ies INSTITUTE OF EDUCATION SCIENCES

Request for Applications

Education Research and Development Center Program

CFDA Number: 84.305C

Letter of Intent Due:	July 11, 2019	iesreview.ed.gov
Application Package Available:	July 11, 2019	Grants.gov
Application Due:	**No later than 11:59:59 pm Eastern on September 26, 2019**	Grants.gov
Possible Grant Start Dates:	July 1 – September 1, 2020	iesreview.ed.gov

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Part I: Overview

A. Introduction

The Institute of Education Sciences (IES) provides scientific evidence to improve education practice and policy and shares that evidence in a way that can be used by educators, parents, policymakers, researchers, and the public. Within IES, the National Center for Education Research (NCER) supports research focused on practices and policies that improve education outcomes and access to education opportunities for all learners from early childhood through adulthood, particularly those at risk for failure.

1. Education Research and Development Center Program (CFDA 84.305C)

In this Request for Applications (RFA), IES invites applications for research centers that will contribute to its Education Research and Development Center program (CFDA 84.305C). NCER's goal is to identify what works for whom, in what context, and why in order to provide reliable information about how to improve education outcomes and narrow achievement gaps for U.S. students. Under the Education Sciences Reform Act of 2002, IES supports National Research and Development Centers (R&D Centers) that conduct focused, scientific research on key education issues that face our nation. Through this program, researchers have greater resources than are available through the Education Research Grants program (CFDA 84.305A) to tackle more complex education problems, create innovative education solutions to these problems, and contribute to knowledge and theory in the education sciences. For information on existing IES R&D Centers, please see https://ies.ed.gov/ncer/RandD/.

For the FY 2020 Education Research and Development Center competition, IES invites applications for R&D Centers in three topic areas:

- Improving Opportunities and Achievement for English Learners in Secondary School Settings
- Improving Teaching and Learning in Postsecondary Institutions
- Improving Access, Instruction, and Outcomes in Gifted Education

Each of these R&D Centers will be responsible for

- Contributing to the solution of a specific education problem and to the generation of new knowledge and theories relevant to the focus of the R&D Center;
- Providing national leadership within the R&D Center's topic by disseminating research and engaging with researchers, practitioners, and policymakers in order to advance evidence-based policy and practice; and
- Conducting relatively rapid research and scholarship on supplemental questions that emerge within the R&D Center's topic area.

To encourage rigorous education research that is transparent, actionable, and focused on consequential outcomes, all applications to the FY 2020 Education Research and Development Center program are expected to follow the principles outlined in the IES-wide Standards for Excellence in Education Research (SEER), as applicable. These principles include pre-registering studies; focusing on outcomes meaningful to student success; documenting intervention implementation to inform use in other settings; identifying core intervention components; analyzing costs; facilitating generalization of study findings; making research findings, methods, and data available to others; and conducting research in a way that informs the future scaling of interventions.

2. RFA Organization

This RFA is organized as follows. Part I sets out the general requirements for a grant application. Part II provides information about the requirements for each R&D Center Topic. Part III provides information about other narrative content for the application, including required appendices. Part IV provides general

information on competition regulations and the review process. Part V provides a checklist that you can use to ensure you have included all required application elements to advance to scientific peer review.

3. Eligible Applicants

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

Broadening Participation in the Education Sciences: IES is interested in broadening institutional participation in its research grant programs. IES encourages applications from minority-serving institutions (MSIs), alone or in combination with other universities, that meet the eligibility criteria for this RFA. MSIs include Alaska Native and Native Hawaiian-Serving Institutions, American Indian Tribally Controlled Colleges and Universities (TCU), Asian American and Native American Pacific Islander-Serving Institutions (AANAPISI), Hispanic-Serving Institutions (HSI), Historically Black Colleges and Universities (HBCU), Native American-Serving, Nontribal Institutions, and Predominantly Black Institutions (PBI). MSI applicants are encouraged to review the *Funding Opportunities for Minority Serving Institutions* webinar (available at https://ies.ed.gov/funding/webinars/).

The Principal Investigator: The institution is responsible for identifying the Principal Investigator (PI) on a grant application and may elect to designate more than one person to serve in this role. The PI is the individual who has the authority and responsibility for the proper conduct of the research, including the appropriate use of federal funds and the submission of required scientific progress reports. If more than one PI is named, the institution identifies these PIs as sharing the authority and responsibility for leading and directing the research project intellectually and logistically. All PIs will be listed on any grant award notification. However, institutions applying for funding must designate a single point of contact for the project. The role of this person is primarily for communication purposes on the scientific and related budgetary aspects of the project and should be listed as the PI. All other PIs should be listed as Co-PIs.

4. Technical Assistance for Applicants

IES provides technical assistance (TA) to applicants that addresses the appropriateness of project ideas for this competition and methodological and other substantive issues concerning research in education settings. IES Program Officers work with applicants though a variety of formats up until the time of Grants.gov submission. If you submit a Letter of Intent (LOI) at https://iesreview.ed.gov, a Program Officer will contact you regarding your proposed project. IES also provides Funding Opportunities Webinars (live and on demand at https://ies.ed.gov/webinars) that provide advice on choosing the correct competition, grant writing, and submitting your application.

B. Changes in the FY 2020 RFA

All applicants and staff involved in proposal preparation and submission, whether submitting a new application or submitting a revised application, **should carefully read all relevant parts of this RFA**. Major changes to the Education Research and Development Center program (CFDA 84.305C) competition in FY 2020 are listed below and described fully in relevant sections of the RFA.

1. IES created a separate application submission guide that provides information about required electronic submission of applications through Grants.gov and an overview of the general IES funding process. Please see the IES Application Submission Guide (https://ies.ed.gov/funding/pdf/submissionguide.pdf) for important information about submitting your application on-time through Grants.gov.

2. The FY 2020 R&D Center competition is inviting applications in three topics:

   • Improving Opportunities and Achievement for English Learners in Secondary School Settings

- Improving Teaching and Learning in Postsecondary Institutions
- Improving Access, Instruction and Outcomes in Gifted Education

C. Getting Started

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

1. This RFA to learn how to prepare an application that is compliant and responsive to the requirements; and

2. The IES Application Submission Guide[1] (https://ies.ed.gov/funding/pdf/submissionguide.pdf) for 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.

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

- **On-Time Submission** - see separate IES Application Submission Guide at (https://ies.ed.gov/funding/pdf/submissionguide.pdf)

  o Received and validated by Grants.gov no later than 11:59:59 pm Eastern Time on September 26, 2019.

- **Compliance** - see this RFA

  o Includes the **required R&D Center narrative** (see Part II).
  o Includes all **required Appendices** (see Part III).

    ▪ Appendix A: Data Management Plan (Required)

- **Responsiveness** - see this RFA

  o Meets **General Requirements** for all applications (see Part I.D).

    ▪ Education Outcomes
    ▪ Education Settings
    ▪ Focused Program of Research
    ▪ Other R&D Center Activities
    ▪ R&D Center Topic (choose one)

- Meets **R&D Center Narrative Requirements** (see Part II).

D. General Requirements

Applications under the R&D Centers program **must meet the requirements** set out below in order to be sent forward for scientific peer review.

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[1] Please note that the IES Application Submission Guide includes application submission information that used to be included in the Request for Applications but has now been pulled out as a separate document.

1. Education Outcomes

All research supported under the R&D Centers program **must** measure academic outcomes.

Academic Outcomes

IES supports research on a diverse set of academic outcomes across development that fall under two categories. The first category includes academic outcomes that reflect **learning and achievement** in academic content areas. The second category includes academic outcomes that reflect learners' **successful progression** through education systems.

IES is interested in the following academic outcomes:

- For **kindergarten through Grade 12**, learning, achievement, and higher order thinking in the academic content areas of reading, writing, and STEM; English language proficiency; and progression through education systems as indicated by course and grade completion, retention, high school graduation, and dropout.
- For **postsecondary education**, access to, persistence in, progress through, and completion of postsecondary education, which includes developmental education courses and bridge programs as well as programs that lead to occupational certificates, associate's, or bachelor's degrees; and learning, achievement, and higher order thinking in postsecondary courses.

Social and Behavioral Competencies

IES supports research on **social and behavioral competencies**, defined as social skills, attitudes, and behaviors that are important to learners' success in school and beyond.

Employment and Earnings Outcomes

IES supports research on **employment and earnings outcomes**, such as hours of employment, job stability, and wages and benefits. In general, such outcomes are most pertinent to the Postsecondary R&D Center topic but can be included in other research topics as appropriate.

2. Education Settings

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

Education in the U.S. is delivered in a wide range of formal settings, such as center-based prekindergarten, public and private K-12 schools, community colleges, 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, online programs, and adult literacy programs run through community-based organizations. IES does not support research that occurs in informal contexts outside of education systems and outside the control of education agencies. Contact an IES Program Officer if you have questions about the education setting(s) you have identified for your proposed research.

IES permits a limited amount of research in laboratories. **Applications with 100 percent of the research taking place in laboratory settings will not be sent forward for scientific peer review.**

3. R&D Center Topic

For the FY 2020 Education Research and Development Center competition, you **must** submit your application to one of the three R&D Center topics listed below.

- Improving Opportunities and Achievement for English Learners in Secondary School Settings
- Improving Teaching and Learning in Postsecondary Institutions

- [Improving Access, Instruction, and Outcomes in Gifted Education](#)

4. Focused Program of Research

Each R&D Center **must** include a focused program of research. [Part II](#) includes additional information about additional requirements for the focused program of research for each R&D Center topic.

5. Other R&D Center Activities

In addition to the focused program of research, R&D Centers **must** (a) provide leadership in the R&D Center topic area and (b)conduct supplemental activities as determined in cooperation with IES.

a) National Leadership and Outreach Activities

R&D Centers are expected to have national visibility and function as a trusted source of scientific research on their topics. IES expects each R&D Center to develop a website that provides links to reports, papers, and other resources that have been peer reviewed or have been through a comparable quality review process. IES expects regular communications with the field through blogs, webinars, podcasts, newsletters, social media, and/or innovative uses of technology to share information and encourage discussion among policymakers and practitioners. IES encourages applicants to consider the various audiences for the research and the types of publications, products, and dissemination activities that will be best suited to their needs. These may include reports, research briefs, methodological papers, data collection tools, and other documents, along with oral presentations and briefings.

Finally, IES considers researcher training to be an important element of national leadership and encourages R&D Centers to provide opportunities for graduate students and early career researchers to participate in instrument development, data collection, analysis, and publication activities. Each R&D Center topic provides additional information about the types of the national leadership and outreach activities IES believes would be beneficial

b) Supplemental Activities

As part of the R&D Center's work, you must conduct supplemental activities, such as meetings and smaller-scale studies, that respond to pressing policy and practice needs within the topic covered by the R&D Center. The R&D Center will work cooperatively with IES to select and design these supplemental activities. For this reason, IES does not expect a detailed plan for these supplemental activities in the application. Applicants should budget a least 5 percent of the maximum award amount for a R&D Center to support these supplemental activities that will be determined in cooperation with IES once an award is made.

E. Award Limits

Applications to the Education Research and Development Centers grants program **must** conform to the following limits on award duration and cost by Topic.

Topic	Maximum Grant Duration	Maximum Grant Award

Improving Opportunities and Achievement for English Learners in Secondary School Settings	5 years	$10,000,000
Improving Teaching and Learning in Postsecondary Institutions	5 years	$10,000,000
Improving Access, Instruction, and Outcomes in Gifted Education	5 years	$5,000,000

Part II: R&D Center Topic Requirements and Recommendations

A. Applying to a Topic

For the FY 2020 Education Research and Development Center competition, you **must** submit your application to one of the three R&D Center topics listed below. You must identify your chosen topic on the SF-424 Form (Item 4b) of the Application Package (see IES Application Submission Guide), or IES may reject your application as nonresponsive to the requirements of this RFA.

Across all topics, in order to be sent forward for scientific peer review

- **You must meet the** general **requirements** outlined in Part I.D: General Requirements; and
- **You must meet the relevant R&D** Center **topic requirements** listed under Part II: R&D Center Topic Requirements and Recommendations.

For each R&D Center Topic:

- **See the Purpose section** for descriptions of the types of research appropriate for each R&D Center. IES encourages the use of mixed methods research, defined as the integration of qualitative and quantitative data, as appropriate.
- **See the Requirements section** for the specific content that you must address in the R&D Center Narrative in order to be sent forward for scientific peer review.
- **See the Award Limits section** for duration and cost maximums by each R&D Center topic.
- **See the Recommendations for Strong Applications section** for recommendations to improve the quality of your application. The scientific peer reviewers are asked to consider these recommendations in their evaluation of the quality of your application. IES strongly encourages you to incorporate the recommendations into your Project Narrative and relevant appendices. Where appropriate, recommendations are aligned with the SEER Principles (https://ies.ed.gov/seer.asp) to ensure that research is transparent, actionable, and focused on meaningful outcomes that have the potential to dramatically improve education.

B. Improving Opportunities and Achievement for English Learners in Secondary School Settings

Program Officer: Dr. Christina Chhin (202-245-7736; christina.chhin@ed.gov)

1. Purpose

IES is requesting applications to establish a **National Research and Development (R&D) Center on Improving Opportunities and Achievement for English Learners in Secondary School Settings (Secondary School ELs Center)**. The Secondary School ELs Center will engage in a **focused program of research** to examine the instruction that secondary school English learners (ELs) receive. Specifically, the Center will carry out two lines of research. The Center will:

- Identify and describe the policies and system-level practices that are associated with secondary ELs' access to the general curriculum and their relation to education outcomes. If possible, test the link between these policies and practices and ELs' access to the general curriculum.
- Identify (with some development, if necessary) at least one approach to improving secondary school ELs' access to and ability to learn from instruction in general education courses where English is the language of instruction. Observe, and test where possible, the links between these practices, ELs' access to the general curriculum, and ELs' education outcomes.

For this R&D Center, the **general curriculum** refers to the courses, course-pathways, and learning opportunities to which non-ELs have access automatically or without needing special permission or advocacy and which are believed to be necessary to prepare learners for postsecondary opportunities. In many settings, the general curriculum is benchmarked against standards for college and career readiness. In other words, the governing education agency requires or expects students to complete this course of study based on the belief that doing so will prepare them to access opportunities in the workforce and postsecondary education. ELs' segregated language instruction, however, sometimes crowds out their access to general curriculum classes. Efforts to create EL-specific content courses with reduced language demands often result in reduced rigor, leaving learners unprepared to meet pre-requisites or prior achievement standards for future courses. Thus, ELs may struggle to participate in the general curriculum, even if their school system has policies mandating their inclusion.

There is a need for a large-scale, coordinated research effort to explore and advance the available knowledge and tools related to ELs' learning opportunities in secondary settings and how these learning opportunities affect outcomes.

The Secondary School ELs Center will conduct studies to identify systemic and instructional influences, including policies, rules, and processes that affect ELs' access to the general curriculum and its relation to education outcomes. Examples of factors that might be explored include the use of pre-requisites for high-level courses, strategies for scheduling language instruction classes relative to other necessary coursework, and the extent to which course assignments are automated or allow for teacher discretion. These studies will likely involve both analysis of extant administrative data from participating schools or districts and qualitative observations of actual decision making and policy implementation in schools or districts. While descriptive and exploratory analyses may yield insights about levers to improve access and education outcomes, applicants are encouraged to exploit events such as policy changes, reclassification cut scores, or automated program assignment mechanisms to conduct experimental or quasi-experimental analyses when possible.

Because improving education outcomes is not achieved by simply getting learners into classrooms, the Secondary School ELs Center also must facilitate ELs' meaningful participation in the general curriculum

in order to improve their education outcomes as well as postsecondary and workforce opportunities. At the level of instruction, the Secondary School ELs Center's goal is to produce at least one approach that reduces or removes barriers to learning and teaching in the general education classroom that secondary ELs or their educators face and test its promise for improving education outcomes. The approach may be educator-facing or learner-facing and may be course-specific or course-agnostic. Applicants should discuss prior evidence that indicates how the approach is linked to improved education outcomes in other instructional settings. Illustrative examples might include the following:

- A professional development intervention for high school science educators to help them develop comfort and competence in implementing explicit language instruction and language-rich practices in their classrooms;
- A text analysis tool for educators to input their extant course materials and identify linguistic features that are likely to be challenging for ELs, as well as possible changes or scaffolds that could reduce these challenges;
- A set of classroom-based assessments that measure both content knowledge and language development/proficiency throughout the year and include EL-relevant accommodations such as glossaries or native language supports; or
- The creation of native-language supports and scaffolds to improve access to a widely used extant course curriculum for speakers of a non-Spanish language.

Though not a requirement, applicants are encouraged to leverage technology for these interventions to the extent that it may improve their efficiency and scalability. Interventions that may readily be modified to support multiple courses or contexts are also encouraged.

Since the two components of the focused program of research require different types of expertise, applicants should consider collaborative partnerships to ensure that the Center's key personnel reflect the diverse knowledge and skills necessary to carry out this work. Applicants may propose to carry out the two major activities either sequentially or simultaneously.

IES expects applicants to conduct their focused program of research in multiple settings that represent a variety of different EL populations and learning contexts. These settings may vary from one another in terms of, for example, the proportion of secondary ELs who are long-term ELs versus newcomers, the languages and cultures represented in the EL population, the size of the districts, or the programming options available for secondary ELs. Collaborative partnerships among education agencies and researchers are encouraged, as are relationships with developers who may be able to leverage technology to improve the flexibility and efficiency of the development work.

In addition to the focused program of research, the Secondary School ELs Center also will engage in **national leadership, capacity-building, and outreach activities** that will support

- Learning and collaboration opportunities for or among state education agencies (SEAs) and local education agencies (LEAs) that might otherwise struggle to conduct rigorous research about their ELs due to small populations or a lack of infrastructure or institutional capacity; and
- The creation of a website that includes user-friendly tools, products, and other materials to help individuals from various stakeholder groups identify practices, information, or resources that will help them better support their secondary school ELs.

For these outreach activities, the Secondary School ELs Center's goal should be to share what kinds of practices and policies improve secondary school ELs' access to and participation in the general curriculum, evidence about the degree to which changes to such practices and policies are linked to improved education outcomes for these learners, and to ensure that these findings are translated into actionable tools and information that will allow practitioners to put these findings into practice in real-world settings to improve education outcomes. These activities are particularly important for this Center given the diversity and contextual variations in EL education settings and populations.

The Secondary School ELs Center is also expected to conduct **supplemental activities** such as meetings and smaller scale studies that speak to other issues that are important within the context of EL education in secondary settings. The Secondary School ELs Center will work cooperatively with IES to select and design these supplemental activities to respond to pressing policy and practice needs within the topic covered by the Center. For this reason, IES does not expect a detailed plan for these supplemental activities in the application but does expect the grantee to set aside 5 percent of the maximum grant award ($500,000) for supplemental activities.

2. Requirements

a) Sample, Outcomes, and Setting

- **Sample**
  - Your research **must** focus on students in grades 6 to 12 who are currently identified as English learners by their education agency's definitions. You may include non-ELs and former EL students for comparison purposes. Your sample is not required to include students from each grade in the grade 6-12 span.

- **Outcomes**
  - Your research **must** include measures of academic outcomes. You may also include measures of social-behavioral competencies and employment and earnings if these are relevant to the research you are proposing. As appropriate, include milestones and achievement metrics that are specific to English learners, such as language proficiency, reclassification, achievement in a native language, or bilingualism/biliteracy.

- **Setting**
  - Your research **must** be conducted in education settings that include grades 6 to 12 or on data collected from such settings.
  - You **must** plan to conduct research in at least two states or territories.

b) R&D Center Narrative

The R&D Center narrative (recommended length: no more than 35 pages) for a Secondary School ELs Center application **must** include five sections: Significance, Research Plan, Leadership and Outreach Activities, Management and Institutional Resources, and Personnel.

i. **Significance –** The purpose of this section is to explain why it is important to study the policies, systems-level practices, and approaches you have identified as critical to improving secondary school ELs access to the general curriculum and education outcomes.

- You **must describe**
  - the conceptual framework that will guide your work;
  - the policies, systems-level practices, and approaches you will study; and
  - the research questions you will address.

ii. **Research Plan -** The purpose of this section is to describe your research design(s) and methods for your focused program of research and demonstrate how they will allow you to address your research questions.

- You **must describe** the
  - characteristics of your sample(s);
  - research designs and methods for each study proposed;
  - power analysis, if a causal study is proposed; and

    o data analysis plans.

  iii. **National Leadership, Capacity-Building, and Outreach Activities** – The purpose of this section is to describe the national leadership and outreach activities of the Secondary School ELs Center.

- You **must describe** the

    o leadership, capacity-building, and outreach activities of the Secondary School ELs Center.

  iv. **Management and Institutional Resources –** The purpose of this section is to demonstrate that you have the organizational structure, institutional capacity, and access to the resources needed to carry out and effectively manage the project.

- You **must describe**

    o the organizational structure of the Secondary School ELs Center;
    o plans and procedures for the overall management of the Secondary School ELs Center; and
    o the resources to conduct the work of the Secondary School ELs Center.

  v. **Personnel –** The purpose of this section is to demonstrate that your team possesses the appropriate training and experience to carry out the focused program of research and national leadership activities and will commit sufficient time to the project.

- You **must describe** your project team.

c) Data Management Plan

All R&D Center applications must include a [Data Management Plan (DMP) placed in Appendix A](#). Your DMP describes your plans for making the final research data from the proposed project accessible to others. IES's Program Officers will be responsible for reviewing the completeness of the proposed DMP, and it is not considered in the review of scientific merit of your application. If your application is being considered for funding based on the scores received during the scientific peer review process but your DMP is determined incomplete, you will be required to provide additional detail regarding your DMP. See the Recommendations for Strong Applications section below for additional detail regarding your DMP.

3. Award Limits

Awards made under the Secondary School ELs Center topic **must** conform to the following limits on duration and cost.

Duration Maximum:

- The maximum duration of the Secondary School ELs Center is **5 years.**

Cost Maximum:

- The maximum cost for a Secondary School ELs Center award is **$10,000,000** (total cost = direct costs + indirect costs).
  - No less than 75 percent of the total budget (direct costs + indirect costs) may be allocated to the focused program of research.
  - At least 5 percent of the maximum award ($500,000) must be reserved for supplementary studies to be designed in collaboration with IES.

4. Recommendations for Strong Applications

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

IES expects your application to include at least two studies, one identifying barriers to ELs' access to the general curriculum and the other examining an approach to overcoming these barriers. Your five sections of the Center Narrative should clearly apply the recommendations to each study.

Significance

- Discuss the conceptual framework that will guide your work.
- Discuss the practical and theoretical significance of your proposed work. How will the results affect policy or practice? How will the results inform future education research?
- Describe the specific need for developing or refining the approach to reducing or removing barriers that secondary ELs or their educators may face in the general education classroom, the potential market for this approach, the resources and organizational structure necessary for the wide adoption and implementation of this approach, and the potential commercialization of the approach.

  o Contrast the approach with current practice. What differentiates it, and how does it address shortcomings of other approaches?

- Describe how your focused program of research will increase our knowledge of how to improve the education outcomes of secondary school ELs.

Research Plan for the Focused Program of Research

- Organize the Research Plan into two subsections, one for each of the components of the Secondary School ELs Center's focused program of research (see above Requirements).
- Explain how the two components of the focused program of research are complementary.
- Specify your research questions and how they are motivated by the information provided in your significance section.
- As appropriate to your research questions, IES recommends that you refer to the Recommendations for project types in its [Education Research Grants Program](#) (CFDA 84.305A) to make sure your research plan is complete. These project types include Exploration, Development and Innovation, Efficacy and Follow-Up, and Measurement.
- For each study, present a research plan that includes the following:
  o A clear statement of the problem or issue that your study will address;
  o The sample and setting and how they will be appropriate for meeting the research aims of the study;
  o A detailed research design;
  o A detailed data analysis plan;
  o A detailed plan to describe the cost of implementing the innovation; and
  o A timeline.

Sample

- Describe your sample(s), how they represent the population you intend to study, and, if applicable, strategies to reduce attrition. Include information about EL status of sample, including whether they are considered to be long-term ELs or newcomers.
- For all quantitative inferential analyses, demonstrate that the sample provides sufficient power to address your research questions.

Research Design and Methods

- Describe your research designs with enough detail to demonstrate they will address your research questions.
- Identify all measures and discuss their validity and reliability for the intended purpose and population.
- If appropriate, collecting postsecondary outcome data can lead to additional insights as to the outcomes of increasing access to the general education curriculum for ELs.
- For primary data collection projects,

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

- For secondary data,

  o note the response rate or amount of missing data for each measure; and
  o if the data will be transformed to create any of the key variables, describe this process.

Data Analysis Plan:

- Describe and justify the statistical models to be used, including how they address the multilevel nature of education data and how well they control for selection bias.
- Discuss analyses to explore alternative hypotheses.
- Discuss how you will address exclusion from testing and missing data. Propose to conduct sensitivity tests to assess the influence of key procedural or analytic decisions on the results.
- Provide separate descriptions for all analyses of factors that mediate or moderate the relationships of interest and provide information about the statistical power for each analysis.
- Provide sufficient detail for reviewers to be able to judge the feasibility of any plans to link multiple data sets.

Timeline

- Provide a timeline for each step in your project including such actions as sample selection and assignment, data collection, data analysis, and dissemination. Timeline tables or figures should be placed in either the Project Narrative or Appendix B: Supplemental Charts, Tables, and Figures but should be discussed only in the Project Narrative.

National Leadership, Capacity-Building, and Outreach Activities

- Discuss your plan to maintain a website that describes the Secondary School ELs Center's goals and activities and makes the Center's research reports and other products readily available.
- Describe the activities you will undertake to communicate with policymakers, practitioners, researchers, the media, families, and the general public about the Center's work.
- Explain the learning and collaboration opportunities you will provide for or among SEAs and LEAs that might struggle to conduct rigorous research about their ELs.
- Describe your plans for meetings, conferences, and other events.
- Discuss your plans to use technology to broaden the reach of the Center at a relatively low cost.
- Describe any plans to involve external advisors to help guide and provide feedback on the Center's work.
- Discuss any opportunities you will provide for graduate students or early career researchers to contribute to Secondary School ELs Center activities and gain meaningful experience.

Management and Institutional Resources

Resources to manage the project

- Identify the management structure and procedures that will be used to keep the project on track and ensure its quality.
- Describe your plans and procedures for the overall management of the Secondary School ELs Center and its diverse activities.
- Describe your institution's capacity to manage a grant of this size.
- Include an organization chart that shows how the major functions or activities of the Secondary School ELs Center will be organized and how key personnel will relate to one another.

Resources to conduct the project

- Describe your access to resources available at the primary institution and any subaward institutions.
- Describe your plan for acquiring resources that are not currently accessible, will require significant expenditures, and are necessary for the successful completion of the project, such as equipment, test materials, curriculum, or training materials.
- Describe your access to the settings in which the research will take place. Include Letters of Agreement in Appendix D documenting their participation and cooperation. Convincing letters convey that the organizations understand what their participation in the study will involve, such as annual student and teacher surveys, student assessments, and/or classroom observations.

  o Include information about incentives for participation, if applicable.

- Describe your access to any necessary datasets. Include Letters of Agreement, data licenses, or existing Memoranda of Understanding in Appendix D to document that you will be able to access those data for your proposed use.

Resources to disseminate the results

- Describe any specific team members, offices, or organizations expected to take part in your dissemination plans and their specific roles.

Personnel

- Identify and describe the following for all key personnel, including the Principal Investigator, Co-Principal Investigators, and Co-Investigators:

  o qualifications to carry out the proposed work;
  o roles and responsibilities within the project;
  o percent of time and calendar months per year (academic plus summer) to be devoted to the project;
  o past success at disseminating research findings to policymaker and practitioner audiences and in peer-reviewed scientific journals;
  o experience that is relevant to national leadership activities; and
  o experience and capacity to manage a project of this size and type.

- Describe additional personnel at the primary applicant institution and any subaward institutions along with any consultants.
- Describe team members' qualifications to carry out the proposed work.
- Provide a plan for how key personnel will maintain their objectivity in conducting the proposed research and dissemination activities.
- If key personnel have previously received an IES grant (or grants), briefly discuss the outcomes of the research, including products developed and/or tested and how the project's findings and

products were disseminated, in order to demonstrate your ability to produce project outcomes consistent with IES's mission.

C. Improving Teaching and Learning in Postsecondary Institutions

Program Officer: Dr. Meredith Larson (202-245-7037; Meredith.Larson@ed.gov)

1. Purpose

IES seeks to establish a **National Research and Development Center on Improving Teaching and Learning in Postsecondary Institutions (Postsecondary Center)**. The Postsecondary Center will examine instructional innovations for improving postsecondary student learning outcomes. In particular, the Postsecondary Center will both examine how open-/broad-access institutions of postsecondary education[2] are leveraging technologies to personalize instruction in credit-bearing courses and build the capacity of administrators, instructors, developers, and researchers to create, implement, and evaluate the instructional interventions they have chosen.

Institutions and instructors are leveraging technology to personalize the postsecondary instructional experience. These innovations include institutional reforms, such as developing fully online, hybrid, and blended courses and infrastructure to iteratively improve them, as well as instructor-focused advances, such as integrating Web 2.0 tools into courses. Developers are also creating approaches and tools such as interactive tutoring systems and eTextbooks. These innovations aim to improve the instructional environment and student learning, often by tailoring the instruction or content or creating adaptive and guided learning models.

However, it is unclear which of these innovations work for whom, under what conditions, and for which learning outcomes. Research on a variety of innovations, from online instruction to the use of web-based discussion boards, have mixed findings.

There are many possible reasons for the mixed results. Technology developers and instructional designers may not design appropriate tools because they are not aware of relevant basic research that could inform the identification and development of key intervention components. In addition, instructors and administrators may not select the best innovations because they lack impartial information about whether the innovations are appropriate for their needs.

The Postsecondary Center will address these research gaps to improve postsecondary teaching and learning through (i) a focused program of research; (ii) national leadership, capacity-building, and outreach activities; and (iii) supplemental activities.

The Postsecondary Center's **focused program of research** will conduct translational research to address fundamental questions about which innovations improve postsecondary learning outcomes, for whom, and under what conditions. The goal of this work is two-fold. First, this research will help the community of postsecondary researchers, developers, administrators, and instructors better understand the opportunities for and benefits and limitations of technology-supported instructional innovations. Second, this work will lead to improved theories of change, practical guidance, and training materials that various stakeholders can use to strengthen their work.

Examples of question to address:

- What are the basic learning principles that support postsecondary student learning and could enhance instruction, and how can they be integrated into or leveraged by technological tools or reforms?
- What characteristics of students, faculty, courses, and institutions should researchers and technology developers keep in mind when creating tools or reforms?

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[2] These include both community colleges and 4-year colleges and universities that accept 75 percent or more of their applicants.

- How should institutions or instructors determine whether particular technological tools or reforms are appropriate for their goals and contexts? What information is useful for identifying the key features of innovations that best match their needs?
- What factors of the setting predict successful adoption or deployment of an innovation (tools or reforms), and how can such successes be replicated or taken to scale?

As the Postsecondary Center conducts its research, it will also be developing the tools and guidance the field needs to improve the technology innovation pipeline. The Postsecondary Center will study not only relevant innovations but also how best to guide and support those developing, implementing, or evaluating such innovations.

As part of its activities, the Postsecondary Center will also **share data** from the innovation or innovations it studies. The field requires access to non-proprietary data in order to build shared knowledge and determine what gaps remain for further research, development, or evaluation.

The Postsecondary Center will also conduct **national leadership, capacity-building, and outreach** activities to address three hurdles the field faces when considering innovations that leverage technology:

- The lack of clear, objective information about the benefits, costs, and implications of such innovations (Information Hurdle);
- The difficulty faced by administrators and faculty in choosing the most appropriate innovation(s) to meet their needs and evaluating whether their investments are working as intended (Adoption and Implementation Hurdle); and
- The lack of coordination among research, development, and the market to ensure developers have information, products with evidence of effectiveness go to market, and the market's needs are integrated into research and development (Research/Market Pipeline Hurdle).

Throughout the entire project period, the Postsecondary Center will work to inform and support the broader community. The combined national leadership activities will build from and feed into the focused program of research and will help address the needs of a wide range of stakeholders.

To address the Information Hurdle, the Postsecondary Center will conduct activities that address the needs of technical and non-technical audiences, including policymakers, practitioners, developers and industry, and researchers. These may include working papers, journal publications, and briefs; the use of social media; and presentations at professional conferences. These activities should clarify the role of the Postsecondary Center's innovations in improving postsecondary teaching and learning.

To address the Adoption and Implementation Hurdle, the Postsecondary Center will conduct activities that build postsecondary institutional capacity to select, deploy, and evaluate the use of instructional innovations. These may include the development of toolkits and rubrics, workshops and trainings, and other activities designed for institutional staff, such as instructional developers, and institutional researchers.

To address the Research/Market Pipeline Hurdle, the Postsecondary Center will conduct activities that bring together research and development work and market insights to help improve the development and deployment of evidence-based innovations. These activities could include creating research toolkits, workshops on moving to market, or other activities. Ideally, the Postsecondary Center will provide training and mentoring opportunities, such as secondary data analysis training with the Center's data or hands-on experience conducting research. At minimum, the Postsecondary Center **must host a yearly convening of IES-funded researchers and developers** to discuss research related to improving postsecondary teaching and learning, review emerging findings, and improve the dissemination and marketing of products. This convening will take place at the Annual IES PI Meeting.

Finally, the Postsecondary Center will also conduct **supplemental activities** (such as meetings or smaller scale studies). These activities will support the focused program of research activities and/or the national leadership and outreach activities. The Postsecondary Center will work cooperatively with IES to select and design these activities in response to policy and practice needs relevant to the Center's topic.

For this reason, IES does not expect a detailed plan for these supplemental activities in the application but does expect a budget set aside of 5 percent of the maximum grant award ($500,000) for them.

2. Requirements

a) Sample, Outcomes, and Setting

- **Sample**
  - Your research **must** focus on postsecondary learners. Postsecondary students with or at risk for disabilities may be included in your proposed research activities and could be the primary focus.

- **Outcomes**
  - Your research **must** include measures of academic outcomes. You may also include measures of social-behavioral competencies and employment and earnings if these are relevant to the research you are proposing.

- **Setting**
  - Your research **must** be conducted in open/broad-access postsecondary education settings, which may include online institutions of higher education, or with data collected from such settings. Your research may include other postsecondary education settings.

b) R&D Center Narrative

The R&D Center narrative (recommended length: no more than 35 pages) **must** include five sections: Significance, Research Plan, Leadership and Outreach Activities, Management and Institutional Resources, and Personnel.

i. **Significance of the Focused Program of Research and National Leadership, Capacity-Building, and Outreach Activities -** The purpose of this section is to describe the innovation(s) the Postsecondary Center will focus on and how building capacity to develop, implement, and evaluate such innovations have the potential to transform the education outcomes of postsecondary learners at scale.

- You must describe
  - the conceptual framework that will guide the Postsecondary Center's work, including the national leadership, capacity-building, and outreach activities;
  - the innovation(s) that will be the focus of the research; and
  - the research questions the Postsecondary Center will address.

ii. **Research Plan for the Focused Program of Research –** The purpose of this section is to describe your focused program of research.

- You **must describe** the
  - characteristics of your sample;
  - research design and methods for each study proposed;
  - power analyses for each study;
  - the cost analysis plan for implementing the innovation(s) the Postsecondary Center is focusing on; and
  - data analysis plans for each study.

iii. **National Leadership, Capacity-Building, and Outreach Activities –** The purpose of this section is to describe the Postsecondary Center's leadership, capacity-building, and outreach activities.

- You **must describe** how you will

  - disseminate what the Postsecondary Center is learning to technical and nontechnical audiences;
  - build capacity to leverage teaching and learning technologies; and
  - improve the pipelines connecting research, development, and the postsecondary market, including plans for a yearly convening with IES-funded researchers and developers.

iv. **Management and Institutional Resources –** The purpose of this section is to demonstrate that you have the organizational structure, institutional capacity, and access to the resources needed to carry out and effectively manage the project.

- You **must describe** the

  - organizational structure of the Postsecondary Center;
  - plans and procedures for the overall management of the Postsecondary Center; and
  - resources to conduct the work of the Postsecondary Center.

v. **Personnel –** The purpose of this section is to demonstrate that your team possess appropriate training and experience for the proposed research and leadership activities and will commit enough time to the project.

- You **must describe** your project team.

c) Data Management Plan

All R&D Center applications must include a [Data Management Plan (DMP) placed in Appendix A](). Your DMP describes your plans for making the final research data from the proposed project accessible to others. IES's Program Officers will be responsible for reviewing the completeness of the proposed DMP, and it is not considered in the review of scientific merit of your application. If your application is being considered for funding based on the scores received during the scientific peer review process but your DMP is determined incomplete, you will be required to provide additional detail regarding your DMP. See the Recommendations for Strong Applications section below for additional detail regarding your DMP.

3. Award Limits

Awards made under the Postsecondary Center topic **must** conform to the following limits on duration and cost.

Duration Maximum:

- The maximum duration of a Postsecondary Center is **5 years**.

Cost Maximum:

- The maximum cost for a Postsecondary Center award is **$10,000,000** (total cost = direct costs + indirect costs).

  - No more than 60 percent of the total budget (direct costs + indirect costs) may be allocated to the focused program of research.
  - At least **5 percent** of the maximum award ($500,000) **must be reserved for supplementary studies** to be designed in collaboration with IES.

4. Recommendations for a Strong Application

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

Significance

- Describe how the instructional innovation(s) you plan to focus on could improve teaching and learning outcomes.
- Identify a clear theme for the Postsecondary Center. The theme may be a particular instructional innovation, such as online learning or mobile technologies, or it may be on particular learner outcome, such as improved writing or progression through a program. Explain why this theme is significant to postsecondary success and what it could contribute to our knowledge of postsecondary teaching and learning.
- Describe how the Postsecondary Center's research questions will contribute to building knowledge about and capacity for postsecondary instructional innovations.
- Describe how the work of the Postsecondary Center could help improve the research/market-to-postsecondary pipeline.
- Discuss instructional, adoption, or other hurdles faced by various stakeholders—including postsecondary staff and faculty, researchers, and learners—and how research on the Postsecondary Center's theme along with national leadership, capacity-building, and outreach activities would address these hurdles.
- Describe the types of stakeholders that need to be engaged in researching, implementing, and disseminating information. Identify places where their interests converge or diverge and discuss how this creates opportunities and challenges.
- Discuss how the various research projects and national leadership activities will inform one another and how the different partners will collaborate and benefit from involvement.

Research Plan for the Focused Program of Research

- Consider the needs of end users including administrators, faculty, learners, researchers, developers, and other stakeholders. Identify what they need to know to make informed choices and discuss how your research and other activities address those needs.
- Discuss whether the research will include studies, such as experimental, A/B, or design studies, that test whether different modifications lead to different outcomes. If this work includes lab studies, discuss how the results from this work will translate into research in instructional settings.
- For each study, present a research plan that includes the following:

  - a clear statement of the problem or issue that your study will address;
  - The sample and setting and how they will be appropriate for meeting the research aims of the study;
  - a detailed research design;
  - a detailed data analysis plan;
  - a detailed plan to describe the cost of implementing the innovation; and
  - a timeline.

- Explain how your study (or studies) will contribute to the research gaps you have identified in your Significance section and how it fits the Postsecondary Center's theme.
- Describe the factors you will study and how they related or lead to specific learner outcomes. Identify contextual factors and learner characteristics that may affect the association.
- Describe the quantitative and/or qualitative methods you will use. Make clear how each method will be used and for what purpose. For example, if you plan to use log file data, clearly describe the source of these data and why they are appropriate for the research questions. Or if you will be collecting observation data or survey data, you should make clear who will conduct the observations or provide responses to the surveys.
- Describe the data collection instruments you will use and their reliability and validity.
- As appropriate to your research questions, IES recommends that you refer to the Recommendations for project types in its Education Research Grants Program (CFDA 84.305A) to

make sure your research plan is complete. These project types include Exploration, Development and Innovation, Efficacy and Follow-Up, and Measurement.

National Leadership, Capacity-Building, and Outreach Activities

- Provide a timeline that shows when major activities will take place and a description of how those activities will inform one another and how they build from or feed into the Center's research activities.
- Consider activities that bring together different stakeholders or that help different audiences understand the needs, insights, or motivations of groups they may not normally interact with. For example, the Postsecondary Center could help developers better understand the working conditions and motivations of postsecondary faculty.
- Identify the knowledge, skills, and abilities that professionals (including institutional researchers, administrators, education researchers, technology developers, curriculum designers, textbook writers) need to build and discuss the activities and products the Postsecondary Center will create to address their needs.
- If you plan on providing trainings, include the following:

  o the type(s) of training you are prepared to offer and why the training is needed;
  o the individuals or groups that will be targeted for the training, the numbers of each, and how they will be identified or recruited;
  o the content and format of the training;
  o the length of the training and whether it will be offered a single time or repeated;
  o how you will advertise the training;
  o the steps you will take to ensure that trainees come from diverse backgrounds; and
  o how you will assess the outcomes of your training and use this to improve the training or materials if the training will happen multiple times.

- If you plan to offer financial support to trainees, specify the amount and the conditions for the support.
- Discuss your plans for convenings with IES-funded researchers including the major goals for meeting with them, how you will facilitate the exchange of information and ideas, and how you might work with them and IES to determine training or dissemination needs and to form appropriate plans to meet these needs. You might consider including a proposed agenda for the first meeting in your narrative or Appendix B. These convenings will take place at the Annual IES PI Meeting.
- Identify existing forums, such as annual professional conferences, where the Postsecondary Center can disseminate to technical and nontechnical audiences, including postsecondary educators, administrators, and other staff.
- Describe the Postsecondary Center website you will design, including its content and the audiences you intend to reach. IES also encourages applicants to use social media and electronic forms of communication (such as webinars, podcasts, and videos) to broaden the reach of the Postsecondary Center at a relatively low cost.
- Discuss any opportunities you will provide for graduate students or early career researchers to contribute to the Postsecondary Center activities and gain meaningful experience.

Management and Institutional Resources

- Describe your plans and procedures for the overall management of the Postsecondary Center and its diverse activities.
- Identify the management structure and procedures that you will use to ensure that the Postsecondary Center is responsive to the concerns and needs of IES and IES-funded researchers while also meeting the expectations for the focused program of research.
- Include an organization chart that shows how the major functions or activities of the Postsecondary Center will be organized and how key personnel will relate to one another.

- Document the availability and cooperation of the settings required to carry out your research via letters of agreement in Appendix D of your application.

Personnel

- Identify and describe the following for all key personnel, including the Principal Investigator, Co-Principal Investigators, and Co-Investigators:

  - qualifications to carry out the proposed work;
  - roles and responsibilities within the project;
  - percent of time and calendar months per year (academic plus summer) to be devoted to the project;
  - experience that is relevant to national leadership activities, including communications, dissemination, and/or the research-to-market pipeline; and
  - experience and capacity to manage a project of this size and type.

- IES strongly encourages applicants to propose partnerships among an interdisciplinary team of researchers, developers and industry representatives, and postsecondary administrators and faculty to help guide the program of research and the national leadership, capacity-building, and outreach activities.
- Include a plan for how key personnel will maintain their objectivity.
- Discuss how your team reflects the diverse populations the Postsecondary Center aims to serve or has experience working with groups such as education researchers, technology developers, postsecondary practitioners, and industry members.
- Discuss who will manage the communications across the Postsecondary Center and with the public. Strong applications will have a dedicated communications manager or communications team.
- If key personnel have previously received an IES grant (or grants), briefly discuss the outcomes of the research, including products developed and/or tested and how the project's findings and products were disseminated, in order to demonstrate your ability to produce project outcomes consistent with IES's mission.

D. Improving Access, Instruction, and Outcomes in Gifted Education

Program Officer: Dr. Corinne Alfeld (202-245-8203, Corinne.Alfeld@ed.gov)

1. Purpose

IES is requesting applications to establish a **National Research and Development (R&D) Center on Improving Access, Instruction, and Outcomes in Gifted Education (Gifted Center).**[3] Studies show that, overall, gifted education underserves disadvantaged student subgroups (such as English learners, those from lower income families, and Black and Hispanic students). The Gifted Center will be expected to examine how state, district, and school leaders and educators can implement policies and practices to better identify and serve gifted learners from all demographic backgrounds and improve student outcomes through gifted education.

Gifted education is typically offered beginning in 3rd grade, and there is wide variation between districts and states in what is provided, where it is provided, how it is provided, and who provides it. The Gifted Center will examine how any aspect(s) of the identification process or the provision of gifted services leads to subgroups being underserved, what changes could be made to increase service to these subgroups, and to what effect.

In the **focused program of research**, IES expects applicants for the Gifted Center grant to propose several research projects that, together, have the potential to improve access, instruction, and student outcomes for learners from disadvantaged backgrounds. The prior Gifted Center discovered that very few districts offer programs to identify and recruit potentially gifted students and that English learners, free or reduced lunch recipients, and Hispanic and Black students are less likely to be identified as gifted even if they have the same reading and mathematics achievement as students not from these groups. Practices such as universal screening and nonverbal tests do not appear to be panaceas for removing the identification gap, although universal screening with modifications can reduce the under-identification of students from underserved populations. The new Gifted Center will be expected to build on these and other findings from the prior Gifted Center.

Below are some potential ways that the Gifted Center could advance our understanding of how to improve the education delivered to groups traditionally underrepresented in gifted education programs. IES welcomes and encourages other ideas.

- *Improve the identification of gifted learners:* Universal screening is effective at increasing the participation of underrepresented groups in gifted education. However, universal screening is costly and requires trained personnel. The new Gifted Center could identify and pilot more accessible and less expensive methods to allow broader adoption of universal testing and the adoption of group-specific, local norms.

  o *Development of alternative measures:* The Gifted Center may wish to undertake one or more measurement studies to develop new metrics that capture abilities correlated with giftedness but not routinely measured, such as visual-spatial skills and creativity.

- *Compare identified and* similar *non-identified learners over time:* Using state or district-level longitudinal data, the Gifted Center could examine academic outcomes over time for learners placed in gifted programs compared to a well-matched sample of gifted but non-identified learners from underserved groups or compared to similar students around a cutoff score (e.g., IQ) in a regression discontinuity design. Longitudinal research using secondary data could also

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[3] In fulfillment of the requirement in the "Jacob K. Javits Gifted and Talented Students Education Program" in the Every Student Succeeds Act (ESSA) (SEC. 4644. ø20 U.S.C. 7294 [d]) for a National Research Center for the Education of Gifted and Talented Children and Youth.

examine whether the timing of identification of giftedness is linked to gains over time. Some longitudinal data systems include not only K-12 and postsecondary education data but also labor force, health, and voting records that could be examined to understand gifted individuals' trajectories.

- *Describe the long-term outcomes for students who participated in prior research on gifted education policies or practices:* Considering the increase in availability of longitudinal education databases in states and districts, can participants from prior studies conducted with elementary-aged gifted students be located and reconsented in high school, college, or adulthood to answer surveys about their current education and work or to consent to have their data accessed from a SLDS or other administrative dataset(s) so that researchers can learn about their long-term outcomes?
- *Document the implementation of evidence-based gifted education curricula*: What types of curricula for gifted students show evidence of positive impact on student outcomes, and to what extent are they being used in schools? What are the barriers to implementing these curricula? What are the roles of LEAs and SEAs in ensuring that the curricula are enacted as intended?
- *Explore domain alignment in gifted services*: To what extent does the domain in which the learner demonstrates above-average abilities or aptitudes align with the resources they receive? If domain alignment matters, are there reliable and valid measures of domain-specific abilities?
- *Analyze gifted educator and coordinator preparation*: How do state and local education agencies prepare their gifted educators and coordinators? Are different forms of preparation related to how well underserved groups are identified and provided with gifted services? Are they linked to education outcomes for gifted learners?

One or more research teams may be involved in the different proposed studies. Across the studies, IES expects the successful applicant to conduct their research in multiple settings that systematically vary across different populations and learning contexts. Such variation should improve our ability to identify what interventions work for whom and under what conditions.

In addition to the focused program of research, the Gifted Center also will engage in **national leadership and outreach activities** that will support the following:

- Coordination among other Javits-funded researchers, for example by coordinating communications, hosting meetings, and conducting joint conference presentations to share research and findings.
- Delivery of a webinar at least once per year to share research findings with education leaders, teachers, researchers, and parents. The Gifted Center may also use webinars or conference sessions to enhance the training of researchers in methods of studying gifted education issues.
- Creation and hosting of a website that includes user-friendly tools, products, and other materials to help stakeholders understand issues related to the underrepresentation of learners from certain groups in gifted education and learn about evidence-based practices to increase access to high quality gifted education.
- Dissemination of the Gifted Center's research findings to practitioners, researchers, and policymakers through conference presentations, briefs, and journal articles, as well as on the website.

For these outreach activities, the Gifted Center should advance the field's knowledge about what kinds of practices and policies improve gifted students' identification and participation in gifted programs and which ones are associated with improved student outcomes. The Gifted Center has the responsibility to ensure that these findings are translated into actionable tools and information that will allow practitioners to put these findings into practice in real-world settings.

During its work, the Gifted Center is also expected to conduct **supplemental activities** (meetings, smaller-scale studies, etc.) that speak to other issues that are important within the context of increasing diversity and success in gifted education. The Gifted Center will work cooperatively with IES to select and design these supplemental activities to respond to pressing policy and practice needs within the topic covered by the Gifted Center. For this reason, IES does not expect a detailed plan for these supplemental

activities in the application but does expect the grantee to set aside 5 percent of the maximum grant award ($250,000) for supplemental activities.

2. Requirements

a) Sample, Outcomes, and Setting

i. **Sample**

- Your research **must** focus on students in grades K-12.

ii. **Outcomes**

- Your research **must** include measures of academic outcomes. You may also include measures of social-behavioral competencies and employment and earnings if these are relevant to the research you are proposing. You may also include milestones and achievement metrics that are specific to gifted learners, such as grade acceleration and special honors, or alternate measures of giftedness, such as visual-spatial skills or creativity.

iii. **Setting**

- Your research **must** be conducted in K-12 schools or on data collected from schools.
- You **must** plan to conduct research in at least two states or territories.

b) R&D Center Narrative

The Gifted Center narrative (recommended length: no more than 35 pages) **must** include five sections: Significance, Research Plan, Leadership and Outreach Activities, Management and Institutional Resources, and Personnel.

i. **Significance of the Focused Program of Research –** The purpose of this section is to explain why it is important to study ways to increase the identification of gifted students from all backgrounds and provide more students with access to high-quality gifted education to improve their education outcomes.

- You must describe
  - o the conceptual framework that will guide your focused program of research;
  - o the policies, systems-level practices, and approaches you will study; and
  - o the research questions you will address.

ii. **Research Plan -** The purpose of this section is to describe your research design(s) and methods for your focused program of research and demonstrate how they will allow you to address your research questions.

- You must describe the
  - o characteristics of your sample;
  - o research designs and methods for each study proposed; and
  - o data analysis plans.

iii. **National Leadership and Outreach Activities –** The purpose of this section is to describe the national leadership and outreach activities of the Gifted Center.

- You **must describe** the leadership and outreach activities of the Gifted Center.

    iv.   **Management and Institutional Resources –** The purpose of this section is to demonstrate that you have the organizational structure, institutional capacity, and access to the resources needed to carry out and effectively manage the project.

- You must describe the

  o organizational structure of the Gifted Center;
  o plans and procedures for the overall management of the Gifted Center; and
  o resources to conduct the work of the Gifted Center.

    v.   **Personnel –** The purpose of this section is to demonstrate that your team possesses the appropriate training and experience to carry out the focused program of research and national leadership activities and will commit sufficient time to the project.

- You **must describe** your project team.

Data Management Plan

All R&D Center applications must include a [Data Management Plan (DMP) in Appendix A](). Your DMP describes your plans for making the research data from the proposed project accessible to others. IES's Program Officers will be responsible for reviewing the completeness of the proposed DMP, and it is not considered in the review of scientific merit of your application. If your application is being considered for funding based on the scores received during the scientific peer review process but your DMP is determined incomplete, you will be required to provide additional detail regarding your DMP. See the Recommendations for Strong Applications section below for additional detail regarding your DMP.

3. Award Limits

Awards made under the Gifted Center topic **must** conform to the following limits on duration and cost.

Duration Maximum:

- The maximum duration of the Gifted Center is **5 years**.

Cost Maximum:

- The maximum award for the Gifted Center is **$5,000,000** (total cost = direct costs + indirect costs).

  o At least **5 percent** of the maximum award ($250,000) **must be reserved for supplementary studies** to be designed in collaboration with IES.

4. Recommendations for Strong Applications

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

Significance

- Describe the need for a new Gifted Center, considering the lessons from prior gifted education research and the current challenges facing gifted education.
- Explain the major problem(s) or issue(s) in gifted education that the Gifted Center will address and why.
- Review the relevant literature on the selected problem(s) or issue(s). Identify any research gaps and the role the Gifted Center will play in addressing such gaps.

- Explain how your approach is different from prior research and how you think the Gifted Center's work will improve practice in the identification of and service for gifted students to improve their education outcomes.
- Describe at least two U.S. states or territories that you will work in and why you selected them. Use data to describe the settings.
  - IES encourages you to include geographic settings that have different demographic or cultural characteristics.

Research Plan for the Focused Program of Research

- As appropriate to your research questions, IES recommends that you refer to the Recommendations for project types in its [Education Research Grants Program](#) (CFDA 84.305A) to make sure your research plan is complete. These project types include Exploration, Development and Innovation, Efficacy and Follow-Up, and Measurement.

Research Design and Sample
- Specify your research questions and how they are motivated by the information provided in your Significance section.
- Describe your research design with enough detail to demonstrate it will address your research questions.
- Describe your samples, how they represent the populations you intend to study, and strategies to reduce attrition.
- For all quantitative inferential analyses, demonstrate that the sample provides enough power to address your research questions.

Measures:
- Identify all measures and discuss their validity and reliability for the intended purpose and population.
  - If applicable, discuss how you will obtain your measures or assessments and how they will be scored.
- For secondary data,
  - note the response rate or amount of missing data for each measure; and,
  - if the data will be transformed to create any of the key variables, describe this process.

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

Data Analysis
- 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.
- Describe how, when, and where you will pre-register your efficacy studies, if applicable.
- Discuss analyses to explore alternative hypotheses.
- Discuss how you will address exclusion from testing and missing data. Propose to conduct sensitivity tests to assess the influence of key procedural or analytic decisions on the results.
- Provide separate descriptions for all mediator and moderator analyses and provide information about the statistical power for each analysis.

- Provide sufficient detail for reviewers to be able to judge the feasibility of any plans to link multiple data sets.

Timeline

- Provide a timeline for each step in your project including such actions as sample selection and assignment, data collection, data analysis, and dissemination. Timeline tables or figures should be placed in either the Project Narrative or Appendix B: Supplemental Charts, Tables, and Figures but should be discussed only in the Project Narrative.

Leadership and Outreach Activities

- Describe how the work you are proposing will build the capacity of LEAs and SEAs to address the problem of underrepresentation to ensure all gifted students' access to effective gifted education.
- Discuss your plan to create and maintain a website that describes the Center's goals and activities and makes its research reports and other products readily available for download.
- Describe the activities you will undertake to communicate with policymakers, practitioners, researchers, the media, parents, and the general public about the Center's work.
- Describe your plans for meetings, conferences, and other events.
- Discuss your plans to use technology to broaden the reach of the Center at a relatively low cost.
- Explain how you will involve educators in your research and dissemination activities. Discuss how this collaborative work will build lead to better identification and services for all gifted students.
- Describe any plans to involve external advisors to help guide and provide feedback on the Center's work.
- Describe your plans to share research tools and findings with other gifted education researchers.
- Discuss any opportunities you will provide for graduate students or early career researchers to contribute to Center activities and gain meaningful experience.

Management and Institutional Resources

Resources to manage the project

- Identify the management structure and procedures that will be used to keep the project on track and ensure its quality.
- Describe your plans and procedures for the overall management of the Center and its diverse activities.
- Describe your institution's capacity to manage a grant of this size.
- Include an organization chart that shows how the major functions or activities of the Center will be organized and how key personnel will relate to one another.

Resources to conduct the project

- Describe your access to resources available at the primary institution and any subaward institutions.
- Describe your plan for acquiring resources that are not currently accessible, will require significant expenditures, and are necessary for the successful completion of the project, such as equipment, test materials, curriculum, or training materials.
- Describe your access to the settings in which the research will take place. Include Letters of Agreement in Appendix D documenting their participation and cooperation. Convincing letters convey that the organizations understand what their participation in the study will involve, such as annual student and teacher surveys, student assessments, and/or classroom observations.

  o Include information about student, teacher, and school incentives, if applicable.

- Describe your access to any necessary datasets. Include Letters of Agreement, data licenses, or existing Memoranda of Understanding in Appendix D to document that you will be able to access those data for your proposed use.

Resources to disseminate the results

- Describe any specific team members, offices, or organizations expected to take part in your dissemination plans and their specific roles.

Personnel

- Identify and describe the following for all key personnel, including the Principal Investigator, Co-Principal Investigators, and Co-Investigators:

  - qualifications to carry out the proposed work;
  - roles and responsibilities within the project;
  - percent of time and calendar months per year (academic plus summer) to be devoted to the project;
  - past success at disseminating research findings to policymaker and practitioner audiences and in peer-reviewed scientific journals;
  - experience that is relevant to national leadership activities; and
  - experience and capacity to manage a project of this size and type.

- Describe additional personnel at the primary applicant institution and any subaward institutions along with any consultants.
- If key personnel have previously received an IES grant (or grants), briefly discuss the outcomes of the research, including products developed and/or tested and how the project's findings and products were disseminated, in order to demonstrate your ability to produce project outcomes consistent with IES's mission.
- IES encourages applicants to form multi-disciplinary teams and to consider scholars with different perspectives.

Part III: Appendices and Other Narrative Content

A. Required and Optional Appendices

The required R&D Center Narrative – Significance, Research Plan, Leadership and Outreach Activities, Management and Institutional Resources, and Personnel – that is described for each R&D Center (see [Part II: R&D Center Descriptions and Requirements](#)) is followed by several appendices. One appendix is 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 required and optional appendices* and include it as an attachment in the application package. Include appendices in alphabetical order and simply skip an appendix if it is not required for your application or if you choose not to include one of the optional appendices. See the IES Application Submission Guide (https://ies.ed.gov/funding/pdf/submissionguide.pdf) for more information about preparing and submitting your application using the required application package for this competition through Grants.gov (https://www.grants.gov/).

1. Appendix A: Data Management Plan (Required)

You **must** include Appendix A after the R&D Center Narrative. We recommend that Appendix A be no more than five pages. In Appendix A, describe your plans for making the final research data from the proposed R&D Center accessible to others.

Applications that do not contain a Data Management Plan (DMP) will be deemed nonresponsive to the Request for Applications and will not be accepted for review. Resources that may be of interest to researchers in developing a data management plan can be found at https://ies.ed.gov/funding/researchaccess.asp.

DMPs are expected to differ depending on the nature of the studies conducted by the R&D Center and the data collected. By addressing the items identified below, your DMP describes how you will meet the requirements of the IES policy for data sharing. The DMP should include the following:

- Plan for pre-registering any casual impact studies in an appropriate registry for education evaluations (for example, the SREE Registry of Efficacy and Effectiveness Studies at https://www.sree.org/pages/registry.php).
- Type of data to be shared.
- Procedures for managing and for maintaining the confidentiality of Personally Identifiable Information.
- Roles and responsibilities of project or institutional staff in the management and retention of research data, including a discussion of any changes to the roles and responsibilities that will occur should the Project Director/Principal Investigator and/or Co-Project Directors/Co-Principal Investigators leave the project or their institution.
- Expected schedule for data access, including how long the data will remain accessible (at least 10 years) and acknowledgement that the timeframe of data accessibility will be reviewed at the annual progress reviews and revised as necessary.
- Format of the final dataset.
- Dataset documentation to be provided.
- Method of data access (e.g., provided by the Project Director/Principal Investigator, through a data archive) and how those interested in using the data can locate and access them.
- Whether or not a data agreement that specifies conditions under which the data will be shared will be required.
- Any circumstances that prevent all or some of the data from being made accessible. This includes data that may fall under multiple statutes and, hence, must meet the confidentiality requirements

for each applicable statute (e.g., data covered by Common Rule for Protection of Human Subjects, FERPA, and HIPAA).

The costs of the DMP can be covered by the grant and should be included in the budget and explained in the Narrative Budget Justification for the Center. The scientific peer review process will not include the DMP in the scoring of the scientific merit of the application. IES Program Officers will be responsible for reviewing the completeness of the proposed DMP. If your application is being considered for funding based on the scores received during the scientific peer review process but your DMP is determined incomplete, you will be required to provide additional detail regarding your DMP (see Pre-Award Requirements).

2. Appendix B: Supplemental Charts, Tables, and Figures (Optional)

We recommend that Appendix B be no more than 15 pages.

In Appendix B, 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. These are the only materials that should be included in Appendix B.

3. Appendix C: Examples of Intervention or Assessment Materials (Optional)

We recommend that Appendix C be no more than 10 pages.

If you are proposing to explore, develop, evaluate, or validate an intervention or assessment, you may include examples of the essential practices and structural elements that constitute the core components of the intervention or assessment. These are the only materials that should be included in Appendix C.

4. Appendix D: Letters of Agreement (Optional)

We do not recommend a page length for Appendix D.

Use this appendix to provide copies of Letters of Agreement from schools and districts who will participate in or provide data for the proposed research or 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](#) for guidance regarding the size of file attachments.

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

B. Other Narrative Content

In addition to the R&D Center Narrative (see [Part II: R&D Center Topic Requirements and Recommendations](#)) and required and optional Appendices (see above), you will also prepare a Project Summary/Abstract and a Bibliography and References Cited to include as file attachments in your application. See the IES Application Submission Guide (https://ies.ed.gov/funding/pdf/submissionguide.pdf) for more information about preparing and

submitting your application using the required application package for this competition on Grants.gov (https://www.grants.gov/).

1. Project Summary/Abstract

You must submit the Project Summary/Abstract as a separate PDF attachment. We recommend that the Project Summary/Abstract be one page long and include the following information:

- **Distinct, descriptive title** of the R&D Center.
- **Topic** to which you are applying (see Part II). This information should match the topic code entered for Item 4b: Agency Routing Number on the SF 424 Application for Federal Assistance form (see the IES Application Submission Guide).
- **Focused Program of Research**: A brief description of the R&D Center's focused program of research and its significance for improving education in the United States. This should include why the research is important, what this Center will do to address the need, and the general expected outcomes of the Center.
- **Setting**: A brief description of the location(s) 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.
- **National Leadership and Outreach Activities**: A brief description of the R&D Center's national leadership and outreach activities.

See https://ies.ed.gov/ncer/research/randdCenters.asp for examples of the content to be included in your Project Summary/Abstract.

2. Bibliography and References Cited

You must submit the Bibliography and References Cited as a separate PDF attachment in the application package. We do not recommend a page length for the Bibliography and References Cited. You should include complete citations, including the names of all authors (in the same sequence in which they appear in the publication), titles of relevant elements such as the article/journal and chapter/book, page numbers, and year of publication for literature cited in the Project Narrative.

3. Human Subjects Narrative

You must submit an Exempt or Non-Exempt Human Subjects Narrative as a separate PDF attachment in the application package. 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 for more information about what to include in this narrative.

The U.S. Department of Education does not require certification of Institutional Review Board 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.

Part IV: Competition Regulations and Review Criteria

A. Funding Mechanisms and Restrictions

1. Mechanism of Support

IES intends to award cooperative agreements pursuant to this Request for Applications. Through the terms of the cooperative agreement, grantees will work with IES to plan work related to Supplemental and Leadership activities.

2. Funding Available

Although IES intends to support the R&D Center topics 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. IES will prioritize funding one R&D Center under each topic. For the Education Research and Development Center for Improving Access, Instruction, and Outcomes in Gifted Education, the availability of funds will depend upon funds being authorized through the Jacob K. Javits Gifted and Talented Students Education Act and appropriated by Congress for the Javits program.

The size of the award depends on the R&D Center topic and scope of the project. Please attend to the duration and budget maximums set for each topic in Part II.

3. Special Considerations for Budget Expenses

Indirect Cost Rate

When calculating your expenses for research conducted in field settings, you should apply your institution's federally negotiated off-campus indirect cost rate. Questions about indirect cost rates should be directed to the U.S. Department of Education's Indirect Cost Group http://www2.ed.gov/about/offices/list/ocfo/fipao/icgindex.html.

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

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 OMB's Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance), 2 CFR, §200.432 Conferences.

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.

3. Program Authority

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

4. 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 Award Requirements

1. Attendance at the Annual IES Principal Investigators Meeting

The Principal Investigator (PI) is required to attend one meeting each year (for up to 2 days) in Washington, DC with other IES grantees and IES staff. The project's budget should include this meeting. Should the PI not be able to attend the meeting, the PI may designate another person who is key personnel on the research team to attend.

2. Public Availability of Data and Results

You must include a [Data Management Plan (DMP) in Appendix F](#) as part of your R&D Center application. The scientific peer review process will not include the DMP in the scoring of the scientific merit of the application. Instead, IES Program Officers will be responsible for reviewing the completeness of the proposed DMP. The costs of the DMP can be covered by the grant and should be included in the budget and explained in the budget narrative.

All Principal Investigators are required to submit the electronic version of their final manuscripts upon acceptance for publication in a peer-reviewed reviewed scholarly publication to [ERIC](#), 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](#) applies to peer-reviewed, original scholarly publications that have been supported, in whole or in part with direct funding from IES, although it does not apply to book chapters, editorials, reviews, or non-peer-reviewed conference proceedings. **Principal Investigators must submit any peer-reviewed scholarly publications to ERIC**.

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](#), as well as a [Frequently Asked Questions](#) page. During the submission process, authors will submit bibliographic information from the publication, including title, authors, publication date, journal title, and associated IES award number(s).

3. 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.

4. Demonstrating Access to Data and Education Settings

The research you propose to do under a specific R&D Center topic will most likely require that you have (or will obtain) access to education settings such as classrooms, schools, districts, colleges/universities; secondary data sets; 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 D 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 may ask you to provide documentation that the settings originally recruited for the application are still willing to partner in the research.
- *Using secondary data sets*: 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 data sets such as federally collected data sets, 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 data sets in order to receive the grant. This means that if you do not have permission to use the proposed data sets at the time of application, you must provide documentation to IES from the entity controlling the data set(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 data set prior to submitting your application, IES may ask you to provide updated documentation indicating that you still have permission to use the data set to conduct the proposed research during the project period.
- *Building on existing studies*: You may propose studies that piggyback onto an ongoing study (i.e., that require access to subjects and data from another study). 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. Overview of Application and Scientific Peer Review Process

1. Submitting Your Letter of Intent

Letters of Intent are submitted online at https://iesreview.ed.gov. **Select the Letter of Intent form for the topic 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 a Letter of Intent, a Program Officer will contact you regarding your proposed research. IES staff also use the information in the Letters of Intent 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. Your LOI should include the following information:

- Descriptive title
- R&D Center topic that you will address
- Brief description of the proposed R&D Center
- 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 R&D Center (attend to the Duration maximum)
- Estimated total budget request (attend to the Budget maximums for your R&D Center topic)

2. Multiple Submissions

You may submit applications to more than one of IES's FY 2020 grant programs and to multiple topics within the Education Research and Development Center program. However, you may submit a given application only once for the FY 2020 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 26, 2019 through the internet using the software provided on the Grants.gov website https://www.grants.gov/. You must follow the application procedures and submission requirements described in the IES Application Submission Guide (https://ies.ed.gov/funding/pdf/submissionguide.pdf) and on Grants.gov https://www.grants.gov/web/grants/applicants/apply-for-grants.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 Peer Review Information Management Online (PRIMO) system (https://iesreview.ed.gov/). PRIMO allows applicants to track the progress of their application via the Applicant Notification System (ANS).

Approximately 1 to 2 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 4 to 6 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 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/peer_review/application_review.asp, by a panel of scientists 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 scientific review panels https://ies.ed.gov/director/sro/peer_review/reviewers.asp. 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 scientific peer review panel convenes to complete the review of applications.

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

5. Review Criteria for Scientific Merit

The purpose of IES-supported research is to contribute to solving education problems and to provide reliable information about the education practices that support learning and improve academic achievement and access to education for all learners. IES expects reviewers for all applications to assess the following aspects of an application in order to judge the likelihood that the proposed research will have a substantial impact on the pursuit of that purpose. Information pertinent to each of these criteria is described in Part II R&D Center Topic Requirements and Recommendations.

a) Significance of the Focused Program of Research

Does the applicant address the recommendations described in the Significance section for the R&D Center topic under which the applicant is submitting the application?

b) Research Plan for the Focused Program of Research

Does the applicant address the recommendations described in the Research Plan for the Focused Program of Research section for the R&D Center topic under which the applicant is submitting the application?

c) Plans for Other R&D Center Activities

Does the applicant address the recommendations described in the National Leadership, Capacity-Building, and Outreach section for the Secondary School ELs or Postsecondary Center or the National Leadership and Outreach section for the Gifted Center? Does the description of the applicant's capacity to conduct supplemental and leadership activities demonstrate that the applicant has the ideas, experience, and capability to successfully carry-out such activities in cooperation with IES? Does the applicant propose meaningful leadership and outreach activities for the R&D Center?

d) Management and Institutional Resources

Do the plans and procedures for the overall management of the R&D Center indicate that the applicant has the capacity to complete the proposed research, dissemination, and leadership activities efficiently and successfully? Does the applicant have the facilities, equipment, supplies, and other resources required to support the proposed activities? Do the commitments of each partner show support for the implementation and success of the proposed R&D Center activities? Does the applicant address the recommendations described in the Management and Institutional Resources section for the R&D Center topic under which the applicant is submitting the application?

e) Personnel

Does the description of the personnel make it apparent that the Principal Investigator/Center Director and other key personnel possess the appropriate training and experience and will commit sufficient time to competently implement the proposed research? Does the applicant address the recommendations described in the Personnel section for the R&D Center topic under which the applicant is submitting the application?

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; and
- availability of funds.

Part VI: Compliance and Responsiveness Checklist

Only compliant and responsive applications will be peer reviewed. 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/pdf/submissionguide.pdf) for an Application Checklist that describes the forms in the application package that must be completed and the PDF files that must be attached to the forms for a successful submission through Grants.gov.

Compliance
• Have you included an R&D Center Narrative?
• Have you included Appendix A: Data Management Plan?

Responsiveness
• Have you met all the General Requirements for an application?
o Does your proposed research include measures of academic outcomes?
o Do you propose to conduct your research in education settings as described in this RFA?
o Is this research relevant to education in the United States and does it address factors under the control of U.S. education systems?
o Does your application describe the R&D Center's focused program of research?
o Does your application describe the R&D Center's other activities, including national leadership and outreach activities as well as supplemental activities?
• Have you indicated a single topic for your application?
• Does your R&D Center Narrative meet the sample, outcomes, and setting requirements described below?

Sample, Outcomes, and Setting Requirements			
	Secondary School ELs Center	**Postsecondary Center**	**Gifted Center**
Sample	• Students in grades 6-12 currently identified as English learners	• Postsecondary learners	• Students in grades K-12
Outcomes	• Academic Outcomes	• Academic outcomes	• Academic outcomes
Setting	• Education settings including grades 6-12, or data collected from such settings • At least 2 states or territories	• Open/broad access postsecondary education settings, which may include online institutions of higher education, or data collected from such settings	• Education settings including grades K-12, or data collected from such settings • At least 2 states or territories

• Does your R&D Center Narrative include the five required sections and the associated requirements for the selected R&D Center Topic? Did you describe the elements required for each section?

Required R&D Center Narrative Elements			
	Secondary School ELs Center	**Postsecondary Center**	**Gifted Center**
Significance	• conceptual framework that will guide the Center's work • policies, systems-level practices, and approaches you will study • research questions you will address	• conceptual framework that will guide the Center's work, including the national leadership, capacity-building, and outreach activities; • innovation(s) that will be the focus of the research • research questions you will address	• conceptual framework that will guide the Center's work • research questions you will address
Research Plan	• characteristics of your sample • research design and methods for each study proposed • power analysis, if a causal study is proposed • data analysis plans	• characteristics of your sample • research design and methods for each study proposed • power analysis for each study • data analysis plans • cost analysis plan for implementing the innovation(s) the Center is focusing on	• characteristics of your sample • research design and methods for each study proposed • power analysis • data analysis plans

National Leadership, Capacity-Building, and Outreach Activities	• leadership, capacity-building, and outreach activities of the Center	A description of • how you will disseminate what the Center is learning to technical and nontechnical audiences • build capacity to leverage teaching and learning technologies • improve the pipeline connecting research, development, and the postsecondary market, including plans for a yearly convening with IES-funded researchers and developers	• leadership and outreach activities of the Center
Management and Institutional Resources	• organizational structure of the Center • plans and procedures for the overall management of the Center • resources to conduct the work of the Center	• organizational structure of the Center • plans and procedures for the overall management of the Center • resources to conduct the work of the Center	• organizational structure of the Center • plans and procedures for the overall management of the Center • resources to conduct the work of the Center
Personnel	• project team	• project team	• project team