outcomes of English learners in postsecondary and adult education settings
- Identification of adult education programs, practices, and policies associated with improved education outcomes, functional literacy, and employment and wage outcomes of adult learners with disabilities

## **9. Science, Technology, Engineering, and Mathematics (STEM) Education**

*Program Officer:* Dr. Christina Chhin (202-245-7736; [Christina.Chhin@ed.gov](mailto:Christina.Chhin@ed.gov))

### *(a) Purpose*

STEM Education (<https://ies.ed.gov/ncer/projects/program.asp?ProgID=12>) supports research on the improvement of STEM knowledge and skills. Over the past 25 years or so, STEM education has evolved from a clustering of four overlapping disciplines (science, technology, engineering, and mathematics) toward an integrated knowledge base and set of critical skills necessary for today's workplace. There is an urgent need to improve STEM achievement in the United States to meet the needs of today's workplace. This is even more so as generative artificial intelligence (AI) transforms STEM education.

### *(b) Needed Research*

Below are examples of research that have the potential to lead to advances in the field.

- Development and testing of strategies to implement convergent STEM education that blends knowledge and skills across multiple disciplines
- Identification of effective and efficient learning pathways for students in data science education
- Impact studies of programs, policies, and practices that increase opportunities for learners who are historically underrepresented in STEM to persist and achieve
- Impact studies of science education programs, policies, and practices on student learning and engagement in science

## **10. Social, Emotional, and Behavioral Context for Teaching and Learning**

Program Officers: Dr. Emily Doolittle (202-987-0795; [Emily.Doolittle@ed.gov](mailto:Emily.Doolittle@ed.gov))  
Dr. Christina Chhin (202-245-7736; [Christina.Chhin@ed.gov](mailto:Christina.Chhin@ed.gov))

### *(a) Purpose*

Social, Emotional, and Behavioral Context for Teaching and Learning (<https://ies.ed.gov/ncer/projects/program.asp?ProgID=21>) supports research on social, emotional, and behavioral competencies for educators and learners that improve learners' academic achievement and progress through the education system. **For this reason, measures of social, emotional, and behavioral competencies must be included along with the required measures of academic outcomes for learners.** Several decades of research suggest that social, emotional, and behavioral competencies like the ability to self-regulate or cooperate with peers may be just as important as content knowledge and academic skills for success in school and work, yet the evidence base for school-based social, emotional, and behavioral interventions is equivocal.

### *(b) Needed Research*

Below are examples of research that have the potential to lead to advances in the field.

- Refinement and testing of sustainable approaches to supporting youth mental health in school settings
- Development and testing of new approaches to discipline that maintain access to teaching and learning for all students regardless of race and ethnicity, sex, or disability status
- Development and validation of measures of social, emotional, and behavioral competencies that predict academic outcomes
- Development and testing of curricula, instructional approaches, and measures of career and life skills, such as collaboration, cooperation, and communication skills, that employers consider critical workplace skills but are lacking in applicant pools



## **11. Teaching, Teachers, and the Education Workforce**

*Program Officer:* Dr. Wai-Ying Chow (202-245-8198; [Wai-Ying.Chow@ed.gov](mailto:Wai-Ying.Chow@ed.gov))

### *(a) Purpose*

Teaching, Teachers, and the Education Workforce

(<https://ies.ed.gov/ncer/projects/program.asp?ProgID=75>) supports research to understand the aspects of teaching, teachers, and the education workforce that promote academic outcomes. **For this reason, measures of educator outcomes must be included along with the required measures of student academic outcomes.** Rigorous research is needed to build our understanding of effective teaching and teachers and to inform the training, recruitment, and retention of the education workforce. Measurement of educator knowledge/practice is essential to clarify the links between teaching and learner outcomes.

### *(b) Needed Research*

Below are examples of research that have the potential to lead to advances in the field.

- Exploration of how evidence-based educator practices, such as those from the science of reading, could be promoted through pre-service training
- Identification of how technology and other innovations, such as artificial intelligence (AI), can be used to ease the demands on teachers and address other factors contributing to teacher shortages
- Identification of the skills teachers need to provide effective teaching to learners from various backgrounds (sometimes referred to as “cultural and linguistic competence”, “cultural proficiency”, or “cultural responsiveness”)
- Impact studies of approaches to teacher recruitment, retention, certification, assessment, and compensation, including registered apprenticeship programs and online teacher training programs, on learner outcomes

## Part III: Project Type Requirements and Recommendations

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### A. Applying Under a Project Type

For the FY 2024 Education Research Grants program, you **must** submit under one of four project types: Measurement, Exploration, Development and Innovation, or Impact.

To ensure appropriate assignment of your application for peer review, you **must** specify the project type you have identified for your proposed research on the Application for Federal Assistance SF 424 (R&R) form (Item 4b) of the Application Package (see the IES Application Submission Guide ([https://ies.ed.gov/funding/submission\\_guide.asp](https://ies.ed.gov/funding/submission_guide.asp)) and the [project type codes in Part VII](#)).

**For each project type—**

- **See the Purpose section** for the **types of research** appropriate for a given project type. Your specific aims and research questions should align with the purpose of the project type you choose.
  - IES encourages the use of mixed methods research, defined as the integration of qualitative and quantitative methodologies in a single study, for all project types. Results obtained from mixed methods studies have the potential to enrich our understanding of education research questions, issues, and outcomes.
  - IES encourages researchers to leverage widely used digital learning platforms for their projects. These platforms typically have over 100,000 users; are implemented through a device such as a computer, tablet, or smartphone; can support multiple types of learner and educator interactions; and have the capacity to collect multiple types of user data.
- **See the Award Limit section** for the maximum duration and budget that can be requested for each type of project.
- **See the Requirements section** for the specific content that you **must** address in the four sections of the project narrative (Significance, Research Plan, Personnel, Resources). **Applications lacking this specific content will not be sent forward for peer review.**
- **See the Recommendations for Strong Applications section** for recommendations to improve the quality of your application. Reviewers determine quality in part by considering whether you have incorporated relevant recommendations appropriately. Many of these recommendations are aligned with the SEER principles (<https://ies.ed.gov/seer/>) to help ensure that research is transparent, actionable, and focused on meaningful outcomes that have the potential to dramatically improve education.

## B. Measurement

### 1. Purpose

IES supports research to develop, refine, and/or validate measures for use by educators and education researchers. In addition to assessments of individual learners, IES encourages the development and validation of assessments of education systems and educators to understand the contexts in which learning occurs and the opportunities for learning and achievement that education systems provide.

Successful Measurement projects will produce affordable and feasible assessments with clearly specified items, procedures, and materials for intended purposes, populations, and settings whether in education research or practice contexts.

### 2. Award Limit

No more than \$2,000,000 (direct and indirect costs) over no more than 4 years.

- The duration and budget you request should reflect the actual time and amount of funding necessary to conduct your proposed scope of work.
- **IES will not make an award under the Measurement project type that exceeds \$2,000,000 or that is for longer than 4 years.**

### 3. Requirements

#### (a) Project Narrative

You **must** include a Project Narrative with four sections: **(i) Significance, (ii) Research Plan, (iii) Personnel, and (iv) Resources**. If any of these four sections are missing, or lack the required content described below, the application will not move forward to peer review.

The Project Narrative **must** adhere to the formatting guidelines (see [Part IV.B](#)) and be **no more than 22 pages**. For example, the use of small type will be grounds for IES to return the application without scientific peer review. If the narrative exceeds the page limit, IES will remove any pages after the 22nd page of the narrative.

The four sections of the Project Narrative **must** include the content described below. Please see the [recommendations section](#) for additional information about what to include in the Project Narrative.

#### (i) Significance

The purpose of this section is to explain why it is important to develop or refine and/or validate the assessment for the proposed purpose, context, population, and age range.

You **must** describe the following:

- The assessment you propose to develop, refine, and/or validate
- The purpose(s), population(s), and context(s) for which the assessment is intended

#### (ii) Research Plan

The purpose of this section is to describe your sample, setting, research design, methods, and data analysis plans you will use to develop and/or refine the assessment (if applicable), document its validity and reliability, and establish its connection to education outcomes.

You **must** describe the following:

- The sample and setting for your project
- The research design, methods, and data analysis plans for the assessment's

- Development and/or refinement, as applicable
- Validation

### **(iii) Personnel**

The purpose of this section is to describe the members of your project team, their training and experience (including experience working with the proposed study population), and the amount of time they will commit to the proposed research and dissemination activities.

You **must** describe:

- The project team

### **(iv) Resources**

The purpose of this section is to describe the institutions involved in the research and their capacity and access to resources needed to execute a project of this size and complexity and to appropriately disseminate findings.

You **must** describe:

- The research infrastructure and capacity to conduct the project

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

IES provides recommendations intended to improve the quality of your application. Peer reviewers are asked to consider these recommendations in their evaluation of your application. Where appropriate, we provide recommendations following the Standards for Excellence in Education Research (SEER; <https://ies.ed.gov/seer>) to help ensure research is transparent, actionable, and focused on meaningful outcomes that have the potential to dramatically improve education. We also provide links to specific SEER resources that may be useful as you incorporate these recommendations into your application.

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

Strong applications will address a significant challenge in education and provide a compelling theoretical and empirical rationale for the project.

Describe the specific need for developing, refining, and/or validating the assessment and the potential market for it.

- Contrast the assessment with current typical measurement practices. What differentiates it and how does it address shortcomings of other assessments?
- Identify the age range, if applicable, of those who will be assessed with the new or refined measurement tool.
- Describe the intended users of the assessment (for example, researchers, teachers, learners) and the intended uses of the data collected with it.
- Note whether there is a potential market for the new/refined measurement tool. Discuss those markets where it will be offered and examples of how it will be used. Describe your strategy for bringing the assessment 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).
- How will the proposed assessment(s) improve education research, education policy, and/or classroom teaching?
- How will the proposed assessment(s) contribute to increasing our ability to address the education

needs of all learners? How might historically underserved learners benefit from the assessment?

- If relevant, describe any partnerships with education agencies to carry out the proposed work. Including education agencies as partners makes it more likely that researchers focus on assessments that are meaningful and useful to the education practitioners and policymakers who will use them.

If you are proposing to further develop an assessment that was the focus of a previous measurement grant, address the need for another measurement grant by describing the following:

- The results of other grants to justify the further development or validation of the assessment.
- Whether what was developed has been (or is being) tested for validity and reliability and include any available results and explain their implications for the proposed project.
- Whether what was developed is being used in the field. If it is not being used, explain why.

Describe the following about the assessment you propose to develop or refine and/or validate:

- The construct or education outcome it will measure.
- The assessment framework and how the proposed validation activities will produce evidence to support the claims of that framework, including the following:
  - Operational definition(s) of the construct(s) of measurement
  - A theoretical model showing how constructs are related to each other and/or external variables
  - A description of how the assessment provides evidence of the construct(s) identified in the rationale
  - A description of the rationale for how and why a respondent's score on the assessment supports inferences or judgments regarding the construct(s) being measured
  - A description of the intended use(s) and population(s) for which the assessment is meant to provide valid information

Explicitly state your research questions or specific aims.

### *(b) Research Plan*

Strong applications will demonstrate that the sample, setting, research design, methods, and data analysis plans align with the research questions posed in the Significance section and that the project will be able to answer those questions with sufficient rigor.

Include a timeline for project activities in [Appendix C: Supplemental Charts, Tables, and Figures](#).

### ***Sample and Setting***

Describe the target population of learners that your sample represents. Explain how your work with this sample will contribute to a larger body of knowledge for the target population.

Discuss the procedure you will use to recruit a sample(s) for item development, feasibility, reliability, and/or validation activities that represents your target population.

Describe and justify exclusion and inclusion criteria and discuss how these may narrow the target population you propose to study and influence the generalizability of the results to this target population. Through intentional sampling or other means, your proposed study should permit ready generalization of its findings to your population of interest. For additional resources see <https://ies.ed.gov/seer/generalization.asp>. IES does not expect individual projects to be generalizable to the U.S. population as a whole. Your target population may represent a very narrow segment of the larger U.S. population.

Describe strategies to increase the likelihood that participants will join the project and remain in the study (reduce attrition).

Describe the setting(s) in which item development, feasibility, reliability, and/or validation activities 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.

### ***Research Design, Methods, and Data Analysis Plan***

#### *Development/Refinement Activities*

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

- The iterative procedures for developing, field testing, and selecting items to be used in the assessment 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 scoring the assessment, including justification for the scoring rubric and any weighting involved in calculating the score
- The procedures for establishing whether the items and the assessment 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 assessment, 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 establishing an assessment that is vertically equated, if the proposed assessment 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 assessment 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 assessment for the proposed purpose(s), population(s), and context(s).
- Describe the procedures for statistically evaluating the validity of each subscale, if subscales are part of the assessment framework.

#### *Feasibility Plan*

Provide a plan to collect information on the feasibility of implementing the fully developed assessment in the contexts in which it is intended to be used and describe how you would use that information to modify the assessment to improve its scalability. For example, provide a plan to gather information on the extent to which the assessment fits within the intended setting and the amount of time and training needed to adopt the assessment.

#### *High-quality Measures*

Describe and justify the measures that will be used to validate the assessment. Include information about

their reliability, validity, and appropriateness for the proposed sample and setting. For additional resources see <https://ies.ed.gov/seer/outcomes.asp>.

#### *Data Analysis Plan*

Detail your data analysis procedures for all quantitative and qualitative analyses necessary to address your research questions, including the following:

- The statistical models and analyses that will be used, and how well they control for selection bias
- How you will address missing data, if applicable
- Sensitivity tests to assess the influence of key procedural or analytic decisions on the results
- Statistical power for all proposed inferential analyses for which decisions will be based on statistical significance
- Analyses that will be conducted to examine variations in outcomes among learners from diverse backgrounds and experiences, including historically underserved learners, and what your findings will mean for the heterogeneity of the target population you have identified
- How you will assess the generalizability of your findings by contrasting your sample's characteristics with the characteristics of the target population. Explain how you will adjust for any mismatch between your sample and the population. For additional resources see <https://ies.ed.gov/seer/generalization.asp>

#### *Cost Analysis Plan*

You are encouraged to develop a cost analysis plan that describes how you will estimate the costs to implement the fully developed, refined, and/or validated assessment. If you include a cost analysis plan, describe your plan to determine the quantity, quality, and value of all resources needed to implement the assessment as intended given the implementation context (setting, education personnel or researchers, and target population).

As you develop the plan for your cost analysis, please keep the following in mind:

- Even if you already have an estimate of the cost of implementing the assessment, you still should include a plan to collect this information.
- You should gather information about the costs of implementing your assessment even if you intend to offer the assessment free of charge.

Your plan should describe the following:

- How you will estimate costs using a societal perspective and the cost method you will use, noting whether another perspective, such as that of the local education agency, will also be included
- The resources you will use to implement the assessment including personnel, facilities, equipment, materials, training, or other inputs, and describe each resource's quality and quantity
- How you will collect data about costs, including the time period for the cost data collection, the data collection assessments you will use, and the sources you will use to obtain national prices for resources and, if useful to a local audience, local prices
- How you will calculate the cost of the resources and the assessment's total cost, including details such as how you will adjust prices where needed (for example, to account for geographic price differences), assign costs to resources that are provided at below their actual value, and run sensitivity analyses to check assumptions
- The metrics you will use to report costs and how you will explain their meaning to education stakeholders

For additional resources, see [https://ies.ed.gov/seer/cost\\_analysis.asp](https://ies.ed.gov/seer/cost_analysis.asp).

### *(c) Personnel*

Strong applications will demonstrate that the project team possess the appropriate skills and qualifications to carry out the proposed research project, that the principal investigator and other key personnel possess the appropriate training and experience for their roles and responsibilities, and that they will commit sufficient time to competently implement the proposed research.

In its research grant programs, IES is strongly committed to broadening participation, including personnel from underrepresented communities and diverse institutions.

Describe how the background and experience of the project team supports the conduct of the proposed study with the population of learners that your project addresses.

Measurement projects demand a wide variety of expertise to ensure they are of high quality. Identify the key personnel who will be responsible for each of the specified activities in the proposed research plan and the amount of time they will devote to the project.

Describe the following:

- The plan for how key personnel will maintain their objectivity and promote transparency in conducting the proposed research and dissemination activities.
- The management structure and procedures that will be used to keep the project on track and ensure the study is of high quality.

### *(d) Resources*

Strong applications will demonstrate that there is sufficient research infrastructure and institutional capacity to carry out the proposed research and that the commitments of each partner show support for the implementation and success of the project.

Describe the research infrastructure and capacity to conduct the proposed project at both the primary applicant institution and any subaward institutions, including the following:

- Your institution's capacity to manage a grant of this size.
- Your current access to resources available at the primary institution and any subaward institutions.
- 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.
- Your access to specific offices and organizations that will support your plan to disseminate results as described in the required [Dissemination Plan in Appendix A: Dissemination History and Plan](#).
- Access to the settings, data sets, and digital platforms necessary for the proposed research.
  - Include letters of agreement, data licenses, or existing memoranda of understanding in [Appendix E](#) documenting this access.
  - Convincing letters convey that the organizations understand what their participation in the study will involve, such as surveys, direct assessments, and/or classroom observations. Include information about incentives for participation, if applicable.



## C. Exploration

### 1. Purpose

IES supports exploratory research to develop, clarify, or expand theories of action and conceptual frameworks by examining relationships between learner-, educator-, education setting-, and/or policy-level factors and meaningful education outcomes. 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.

Successful Exploration projects will generate hypotheses about how best to improve learner, educator, and system outcomes and should inform future work such as the development/refinement and testing of potentially beneficial programs, practices, or policies or the development/refinement and/or validation of assessments.

Note: Under Exploration, IES does not support work to test the impact of a fully developed program, practice, or policy that is ready to be implemented. 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 program, practice, or policy. If you plan to develop or evaluate a program, practice, or policy, you **must** apply under the Development and Innovation or Impact project types. Otherwise, your application will be deemed nonresponsive and will not be forwarded for scientific peer review. If you need to develop a measure and it will take more than 6 months to do so, you **must** apply under the Measurement project type or your application will be deemed nonresponsive and will not be forwarded for peer review.

### 2. Award Limit

No more than \$1,700,000 (direct and indirect costs) over no more than 4 years. 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.

- The duration and budget you request should reflect the actual time and amount of funding necessary to conduct your proposed scope of work.
- **IES will not make an award under the Exploration project type that exceeds \$1,700,000 or that is for longer than 4 years.**

### 3. Requirements

#### (a) Project Narrative

You **must** include a Project Narrative with four sections: **(i) Significance, (ii) Research Plan, (iii) Personnel, and (iv) Resources**. If any of these four sections are missing, or lack the required content described below, your application will not move forward to peer review.

The Project Narrative **must** adhere to the formatting guidelines (see [Part IV.B](#)) and be **no more than 22 pages**. For example, the use of small type will be grounds for IES to return the application without scientific peer review. If the narrative exceeds this page limit, IES will remove any pages after the 22<sup>nd</sup> page of the narrative.

The four sections of the Project Narrative **must** include the content described below. Please see the [recommendations section](#) for additional information about what to include in the Project Narrative.

### **(i) Significance**

The purpose of this section is to describe the learner-, educator-, education setting-, and policy-level factors you propose to study and their potential association with learner outcomes.

You **must** describe the following:

- The factors you propose to study

### **(ii) Research Plan**

The purpose of this section is to describe your sample, setting, research design, methods, and data analysis plans and demonstrate how they will allow you to address your research questions.

You **must** describe the following:

- The sample and setting for your project
- The research design, methods, and data analysis plans for your project

### **(iii) Personnel**

The purpose of this section is to describe the members of your project team, their training and experience (including experience working with the proposed study population), and the amount of time they will commit to the proposed research and dissemination activities.

You **must** describe:

- the project team

### **(iv) Resources**

The purpose of this section is to describe the institutions involved in the research and their capacity and access to resources needed to execute a project of this size and complexity and to appropriately disseminate findings.

You **must** describe:

- The research infrastructure and capacity to conduct the project

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

You must include a [Data Sharing and Management Plan \(DSMP\) in Appendix F](#) of your Exploration application in compliance with the IES Policy Regarding Public Access to Research (<https://ies.ed.gov/funding/researchaccess.asp>). If your application does not include a DSMP in Appendix F, IES will declare your application noncompliant and it will not move forward to peer review.

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

IES provides recommendations intended to improve the quality of your application. Peer reviewers are asked to consider these recommendations in their evaluation of your application. Where appropriate, we provide recommendations following the Standards for Excellence in Education Research (SEER; <https://ies.ed.gov/seer>) to help ensure research is transparent, actionable, and focused on meaningful outcomes that have the potential to dramatically improve education. We also provide links to specific SEER resources that may be useful as you incorporate these recommendations into your application.

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

Strong applications will address a significant challenge in education and provide a compelling theoretical and empirical rationale for the project.

Describe the factors that you propose to study and the relationship(s) you expect them to have with learner education 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.

How will the proposed project contribute to our understanding of and ability to address the needs of all learners, including historically underserved learners.

For projects that propose to analyze data from a prior impact study, describe the relationships you propose to explore and how the project will contribute to a better understanding of the program, practice, or policy's mechanisms of change; sources of heterogeneity in implementation and outcomes across different settings, educators, or learners within the sample; or how variation in business-as-usual practices relates to learner outcomes.

If relevant, describe any partnerships with education agencies to carry out the proposed work. Including education agencies as partners makes it more likely that researchers focus on factors and outcomes that are meaningful to education practitioners and policymakers.

Describe how the results of your proposed exploratory study will inform future research and increase understanding of issues of importance to learners and educators.

Explicitly state your research questions or specific aims.

### *(b) Research Plan*

Strong applications will demonstrate that the sample, setting, research design, methods, and data analysis plans align with the research questions posed in the Significance section and that the project will be able to answer those questions with sufficient rigor.

Include a timeline for study activities in [Appendix C: Supplemental Charts, Tables, and Figures](#).

### ***Sample and Setting***

Describe the target population of learners that your sample represents. Explain how your work with this sample will contribute to a larger body of knowledge for the target population.

If you will need to recruit participants, discuss the procedure you will use to recruit a sample that represents your target population. Describe and justify the inclusion/exclusion criteria you will use and discuss how these may narrow the target population you propose to study and influence the generalizability of the results to this target population. Through intentional sampling or other means, your proposed study should permit ready generalization of its findings to your population of interest. For additional resources see <https://ies.ed.gov/seer/generalization.asp>. IES does not expect individual projects to be generalizable to the U.S. population as a whole. Your target population may represent a very narrow segment of the larger U.S. population.

Describe strategies to increase the likelihood that participants will join the project and remain in the study (reduce attrition).

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.

- If you propose to analyze extant data, describe the settings in which the data was collected. If the data was collected long ago, address the relevance of the data to current issues in education and the needs of your learner population today.

### ***Research Design, Methods, and Data Analysis Plan***

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

A wide variety of research designs are appropriate for exploratory studies, including correlational, descriptive cross-sectional, longitudinal, and experimental designs.

Describe the methods you will use and how they will inform your research questions and/or specific aims. Use a mixed methods approach whenever possible.

If you propose to collect data, describe the following:

- Procedures for data collection.
- Procedures for monitoring and maintaining inter-rater reliability for observational measures, if applicable.

If you propose to conduct a meta-analysis, describe and justify the following:

- The criteria for including or excluding studies
- The search procedures for ensuring that a high proportion of eligible studies, both published and unpublished, will be located and retrieved, with relevant information reported frequently enough and in a form that allows an adequate dataset to be constructed to support the meta-analysis
- 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

If you propose to analyze existing data, describe the following:

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

#### *Power Analyses*

For all quantitative inferential analyses, demonstrate that your proposed sample will provide enough power to address your research questions. 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.

#### *High-quality Measures*

Clearly define the constructs of interest in the proposed study. Describe the importance, reliability, and validity of all measures proposed, including learner outcomes, educator outcomes, and educator and education system characteristics. For additional resources see <https://ies.ed.gov/seer/outcomes.asp>.

- If you need to develop a measure, describe what you will develop, why it is necessary, how it will be developed, and the process for checking its reliability and validity. It is also critical that you explain

how this measurement work will not compromise your ability to answer your research questions. No more than 6 months may be spent on developing and validating such an assessment.

#### *Data Analysis Plan*

Detail your data analysis procedures for all quantitative and qualitative analyses necessary to address your research questions.

- For mixed methods studies, data analysis plans should provide detailed information on the analytical and interpretive processes for the qualitative data and reflect the integration of qualitative and quantitative data.
- Explain how you will measure outcomes and report results in ways that policymakers and practitioners can readily understand.
- Describe how you will assess the generalizability of your findings by contrasting your sample's characteristics with the characteristics of the target population. Explain how you will adjust for any mismatch between your sample and the population. For additional resources see <https://ies.ed.gov/seer/generalization.asp>.
- 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, if appropriate.
- 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. Describe sensitivity tests to assess the influence of key procedural or analytic decisions on the results.
- If you intend to link multiple datasets, provide sufficient detail for reviewers to judge the feasibility of the linking plan.
- Describe how you will identify and examine any variables that might influence the relationship between the learner education outcomes and the educators and education settings you propose to study.
- Discuss analyses to explore alternative hypotheses.
- Provide separate descriptions for all analyses of factors that mediate or moderate the relationships of interest.
- Analyses that will be conducted to examine variations in outcomes among learners from diverse backgrounds and experiences, including historically underserved learners, and what your findings will mean for the heterogeneity of the target population you have identified
- 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*

Strong applications will demonstrate that the project team possess the appropriate skills and qualifications to carry out the proposed research project, that the principal investigator and other key personnel possess the appropriate training and experience for their roles and responsibilities, and that they will commit sufficient time to competently implement the proposed research.

In its research grant programs, IES is strongly committed to broadening participation, including personnel from underrepresented communities and diverse institutions.

Describe how the background and experience of the project team supports the conduct of the proposed study with the population of learners that your project addresses.

Exploration projects demand a wide variety of expertise to ensure they are of high quality. Identify the key personnel who will be responsible for each of the specified activities in the proposed research plan and the amount of time they will devote to the project.

Describe the following:

- The plan for how key personnel will maintain their objectivity and promote transparency in conducting the proposed research and dissemination activities.
- The management structure and procedures that will be used to keep the project on track and ensure the study is of high quality.

#### *(d) Resources*

Strong applications will demonstrate that you have sufficient research infrastructure and institutional capacity to carry out the proposed research and that the commitments of each partner show support for the implementation and success of the project.

Describe the resources you will use to conduct the proposed project at both the primary applicant institution and any subaward institutions, including the following:

- Your institution's capacity to manage a grant of this size.
- Your immediate access to resources available at the primary institution and any subaward institutions.
- 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.
- Your access to specific offices and organizations that will support your plan to disseminate results as described in the required Dissemination Plan in Appendix A: Dissemination History and Plan.
- Your access to specific offices or organizations that will support dataset documentation and execution of the required Data Sharing and Management Plan (DSMP) in Appendix F: Data Sharing and Management Plan.
- Access to the settings, data sets, and platforms necessary for the proposed research.
  - Include letters of agreement, data licenses, or existing memoranda of understanding in [Appendix E](#) documenting this access.
  - 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.

#### *(e) Data Sharing and Management Plan (DSMP)*

See the Implementation Guide for Public Access to Research Data ([https://ies.ed.gov/funding/datasharing\\_implementation.asp](https://ies.ed.gov/funding/datasharing_implementation.asp)) and our FAQs ([https://ies.ed.gov/funding/datasharing\\_faq.asp](https://ies.ed.gov/funding/datasharing_faq.asp)) for additional guidance on developing a DSMP.

When the principal investigator (PI) and authorized organization representative (AOR) sign the cover page of the grant application, they will be assuring compliance with the IES Policy Regarding Public Access to Research (<https://ies.ed.gov/funding/researchaccess.asp>) as well as other policies and regulations governing research awards. This entails uploading full text of accepted or published manuscripts to ERIC that are based on IES-funded data, as well as the sharing of data.

Once the DSMP 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 if 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 DSMP, subsequent awards to individuals or institutions may be affected. By addressing the items identified below, your DSMP describes how you will meet the requirements of the IES policy for data sharing and adopt best practices for adherence to open science principles.

The DSMP should describe the following:

- The pre-registration 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>).
- The data repository where you plan to share your data, and an indication of the selected repository's adherence with the National Science and Technology Council document entitled "Desirable Characteristics of Data Repositories for Federally Funded Research" (<https://repository.si.edu/handle/10088/113528>).
- The type of data to be shared.
- The approach you will take to curating, cleaning, and preparing data for sharing, taking into consideration guidance from IES's Sharing Study Data: A Guide for Education Researchers (<https://ies.ed.gov/ncee/pubs/2022004/>).
- The 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.
- Intentions to share analysis code to support reproducibility, including format and location.
- 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.
- 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, the Family Educational Rights and Privacy Act (FERPA), and the Health Insurance Portability and Accountability Act (HIPAA). Approaches to disseminating the availability and location of data to support discoverability for reuse purposes.
- The costs associated with implementation of the DSMP 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 DSMP. If your application is being considered for funding based on the scores received during the scientific review process but your DSMP is determined incomplete, you will be required to provide additional detail regarding your DSMP.

## D. Development and Innovation

### 1. Purpose

IES supports research to develop or modify and pilot innovative programs, practices, or policies that can be scaled up to benefit learner education outcomes.

Successful Development and Innovation projects produce programs, practices, or policies with clearly specified core components, implementation support, cost information, and pilot data on benefits for learners' education outcomes to support future impact testing and scaling.

### 2. Award Limit

No more than \$2,000,000 (direct and indirect costs) over no more than 4 years.

- The duration and budget you request should reflect the actual time and amount of funding necessary to conduct your proposed scope of work.
- **IES will not make an award under the Development and Innovation project type that exceeds \$2,000,000 or that is for longer than 4 years.**
- 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 implementation of the new/modified program, practice, or policy; data collection; and analysis of pilot data.

### 3. Requirements

#### (a) Project Narrative

You **must** include a Project Narrative with four sections: **(i) Significance, (ii) Research Plan, (iii) Personnel, and (iv) Resources**. If any of these four sections are missing, or lack the content described below, your application will not move forward to peer review.

The Project Narrative **must** adhere to the formatting guidelines (see Part IV.B) and be **no more than 22 pages**. For example, the use of small type will be grounds for IES to return the application without scientific peer review. If the narrative exceeds this page limit, IES will remove any pages after the 22nd page of the narrative.

The four sections of the Project Narrative **must** include the content described below. Please see the [recommendations section](#) for additional information about what to include in the Project Narrative.

#### (i) Significance

The purpose of this section is to explain why it is important to develop the program, practice, or policy to benefit learner education outcomes and why it is likely to be affordable and feasible to implement at scale.

You **must** describe the following:

- The program, practice, or policy you propose to develop and how it will be implemented

#### (ii) Research Plan

The purpose of this section is to describe your sample, setting, research design, methods, data analysis plans, and cost analysis plan, and demonstrate how they will allow you to address your research questions.

You **must** describe the following:

- The sample and setting for your project



- The research design, methods, and data analysis plans for:
  - Developing or refining the program, practice, or policy
  - Determining its usability and feasibility
  - Determining its promise for generating beneficial learner outcomes
- Your plan for determining the costs associated with implementing the fully developed program, practice, or policy in the context of the pilot study

### **(iii) Personnel**

The purpose of this section is to describe the members of your project team, their training and experience (including experience working with the proposed study population), and the amount of time they will commit to the proposed research and dissemination activities.

You **must** describe:

- Your project team

### **(iv) Resources**

The purpose of this section is to describe the institutions involved in the research and their capacity and access to resources needed to execute a project of this size and complexity and to appropriately disseminate findings.

You **must** describe:

- The research infrastructure and capacity to conduct the project

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

IES provides recommendations intended to improve the quality of your application. Peer reviewers are asked to consider these recommendations in their evaluation of your application. Where appropriate, we provide recommendations following the Standards for Excellence in Education Research (SEER; <https://ies.ed.gov/seer>) to help ensure research is transparent, actionable, and focused on meaningful outcomes that have the potential to dramatically improve education. We also provide links to specific SEER resources that may be useful as you incorporate these recommendations into your application.

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

Strong applications will address a significant challenge in education and provide a compelling theoretical and empirical rationale for the project.

Describe the program, practice, or policy you propose to develop or refine, including the following:

- The core features of the program, practice, or policy, including its essential practices and structural elements. For additional resources see [https://ies.ed.gov/seer/core\\_components.asp](https://ies.ed.gov/seer/core_components.asp).
- How and where it will be implemented.
- The population of learners and educators intended to benefit from the program, practice, or policy.
- Why the program, practice, or policy is likely to be an improvement over what already exists. For example, is it more likely to be scaled-up because it is more user-friendly and less expensive to implement? Is it likely to produce significantly better education outcomes?
- The potential market for the program, practice, or policy. What resources and organizational structure would be necessary for its wide adoption and implementation? What is its potential for commercialization?

- The scale up potential of your program, practice, or policy to different populations and contexts.
- For adaptive interventions, a rationale for decision points, tailoring variables, decision rules, and intervention options.

Describe the theory of change that will guide your development/refinement and testing of the program, practice, or policy. The theory of change should be supported by theoretical frameworks and empirical evidence that illustrate how and why the desired change in learner outcomes is expected to happen. The theory of change description should:

- Make clear why the program, practice, or policy is likely to produce better education outcomes relative to current practice.
- Justify the size of the change in learner education outcomes you anticipate from the program, practice, or policy.
- Specify the conditions that must be in place, including implementation support, that will lead to the desired change in education outcomes.
- Be supported by a visual representation of the theory of change in [Appendix C: Supplemental Charts, Tables, and Figures](#).

Discuss how historically underserved learners might benefit from the program, practice, or policy, including how it will address the needs of these learners and address education inequities, such as by improving learners' outcomes and/or their access to resources and opportunities.

Describe any partnerships with education agencies to carry out the proposed work. Including education agencies as partners makes it more likely that researchers focus on programs, practices, and policies that are meaningful and useful to education practitioners and policymakers.

If you are proposing to further develop a program, practice, or policy that was the focus of a previous development grant, address the need for another development grant by describing the following:

- The results of other grants to support the development or further development of the program, practice, or policy.
- Whether what was developed has been (or is being) tested for impact and include any available results and explain their implications for the proposed project.
- Whether what was developed is being used in the field. If it is not being used, explain why.

Explicitly state your research questions or specific aims.

### *(b) Research Plan*

Strong applications will demonstrate that the sample, setting, research design, methods, data analysis plans, and cost analysis plan align with the research questions posed in the Significance section and that the project will be able to answer those questions with sufficient rigor.

Include a timeline for study activities in [Appendix C: Supplemental Charts, Tables, and Figures](#).

Discuss how your study conceptualizes education equity, and how the proposed study's design, sample, measurement, analysis, and reporting align to that conceptualization.

### ***Sample and Setting***

Describe the target population of learners that your sample represents. Explain how your work with this sample will contribute to a larger body of knowledge on promising programs, practices, and policies for the target population.

- Describe the procedure you will use to recruit a sample that represents your target population. Describe and justify the inclusion/exclusion criteria you will use and discuss how these may narrow the target population you propose to study and influence the generalizability of the results to this target population. Through intentional sampling or other means, your proposed study should permit ready generalization of its findings to your population of interest. For additional resources see <https://ies.ed.gov/seer/generalization.asp>. IES does not expect individual projects to be generalizable to the U.S. population as a whole. Your target population may represent a very narrow segment of the larger U.S. population.
- Describe strategies to increase the likelihood that participants will join the project and remain in the study (reduce attrition).

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.

### ***Research Design, Methods, and Data Analysis Plans***

Use a mixed methods approach whenever possible.

#### *Developing/Refining the Program, Practice, or Policy*

IES recommends using an iterative process to develop or refine programs, practices, and policies. If appropriate, we also encourage you to use a digital learning platform to support this process. Describe the following:

- How your iterative development plan will allow you to refine and improve upon the initial version of the program, practice, or policy by implementing all or component parts as you collect feedback from those who will use it to ensure usability and feasibility.
- How you will determine which core components are critical for improving outcomes and whether any components may be optional.
- How you will determine the support that will be necessary to ensure high fidelity of implementation.
- Why the iterative development approach you will use is appropriate for your proposed project. (IES does not require or endorse any specific model of iterative development or suggest an ideal number of iterations.)

#### *Determining Usability and Feasibility of the Program, Practice, or Policy*

Describe how you will collect information on the acceptability, usability, and feasibility of implementing the program, practice, or policy. Address how you will use this information to:

- Make adjustments to the program, practice, or policy to improve its future scaling.
- Decide if the program, practice, or policy is a good fit for the setting in which it is being implemented. How will the new program, practice, or policy be integrated into the procedures, pedagogical practices, digital learning platforms, curricula, and/or assessments currently being used?
- Identify the amount of time and training needed to adopt and sustain implementation of the program, practice, or policy.

#### *Determining Promise of Benefit for Learner Education Outcomes*

Describe how you will pilot the program, practice, or policy to determine its potential benefit for learner education outcomes.

If appropriate, consider using a digital learning platform to support the pilot test of promise.

Provide a rationale for the research design you propose for your pilot study.

- Propose the most rigorous research design possible given what you will be piloting, with whom, and under what conditions. Pilot studies may use experimental group, within-subject, or single-case experimental designs, or quasi-experimental designs.
- If your pilot study will be underpowered given the limitations on time and money available for this type of project, describe what can be learned about the potential benefits for learner education outcomes given the known limits on statistical power.
- If using a group design, describe the comparison group and how you will monitor whether the treatment and comparison groups are different enough to expect the predicted education outcomes.

#### *Power Analyses*

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 Sequential, multiple assignment, randomized trials (SMARTs), clearly identify your power to detect differences at each level of randomization as appropriate for your research questions.

#### *High-quality Measures*

Clearly define the constructs of interest in the proposed study. Describe the importance, reliability, and validity of all measures proposed, including learner outcomes, educator outcomes, educator and education system characteristics, and implementation outcomes. For additional resources see <https://ies.ed.gov/seer/outcomes.asp>.

- If you need to develop a measure, describe what you will develop, why it is necessary, how it will be developed, and the process for checking its reliability and validity. It is also critical that you explain how this measurement work will not compromise your ability to achieve the primary aims. No more than 6 months may be spent on developing and validating such an assessment.
- Describe how you will measure implementation fidelity of the program, practice, or policy, including any training that is provided to support implementation.

#### *Data Analysis Plan*

Detail your data analysis procedures for all quantitative and qualitative analyses necessary to address your research questions.

- For mixed methods studies, data analysis plans should provide detailed information on the analytical and interpretive processes for the qualitative data and reflect the integration of qualitative and quantitative data.

Describe how you will measure the generalizability of your findings by contrasting your sample's characteristics with the characteristics of the target population. Explain how you will adjust for any mismatch between your sample and the population. For additional resources see <https://ies.ed.gov/seer/generalization.asp>.

Describe and justify the statistical models to be used, including how they address the multilevel nature of education data. Address any clustering of learners within classrooms, schools, districts, colleges, 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. Propose to conduct sensitivity tests to assess the influence of key procedural or analytic decisions on the results.

Describe analyses that will be conducted to examine outcomes for learners from diverse backgrounds and experiences, including learners from historically underserved communities or populations.

### *Cost Analysis Plan*

In your cost analysis plan, describe the following:

- The level that is most relevant for the new program, practice, or policy, whether the school, classroom, or individual learner level.
- How you will estimate costs using a societal perspective. Describe the cost method you will use, noting whether another perspective, such as that of the local education agency, will also be included.
- How you will collect data about costs, including the time period for the cost data collection, the data collection assessments you will use, and the sources you will use to obtain national prices for resources and, if useful to a local audience, local prices.
- How you will calculate the cost of the resources, the cost of core components of the program, practice, or policy, and the total and incremental cost of implementing the program, practice, or policy. Include details such as how you will adjust prices where needed (for example, to account for inflation, geographic price differences, the time value of money), assign costs to resources that are provided at below their actual value, and run sensitivity analyses to check assumptions.
- The metrics you will use to report costs to education stakeholders.

For additional resources, see [https://ies.ed.gov/seer/cost\\_analysis.asp](https://ies.ed.gov/seer/cost_analysis.asp).

### *(c) Personnel*

Strong applications will demonstrate that the project team possess the appropriate skills and qualifications to carry out the proposed research project, that the principal investigator and other key personnel possess the appropriate training and experience for their roles and responsibilities, and that they will commit sufficient time to competently implement the proposed research.

In its research grant programs, IES is strongly committed to broadening participation, including personnel from underrepresented communities and diverse institutions.

Describe how the background and experience of the project team supports the conduct of the proposed study with the population of learners that your project addresses.

Development and Innovation projects demand a wide variety of expertise to ensure they are of high quality. Identify the key personnel who will be responsible for each of the specified activities in the proposed research plan and the amount of time they will devote to the project.

Describe the following:

- The plan for how key personnel will maintain their objectivity and promote transparency in conducting the proposed research, including the proposed pilot test of promise and dissemination activities.
- The management structure and procedures that will be used to keep the project on track and ensure the study is of high quality.

*(d) Resources*

Strong applications will demonstrate that you have sufficient research infrastructure and institutional capacity to carry out the proposed research and that the commitments of each partner show support for the implementation and success of the project.

Describe the resources you will use to conduct the proposed project at both the primary applicant institution and any subaward institutions, including the following:

- Your institution's capacity to manage a grant of this size.
- Your immediate access to resources available at the primary institution and any subaward institutions.
- 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.
- Your access to specific offices and organizations that will support your plan to disseminate results as described in the required Dissemination Plan in Appendix A: Dissemination History and Plan.
- Access to the settings, data sets, and digital platforms necessary for the proposed research.
  - Include letters of agreement, data licenses, or existing memoranda of understanding in [Appendix E](#) documenting this access.
  - Convincing letters convey that the organizations understand what their participation in the study will involve, such as surveys, assessments, and/or classroom observations. Include information about incentives for participation, if applicable.

## E. Impact

### 1. Purpose

IES supports causal studies to assess the near and/or long-term impacts of programs, practices, or policies on learner education outcomes. These studies also document how and where the program, practice, or policy was implemented and the necessary support, including at what cost, for its implementation with fidelity.

Impact projects include initial efficacy studies that test a program, practice, or policy that has not been rigorously evaluated previously to determine whether it has beneficial impacts on education outcomes; replication studies that test a program, practice, or policy that has been rigorously evaluated previously and demonstrated beneficial impacts on education outcomes to better understand for whom it works and under what conditions; and follow-up studies that test the longer-term impact of a program, practice, or policy that has been shown to have beneficial impacts on education outcomes in a previous or ongoing evaluation study. A variety of approaches are appropriate under Impact including (1) primary data collection and analyses, (2) secondary data analyses, or (3) some combination of these two approaches.

Successful Impact studies will generate evidence about benefits to learners and the affordability and feasibility of programs, practices, and policies to support their future deployment at scale.

Note: If the program, practice, or policy 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 assessments 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.

### 2. Award Limit

No more than \$4,000,000 (direct and indirect costs) over no more than 5 years.

- The duration and budget you request should reflect the actual time and amount of funding necessary to conduct your proposed scope of work.
- **IES will not make an award under the Impact project type that exceeds \$4,000,000 or that is for longer than 5 years.**

### 3. Requirements

#### (a) Project Narrative

You **must** include a Project Narrative with four sections: **(i) Significance, (ii) Research Plan, (iii) Personnel, and (iv) Resources**. If any of these four sections are missing, or lack the content described below, your application will not move forward to peer review.

The Project Narrative **must** adhere to the formatting guidelines (see Part IV.B) and be **no more than 22 pages**. For example, the use of small type will be grounds for IES to return the application without scientific peer review. If the narrative exceeds this page limit, IES will remove any pages after the 22nd page of the narrative.

The four sections of the Project Narrative **must** include the content described below. Please see the [recommendations section](#) for additional information about what to include in the Project Narrative.

#### (i) Significance

The purpose of this section is to explain why it is important to test the impact of the program, practice, or policy on learner education outcomes.

You **must** describe the following:

- The program, practice, or policy you propose to test and how it is being, will be, and/or was implemented
- Any prior evidence of impact on learner education outcomes (or lack of evidence) for the program, practice, or policy you propose to test

### **(ii) Research Plan**

The purpose of this section is to describe your sample, setting, research design, methods, data analysis plans, power analyses (if appropriate), plan to document implementation, and cost and cost effectiveness plans, and demonstrate how they will allow you to address your research questions.

You **must** describe the following:

- The sample and setting for your project
- The research design, methods, and data analysis plans for your project
- Your statistical power analyses, unless using a single-case experimental design
- Your plan for documenting implementation, or a rationale for why you cannot do so
- Your plan for determining the cost to implement the program, practice, or policy, or a rationale for why a cost analysis cannot be done
- Your plan for determining the cost effectiveness of the program, practice, or policy, or a rationale for why a cost-effectiveness analysis cannot be done

### **(iii) Personnel**

The purpose of this section is to describe the members of your project team, their training and experience (including experience working with the proposed study population), and the amount of time they will commit to the proposed research and dissemination activities.

You **must** describe the following:

- Your project team

### **(iv) Resources**

The purpose of this section is to describe the institutions involved in the research and their capacity and access to resources needed to execute a project of this size and complexity and to appropriately disseminate findings.

You **must** describe:

- The research infrastructure and capacity to conduct the project

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

You **must** include a Data Sharing and Management Plan (DSMP) in Appendix F to ensure compliance with the IES Policy Regarding Public Access to Research (<https://ies.ed.gov/funding/researchaccess.asp>). If your application does not include a DSMP in Appendix F, IES will declare your application noncompliant and it will not move forward to peer review.

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

IES provides recommendations intended to improve the quality of your application. Peer reviewers are asked to consider these recommendations in their evaluation of your application. Where appropriate, we provide recommendations following the Standards for Excellence in Education Research (SEER; <https://ies.ed.gov/seer>) to help ensure research is transparent, actionable, and focused on meaningful



outcomes that have the potential to dramatically improve education. We also provide links to specific SEER resources that may be useful as you incorporate these recommendations into your application.

### *(a) Significance*

Strong applications will address a significant challenge in education and provide a compelling theoretical and empirical rationale for the project.

Describe the education problem or challenge that your impact study will address. How will the program, practice, or policy you propose to test address this problem or challenge and meet the needs of schools, institutions of higher education, educators, learners, and/or other key stakeholders?

Explicitly state whether your proposed research project is an initial efficacy, replication, or follow-up study.

Describe the program, practice, or policy that you propose to evaluate, including the following:

- Its core features, including essential practices and structural elements. For additional resources see [https://ies.ed.gov/seer/core\\_components.asp](https://ies.ed.gov/seer/core_components.asp).
- The conditions that must be in place for the desired change in education outcomes to occur.
- The overall practical importance to educators and policymakers.
- The extent to which it is ready to be implemented or is already in use in real-world settings.
- The potential market for the program, practice, or policy, including the resources and organizational structure necessary for its wider adoption and implementation and its potential to be commercialized, should it have beneficial impacts on learner outcomes.

Describe the theory of change that will guide your impact study. Describe any prior evidence to justify the anticipated effects of the program, practice, or policy on education outcomes. If there is not an explicit theory of change already articulated, propose one to guide your measurements of mechanisms of action and expected outcomes. The theory of change description should:

- Make clear why the program, practice, or policy is likely to produce better education outcomes relative to current, previous, or alternative practice.
- Justify the size of the effect you anticipate from the program, practice, or policy in your proposed study.
- Be supported by a visual representation of the theory of change in [Appendix C: Supplemental Charts, Tables, and Figures](#).

Describe your target population. Note whether it differs from any prior studies of the program, practice, or policy. For example, you may propose to implement and evaluate the program, practice, or policy with a different population of learners, such as those from different racial/ethnic groups, or learners who demonstrate different levels of achievement from those included in prior studies.

Consider and discuss how historically underserved learners might benefit from the program, practice, or policy, including how it will address the needs of these learners and education inequities, such as by improving learners' outcomes and/or their access to resources and opportunities.

Describe how the program, practice, or policy will be implemented, including the following:

- The processes, strategies, and materials needed to support its implementation.
- The settings(s) where it is being, will be, and/or was implemented.
- The extent to which the conditions of your study will be similar to or differ from the conditions of real-world implementation. 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 were being conducted.

Describe and justify any changes that are needed to make the program, practice, or policy appropriate for implementation under the proposed conditions and/or with the proposed population. Note: You should not make significant changes to the core components of the program, practice, or policy. Studies that involve substantial revisions to a program, practice, or policy may be more appropriate for the Development and Innovation project type.

Describe any partnerships with education agencies to carry out the proposed work. Including education agencies as partners makes it more likely that researchers focus on programs, practices, and policies and outcomes that are meaningful and useful to education practitioners and policymakers.

For initial efficacy studies, describe the following:

- Evidence showing the program, practice, or policy's readiness for evaluation, including data on feasibility and fidelity of implementation, promise for achieving intended learner outcomes, and cost to implement.
- For an initial efficacy study of a widely used program, practice, or policy which may lack an explicit theory of change and evidence of implementation feasibility and fidelity, and/or lack pilot data on promise for improving learner outcomes, 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 evidence that it is still being widely used today and, therefore, should be evaluated.

For replication studies, describe the following:

- The program, practice, or policy's beneficial impact on education outcomes from the previous rigorous evaluation(s).
- The sample along with the design, measures, implementation, analyses, and results of this previous study (or studies) so that reviewers have enough information to judge its quality.
- The aspects of the prior study or studies that will be varied (such as the population, setting, and implementation conditions) and why.
- How the results of this replication study, if the program, practice, or policy is found to be efficacious, increase its potential to reach learners who could most benefit from it. For example, the results may provide a better specification of the types of settings or learners that are most likely to benefit from this program, practice, or policy or the identification of the resources and organizational structure necessary for the wider adoption and implementation of it.

For follow-up studies, describe the following:

- The program, practice, or policy's beneficial impact on education outcomes for the sample from the previous rigorous evaluation.
- The sample along with the design, measures, implementation, analyses, and results of this previous study so that reviewers have enough information to judge its quality.
- The extent to which previously observed outcomes would be expected to persist.
- 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 number of participants at each stage of the prior study.

For Impact studies that involve solely secondary data analysis, discuss the following:

- How widespread the program, practice, or policy currently is.
- The importance of evaluating it 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 program, practice, or policy's implementation and comparison group practice. Justify the value of the study should little information on implementation be available.

Explicitly state your research questions or specific aims.

### *(b) Research Plan*

Strong applications will demonstrate that the sample, setting, research design, methods, data analysis plans, power analyses, and cost and cost effectiveness plans align with the research questions posed in the Significance section and that the project will be able to answer those questions with sufficient rigor.

Include a timeline for study activities in [Appendix C: Supplemental Charts, Tables, and Figures](#).

Discuss how your study conceptualizes education equity, and how the proposed study's design, sample, measurement, analysis, and reporting align to that conceptualization.

IES encourages you to identify and use education outcomes that could be measured beyond the implementation period of the program, practice, or policy to determine if short-term changes in education outcomes are sustained over time. Depending on your design, you may be able to include additional follow-up data collection within your current study or, if that is not possible, you may be able to include activities that will help you do additional follow-up outside of the current study. Such activities may include planning your sample size to account for attrition if you intend to collect additional data in the future and ensuring your IRB protocols are written to allow researchers to follow participants beyond your current grant time period.

### ***Sample and Setting***

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 the target population.

The procedure you will use to recruit a sample that represents your target population. Describe and justify the inclusion/exclusion criteria you will use during sample recruitment and discuss how these may narrow the target population you propose to study and influence the generalizability of the results to the target population. Through intentional sampling or other means, your proposed study should permit ready generalization of its findings to your population of interest. For additional resources see <https://ies.ed.gov/seer/generalization.asp>. IES does not expect individual projects to be generalizable to the U.S. population as a whole. Your target population may represent a very narrow segment of the larger U.S. population.

Describe strategies to increase the likelihood that participants will join the study and remain in the study (reduce attrition) over the course of the evaluation.

- For a follow-up study, discuss what steps you will take to minimize attrition from the original 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.

Describe the setting(s) in which the research will take place (provide letters of agreement in [Appendix E](#)), including the size and characteristics of the setting and/or the surrounding community, and discuss how this will allow you to draw conclusions about the education settings your research is intended to inform.

### ***Research Design, Methods, and Data Analysis Plans***

Impact studies should use designs that are eligible to meet the IES What Works Clearinghouse (WWC) design standards that are in effect at the time of RFA publication (<https://ies.ed.gov/ncee/wwc/Handbooks>). Provide a rationale for the research design you propose. Explain how your study will meet WWC design standards with or without reservations.

IES recommends using randomized controlled trials (RCTs) for impact studies because they have the strongest internal validity for causal conclusions. We recognize that RCTs are not always the best design choice for some types of programs, practices, or policies (for example, policies that are implemented state-wide). We expect applicants to use the strongest research design available to address your proposed impact questions for the program, practice or policy you are testing. The WWC currently only reviews studies that use one of the following designs:

- Group RCTs
- Sequential, multiple assignment, randomized trials (SMARTs)
- Regression discontinuity designs (RDDs)
- Quasi-experimental designs (QEDs) including cross-sectional group designs, comparative interrupted time series, difference-in-difference designs, and growth curve designs
- Single case experimental designs (SCDs)

When feasible, choose a study design that allows valid estimates to be calculated for different settings or groups within your proposed sample (particularly those who have been historically underserved).

If you propose an RCT, describe the following:

- The unit of randomization, your rationale for randomizing at that level, and the procedures for implementing and maintaining random assignment to condition.
- How you will document baseline equivalence between treatment and comparison groups at the start of the study and the level of bias occurring from overall and differential attrition rates.

If you propose a SMART design,

- Identify and provide a 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.

If you propose an RDD, 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.
- How you will determine that there is a true discontinuity at the cutoff point and not at other points where a discontinuity would not be expected.
- How you will determine that no manipulation of the assignment variable has occurred.
- How you will determine that the treatment and comparison groups have similar baseline characteristics, especially around the cutoff point, to rule out selection bias.
- How you will demonstrate high levels of compliance to assignment with most treatment group members receiving the program, practice, or policy and most comparison group members not.

If you propose a QED, describe the following:

- How you will ensure that the proposed design permits drawing causal conclusions about the effect of the program, practice, or policy on the intended outcomes
- The procedure for minimizing selection bias and the plan to address threats to internal validity

If you propose a SCD, describe the following:

- The type of SCD you propose to use
- Quantitative analyses, in addition to visual analysis, for analyzing the resulting data

If you are proposing mixed methods research, in addition to the relevant quantitative design recommendations above, you should include and/or describe the following:

- A rationale supporting the benefit of a mixed methods approach
- Research questions that reflect a mixed methods approach
- The qualitative approach used
- Types of data to be collected
- Management of qualitative data, including codebook development and intercoder reliability process

#### *Plan for Documenting Implementation*

If applicable, describe your plan for assessing implementation strategies and fidelity to core components in the treatment group and the identification of similar components in the comparison group. If a program, practice, or policy is not found to have a positive impact on learner outcomes, it could be because implementation fidelity of core components is not high in the treatment group or the treatment and comparison group components do not differ. Beneficial results can be more confidently attributed to the program, practice, or policy if comparison and treatment group practices differ.

Describe your plan for documenting the treatment implementation and contrast (<https://ies.ed.gov/seer/implementation.asp>), including the following:

- How you will document the essential elements of the treatment contrast early in the evaluation by comparing how the program, practice, or policy will be implemented in the treatment group and comparing that to the counterfactual, including its context. How will you respond if you discover that fidelity to core components in the treatment group is low? What will you do if you find that the treatment and comparison groups are highly similar on these core components?
- How you will document all aspects of implementation, including any training or coaching provided to those education personnel implementing the program, practice, or policy, if applicable.
- The measures you will use to document and understand strategies to support implementation and fidelity to core components, including any training or coaching provided to implementers, and other relevant implementation measures of interest. Show that fidelity measures of the treatment and comparison-group practice are sufficiently comprehensive and sensitive to identify critical differences between what the treatment and comparison groups receive.
- Your plan for examining implementation fidelity of core components and implementation strategies in relation to your outcomes of interest. The results of such analyses may be used to improve the quality and scalability of the program, practice, or policy through improvements in design, use, and support.
- The learner, educator, and/or setting characteristics that might affect implementation and how you will examine their influence. Describe how you will determine the factors that are associated with higher (or lower) implementation fidelity and likelihood of sustainability. These factors could include characteristics of those who implement the program, practice, or policy; adaptations made in response to local context; as well as classroom, school, and district organizational factors.

- How you will identify adaptations of the program, practice, or policy when implemented by the educators in your evaluation. How will you identify the local contexts that lead to adaptations and whether these adaptations are correlated with education outcomes? Document, and identify opportunities to learn from, adaptations of the program, practice, or policy that were observed during implementation.

#### *Power Analyses*

Provide a separate power analysis for each causal analysis you propose. Each power analysis should demonstrate the statistical power of the research design to detect a reasonably expected and minimally important effect of the program, practice, or policy on the focal learner outcomes. Justify why this level of effect would be expected and explain why this would be a practically important effect.

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, stratified sampling, or blocking.
- Predicted attrition and how it was addressed in the power analysis.

For SMARTs, 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 for different groups of learners within the proposed sample and any tests of mediation or moderation, even if those analyses are considered exploratory/secondary.

#### *High-quality Measures*

Clearly define the outcome constructs of interest to the proposed study (<https://ies.ed.gov/seer/outcomes.asp>). For all proposed measures, describe the importance, reliability, validity, sensitivity to change, appropriateness for the proposed sample and setting, and practical importance to educators, parents, and other decision makers.

- When state assessment scores or measures of successful progression through education systems such as attendance, progression, or degree completion are available, accessible, and appropriate for both the construct(s) and learners being assessed, you should include them.
- For programs, practices, or policies designed to directly change the teaching and learning environment and, in doing so, affect learner 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 program, practice, or policy.

Avoid relying solely on outcome measures that are overaligned to the program, practice, or policy being studied (for more information on overalignment, consult the What Works Clearinghouse Standards Handbook, <https://ies.ed.gov/ncee/wwc/Handbooks>).

For replication studies, to the extent possible, use outcome measures that align with those used in the prior impact study (or studies). Variations in outcome measures from the prior studies should be identified and discussed in relation to replicability.

Identify factors that might lead to varying impact on outcomes across the learners in your target population and the variables available to measure these factors.

If you need to develop a measure, describe what you will develop, why it is necessary, how it will be developed, and the process for checking its reliability and validity. It is also critical that you explain how this measurement work will not compromise your ability to answer your research questions. No more than 6 months may be spent on developing and validating such an assessment.

#### *Data Analysis Plan*

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

- For mixed methods studies, data analysis plans should provide detailed information on the analytical and interpretive processes for the qualitative data and reflect the integration of qualitative and quantitative data.
- As appropriate, proposed analyses should examine learners from diverse backgrounds and experiences. Describe any analyses that will be conducted to examine variations by demographic factors such as gender, race/ethnicity, and socioeconomic status.
- Explain how you will measure and report effect sizes in ways that policymakers and practitioners can readily understand.
- Describe how you will measure the generalizability of your findings by contrasting your sample's characteristics with the characteristics of the target population. Explain how you will adjust for any mismatch between your sample and the population. For additional resources see <https://ies.ed.gov/seer/generalization.asp>.
- 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.
- Describe how you will identify and examine any variables, including those related to implementation, that might cause the impact of the program, practice, or policy to vary across learners, classrooms, schools, colleges, districts, states, or [formal education programs](#).
- For replication studies, describe the plan for comparing the results of the proposed study to those from prior impact studies in order to determine whether the proposed study replicated the findings from prior studies. Note: IES encourages using multiple metrics to determine whether the proposed replication supports prior findings.

#### *Cost Analysis and Cost Effectiveness Analysis Plans*

In your cost and cost effectiveness analysis plan, describe the following:

- The level that is most relevant for the program, practice, or policy being studied, whether the school, classroom, or individual learner level.
- How you will estimate costs using a societal perspective. Describe the cost method you will use, noting whether another perspective, such as that of the local education agency, will also be included.
- How you will collect data about costs, including the time period for the cost data collection, the data collection assessments you will use, and the sources you will use to obtain national prices for resources and, if useful to a local audience, local prices.

- 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.
- How you will calculate the cost of the resources, the cost of core components of the program, practice, or policy, and the total and incremental cost of implementing the program, practice, or policy. Include details such as how you will adjust prices where needed (for example, to account for inflation, geographic price differences, the time value of money), assign costs to resources that are provided at below their actual value, run sensitivity analyses to check assumptions, and combine cost data with impact data to create a cost effectiveness ratio.
- The metrics you will use to report costs and how you will explain the meaning of the cost effectiveness ratio to education stakeholders.

For additional resources, see [https://ies.ed.gov/seer/cost\\_analysis.asp](https://ies.ed.gov/seer/cost_analysis.asp).

For follow-up studies, if a rigorous cost analysis has already been completed for the same program, practice, or policy in a similar context, you may rely on that cost analysis rather than completing a new one. In such a case, provide the findings of the previous cost analysis in your application and show that it applies to the same program, practice, or policy and context you propose examining for follow-up impacts.

### *(c) Personnel*

Strong applications will demonstrate that the project team possess the appropriate skills and qualifications to carry out the proposed research project, that the principal investigator and other key personnel possess the appropriate training and experience for their roles and responsibilities, and that they will commit sufficient time to competently implement the proposed research.

In its research grant programs, IES is strongly committed to broadening participation, including personnel from underrepresented communities and diverse institutions.

Describe how the background and experience of the project team supports the conduct of the proposed study with the population of learners that your project addresses.

Impact projects demand a wide variety of expertise to ensure they are of high quality. Identify the key personnel who will be responsible for each of the specified activities in the proposed research plan and the amount of time they will devote to the project.

Describe the following:

- The plan for how key personnel will maintain their objectivity and promote transparency in conducting the proposed research and dissemination activities. Program, practice and/or policy developers may serve as Principal Investigators or other key personnel as long as the necessary safeguards are in place and their involvement does not jeopardize the objectivity of the evaluation.
  - Safeguards may include masking to condition, having separate teams of personnel for implementing the intervention versus conducting the evaluation activities, and/or pre-registering the analytic plan.
  - At a minimum, you should demonstrate that key personnel who are responsible for the random assignment, supervision of outcome data and coding, and data analysis are not involved in the development or distribution of the program, practice, or policy and do not have a financial interest in it.
- The management structure and procedures that will be used to keep the project on track and ensure the study is of high quality.



### *(d) Resources*

Strong applications will demonstrate that you have sufficient research infrastructure and institutional capacity to carry out the proposed research and that the commitments of each partner show support for the implementation and success of the project.

Describe the resources you will use to conduct the proposed impact study at both the primary applicant institution and any subaward institutions, including the following:

- Your institution's capacity to manage a grant of this size.
- Your immediate access to resources available at the primary institution and any subaward institutions.
- 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.
- Your access to specific offices and organizations that will support your plan to disseminate results as described in the required Dissemination Plan in [Appendix A: Dissemination History and Plan](#).
- Your access to specific offices or organizations that will support dataset documentation and execution of the required Data Sharing and Management Plan (DSMP) in Appendix F: Data Sharing and Management Plan.
- Access to the settings, data sets, and platforms necessary for the proposed research.
  - Include letters of agreement, data licenses, or existing memoranda of understanding in [Appendix E](#) documenting this access.
  - 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.

### *(e) Data Sharing and Management Plan (DSMP)*

See the Implementation Guide for Public Access to Research Data ([https://ies.ed.gov/funding/datasharing\\_implementation.asp](https://ies.ed.gov/funding/datasharing_implementation.asp)) and our FAQs ([https://ies.ed.gov/funding/datasharing\\_faq.asp](https://ies.ed.gov/funding/datasharing_faq.asp)) for additional guidance on developing a DSMP.

When the principal investigator (PI) and authorized organization representative (AOR) sign the cover page of the grant application, they will be assuring compliance with the IES Policy Regarding Public Access to Research (<https://ies.ed.gov/funding/researchaccess.asp>) as well as other policies and regulations governing research awards. This entails uploading full text of accepted or published manuscripts to ERIC that are based on IES-funded data, as well as the sharing of data.

Once the DSMP 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 if 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 DSMP, subsequent awards to individuals or institutions may be affected. By addressing the items identified below, your DSMP describes how you will meet the requirements of the IES policy for data sharing and adopt best practices for adherence to open science principles.

The DSMP should describe the following:

- The pre-registration 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>).

- The data repository where you plan to share your data, and an indication of the selected repository's adherence with the National Science and Technology Council document entitled "Desirable Characteristics of Data Repositories for Federally Funded Research" (<https://repository.si.edu/handle/10088/113528>).
- The type of data to be shared.
- The approach you will take to curating, cleaning, and preparing data for sharing, taking into consideration guidance from IES's Sharing Study Data: A Guide for Education Researchers (<https://ies.ed.gov/ncee/pubs/2022004/>).
- The 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.
- Intentions to share analysis code to support reproducibility, including format and location.
- 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.
- 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, the Family Educational Rights and Privacy Act (FERPA), and the Health Insurance Portability and Accountability Act (HIPAA).
- Approaches to disseminating the availability and location of data to support discoverability for reuse purposes.
- The costs associated with implementation of the DSMP 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 DSMP. If your application is being considered for funding based on the scores received during the scientific review process but your DSMP is determined incomplete, you will be required to provide additional detail regarding your DSMP.

## 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. Read the IES Application Submission Guide ([https://ies.ed.gov/funding/submission\\_guide.asp](https://ies.ed.gov/funding/submission_guide.asp)) to learn how to prepare a complete application that is submitted on time through Grants.gov (<https://www.grants.gov/>).

### 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, and use footnotes sparingly, if at all, the application will typically meet these requirements. Readability should guide your selection of an appropriate font and your use of footnotes.

#### 5. Citations

Use the parenthetical author-date style for citations rather than numeric citations that correspond to the reference list.

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

Use black and white in graphs, diagrams, tables, and charts. If color is used, check that the material reproduces well if 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/submission\\_guide.asp](https://ies.ed.gov/funding/submission_guide.asp)) 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 the peer reviewers will evaluate 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**. IES suggests 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 3<sup>rd</sup> 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 and your project team 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. PIs who have never led an IES grant should focus on dissemination history of related, past federal or non-federal research projects in which they and their project team have participated or other relevant research dissemination activities. Reviewers will use this information to determine whether the project personnel have dissemination experience that will support 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 institutions 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/ncer/research/randdCenters.asp>), Research Networks (<https://ies.ed.gov/ncer/research/researchNetworks.asp>), or Regional Educational Laboratories (RELs) (<https://ies.ed.gov/ncee/edlabs/>).

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 (open access, where feasible) 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 assessments 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 programs, practices, policies, or assessments.
- [Development and Innovation](#) projects develop new or revise existing programs, practices, or policies and pilot them to provide evidence of promise for improving education outcomes. For example, if the results of your pilot study indicate the program, practice, or policy is promising, dissemination efforts should focus on letting others know about the availability of it 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 program, practice, or policy needs to be measured and communicating the cost should be part of dissemination work.

- **Impact** projects evaluate the impact of a program, practice, or policy 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 program, practice, or policy and will form the basis for recommendations. The costs of the program, practice, or policy need to be measured and communicating the costs and cost-effectiveness of should be part of dissemination work. **Findings of a beneficial impact** on learner outcomes could support the wider use of the program, practice, or policy, the further adaptation of it for different conditions, and increased marketability. **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 program, practice, or policy, further revision of the it and its implementation, and revision of the theory of change underlying it.

**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 may 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 Program, Practice, Policy, 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 a program, practice, policy, or assessment you may include examples of it such as curriculum materials, computer screen shots,

assessment items, or other materials used in the program, practice, policy, or assessment to be explored, developed, evaluated, or validated.

**These are the only materials that may 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, colleges, districts, platform developers, and/or other settings or data sources that will be a part of or will 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/submission\\_guide.asp](https://ies.ed.gov/funding/submission_guide.asp)) 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 time commitment and timing of participation, as well as the required space and personnel resources that the organization is prepared to contribute to the research project and the ways that organization personnel will be expected to coordinate with the research team (e.g., quarterly meetings with administrative staff, weekly research team observations in classrooms) if the application is funded. A common reason for projects to fail is loss of participants. 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.

**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 Sharing and Management Plan (Required for Exploration and Impact)***

If you are applying under [Exploration](#) or [Impact](#) 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 Sharing and Management Plan (DSMP) in Appendix F. The content of the DSMP is discussed under Data Sharing and Management Plan in [Exploration](#) and [Impact](#).

**This is the only material that may 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 and consultants to include as file attachments in your application. See the IES Application Submission Guide ([https://ies.ed.gov/funding/submission\\_guide.asp](https://ies.ed.gov/funding/submission_guide.asp)) 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/>).

### *(1) Title*

- **Title:** Distinct, descriptive title of the project.
- **Topic and Project Type:** Identify the topic and project type to which you are applying (see [Parts II and III](#)). This information should match the topic 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/submission\\_guide.asp](https://ies.ed.gov/funding/submission_guide.asp) and [the topic and project type codes in part VII](#) for more information).

### *(2) Project Summary*

The purpose of the project summary is to provide a high-level overview of the research 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 program, practice, policy, or assessment to be developed and the information that will be learned and disseminated

### *(3) 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
- **Factor/Program/Practice/Policy/Assessment:**
  - For Measurement, Development and Innovation, and Impact projects, a brief description of the program, practice, policy, or assessment 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 – whether you will use a randomized controlled trial or a quasi-experimental design for an Impact study, information about the qualitative methods you will use to inform the design process for a Development project), describing the 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. State that there is no treatment contrast, when relevant
- **Key Measures:** A brief description of key measures, including what constructs the measures assess and whether those constructs are education 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:** A list of the IES-issued award number and/or corresponding online abstract link (URLs) to completed or ongoing IES-funded projects that are related to the proposed project (for example, if you submit an Impact application to test a program, practice, or policy developed with IES funding, list that Development and Innovation grant number here)

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 and to search for award numbers and URLs.

## ***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. As a reminder, you should use the author-date style for citations in the project narrative (see [Part VI B.5 Citations](#) for more information).

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

You **must** submit an exempt or non-exempt human subjects narrative as a separate PDF attachment in the application package. We do not recommend a 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/hrsnarrative1.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.

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 for each person named as key personnel in your application. You may also submit biographical sketches for consultants (optional). Each biographical sketch (an abbreviated CV plus current and pending support information) **must be no more than five pages in length, and this five-page limit includes current and pending support information**. 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. IES will accept the SciENCv format for your biographical sketch even though it does not adhere exactly to our general formatting requirements. 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.

The biographical sketch for the principal investigator, each co-principal investigator, other key personnel, and consultants (if included) should show how members of the project team possess training and expertise commensurate with their specified duties on the proposed project, for example, by describing relevant publications, grants, and research experience, including experience working with the study population as applicable.

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.

Include a persistent identifier (PID) such as an ORCID iD (Open Researcher and Contributor; <https://orcid.org/>) in the biosketches for all key personnel. If you or any key member of your project team does not yet have a PID, IES encourages you to establish one as soon as possible, given the requirement that **all key personnel are required to have a PID in place before an award will be made.**

## 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

Applicants are expected to apply their institution's federally negotiated indirect cost rate when developing a budget for the proposed research project.

If your institution does not have an indirect cost rate and you receive a grant from IES, the Indirect Cost Group (ICG) in the U.S. Department of Education's Office of the Chief Financial Officer (<https://www2.ed.gov/about/offices/list/ocfo/fipao/faq.html>) can help with obtaining an indirect cost rate once the grant is awarded. Please note that the ICG is not available for assistance during the application preparation process.

Most institutions that do not have a current negotiated rate may use a de minimis rate of 10 percent of modified total direct costs (see 2 CFR §200.414 [https://www.ecfr.gov/cgi-bin/text-idx?node=se2.1.200\\_1414&rgn=div8](https://www.ecfr.gov/cgi-bin/text-idx?node=se2.1.200_1414&rgn=div8) for more information). This de minimis rate may be used indefinitely and no documentation is required to justify its use.

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**

“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.

#### **Conducting research in or with education settings**

If your application is being considered for funding based on scientific merit scores from the scientific 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.

#### **Using secondary datasets**

If your application is being considered for funding based on scientific merit scores from the scientific 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.

### **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. IES also determines the principal investigator's (PI's) compliance with the IES Policy Regarding Public Access to Research if they were the PI on previous IES grants awarded in 2012 or later (<https://ies.ed.gov/funding/researchaccess.asp>).

### *(d) Persistent Identifiers (PIDs) for Key Personnel*

**All key personnel are required to have a persistent identifier (PID),** such as ORCID iD (Open Researcher and Contributor Identification; <https://orcid.org/>) **in place before an award will be made.**

## **2. Post-Award**

### *(a) Compliance with IES Policy Regarding Public Access to Research*

#### **Access to research 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. The public access requirement 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 (PI) 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 are asked to submit bibliographic

information from the publication, including title, authors, publication date, journal title, and associated IES award number(s).

### **Access to final research data**

Applicants proposing exploratory or impact research must describe a plan for making final research data available should the project be funded. You must include a [Data Sharing and Management Plan \(DSMP\) in Appendix F](#) if you are submitting an [Exploration](#) or [Impact](#) application. The scientific peer review process will not include the DSMP in the scoring of the scientific merit of the application. Instead, IES program officers will be responsible for reviewing the completeness of the proposed DSMP. The costs of the DSMP can be covered by the grant and should be included in the budget and explained in the budget narrative.

### *(b) Pre-Register Exploration and Impact Studies*

Grantees must register their exploratory and impact studies on a suitable pre-registration platform within the first year of receiving a new award. There are several options for pre-registration including but not limited to 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/>), AEA Registry (<https://www.socialscienceregistry.org/>), 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
- 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 the IES Application Submission Guide ([https://ies.ed.gov/funding/submission\\_guide.asp](https://ies.ed.gov/funding/submission_guide.asp)) that the FY 2024 application is a resubmission (Item 8) and include the application number of the previous application (an 11-character alphanumeric identifier beginning “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 2024 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 2024 application is a new application. In Appendix B, you should provide a rationale explaining why your FY 2024 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 2024 IES grant programs and to multiple topics within the Education Research Grants program. In addition, within a particular grant program or topic, you may submit multiple applications. However, you may submit a given application only once for the FY 2024 grant competitions, meaning you may not submit the same application or similar applications to multiple grant programs, multiple topics, or multiple times within the same topic. 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 September 21, 2023** using the Grants.gov Workspace (<https://www.grants.gov/applicants/workspace-overview.html>). You must follow the application procedures and submission requirements described in the IES Application Submission Guide ([https://ies.ed.gov/funding/submission\\_guide.asp](https://ies.ed.gov/funding/submission_guide.asp)) and on Grants.gov (<https://www.grants.gov/web/grants/applicants.html>).

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/submission\\_guide.asp](https://ies.ed.gov/funding/submission_guide.asp)) 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 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 they believe 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 help solve education problems by generating reliable information about education programs, practices, policies, and assessments that support learning and improve academic achievement and education access 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 proposed research address a significant challenge in education and does the applicant provide a compelling theoretical and empirical rationale for the project? Does the applicant thoughtfully address relevant recommendations described in the Significance section for the project type under which the applicant is submitting the application? For resubmissions, does the applicant adequately address the comments/concerns of prior reviewers?

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

Do the research design and methods, sample and setting, and data analysis plans align with the research questions and aims posed in the Significance section and indicate that the project will be able to answer those questions with sufficient rigor? Does the applicant thoughtfully address relevant recommendations described in the Research Plan section for the project type under which the applicant is submitting the application? For resubmissions, does the applicant adequately address the comments/concerns of prior reviewers?

##### *(c) Personnel*

Does the project team possess the appropriate skills and qualifications to carry out the proposed research project? Do the principal investigator and other key personnel possess the appropriate training and experience for their roles and responsibilities and will they commit sufficient time to competently implement the proposed research? Does the applicant thoughtfully address relevant recommendations described in the



Personnel section for the project type under which the applicant is submitting the application? For resubmissions, does the applicant adequately address the comments/concerns of prior reviewers?

*(d) Resources*

Does the applicant have sufficient research infrastructure and institutional capacity to carry out the proposed research? Do the commitments of each partner show support for the implementation and success of the project? Does the applicant thoughtfully address relevant recommendations described in the Resources section for the project type under which the applicant is submitting the application? For resubmissions, does the applicant adequately address the comments/concerns of prior reviewers?

*(e) Dissemination*

Does the project team have a history of disseminating results from education research widely and appropriately? Is the plan for dissemination tailored to the multiple audiences who will benefit from the findings of the proposed project? Does the plan reflect the purpose of the project type? For resubmissions, does the applicant adequately address the comments/concerns of prior reviewers?

**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
- 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

Only compliant and responsive applications will be forwarded for scientific peer review. Use this checklist to better ensure you have included all required components for compliance and that you have addressed all general and project narrative requirements for responsiveness.

See the IES Application Submission Guide ([https://ies.ed.gov/funding/submission\\_guide.asp](https://ies.ed.gov/funding/submission_guide.asp)) 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 Impact application, have you included Appendix F: Data Sharing and Management Plan?
General Requirements for Responsiveness
Have you met all the Requirements for an application?
Does your proposed research include measures of academic outcomes?
<ul style="list-style-type: none"> <li>If you are applying under the Teaching, Teachers, and the Education Workforce topic, does your proposed research include the additional required measures of educator outcomes?</li> </ul>
<ul style="list-style-type: none"> <li>If you are applying under the Social, Emotional, and Behavioral Context for Teaching and Learning topic, does your proposed research include the additional required measures of social, emotional, and behavioral competencies?</li> </ul>
Is the proposed 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 single 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?

*This checklist continues on the next page.*

Project Narrative Requirements for Responsiveness				
	<u>Measurement</u>	<u>Exploration</u>	<u>Development and Innovation</u>	<u>Impact</u>
Significance	<ul style="list-style-type: none"> <li>assessment to be developed, refined, and/or validated</li> <li>purpose(s), population(s), and context(s) for which it is intended</li> </ul>	<ul style="list-style-type: none"> <li>factors to study</li> </ul>	<ul style="list-style-type: none"> <li>program, practice, or policy to be developed and how it will be implemented</li> </ul>	<ul style="list-style-type: none"> <li>program, practice, or policy to be tested and how it is being, will be, and/or was implemented</li> <li>prior evidence of beneficial impact on learner education outcomes (or lack thereof) for it</li> </ul>
Research Plan	<ul style="list-style-type: none"> <li>sample and setting</li> <li>research design, methods, and data analysis plans for the assessment's                             <ul style="list-style-type: none"> <li>development or refinement</li> <li>validation</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>sample and setting</li> <li>research design, methods, and data analysis plans</li> </ul>	<ul style="list-style-type: none"> <li>sample and setting</li> <li>research design, methods, and data analysis plans for                             <ul style="list-style-type: none"> <li>developing or refining the program, practice, or policy</li> <li>determining usability and feasibility</li> <li>determining promise for generating beneficial learner outcome</li> </ul> </li> <li>cost analysis plan</li> </ul>	<ul style="list-style-type: none"> <li>sample and setting</li> <li>research design, methods, and data analysis plans</li> <li>statistical power calculations (if applicable)</li> <li>plan for documenting implementation (or rationale for not including)</li> <li>cost analysis plan (or rationale for not including)</li> <li>cost effectiveness analysis plan (or rationale for not including)</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>research infrastructure and capacity</li> </ul>	<ul style="list-style-type: none"> <li>research infrastructure and capacity</li> </ul>	<ul style="list-style-type: none"> <li>research infrastructure and capacity</li> </ul>	<ul style="list-style-type: none"> <li>research infrastructure and capacity</li> </ul>

## Part VII: Required Codes for Item 4b of the SF 424 Cover Sheet

Applications to the **Education Research Grants Program (ALN 84.305A)** are submitted under a single topic and a single project type.

You **must** enter the appropriate topic and project type codes *as a single line* in Item 4b of the SF 424 Application for Federal Assistance form (see the IES Application Submission Guide [https://ies.ed.gov/funding/submission\\_guide.asp](https://ies.ed.gov/funding/submission_guide.asp) for more information about this form). For example, an application under the Science, Technology, Engineering, and Mathematics (STEM) Education topic and the Exploration project type should have the following entered in the field for Item 4b: **NCER-STEM-Exploration**

Topics	Codes
Career and Technical Education	NCER-CTE
Civics Education and Social Studies	NCER-SocStu
Cognition and Student Learning	NCER-CASL
Early Learning Programs and Policies	NCER-ELPP
Improving Education Systems	NCER-SYS
Literacy	NCER-Literacy
Postsecondary and Adult Education	NCER-PostsecAdult
Policies, Practices, and Programs for English Learners	NCER-EL
Science, Technology, Engineering, and Mathematics (STEM) Education	NCER-STEM
Social, Emotional, and Behavioral Context for Teaching and Learning	NCER-SocBeh
Teaching, Teachers, and the Education Workforce	NCER-Teach

Project Types	Codes
Measurement	Measurement
Exploration	Exploration
Development and Innovation	Development
Impact	Impact