

MLDS Center External Research Application

External Research Applicants are required to submit a Research Proposal Summary using this form. The summary covers the most frequently asked questions from the MLDS Governing Board, Research and Policy Advisory Board (RPB), and MLDS Center Staff.

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Research Applicant Name

Angela Henneberger

Organization

MLDS Center/ UMB SSW

Phone Number

4107066341

Researcher Information

Please provide information about the Research Applicant's background, other relevant research, and related interests.

Research Applicant Background and Qualifications

Dr. Angela K. Henneberger, Ph.D., is the Director of Research with the MLDSC and is a Research Assistant Professor at the University of Maryland School of Social Work. Dr. Henneberger's research applies advanced quantitative methods to examine the academic, social, emotional, and behavioral development of children and adolescents, with a specific focus on the effects of family and peer relationships on development. Dr. Henneberger received her Ph.D. from the University of Virginia, where she was awarded with a predoctoral fellowship from the Institute of Education Sciences (IES), and she completed a postdoctoral fellowship at the Pennsylvania State University in the Prevention and Methodology Training (PAMT) program.

Does your project include additional Research Applicants?

- Yes. If so, please upload CV for all Research Applicants.
- No

Proposed Project

Project Title

Quantity, Quality, and Diversity in Teaching: Collaborations to Examine the Educator Pipeline in Maryland

Abstract or Brief Description

The University of Maryland College Park (UMD), the Maryland Longitudinal Data System (MLDS) Center through the University of Maryland School of Social Work, the Maryland State Department of Education (MSDE), and Prince George's County Public Schools (PGCPS) will collaborate on a project with funding from the Institute for Education Science's call for proposals under the Researcher-Practitioner Partnerships in Education Research topic. Our work aims to increase quantity, quality, and diversity in the teacher workforce in Maryland by extending existing relationships between university-based researchers, and state and local practitioners and policymakers; and by leveraging two unique mechanisms – a rich statewide longitudinal data system and a research apprenticeship model – to provide timely feedback on the success of innovative policies and programs.

Research Project Question

This work will collaboratively identify research questions central to policy related to the teacher pipeline in Maryland and will begin to provide a description of the teacher pipeline in Maryland.

Select one or more MLDS Research Agenda Questions

- 1. What is the impact of early childhood education experiences and programs on children's school readiness and K-12 outcomes?
- 2. Are Maryland students academically prepared to enter postsecondary institutions and complete their programs in a timely manner?
- 3. What percentage of Maryland high school exiters go on to enroll in Maryland postsecondary education?
- 4. What percentage of Maryland high school exiters entering college are assessed to need to take developmental courses and in what content areas?
- 5. Which financial aid programs are most effective in improving access and success (i.e., retention and graduation) for Maryland students?
- 6. Assess the need for inclusion of online education data.
- 7. How likely are students placed in developmental courses to persist in postsecondary education and transfer and/or graduate?
- 8. Are community college students able to transfer within the state to 4-year institutions successfully and without loss of credit?
- 9. What are the differences in performance, retention, and graduation, including time to degree, of students who initially matriculate at a Maryland community college and transfer to a Maryland 4-year institution versus those who initially matriculate at a Maryland 4-year?
- 10. What are the differences in performance, retention and graduation,

including time to degree, of students beginning in dual enrollment programs, at 2-year institutions and at 4-year institutions?

- 11. What are the characteristics of 2-year institutions that are allowing students to persist most effectively and either graduate or transfer?
- 12. Which 4-year institutions are graduating students most effectively and in the timeliest fashion?
- 13. What happens to students who start at community colleges and do not go on to 4-year institutions?
- 14. What are the educational and labor market outcomes for individuals who use federal and state resources to obtain training at community colleges or other postsecondary institutions?
- 15. What economic value do noncredit community college credentials have in the workplace?
- 16. Are exiters of Maryland colleges successful in the workforce?
- 17. Assess STEM post-graduate student state and regional job acceptance and retention.
- 18. Assess training and retention of early childhood workforce in Maryland.
- 19. What are the workforce outcomes for Maryland students who earn a high school diploma (via high school graduation or GED®) but do not transition to postsecondary education or training?
- 20. What are the workforce outcomes for Maryland high school students who complete Career Technical Education coursework, who either enter the workforce directly or also obtain postsecondary education or training?

21. What are the workforce outcomes of Maryland high school non-completers?

Explanation of Cross-Sector

This research is cross-sector by incorporating data from Maryland high school students entering teacher preparation programs (or other similar programs), data from Maryland college students in teacher preparation programs and moving into the workforce where they are the teacher of record, and data from Maryland workers (teachers) and their K-12 students.

Please describe how the proposed research will inform choices to improve student and workforce outcomes in the State of Maryland. Consider including implications such as broadening the participation of underrepresented groups (e.g. gender, ethnicity, geographic, etc.), enhancing the infrastructure for research and education, and benefiting and/or informing educational policy and practice.

Benefit to the State of Maryland

This project will benefit the State of Maryland in two major ways. First, we will collaboratively develop a set of key research questions central to understanding the teacher pipeline in Maryland. Second, we will begin to provide big picture descriptive information about the teacher pipeline in Maryland. This work will support future research using advanced statistical analyses able to support causal inferences. Understanding the teacher pipeline in Maryland informs the development and implementation of future policy and practice related to teachers and students.

Estimated Timeline for the Proposed Project

This project is being submitted to IES in August 2018. A funding decision should be made in June 2019. If funded, the funding timeline would be for two years (July 1, 2019 through June 30, 2021). If the project is not funded, the research team will incorporate feedback from peer reviewers and resubmit the grant in August 2019. Regardless of funding status, preliminary work on the project will begin in the Fall of 2018.

Available Resources

Please provide information on funding for this project.

Is this project supported through grant funds? *

- Yes, grant funds have already been secured for this project.
- Yes, I have applied to receive grant funds for this project.
- Yes, I plan to apply for grant funds for this project.
- No ,there are no grant funds and no plans to apply for grant funds in support of this project.

Grant Funding

If you replied "Yes" above, please complete the following information about the grant funding.

Provide the name of the grantor:

Institute of Education Sciences (IES)

Provide information on the RFP or the grant program description. A link to the RFP or grant program may be included below.

Researcher-Practitioner Partnerships in Education Research

RFP or Grant Program Information

2019_84305H - Ang...

Provide the amount of funds sought/awarded:

\$400,000

Provide the date you applied or plan to apply for the grant:

August 23, 2018

Do you need (or anticipate needing) the Center to provide a letter of support for your grant application?

Yes

No

Other:

If you have not yet been awarded a grant, do you intend to do this project if grant funds cannot be secured?

Yes

No

Please describe any other type of funding you may be using to support this project.

MLDS Center Research Branch funds and resources are already planned for this topic area.

Proposed Center Output and Further Development

Please provide a description of the proposed Center Output to be completed as part of this work. Additionally, please provide your plans for further development of the Center output. Be sure to include possible publications and presentations in your description. Further developed work occurs after System access is terminated and may only use aggregate, de-identified data that was developed as part of the Center output.

Description of the proposed Center Output

Research/practitioner partnership meetings where MLDS Center researchers discuss research questions and research plans that support causal inference with key State and local stakeholders;

A list of research questions related to the quantity, quality, and diversity of the teacher pipeline. The research questions will be developed in collaboration between researchers and policymakers to ensure that research questions are of relevance to a broad set of MLDS Center stakeholder groups;

Research series presentation on the teacher pipeline in Maryland;

Research report on the teacher pipeline in Maryland.

Plans for further development

We plan to submit results to academic conferences (e.g., American Educational Research Association, Association for Education Finance and Policy, Association for Public Policy and Management), academic journals (e.g., Educational Evaluation and Policy Analysis, Educational Researcher, Educational Policy), and practitioner-oriented journals (e.g., The Journal of Effective Teaching; Journal of Teacher Education). These outlets are particularly important for doctoral students working on the project.

Supporting Documents

Curriculum Vitae for Research Applicants

•_Henneberger_CV_...

•Blazar_CV_0 (1) - A...

Formal Research Proposal

•Henneberger_Exter...

Data Request Template

•Henneberger_Data...

IRB Approval and Completed Trainings

This form was created inside of Maryland.gov.

Google Forms

**Quantity, Quality, and Diversity in Teaching:
Collaborations to Examine the Educator Pipeline in Maryland**

Topic: IES grant submission; Researcher-Practitioner Partnerships in Education Research

Duration: Two years (July 1, 2019 through June 30, 2021)

Date External Research Application is Submitted: July 16, 2018

Principal Investigator of UMB SSW sub-contract:

Angela K. Henneberger, Director of Research, *Maryland Longitudinal Data System Center* and
Research Assistant Professor, *University of Maryland School of Social Work*

Principal Investigator of IES Grant:

David Blazar, Assistant Professor of Education Policy and Economics, *College of Education,*
University of Maryland College Park

Co-Principal Investigators of IES Grant:

Jennifer King Rice, Dean and Professor, *College of Education, University of Maryland College Park*

Betty Malen, Professor, *College of Education, University of Maryland College Park*

Angela K. Henneberger, Director of Research, *Maryland Longitudinal Data System Center* and
Research Assistant Professor, *University of Maryland School of Social Work*

Advisory Board: As a part of this project, we will assemble a group of national, state, and local experts on issues related to the teacher pipeline. We will engage that advisory board at least once per year to advise on the project.

Abstract

The University of Maryland College Park (UMD), the Maryland Longitudinal Data System (MLDS) Center through the University of Maryland School of Social Work, and Prince George's County Public Schools (PGCPS) will collaborate on a project with funding from the Institute for Education Science's call for proposals under the *Researcher-Practitioner Partnerships in Education Research* topic. Our work aims to increase quantity, quality, and diversity in the teacher workforce in Maryland by extending existing relationships between university-based researchers, and state and local practitioners and policymakers; and by leveraging two unique mechanisms – a rich statewide longitudinal data system and a research apprenticeship model – to provide timely feedback on the success of innovative policies and programs.

There is a labor force crisis in teaching, particularly in the state of Maryland. Teachers are the highest demand occupation in the state, with 4,475 yearly openings and only 33% of that being met by University System of Maryland institutions. State policymakers and leaders in Maryland are highly aware of this and other challenges facing its education system, and have proposed goals to address them – e.g., recruiting prospective teachers from the top 25% of high school graduates. Pathways to success will require significant work and collaborations between schools, local education agencies, policymakers, and researchers.

We propose a researcher-practitioner partnership with the long-term goal of creating a full-fledged, fully funded and sustainable research center housed at the University of Maryland College Park, College of Education. The center will use multiple disciplinary perspectives and research methods to study different dimensions of the teacher staffing program in Maryland, and will be inherently intertwined with our local and state partners in a way that will impact policy and practice. In the shorter term, the partnership would bring together researchers and practitioners, including state and district leaders, to identify a set of research questions related to the teacher pipeline most pertinent to Maryland's short- and long-term educational improvement strategy. The project would identify a system to continuously track the innovative practices and policies that school districts are undertaking related to the teacher pipeline, and to identify systems for researchers to interface with practitioners prior to the roll out of new policies or programs in order to consider opportunities for rigorous research designs that are necessary to inform policy making. Finally, funding would support continued development of the MLDS Center, which combines K-12 education data with college data and labor market outcomes, as a primary resource to provide timely feedback to districts on the success of certain policies and programs related to the teacher pipeline. Our work will capitalize on existing partnerships to build a long-term and comprehensive plan for studying the teacher pipeline in Maryland and provide actionable, policy-relevant findings to our stakeholders.

Narrative and Problem Statement

The University of Maryland College Park (UMD), the Maryland Longitudinal Data System (MLDS) Center through the University of Maryland School of Social Work, the Maryland State Department of Education (MSDE), and Prince George's County Public Schools (PGCPS) will submit this proposal to the Institute for Education Sciences' (IES) call for proposals under the *Collaboration: Researcher-Practitioner Partnerships in Education Research* topic. Our work will extend existing relationships between University-based researchers and local and state partners to (a) identify a set of research questions aimed at understanding and solving crises related to the educator pipeline in Maryland, (b) identify systems and processes for providing timely feedback to districts using unique data systems and research designs, and (d) begin to implement these processes through an initial mixed methods research project in one local school district that currently is engaging in innovative work around teacher recruitment and retention.

Significance

Defining the Problem

There is a labor force crisis in teaching, particularly in the state of Maryland. Teachers are the highest demand occupation in the state, with 4,475 yearly openings and only 33% of that being met by University System of Maryland (USM) institutions. Likewise, USM institutions are producing only 21% of the candidates for the 805 job openings for school counselors and administrators, and only 48% for the openings for preschool teachers. This situation is likely to be exacerbated by policy proposals to expand the provision for early childhood education in the state (Janulis, 2017).¹

Currently, the gap between supply and demand is met by hiring education professionals prepared in other states or countries. These professionals are being certified to teach in Maryland through a variety of non-traditional pathways that vary in quality and outcome. Making matters more difficult, retention of strong teachers in the teaching profession has long been a daunting issue, and is intensifying (Janulis, 2017; MSDE, 2016).

Two additional and specific challenges motivate our work: First, teacher shortages in some STEM fields, such as high school computer science and physics, are almost absolute (Cowan, Goldhaber, Hayes, & Theobald, 2016; MSDE, 2016). In order to grow a STEM-literate workforce, we must build better recruitment and training pathways to place strong STEM teachers in our schools. Second, myriad research studies document the importance of a diverse teacher workforce that matches the demographics of the student population they teach (Dee, 2004; Egalite, Kisha, & Winters, 2015). Yet, nationally and specifically in Maryland, there is a crisis of attracting, supporting, and retaining African-American and Latino teachers (Hansen & Quintero, 2017; MSDE, 2016; Sunderman & Dayhoff, 2015). The need for diverse teaching talent is particularly acute in school districts such as PGCPS. PGCPS is the second-largest of 24 total school district in Maryland, and among the top 25 largest school districts in the United

¹ All statistics on the Maryland teacher workforce come from the P12 Data Dashboard:
<https://wcp.k12lds.memsdc.org/webcenter/spaces/p12lds>.

States.² In 2017-18, 58% of public school students were black, and 33% were Latino; only 4% were white. Further, students in PGCPS consistently have underperformed state averages: in recent years, roughly 25-30% of students in PGCPS met expectations on math and ELA assessments, compared to roughly 40% of students statewide.

The State of Maryland is aware of the challenges facing its education system. In 2016, the Commission on Innovation and Excellence in Education (Kirwan Commission) articulated these and other concerns. In turn, they tasked MSDE with, among others things, recruiting the top quartile of high school graduates in Maryland into the teaching profession. To help achieve this goal, the Kirwan Commission anticipates spending significant funds both to increase per-pupil expenditures and to provide capacity to districts to engage in research. In its most recent session, the Maryland Senate set aside \$200 million for these purposes (Chasen & Wiggins, 2018). We see our work in this proposal as providing the capacity and follow through on the recommendations of the Kirwan Commission.

Now is a golden opportunity for in-depth collaborative work, given the directives of the Kirwan Commission, growing interest in and push for researcher-practitioner partnerships across Maryland, and the fact that the state is geared up to invest heavily in the educator pipeline.

Research Project Overview and Goals

Ultimately, we have a long-term vision of creating a fully funded and sustainable research center housed at UMD College Park. The center will use multiple disciplinary perspectives and research methods to study different dimensions of the teacher staffing program in Maryland, and will be inherently intertwined with our local and state partners in a way that will impact policy and practice. This is the vision set out by the Kirwan Commission, and funds allocated by the State for evaluations could be used to support these research endeavors.

To achieve this long-term goal, we see four shorter-term goals that can be achieved with grant support from the IES for a researcher-practitioner partnership:

1. Bring together practitioners, including state and district leaders, and researchers to:
 - a. Identify a set of research questions related to the educator pipeline most pertinent to Maryland's short- and long-term educational improvement strategy;
 - b. And identify systems for researchers to interface with practitioners prior to the roll out of new policies or programs in order to consider opportunities for research designs that support causal inferences (e.g., lagged rollout with random assignment) and, thus, can best guide policymaking;
2. Develop a system (e.g., yearly survey) and begin to build an infrastructure to continuously track the range of innovative practices and policies that school districts, universities, the state, and other actors are undertaking aimed at improving quantity, quality, and diversity of the teacher pipeline; tracking these data are a first step to evaluating their effectiveness;

² Data come from MSDE data dashboard, and are available through PGCPS website:
<http://www.pgcps.org/facts-and-figures/>.

3. Prepare state longitudinal data so that it can best be leveraged to profile quantity, quality, and diversity of teacher labor markets across the state, as well as provide timely feedback on the success of certain policies and programs related to the teacher pipeline;
4. Engage in a research apprenticeship through which graduate students and their faculty advisor work collaboratively with practitioners in local school districts to evaluate the implementation of and initial impact of policy initiatives designed to address critical aspects of the teacher pipeline problem; while work during the course of this two-year project will focus on a collaborative project in one district (PGCPS), we also will consider opportunities to roll out the research apprenticeship in other settings in later years.

Rationale 1: Tradeoffs between Quantity and Quality in Teaching

Addressing teacher shortages is a longstanding challenge in Maryland and in the United States more broadly. Teacher labor markets, like other labor markets, presumably work according to the basic economic principles of supply and demand. When the market is in equilibrium, the supply of labor with a particular set of qualifications is equal to the demand for that labor, and a fair compensation package is negotiated between employers and employees.

Key to this puzzle is the quantity versus quality tradeoff. Faced with teacher shortages, many school systems across the country continue to employ large numbers of teachers who, by most indicators, do not fit into the category of “high quality” (Carroll, Reichardt, & Guarino, 2000; Sutcher, Darling-Hammond, Carver-Thomas, 2016). This problem is pronounced in urban high-poverty districts and schools where, arguably, high-quality teachers are needed most (Aragon, 2016; Cowan et al., 2016; Haycock, 2000). Moreover, many schools face significant challenges recruiting qualified teachers (Murphy & DeArmond, 2003) and retaining these teachers once they are hired (Hanushek, Kain, & Rivkin, 2004; Lankford, Loeb, & Wyckoff, 2002; Simon & Johnson, 2014).

In recent years, district and state leaders have considered several possible strategies for balancing quantity and quality in the educator pipeline, including: increasing teacher salary (Hanushek, Rivkin, Rothstein, & Podhursky, 2004; Hoxby & Leigh, 2004), decreasing barriers to entry into the profession (Rotherham & Mead, 2004), improving school working conditions (Johnson & Birkeland, 2003), amongst other strategies. However, the evidence is mixed on the success of these strategies as currently rolled out in school districts. For example, consistent with economic theory (Borjas, 1987; Roy, 1951), blanket increases in teacher salary do not appear to improve quality, on average, as the teaching profession becomes a more attractive alternative to all labor market participants who earn similar or lower wages (e.g., Cabrera & Webbink, 2018). As such, many have argued for differentiated pay schemes, though these are challenging to get into union-negotiated contracts (Goldhaber, 2006; Kopich, 2010) and also show mixed results (Gneezy, Meier, & Rey-Biel, 2011; Podgursky & Springer, 2007).

Similarly, while alternative certification programs have grown immensely over the past two decades, and are a major supply chain for the profession in Maryland (MSDE, 2017), evidence is mixed on the quality of these programs and the teachers they recruit, train, and send off into

public schools (Walsh & Jacobs, 2007). Teachers trained through some highly visible and selective programs such as Teach for America produce larger student gains than comparison teachers (Decker, Meyer, & Glazerman, 2004). But, evidence on other, much larger programs is variable (Kane, Rocoff, & Staiger, 2006; Sass, 2015). Thus, to date, there are outstanding questions about how policymakers and practitioners can balance quantity and quality in the teaching profession.

We highlight two acute challenges that undergird the quantity versus quality tradeoff in Maryland. First, teacher shortages tend to occur in local labor markets and in specific subject areas (i.e., math, science, special education), rather than occurring across the entire profession. Thus, districts, and schools in our state require strategies that are much more targeted in nature. For example, in Maryland, teacher training programs produce far fewer individuals certified in mathematics than they do in general elementary education, or the humanities (MSDE, 2016).

Researchers focused specifically on the Maryland context (Jackson & Maina, 2018), as well as those focused on other contexts (Barth, Dillon, Hull, & Higgins, 2016), have identified possible solutions to this challenge. One approach would be to release statewide data on shortage areas, and work with teacher training institutions to align their openings to these figures. However, such processes have not been well established in the state, due in part to logistical constraints including an infrastructure to support these conversations. The time lag between when districts can identify their shortage areas and when teacher training institutions admit prospective teachers into their programs also creates a challenge that will require considerable collaborations between actors across the state. Another approach could be to differentiate pay within school districts with regard to subject area, providing larger salaries for teachers in STEM fields, special education, and other shortage areas. Currently, salary schedules tend to have just two dimensions: “steps” refer to how many years a teacher has been teaching, and “lanes” refer to how much education a teacher has. To our knowledge, this has yet to occur in practice on a broad scale, likely due in part to the negotiating power of teachers’ unions.

The second specific challenge in the quantity versus quality tradeoff concerns definitions of and ways to measure “quality” in the teaching profession. Researchers, practitioners, and policymakers have not always aligned on a definition of quality, and having such a definition is a prerequisite for policies targeting these individuals. For many years, research and policy focused on attributes believed to be a proxy for observed quality, including earning a bachelor’s degree, state certification and licensure, and knowledge of subject area they teach. However, the education production function literature shows that very few of these and other observable characteristics of teachers are associated with desired outcomes once teachers enter the classroom (for an older review, see Wayne & Youngs, 2003; for more recent empirical analysis from members of our team, see Blazar, 2015; Hill, Blazar, & Lynch, 2015). Teachers’ contributions to students’ test scores - often referred to as their “value-added” score - are another way to identify teachers’ performance on the job, and have been found to be unbiased measures (Blazar, 2018; Chetty, Friedman, & Rockoff, 2014a; Kane, McCaffrey, Miller, & Staiger, 2013) that predict long-term student outcomes (Chetty, Friedman, & Rockoff, 2014b). Yet, it is not possible to use these sorts of measures to recruit prospective teachers, as pre-service teachers do not have data needed to calculate value-added scores. Further, there are concerns at the reliability

of these measures and the fact that teachers' scores can bounce around from one year to the next (Koedel, Mihaly, & Rockoff, 2015).

A lack of clearly defined measures of quality means that state actors will need to collaborate with each other and with researchers to identify and test the success of additional, innovative tools. We are particularly excited by efforts to address this challenge explored in Washington State (e.g., Goldhaber, Grout, & Huntington-Klein, 2015) and in Washington D.C. (e.g., Dee & Wyckoff, 2015; Jacob et al., 2016), both through ongoing researcher-practitioner partnerships. We plan to use these examples as models in our work.

While certification and licensure scores remain the primary screen for quality prior to entering the profession³, there is growing concern that these tools may be keeping teachers of color out of the classroom (Barnum, 2017; Goldhaber & Hansen, 2010; Tyler, 2011). We see increasing diversity in the educator pipeline as particularly important, and so turn our attention to that topic in more depth in the following section.

Rationale 2: Need for Diversity

The student population in Maryland has changed substantially over the last several decades, resulting in a group of students who increasingly are racially and socioeconomically diverse. According to an analysis by our colleagues at UMD's Maryland Equity Project, public school enrollment grew substantially between 1990 and 2010. Those counties with growing student enrollments are more likely to be lower-income, and growing enrollments tend to be focused amongst minority student populations (Sunderman & Dayhoff, 2014). In 1990, over 60% of the student population in Maryland was white, compared to 43.6% in 2010 and 38.2% in 2017. Today, 34% of public school students in Maryland are black, and 16.5% are Latino (MSDE, 2017).

While the pool of teacher candidates in the state also has become more diverse over time - from 17% minority candidates in 2011-12 to 20% in 2014-15 (MSDE, 2017) - these patterns are insufficient to meet the needs of the student population. Statewide, fewer than a quarter of teachers are minority, compared to over half of the student population. This is true even in cities such as Baltimore, where roughly 80% of students but only 40% of teachers are minority (Lindsay, Blom, & Tilsley, 2017).

The need to close these gaps has become particularly acute in recent years, as a growing body of rigorous evidence highlights the importance for students of having a teacher who looks like them. The first study to document this finding used experimental data from Tennessee to show that, among black children, having a black teacher increased math and reading test scores by 3 to 5 percentile points (Dee, 2004). These results extend to additional student populations (Egalite, 2015), and to other "non-tested" outcomes that have become a critical part of the education process. Black students with a black teacher are less likely to undergo "stereotype threat" (Steele & Aronson, 1995) and less likely to be perceived as disruptive and inattentive, relative to black

³ For a description of the process of becoming a public school teacher in Maryland, see:
<http://marylandpublicschools.org/about/pages/dee/certification/index.aspx>

students who had a white teacher (Dee, 2005). Both black and Latino students with a minority teacher are less likely to be suspended when they have a teacher of the same race (Lindsay & Hart, 2017), suggesting that strategic hiring and assignment of teachers will play a critical role in rectifying the biased nature of discipline policies that many argue results in a “school-to-prison pipeline” (Heitzeg, 2009; Wald & Losen, 2003).

This line of work has led to calls from policymakers and practitioners nationally and in Maryland for increasing diversity in the educator pipeline. One of the core recommendations from the Kirwan Commission is that, “School leaders should reflect the diversity of the student population and, through their training as both teachers and leaders, provide culturally relevant instructional techniques and leadership in their schools” (Kirwan, 2018, p. 62). A second working group on teacher diversity mandated by the Maryland General Assembly made a similar call, and also articulated possible solutions: (a) examine current regulations, policies and procedures in the state certification and licensing process to determine if any present barriers exist that might be addressed to enhance the recruitment of minorities into the teaching profession; (b) use recruitment strategies that also include needed support systems for minority teachers; (c) provide financial incentives that make a difference in the life of a newly recruited minority teacher; (d) expand current programs offered in high school such as the Teacher Academy of Maryland, increase enrollment in the Future Educators Association which exists at both middle and high schools, and enhance business partnerships through the Maryland Business Roundtable or other similar organizations which can showcase minority teachers and the teaching profession (Minority Teacher Recruitment Study and Report Working Group, 2013).

We are excited by the possibilities in several of these strategies. Like other researchers (Putnam, 2016), though, we recognize that these efforts must be substantial and multifaceted. Because minority teacher and prospective teacher candidates “leak” from the pipeline at several stages - recruitment, hiring, and retention - focusing on any single issue will be insufficient. Instead, we agree with Putnam et al (2016), who argue:

Achieving a diverse teacher workforce must be a long-term policy goal with a suite of long-term strategies put in place to help minorities succeed in college and to encourage them to return to the classroom to help the next generation of students. Our failure to do so will keep us stubbornly in the same vicious cycle in which low teacher diversity contributes in a myriad of ways to low minority student success in K-12 and college, which results once again in low teacher diversity. (p. 15).

In turn, policy solutions must consider and collaborate with the range of actors across the state of Maryland who have a direct hand in addressing diversity at all stages of the teacher pipeline.

Rationale 3: Multidimensional Policy Landscapes

Clearly, the nature of the teacher staffing problem is both complex and multidimensional. Policy makers wrestle with the concurrent challenges of how to expand the pool of qualified teacher candidates, recruit teachers to the schools where they are needed most, distribute teachers in equitable and efficient ways, and retain qualified teachers over time. The multiple aspects of the

problem suggest that a multidimensional policy response is required to address teacher staffing concerns.

The complexity of the educator pipeline landscape brings us to a third and final rationale for a researcher-practitioner partnership in Maryland. Despite the promise of diverse, high-quality teachers to improve students' short and long-term outcomes, the issues of teacher supply, recruitment, distribution, and retention present significant challenges for many states, districts, and schools and pose considerable risks for ensuring educational equity and adequacy for all students. Thus, as described elsewhere by members of our research team (Rice et al., 2008), responses to the teacher staffing problem require attention to policy "packages" and a multidimensional typology.

One dimension of the empirically-driven typology focuses on broad but often overlapping categories of strategies that districts and schools in Maryland may use to address different aspects of the teacher staffing problem: (1) economic incentives, (2) avenues into the profession, (3) hiring strategies, (4) professional development, and (5) working conditions. Focus on each will require substantial investments in research to identify the most promising interventions in terms of effectiveness at improving student outcomes and cost-effectiveness of those that rise to the top.

From this perspective, one must also recognize that teacher policies are implemented and supported at multiple levels of the education system. Increasingly, state education agencies provide guidance and support for teacher induction, professional development, and other strategies designed to advance teacher and, ultimately, student success. Many states have become involved in encouraging shifts in the teacher labor market by offering economic incentives and rewards to teachers who work in low-performing schools and in subject-shortage areas such as math, science, and special education. The district role traditionally focused on teacher recruitment and hiring but has expanded to attend to issues that surround retention, professional development, and, in some cases, the distribution of teachers across schools. Schools too have taken steps to address different aspects of the teacher staffing problem. Increasingly, schools offer programs focused on teacher mentoring and induction, enhancing professional development opportunities, and improving working conditions.

In light of actors working at multiple levels of the education system to address a similar problem, we see collaborative work among these actors as an essential prerequisite for success. Collaboration amongst actors not only avoids repetitive work but also leverages the unique resources that each brings to bear on the overarching problem.

Alignment with MLDS Center Research Agenda

This research aligns with several MLDS Center research agenda questions:

- *Are Maryland students academically prepared to enter postsecondary institutions and complete their programs in a timely manner?*

- *Which 4-year institutions are graduating students most effectively and in the timeliest fashion?*
- *Are exiters of Maryland colleges successful in the workforce?*

Evaluation of a State or Federal Education Program

This work evaluates Maryland public high schools (e.g., their ability to produce the necessary quantity, quality, and diversity of students entering teacher preparation); Maryland colleges (e.g., their ability to produce the necessary quantity, quality, and diversity of teachers entering the workforce in Maryland PreK-12 public schools), and Maryland public school teaching (e.g., the ability to employ the necessary quantity, quality, and diversity of teachers for Maryland PreK-12 public school students to succeed).

Cross-Sector Research

This research is cross-sector by incorporating data from Maryland high school students entering teacher preparation programs (or other similar programs), data from Maryland college students in teacher preparation programs and moving into the workforce where they are the teacher of record, and data from Maryland workers (teachers) and their K-12 students.

Benefit to the State of Maryland

This project will benefit the State of Maryland in two major ways. First, we will collaboratively develop a set of key research questions central to understanding the teacher pipeline in Maryland. Second, we will begin to provide big picture descriptive information about the teacher pipeline in Maryland. This work will support future research using advanced statistical analyses able to support causal inferences. Understanding the teacher pipeline in Maryland informs the development and implementation of future policy and practice related to teachers and students.

Research Questions/Procedures

Goal 1: The first goal of this project is to convene stakeholders from across the state to identify a set of research questions. We will work collaboratively to identify a set of research questions that collectively address the primary concerns of the state with regard to the educator pipeline. Our pre-planning work, including review of the Kirwan Commission findings and recommendations, other state reports, and ongoing conversations with key stakeholders, leads us to an illustrative but not exhaustive set of possible research questions:

Recruiting and Attracting Teachers

- *What percent of high school graduates in Maryland receive a teaching credential, how many of these end up teaching in Maryland, and what are the background characteristics of these individuals?*
- *Of individuals who graduate from a teacher preparation program in Maryland, what percent end up becoming teachers of record in public schools in the state?*

Pre-Service Training

- *Which preparation programs graduate teachers who are successful once they enter the classroom?*
- *Which characteristics of teacher preparation programs are associated with teachers' later effectiveness in the classroom?*
- *What percentage of new teachers of color and those from STEM fields enter through traditional versus alternative certification routes?*
- *How effective are new "grow-your-own" programs at increasing the number of teachers of color and those from STEM fields, and how do teachers who go through these programs compare to others once they enter the classroom?*

Hiring

- *How systematically are school districts working with teacher preparation programs to identify shortage areas, and then to determine eligible slots in preparation programs based on these specific shortage areas?*
- *What is the effect of overall salary increases on teacher supply, particularly for teachers of color and those in STEM fields?*

As part of this process, we will convene the stakeholder group on UMD's campus (or elsewhere if more convenient) to describe the overarching project and goals and begin a collaborative conversation. Given that stakeholders at the table come with many different perspectives and backgrounds, we will use this first conversation to ensure that all are using similar language and definitions. Specifically, we will describe what the research evidence has identified as critical stages in the educator pipeline and paint a broad picture of the pipeline in Maryland based on an initial look at the MLDS data. Given that a key goal of this group is to identify a set of research questions related to the teacher pipeline that can be answered through ongoing researcher-practitioner partnerships, we also will spend time articulating core differences between *descriptive* research questions and *causal* ones, and provide an overview of research designs that can be used to answer each type of question.

As a part of this process, we will also identify the best data available at the district and State levels to answer the research questions identified by stakeholders. In some cases, data will come from PGCPS, MSDE, MLDS, and/or data collection will be planned where feasible. We do not expect research analyses to answer identified research questions to occur as a result of this grant, as the purpose of this particular grant is largely planning and partnering with stakeholders. Future grant submissions will focus on research analyses where appropriate.

Goal 2: A second goal of our work is to develop a system to continuously track the roll out of new policies and programs across districts and over time. We see several uses of this sort of data when captured statewide. First, this information will help facilitate the types of conversations and partnerships between practitioners and researchers that we describe above. In particular, readily available data would be a strong resource for connecting doctoral students to districts and their research, as doctoral students are hungry for new research opportunities and - when mentored by faculty - can provide inexpensive support to education agencies interested in

evaluation work. Second, tracking policies and programs across districts will help education agencies learn from each other about best practices in the field.

To capture this information, we propose developing a survey instrument that can be administered to district staff each year. We see this approach as feasible, given that there are only 24 public school districts in Maryland, and so the administration and follow-up for the survey is manageable on a yearly basis. Once the survey is established, graduate research assistants at UMD will be primarily responsible for collecting this information. We will develop a complete draft of the instrument over the course of the first year of the project, make changes to it in the beginning of the second year based on feedback received, and administer the revised survey in the second year. Information collected by the survey in year two will be posted publicly - through UMD, MSDE, MLDS, and other web locations - at the end of year two.

In order to develop a usable instrument, we will begin by brainstorming broad categories of interventions that are likely to be included. The instrument likely will be broad in scope and will evolve through the conversations with key stakeholders described above; but, at a minimum the survey likely will collect information including: any changes since the previous year in central office leadership, district-wide professional development opportunities for teachers or school staff, adoption of new curriculum materials for specific subject-grade combinations, updates to union-negotiated teacher or principal contracts, etc. (Blazar & Schueler, in preparation; Leithwood, 2010; Trujillo, 2012). Next, our internal research team will draft an instrument that turns the categories above into survey items. A key in the development of this instrument is that it be comprehensive enough to capture a range of possible activities and interventions that districts recently rolled out, but not too long as to be burdensome to district or school staff. We will allocate one of our meetings with the broad stakeholder group to reviewing and commenting on the survey, and the research team will refine from there.

To pilot the instrument, we will send it electronically to a member of the central office staff from a randomly selected set of half of the 24 school districts. We will follow up with focus groups with a selection of the participants to receive feedback on the survey. In the second year of the project, we will send the finalized instrument to central office staff in each of the 24 school districts, clean and organize the data that comes in, and work with MSDE, MLDS, and other agencies to post information publicly.

Goal 3: The third goal of our work is to prepare the MLDS data so that it can best be leveraged to profile the quantity, quality, and diversity at each stage of the teacher pipeline in Maryland, as well as to provide timely feedback on the success of certain policies and programs related to the teacher pipeline at the State and local levels. Individual-level data from the MLDS can be leveraged to support policymaking around the teacher pipeline by following Maryland high school students into teacher preparation programs of all types and into the workforce where they are the teacher of record, with the additional capability of linking the teacher to their students and following their students into college and career. Specifically, the MLDS will be used to provide “big picture” descriptive data and evidence on the teacher pipeline for State and district stakeholders. The MLDS is unique in its ability to link classroom data to labor market outcomes. To our knowledge, no other state-level education data set also is connected to micro data from

labor departments. This setup will allow us to track students from an individual teacher's classroom into the labor market. The data also will allow us to compare salaries of teachers to those from other service professions, and to examine shifts in supply and demand for teachers and how current/prospective teachers move in and out of the profession.

The first step in this collaborative project will be to leverage MLDS data to provide a full description of all points of entry into and exit from the Maryland public school teacher pipeline, and the number and proportion of individuals who enter or exit at each point, more fully. The MLDS Center has already collaboratively determined the key pathways indicative of entry into and exit from the teacher pipeline (see Figure 1) and the years for which those data are available (academic year 2008 - 2015). A dataset will be constructed that merges and links high school student information, college student information, and workforce information at the individual student level. For each cohort of students, we will create variables that indicate membership in each teacher pipeline bucket for which data are readily available from the MLDS, and produce aggregate counts and percentages for each part of the pipeline. Additionally, we will identify buckets for which data are not readily available in the MLDS and begin to identify sources at the State and local levels that may provide that data.

The second step necessary for this collaborative project will be to link teachers of record to individual students in public PreK-12 schools. To do this, we will use the course enrollment dataset, which has data on courses from 2012-13 through 2015-16, to identify which students are taught by which teachers. Individual student links will then be used to link to student data, such as demographic characteristics, test scores, and absenteeism. Additionally, individual teacher links will be used to link to teacher information, such as degree attainment and teacher demographic characteristics.

Goal 4: A fourth goal of this project is to engage in a research apprenticeship model through which graduate students and their faculty advisor work collaboratively with practitioners in local school districts to evaluate the implementation of and initial impact of policy initiatives designed to address critical aspects of the teacher pipeline problem. Work during the course of this two-year project will focus on a collaborative project in one district (PGCPS), but we will consider opportunities to roll out the research apprenticeship in other settings in later years.

This approach, on a smaller scale than work with MLDS, will allow us to study different approaches to teacher preparation that UMD and the College of Education conducts and studies in our own backyard. Types of innovative programs related to the teacher pipeline include: incentives to attract new talent into the teaching profession, and to distribute highly effective teachers across schools; "grow-your-own" programs that seek to recruit and train local talent, particularly African-American and Latino teacher candidates and those interested in STEM fields; and innovative professional development offerings including teacher coaching models, aimed at improving the quality of instruction of teachers already working in schools.

The research apprenticeship will provide classroom training to current doctoral students at the University of Maryland necessary to conduct quantitative and qualitative research. Faculty mentors will supervise these students as they lead data collection efforts in school districts. This

new work will build on a past research apprenticeship with PGCPS led by co-Principal Investigators Dean Jennifer Rice and Professor Betty Malen, who worked closely with the district to monitor and evaluate the rollout of their Teacher Incentive Fund grant from IES. We believe that the research apprenticeship model is ideal because it will provide the human capital necessary to conduct research projects across the state, is sustainable over the long term given steady enrollments of doctoral students, and will help develop and equip a new generation of education scholars to become leaders throughout the state of Maryland.

Available Resources

As a team, we have substantial capacity to complete this work, including strong pre-existing relationships with districts throughout Maryland and the state; several centers through which we can continue to grow relationships, as well as disseminate information; access to doctoral students who will take part in the work; and sufficient work space. Funding from the IES research grant will provide effort support for the PI and Co-PIs and for doctoral students to work on the project.

Center Product and Further Development

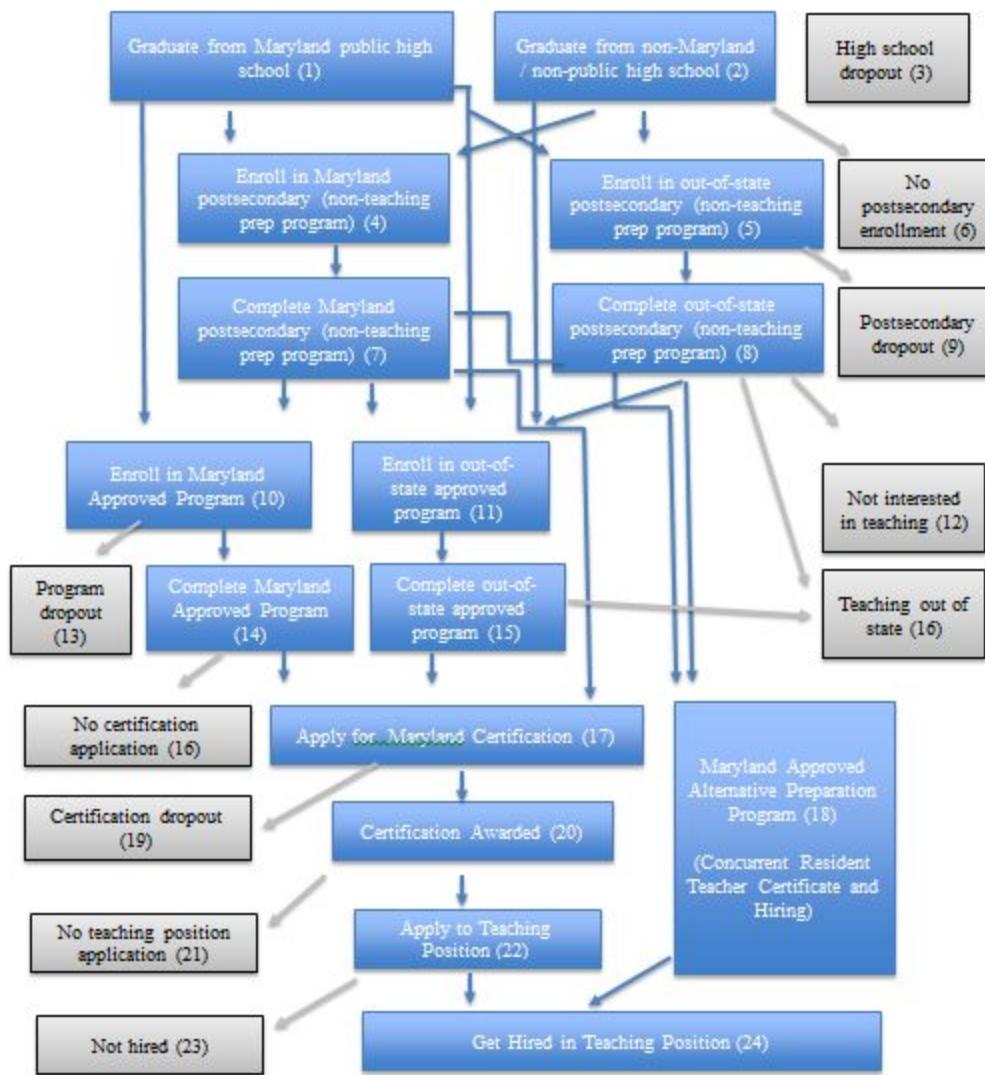
- **MLDS Center products.** This project is expected to result in the following MLDS Center products:
 - (1) Research/practitioner partnership meetings where MLDS Center researchers discuss research questions and research plans that support causal inference with key State and local stakeholders;
 - (2) A list of research questions related to the quantity, quality, and diversity of the teacher pipeline. The research questions will be developed in collaboration between researchers and policymakers to ensure that research questions are of relevance to a broad set of MLDS Center stakeholder groups;
 - (3) A list of the areas of the Maryland teacher pipeline for which the MLDS does not currently contain data and potential sources to address those gaps;
 - (4) Research series presentation on the teacher pipeline in Maryland;
 - (5) Research report on the teacher pipeline in Maryland.
- **Further development:** We plan to submit results to academic conferences (e.g., American Educational Research Association, Association for Education Finance and Policy, Association for Public Policy and Management), academic journals (e.g., *Educational Evaluation and Policy Analysis*, *Educational Researcher*, *Educational Policy*), and practitioner-oriented journals (e.g., *The Journal of Effective Teaching*; *Journal of Teacher Education*). These outlets are particularly important for doctoral students working on the project.

Timeline

This project is being submitted to IES in August 2018. A funding decision should be made in June 2019. If funded, the funding timeline would be for two years (July 1, 2019 through June 30,

2021). If the project is not funded, the research team will incorporate feedback from peer reviewers and resubmit the grant in August 2019. Regardless of funding status, preliminary work on the project will begin in the Fall of 2018.

Figure 1. Draft Conceptualization of the Maryland Teacher Pipeline



Include any notes below that would be helpful for executing your query. For example, if you are Notes: The exact nature of the data requested will be determined based on the nature of the research questions collaboratively developed throughout the research process. A query will not need to be executed by the MLDS data and IT teams, as the PI on the UMB sub-contract (Dr. Henneberger) and the PI on the IES grant (Dr. Blazar) will both have full access to the MLDS. Graduate students under their supervision (and under the supervision of Dr. Nolan Pope and with additional supervision from Drs. Bess Rose, Laura Stapleton, and Tracy Sweet) will perform all work necessary to extract, merge, and clean data for this project.

The following data elements will be provided in all data sets.

--	IDN	000259	IDN	Student Identification Number
MSDE		000893	HSProgComp	High School Program Completion
MSDE		000138	HSDipType	High School Diploma Type
MSDE		001068	LEAId	Local Education Agency Identifier
MSDE		000092	FARM	Free/Reduced Price Meals
MSDE		000149	Homeless	Homelessness Status
MSDE		000180	LOEP	Limited English Proficiency Status
MSDE		000281	Title I	Title I
MSDE		000255	Gender	Gender
MSDE		000242	School Type	School Type
MSDE		000185	ImmStatus	Immigration Status
MSDE		000584	CohortGDYr	Cohort Graduation Year
MSDE		000081	DipAwardDate	Diploma or Credential Award Date
MSDE		000291	TitleIII	Title III Immigrant Status
MSDE	--	MSDE		High School Code (MSDE)
MSDE	HYGYR	000001	HYGYR	HS Graduation Date
MSDE		000033	BirthDate	Birthdate (Only Month and Year)
MSDE	HISPANIC	000144	HISPANIC	Hispanic Ethnicity
MSDE	RACEALL	000973	RACEALL	Mutli-Race
MSDE	RWHITE	000301	RWHITE	White/Caucasian
MSDE	RBLACK	000034	RBLACK	Black/African-American
MSDE	RASIAN	000020	RASIAN	Asian
MSDE	RAIAN	000016	RAIAN	Amer Ind or Nat Alaskan
MSDE	RNHPI	000192	RNHPI	Nat Hawaiian or Pac Is
MHEC_4	FICE	000203	FICE	OPEID
MHEC_4		000033	BirthDate	Birthdate (Only Month and Year)
MHEC_4	HISPANIC	000144	HISPANIC	Hispanic Ethnicity
MHEC_4	RACEALL	000973	RACEALL	Mutli-Race
MHEC_4	RWHITE	000301	RWHITE	White/Caucasian
MHEC_4	RBLACK	000034	RBLACK	Black/African-American
MHEC_4	RASIAN	000020	RASIAN	Asian
MHEC_4	RAIAN	000016	RAIAN	Amer Ind or Nat Alaskan

MHEC_4	RNHPI	000192	RNHPI	Nat Hawaiian or Pac Is
MHEC_4	MILSTAT		MILSTAT	Military Status
MHEC_6	EFC	000756	EFC	Expected Family Contribution
MHEC_6	AGI		AGI	Adjusted Gross Income
MHEC_6		000141	Par1Ed	Parent 1 Highest Grade Level
MHEC_6		000141	Par2Ed	Parent 2 Highest Grade Level
MHEC_4	TATTEND	000727	TATTEND	Term Attendance
MHEC_4	DEGREE	000343	DEGREE	Degree Sought (at enrollment)
MHEC_4	PROGRAM	--	PROGRAM	Program Taxonomy (at enrollment)
MHEC_4	MATHRA	000026	MATHRA	Math Remedial Assessment
MHEC_4	ENGLRA	000026	ENGLRA	English Remedial Assessment
MHEC_4	READRA	000026	READRA	Reading Remedial Assessment
MHEC_4	SATMATH	000265	SATMATH	SAT Math Score
MHEC_4	SATVERB	000265	SATVERB	SAT Verbal Score
MHEC_4	SATWRIT	000265	SATWRIT	SAT Writing Score
MHEC_4	SAT_MATH16		SAT_MATH16	SAT Math Score 2016
MHEC_4	SAT_EBRW16		SAT_EBRW16	SAT EBRW Score 2016
MHEC_4	ACTMATH	000245	ACTMATH	ACT Math Score
MHEC_4	ACTENGL	000245	ACTENGL	ACT English Score
MHEC_4	ACTREAD	000245	ACTREAD	ACT Reading Score
MHEC_4	ACTSCIR	000245	ACTSCIR	ACT Science Reading Score
MHEC_4	ACTCOMP	000245	ACTCOMP	ACT Composite Score
MHEC_5	FSTMATHG	000053	FSTMATHG	First Math Grade
MHEC_5	FSTENGLG	000053	FSTENGLG	First English Grade
MHEC_2	DEGREE	000343	DEGREE	Degree Sought (at graduation)
MHEC_2	PROGRAM		PROGRAM	Program Taxonomy (at graduation)
MHEC_2	DEGREE		DEGREE	Degree Date (at graduation)
MHEC_2	ENTRM		ENTRM	Entry Term (corresponding to graduation)
MHEC_2	ENTYR		ENTYR	Entry Year (corresponding to graduation)

DAVID BLAZAR

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Updated August 2017

EDUCATION

Harvard Graduate School of Education

Ed.D. in Quantitative Policy Analysis in Education (economics) 2016
Ed.M. in Education Policy and Management 2011

Harvard College

A.B. in History and Literature (Cum Laude) 2006

PROFESSIONAL EXPERIENCE

University of Maryland College Park

Assistant Professor of Education Policy and Economics, *College of Education* 2017 – present

Harvard University

Postdoctoral Research Fellow, *Graduate School of Education* 2016 – 2017

Lecturer in Education, *Graduate School of Education and Kennedy School of Government* 2016 – 2017

Teaching Fellow, *Graduate School of Education* 2012 – 2016

Advisor, *Teacher Education Program*, *Graduate School of Education* 2010 – 2011

Freshmen Proctor and Academic Advisor, *Harvard College* 2010 – 2017

High School for International Business and Finance, New York City Department of Education

9th – 12th grade English Language Arts 2006 – 2009

SELECTED AWARDS AND FELLOWSHIPS

Jean Flanigan Outstanding Dissertation Award, *Association for Education Finance and Policy* 2017

Dissertation Fellowship, *Mathematica Policy Research* 2015

Finalist for Spencer Dissertation Fellowship, *National Academy of Education* 2015

Emerging Education Policy Scholar, *Thomas B. Fordham Institute* 2015

Pforzheimer Fellowship for Public Service, *Harvard University* 2010, 2011

PUBLICATIONS

Peer-Reviewed Journal Articles

Kraft, M. A., & Blazar, D. (Forthcoming; online 2016). Improving teachers' practice across grades and subjects: Experimental evidence on individualized teacher coaching. *Educational Policy*.

Blazar, D., Braslow, D., Charalambous, C. Y., & Hill, H. C. (2017). Attending to general and mathematics-specific dimensions of teaching: Exploring factors across two observation instruments. *Educational Assessment, 22*(2), 71-94.

Blazar, D. & Kraft, M. A. (2017). Teacher and teaching effects on students' attitudes and behaviors. *Educational Evaluation and Policy Analysis, 39*(1), 146-170.

Lynch, K., Chin, M., & Blazar, D. (2017). Relationship between observations of elementary teacher mathematics instruction and student achievement: Exploring variability across districts. *American Journal of Education, 123*(4), 615-646.

Blazar, D., Litke, E., & Barmore, J. (2016). What does it mean to be ranked a "high" or "low" value-added teacher? Observing differences in instructional quality across districts. *American Educational Research Journal, 53*(2), 324-359.

Blazar, D. (2015). Effective teaching in elementary mathematics: Identifying classroom practices that support student achievement. *Economics of Education Review, 48*, 16-29.

Blazar, D. (2015). Grade assignments and the teacher pipeline: A low-cost lever to improve student achievement? *Educational Researcher, 44*(4), 213-227.

Blazar, D., & Kraft, M. A. (2015). Exploring mechanisms of effective teacher coaching: A tale of two cohorts from a randomized experiment. *Educational Evaluation and Policy Analysis, 37*(4), 542-566.

Hill, H. C., Blazar, D., & Lynch, K. (2015). Resources for teaching: Examining personal and institutional predictors of high-quality instruction. *AERA Open, 1*(4), 1-23.

Hill, H. C., Charalambous, C. Y., Blazar, D., McGinn, D., Beisiegel, M., Humez, A., Kraft, M., Litke, E., & Lynch, K. (2012). Validating arguments for observational instruments: Attending to multiple sources of variation. *Educational Assessment, 17*(2-3), 88-106.

Blazar, D. (2011). Using theatre to engage cultural identity: Implications for students and teachers. *English Education, 43*(3), 294-304.

Blazar, D. (2009). Self-discovery through character connections: Opening up to gayness in *Angels in America*. *English Journal, 98*(4), 77-84.

Papers Under Review

Blazar, D. Validating teacher effects on students' attitudes and behaviors: Evidence from random assignment of teachers to students (*Education Finance and Policy*, invited revise and resubmit).

Blazar, D., Gilbert, B., Herlihy, C., Gogolen, C. Exploring the potential for video-based classroom observations.

Blazar, D. & Pollard, C. Does test preparation mean low-quality instruction? (*Educational Researcher*, conditionally accepted).

Kraft, M. A., Blazar, D., & Hogan, D. The effect of teacher coaching on instruction and achievement: A meta-analysis of the causal evidence. (*Review of Educational Research*, invited revise and resubmit).

Work in Progress

Blazar, D., Kane, T. J., & Thal, D. Does video technology improve the classroom observation process? Results from a randomized experiment.

Blazar, D., & Kraft, M. A. Teacher evaluation, instruction, and student achievement: Examining mechanisms to support school improvement.

Blazar, D., & Schueler, B. Why do districts matter? An interdisciplinary perspective.

Litke, E., Hill, H. C., Blazar, D., & Humez, A.. Examining high and low value-added mathematics instruction: Can expert observers tell the difference?

Other Articles

Blazar, D., & Kraft, M. A. (2016). Social and emotional skills in school: Pivoting from accountability to development. *Albert Shanker Institute Blog*.

RESEARCH FUNDING

Co-Principal Investigator. “Never Judge a Book by Its Cover,” Bill and Melinda Gates Foundation with Principal Investigator Thomas J. Kane (\$762,059; subcontract to University of Maryland \$30,588). 2016 – 2018

Principal Investigator. “Validating Teacher Effects on Non-Tested Outcomes,” Smith Richardson Foundation #20151018 with advisor Martin West (\$50,000). 2016 – 2018

Principal Investigator. “Teacher and Teaching Effects on Students’ Attitudes and Behaviors,” Albert Shanker Institute (\$2,000). 2015

Co-Principal Investigator. “Evaluating the MATCH Individualized Teacher Coaching Program,” New Schools for New Orleans with Principal Investigator Matthew A. Kraft (\$150,000). 2011 – 2015

CONFERENCE PRESENTATIONS

American Education Research Association (2013, 2014, 2015), *Association for Education Finance and Policy* (2013, 2014, 2015, 2016, 2017), *Association for Public Policy Analysis and Management* (2013, 2014, 2015, 2016), *Hawaii International Conference on Education* (2015), *Society for Research on Educational Effectiveness* (2015, 2017)

REFEREE SERVICE

AERA Open, American Educational Research Journal, Economics of Education Review, Educational Evaluation and Policy Analysis, Educational Researcher, Journal of Research on Educational Effectiveness

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Education

Ph.D. 2012 University of Virginia, Educational Psychology: Applied Developmental Science
Dissertation: The Ecology of Peer Influence: From Negative to Positive

B.S. 2006 University of Maryland, Psychology and Criminology & Criminal Justice

Experience in Higher Education

2016—Present	Director of Research Maryland Longitudinal Data System Center
2015—Present	Research Assistant Professor University of Maryland, School of Social Work (SSW)
2013—2014	Postdoctoral Fellow, Prevention and Methodology Training Program Pennsylvania State University, The Prevention Research Center and The Methodology Center
2012—2013	Postdoctoral Fellow, Youth-Nex University of Virginia, Curry School of Education
2009—2012	Mentor, Summer Undergraduate Research Program University of Virginia, Curry School of Education
2008—2012	Predoctoral Fellow, Virginia Education Sciences Training Program University of Virginia, Curry School of Education
2006—2008	Research Associate University of Pittsburgh, Department of Psychiatry
2005—2006	Research Assistant University of Maryland, Center for Addictions, Personality, and Emotion Research
2004—2005	Undergraduate Teaching Assistant, Introduction to Psychology University of Maryland

2004—2006 Research Assistant
University of Maryland, Laboratory of Emotion, Social Processes, and
Psychopathology

Courses Taught:

Spring 2017	Human Behavior and the Social Environment (SSW; Master's)
Spring 2016	Human Behavior and the Social Environment (SSW; Master's)
Spring 2011	Adolescent Development (University of Virginia; Doctoral)

Experience in Other than Higher Education

2015—2017	JBS International, Program Evaluation Subject Matter Expert
2015—2016	Baltimore’s Promise, Consultant for Landscape Analysis and Asset Maps
2014	Edvance Research, Inc., Aspire High School Success Initiative, Grant Proposal Review Consultant
2012	Center for the Advanced Study of Teaching and Learning, University of Virginia, Mixed Methods Consultant and Program Evaluator
2009	Center for Rural Development and Poverty Alleviation, University of Virginia, Quantitative Statistical Consultant
2006	Child Trends, Youth Development Research Area, Intern
2006	Brook Lane Health Services, Hagerstown, MD, Tutor for high school students diagnosed with an emotional disability

Honors Received

2013—2014	Postdoctoral Fellowship, Pennsylvania State University
2012—2013	Postdoctoral Fellowship, University of Virginia
2012	Outstanding Doctoral Student Award Nominee, University of Virginia
2011	Early Career Preventionist Network Award, Society for Prevention Research
2008—2012	Predoctoral Fellowship, University of Virginia
2006	Magna Cum Laude, University of Maryland

Research Support

Principal Investigator:

2017—2020 Maryland Longitudinal Data System Center (MLDSC). State of Maryland.
(SSW sub-contract for \$1.6 million).

2017—2019 School-Based Prevention and Intervention Science. University of Maryland School of Social Work, \$100,000 to support a postdoctoral fellow.

2017—2019 Exploring Peer Selection in Adolescence: Examining Prevention Program Content and Adolescent Perspectives, University of Maryland School of Social Work, \$30,500.

Co-Principal Investigator:

2019—2021 Increasing Diversity and Quality in Teaching: Collaborations to Examine the Teacher Pipeline in Maryland, Institute of Education Sciences, \$400,000 (submission planned for August 2018).

Co-Investigator:

2016—2017 Maryland Longitudinal Data System Center (MLDSC). State of Maryland. (SSW sub-contract for \$318,000).

2015—2018 Expanding MLDS Data Access and Research Capacity with Synthetic Data. Maryland State Department of Education and the Institute of Education Sciences, \$2.6 million.

2015—2016 Maryland Longitudinal Data System Center (MLDSC). State of Maryland, \$1.7 million (SSW sub-contract for \$350,000).

Fellowships:

2013—2014 Prevention and Methodology Training Postdoctoral Fellowship. National Institute on Drug Abuse (PI: Mark Greenberg).

2008—2012 Virginia Education Sciences Training Predoctoral Fellowship. Institute of Education Sciences (PI: Robert Pianta).

Publications

Articles in Refereed Journals:

Henneberger, A. K., Coffman, D. L., & Gest, S. D. (2017). The effect of having aggressive friends on aggressive behavior in childhood: Using propensity scores to strengthen causal inference. *Social Development*, 26(2), 295-309.

Henneberger, A. K., Varga, S. M., Moudy, A., & Tolan, P. H. (2016). Family functioning and high risk adolescents' aggressive behavior: Examining effects by ethnicity. *Journal of Youth and Adolescence*, 45 (1), 145-155. NIHMSID: 643768

Deutsch, N. L., Reitz-Krueger, C., **Henneberger, A. K.**, Futch, V., & Lawrence, E. C. (2016). "It gave me ways to solve problems and ways to talk to people": Outcomes from a combined group and one-on-one mentoring program for early adolescent girls. *Journal of Adolescent Research*. Advance online publication. doi: 10.1177/0743558416630813.

Henneberger, A. K., Tolan, P. H., Hipwell, A. E., & Keenan, K. (2014). Delinquency in adolescent girls: Using a confluence approach to understand the influences of parents and peers. *Criminal Justice and Behavior*, 41 (11), 1327-1337. doi: 10.1177/0093854814538624 PMCID: PMC4235527

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Keenan, K., Hipwell A. E., Babinski, D. E., Bortner, J., **Henneberger, A.**, Hinze, A. E., Klostermann, S., Rischall, M., & Sapotichne, B. (2013). Examining the developmental interface of cortisol and depression symptoms in young adolescent girls. *Psychoneuroendocrinology*, 38 (10), 2291-2299. doi: 10.1016/j.psyneuen.2013.04.017 PMCID: PMC3776001

Henneberger, A. K., Durkee, M. I., Truong, N. N., Atkins, A. M., & Tolan, P. H. (2013). The longitudinal relationship between peer violence and popularity and delinquency in adolescent boys: Examining effects by family functioning. *Journal of Youth and Adolescence*, 42, 1651-1660. doi: 10.1007/s10964-012-9859-3 PMCID: PMC4122220

Henneberger, A. K., Deutsch, N. L., Lawrence, E. C., & Sovik-Johnston, A. (2013). The Young Women Leaders Program: A mentoring program targeted toward adolescent girls. *School Mental Health*, 5, 132-143. doi: 10.1007/s12310-012-9093-x

Deutsch, N. L., Wiggins, A. Y., **Henneberger, A. K.**, & Lawrence, E. C. (2012). Combining mentoring with structured group activities: A potential after-school context for fostering relationships between girls and mentors. *The Journal of Early Adolescence*, 33(1), 44-76. doi: 10.1177/0272431612458037

Leyton-Armakan, J., Lawrence, E., Deutsch, N., Williams, J. L., & **Henneberger, A.** (2012). Effective youth mentors: The relationship between initial characteristics of college women mentors and mentee satisfaction and outcome. *Journal of Community Psychology*, 40(8), 906-920. doi: 10.1002/jcop.21491

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emotion regulation and depression in preadolescent girls: Moderation by the caregiving environment. *Developmental Psychology*, 45(3), 798-808. doi: 10.1037/a0014617
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Keenan, K., Hipwell, A., Feng, X., Hinze, A. E., Babinski, D., Hinze, A., Rischall, M. & **Henneberger, A.** (2008). Subthreshold symptoms of depression in preadolescent girls are stable and predictive of depressive disorders. *American Academy of Child and Adolescent Psychiatry*, 47(12), 1433-1442. doi: 10.1097/CHI.0b013e3181886ab PMCID: PMC2694956

Articles Under Review in Refereed Journals:

Henneberger, A.K. & Mushonga, D. (Under review). Adolescent peer relationships: An overview of peer processes and contextual considerations to ensure healthy development. Manuscript submitted for publication.

Henneberger, A. K., Gest, S. D., & Zadzora, K. (Under review). Preventing adolescent substance use: A content analysis of peer processes targeted within universal school-based programs. Manuscript submitted for publication.

Henneberger, A.K., Futch, V.A., Lovegrove, P., Hafen, C.A., Maier, M., Larsen, R., & Tolan, P.H. (Under review). Peer substance use norms and substance use in adolescence: The moderating role of internal assets. Manuscript submitted for publication.

Articles in Progress for Refereed Journals:

Henneberger, A.K., Witzen, H., & Preston, A. (2018). What is the causal effect of dual enrollment in improving long-term college and workforce outcomes and do effects vary for under-represented students? Manuscript in progress.

Bloomfield, A., Rose, B. A., Preston, A. M., & **Henneberger, A. K.** (2018). Brain drain in Maryland: Exploring student movement from high school to postsecondary education and the workforce. Manuscript in progress.

Bonney, D., Feng, Y., **Henneberger, A.K.**, Johnson, T., Rose, B., Shaw, T., Stapleton, L.M., Woolley, M.E., & Zheng, Y. (2018). The promise and limitations of gold standard data in pursuit of synthetic state-level multi-agency longitudinal data. Manuscript in progress.

Uretsky, M., Shipe, S., & **Henneberger, A.K.** (2018). Examining the student level and school level predictors of needing remedial coursework in community colleges. Manuscript in progress.

Henneberger, A.K., Mushonga, D., & Quito, E. (2018). Peer selection and adolescent substance use: A review of the social network analytic research. Manuscript in progress.

Henneberger, A.K., Mushonga, D., & Quito, E. (2018). Targeting peer selection in universal

school based prevention programs: Current approaches and future directions. Manuscript in progress.

Henneberger, A.K., Rose, B., Zheng, Y., Feng, Y., Johnson, T., & Stapleton, L.M. (2018). Prevalence of Multiple Membership in a Statewide Longitudinal Data System. Manuscript in progress.

Mushonga, D.R. & **Henneberger, A.K.** (2018). Positive mental health among traditional and non-traditional black college students. Manuscript in progress.

Henneberger, A.K., Mushonga, D., & Quito, E. (2018). I Am College Ready Solutions: A qualitative study of a peer mentoring program to improve college and career outcomes. Manuscript in progress.

Henneberger, A.K., Rose, B., Mushonga, D., & Preston, A. (2018). Student and school-level poverty: What are the long-term consequences for college and workforce outcomes? Manuscript in progress.

Book Chapters:

Henneberger, A.K. (2017). Friends and peers. In K. Peppler (Ed.), *The encyclopedia of out-of-school learning*. Thousand Oaks, CA: Sage Publications.

Deutsch, N. L., Lawrence, E., & **Henneberger, A.** (2013). Social class. In D. DuBois & M. Karcher (Eds.), *The handbook of youth mentoring* (2nd ed.), pp. 175-189. Thousand Oaks, CA: Sage Publications.

Policy Reports:

Henneberger, A.K., Rose, B., Mushonga, D., & Preston, A. (2018). Student and school-level poverty in Maryland: What are the long-term consequences for high school, college, and workforce outcomes?

Henneberger, A.K., Uretsky, M., Preston, A., & Shipe, S. (2018). Predicting the need for remedial coursework in Maryland community colleges: The importance of the high school context. Baltimore, MD: Maryland Longitudinal Data System Center.

Henneberger, A.K., Witzen, H., & Preston, A. (2018). Dual enrollment in Maryland: What are the causal effects on college and workforce outcomes and do effects vary by student subgroup? Baltimore, MD: Maryland Longitudinal Data System Center.

Bloomfield, A., Rose, B. A., Preston, A. M., & **Henneberger, A. K.** (2018). Brain drain in Maryland: Exploring student movement from high school to postsecondary education and the workforce. Baltimore, MD: Maryland Longitudinal Data System Center.

Shaw, T.V., Klumpner, S., & **Henneberger, A.K.** (2017). Workforce outcomes in Maryland for students who do not attend college: Patterns among students who earn a high school diploma, certificate of completion, diploma via GED, and high school non-completers. Baltimore, MD: Maryland Longitudinal Data System Center.

Henneberger, A. K., Cohen, M.K., Shipe, S.L., & Shaw, T.V. (2016). Dual Enrollment in Maryland: A Report to the General Assembly and Governor Larry Hogan. Baltimore, MD: Maryland Longitudinal Data System Center.

Henneberger, A. K., Uretsky, M. C., Klumpner, S., & Woolley, M. E. (2016). Remedial Coursework in Maryland: Examining Trends, High School Predictors, and College Outcomes. Baltimore, MD: Maryland Longitudinal Data System Center.

Uretsky, M.C., **Henneberger, A.K.**, & Woolley, M.E. (2016). High School Persisters: An Examination of College and Workforce Outcomes. Baltimore, MD: Maryland Longitudinal Data System Center.

Klein, E. L., Zheng, X., Sunderman, G. L., **Henneberger, A. K.**, Stapleton, L. M., & Woolley, M. E. (2016). Preparation and Retention of the Early Childhood Care and Education Workforce in Maryland. Baltimore, MD: Maryland Longitudinal Data System Center.

Zheng, X., Stapleton, L. M., **Henneberger, A. K.**, & Woolley, M. E. (2016). Assessing the Workforce Outcomes of Maryland Science, Technology, Engineering, and Math (STEM) Postsecondary Graduates. Baltimore, MD: Maryland Longitudinal Data System Center.

Henneberger, A. K., Shaw, T. V., Uretsky, M.C. & Woolley, M. E. (2015). Dual Enrollment in Maryland: A Report to the General Assembly and Governor Lawrence J. Hogan. Baltimore, MD: Maryland Longitudinal Data System Center.

Presentations

International Refereed Paper Presentations:

Henneberger, A.K., Witzen, H., & Preston, A. (2018, May). Facilitating prevention science in education settings: An example using statewide linked longitudinal data from Maryland's education system and the workforce. In **A.K. Henneberger** (Chair), *Leveraging linked state administrative data to optimize prevention science*. Paper presented at the annual meeting of the Society for Prevention Research, Washington, DC.

Henneberger, A.K., Witzen, H., & Preston, A. (2018, April). Easing the transition from high school to college: Using statewide longitudinal data to evaluate dual enrollment programs. In **A.K. Henneberger** (Chair), *Leveraging secondary data analysis to strengthen education interventions, practice, and policy for adolescents*. Paper presented at the biennial meeting of the Society for Research on Adolescence, Minneapolis, Minnesota.

Uretsky, M., **Henneberger, A.K.**, & Woolley, M. (2018, January). Graduates, dropouts, and persisters: A novel approach to understanding the correlates and consequences of on-time graduation. Oral paper presented at the annual meeting of the Society for Social Work and Research, Washington, DC.

Henneberger, A.K., Klumpner, S., Uretsky, M., & Woolley, M. (2016, March). Successful transition from high school to postsecondary: Targeting policy and practice to prevent the need for remedial coursework. In **A.K. Henneberger** (Chair), *Successful transitions for at risk adolescents: Using research to inform education, child welfare, and juvenile justice policy*. Paper presented at the biennial meeting of the Society for Research on Adolescence, Baltimore, Maryland.

Henneberger, A.K., Zheng, Y., & Coffman, D.L. (2015, March). Alcohol use as a mechanism for criminal justice involvement from adolescence into adulthood: Strengthening causal interpretations. In **A.K. Henneberger** (Chair), *Advanced longitudinal methods for the study of adolescent development: Developmental applications and practical challenges*. Paper presented at the biennial meeting of the Society for Research on Child Development, Philadelphia, Pennsylvania.

Henneberger, A.K., Gest, S.D., & Zadzora, K. (2014, May). Peer processes targeted within universal school-based substance use prevention programs. In S.D. Gest (Chair), *Applications of social network analysis to substance use prevention program development, program impact evaluation, and diffusion analysis*. Paper presented at the annual meeting of the Society for Prevention Research, Washington, DC.

Henneberger, A.K., Gest, S. D., & Coffman, D. L. (2014, May). Peer socialization of aggressive behavior in elementary school: Using propensity scores to strengthen causal inference. In **A. K. Henneberger** (Chair), *Preventing risky behavior across development: Applying innovative longitudinal methods to strengthen prevention science*. Paper presented at the annual meeting of the Society for Prevention Research, Washington, DC.

Henneberger, A. K., Gest, S. D., & Coffman, D. L. (2014, March). Peer influence on aggressive behavior in early adolescence: Strengthening causal inference. In **A. K. Henneberger** (Chair), *The development of risky behavior in adolescence: Applying innovative longitudinal methods to strengthen research and practice*. Paper presented at the biennial meeting of the Society for Research on Adolescence, Austin, Texas.

Henneberger, A. K., Lovegrove, P., Futch, V., Maier, M., Larsen, R., & Hafen, C. as part of the team Youth-Nex Promotion Scientists. (2012, May). *De-polarizing prevention and promotion: Positive youth development and substance use in adolescence*. Paper presented at the Society for Prevention Research Sloboda and Bukoski Cup Competition, Washington, DC.

Henneberger, A. K., Keenan, K., Tolan, P. H., & Hipwell, A. (2012, March). Delinquency in adolescent girls: Testing a confluence approach. In N. L. Deutsch (Chair), *Peers, parents, and "others": Sources and outcomes of social support in adolescence*. Paper presented at the biennial meeting of the Society for Research on Adolescence, Vancouver, BC.

Henneberger, A. K., Lovegrove, P., Deutsch, N. L., & Futch, V. (2012, March). First line social support in adolescence. In N. L. Deutsch (Chair), *Peers, Parents, and "Others": Sources and Outcomes of Social Support in Adolescence*. Paper presented at the biennial meeting of the Society for Research on Adolescence, Vancouver, BC.

Deutsch, N. L., Williams, J. L., **Henneberger, A. K.**, Lawrence, E., & Futch, F. (2012, March). Young women leaders: Outcomes of a group and one-on-one mentoring intervention for girls. In P. H. Tolan (Chair), *Early adolescence: Developmental opportunity for prevention of social and behavior problems*. Paper presented at the biennial meeting of the Society for Research on Adolescence, Vancouver, BC.

Henneberger, A. K., Lovegrove, P., Jamil, F., Maier, M., & Clarke, E. as part of the team Youth-Nex Prevention Scientists. (2011, May). *Can examination of victimization help to direct prevention of suicide? A mediation model*. Paper presented at the Society for Prevention Research Sloboda and Bukoski Cup competition, Washington, DC.

Henneberger, A. K., Oudekerk, B. A., Odgers, C. L., Reppucci, N. D., & Moretti, M. M. (2011, February). *Subtypes of female offenders in adolescence: Testing the predictive validity*. In N. D. Reppucci (Chair), *Mapping heterogeneity and the transition to young adulthood among high risk girls*. Paper presented at the American Psychology-Law Society International Congress on Psychology and Law, Miami, FL.

Deutsch, N. L., **Henneberger, A.**, Wiggins, A. Y., & Lawrence, E. (2010, March). Fostering connection: mentoring groups as a context for relational development for adolescent girls and their mentors. In N. L. Deutsch (Chair), *Strength in numbers: The potential of group mentoring as an intervention for adolescents*. Paper presented at the biennial meeting of the Society for Research on Adolescence, Philadelphia, PA.

Local Refereed Paper Presentations:

Henneberger, A.K. (2018, June). *Program evaluation in the absence of randomization: How can propensity score methods help?* Presented at the Maryland Connections Summit, Towson, MD.

Rose, B., **Henneberger, A.K.**, & Mushonga, D. (2018, June). *Making the most of FARMS data to explore effects of student and school poverty*. Presented at the Maryland Connections Summit, Towson, MD.

Henneberger, A.K. & Preston, A. (2017, August). *Dual enrollment in Maryland: Using propensity scores to strengthen program evaluation with state longitudinal data*.

Presented at the 2017 meeting of the National Center for Education Statistics Stats-DC Data Conference.

Henneberger, A.K. (2016, November). *Remedial coursework in Maryland colleges: Examining high school predictors and college outcomes*. Presented at the meeting of the Maryland Association for Institutional Research annual conference, Baltimore, MD.

Henneberger, A.K., Klumpner, S., Uretsky, M., & Woolley, M.E. (2016, June). *High school predictors of needing remedial coursework in college*. Presented at the Maryland State Department of Education Data Summit, Ellicott City, MD.

Klumpner, S., Shaw, T., & **Henneberger, A.K.** (2016, June). *Workforce outcomes in Maryland: Patterns among students by achievement level*. Presented at the Maryland State Department of Education Data Summit, Ellicott City, MD.

Uretsky, M.C., **Henneberger, A.K.**, & Woolley, M.E. (2016, June). *Correlates and consequences of on-time graduation*. Presented at the Maryland State Department of Education Data Summit, Ellicott City, MD.

Zheng, X., Woolley, M.E., **Henneberger, A.K.**, & Stapleton, L. (2016, June). *Characteristics of employment outcomes of postsecondary STEM graduates in Maryland*. Presented at the Maryland State Department of Education Data Summit, Ellicott City, MD.

Henneberger, A.K., Tolan, P.H., & Deutsch, N.L. (2012, January). *Beyond pathology: A positive youth development approach to peer influence*. Presented at the annual meeting of the Curry Research Conference, Charlottesville, VA.

Deutsch, N. L., **Henneberger, A. K.**, & Wiggins, A. Y. (2010, January). *Mixed methods madness: The theory and practice of combining quantitative and qualitative data*. Presented at the annual meeting of the Curry Research Conference, Charlottesville, VA.

International Refereed Poster Presentations:

Henneberger, A.K., Futch Ehrlich, V.A., Hafen, C.A., Maier, M.F., Lovegrove, P.J., Larsen, R.A., & Tolan, P. (2016, March). *Peer substance use norms and substance use in adolescence: The moderating role of internal assets*. Poster presented at the biennial meeting of the Society for Research on Adolescence, Baltimore, Maryland.

Henneberger, A.K. & Gest, S.D. (2015, May). *Targeting multiple sources of peer influence in prevention programs: A social network analytic approach*. Poster presented at the annual meeting of the Society for Prevention Research, Washington, DC.

Henneberger, A.K. & Gest, S.D. (2015, March). *Peer influence on children's academic achievement and prosocial behavior: Examining multiple sources of influence*. Poster presented at the biennial meeting of the Society for Research on Child Development, Philadelphia, Pennsylvania.

Henneberger, A. K., Coffman, D. L., & Gest, S. D. (2014, March). *The causal effect of peer socialization on prosocial behavior in early adolescence*. Poster presented at the biennial meeting of the Society for Research on Adolescence, Austin, Texas.

Henneberger, A. K., Varga, S., Moudy, A., & Tolan, P. H. (2013, May). *Targeting family-focused prevention: Examining the effect of demographic characteristics on the longitudinal relation between family functioning and aggression by high risk adolescents*. Poster presented at the annual meeting of the Society for Prevention Research, San Francisco, CA.

Henneberger, A. K., Durkee, M. I., Atkins, A., Truong, N., & Tolan, P. H. (2013, March). *Examining the moderating effects of family functioning on the relation between peer violence and popularity on boys' delinquency*. Poster presented at the biennial meeting of the Society for Research in Child Development, Seattle, WA.

Moudy, A., Varga, S. M., **Henneberger, A. K.**, & Tolan, P. H. (2011, July). *Longitudinal relation between parental monitoring and physical aggression in adolescents: Moderation by family characteristics*. Poster presented at the annual meeting of the Leadership Alliance National Symposium, Greenwich, CT.

Varga, S. M., Moudy, A., **Henneberger, A. K.**, & Tolan, P. H. (2011, July). *Longitudinal relation of family cohesion and physical aggression in adolescents: Moderation by socioeconomic status and ethnicity*. Poster presented at the annual meeting of the Leadership Alliance National Symposium, Greenwich, CT.

Henneberger, A. K., Durkee, M. I., Truong, N. N., Atkins, A. M., & Tolan, P. H. (2011, May). *Longitudinal effects of peer violence and popularity on delinquency in adolescent males: Moderation by family functioning*. Poster presented at the annual meeting of the Society for Prevention Research, Washington, DC. **Winner**: Early Career Preventionist Network Student Poster Contest.

Germain, L. J., **Henneberger, A. K.**, Lawrence, E. C., & Deutsch, N. L. (2011, April). *Risky reports: A comparison of multiple methods of labeling academic "risk" in adolescent girls*. Poster presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

Atkins, A. M., Truong, N. N., **Henneberger, A. K.**, Durkee, M. I., & Tolan, P. H. (2010, July). *Longitudinal effects of family characteristics and peer delinquency on adolescent male delinquency*. Poster presented at the annual meeting of The Leadership Alliance National Conference, East Brunswick, NJ.

Truong, N. N., Atkins, A. M., **Henneberger, A. K.**, Durkee, M. I., & Tolan, P. H. (2010, July). *Longitudinal effect of family type and popularity on adolescent male delinquency*. Poster presented at the annual meeting of The Leadership Alliance National Conference, East Brunswick, NJ.

Henneberger, A. K. & Deutsch, N. L. (2010, June). *Promoting the social development of adolescent girls: Moderation of program effects by initial risk status*. Poster presented at the annual meeting of the Institute for Education Sciences, National Harbor, MD.

Henneberger, A. K. & Deutsch, N. L. (2010, March). *Relationship development in the context of a small mentoring group*. Poster presented at the biennial meeting of the Society for Research on Adolescence, Philadelphia, PA.

Klostermann, S., **Henneberger, A.**, Rischall, M., & Keenan, K. (2008, November). *Preadolescent precursors of suicidality in girls*. Poster presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, Orlando, FL.

Klostermann, S., Rischall, M., **Henneberger, A.**, & Keenan, K. (2008, May). *Psychosocial moderators of the effect of maternal depression on preadolescent depression*. Poster presented at the annual meeting of the Association for Psychological Science, Chicago, IL.

Feng, X., Keenan, K., Hipwell, A. E., Butch, J., **Henneberger, A. K.**, & Rischall, M. S. (2008, March). *Depression in preadolescent girls: Associations with emotionality, emotion regulation, and parenting*. Paper presented at the biennial meeting of the Society for Research on Adolescence, Chicago, IL.

Henneberger, A. K., Rischall, M. S., & Keenan, K. (2007, November). *Comorbidity of depression and anxiety symptoms in preadolescent girls*. Poster presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, Philadelphia, PA.

Henneberger, A. K., Rischall, M. S., & Keenan, K. (2007, August). *Parent child interactions and depression in preadolescent girls*. Poster presented at the annual meeting of the American Psychological Association, San Francisco, CA.

Mann, M. C., **Henneberger, A. K.**, Thompson, R. T., & Blanchard, J. J. (2007, May). *Understanding affect in social anhedonia: An examination of facial expression and language*. Poster presented at the annual meeting of the Association for Psychological Science, Washington, DC.

Rischall, M. S., **Henneberger, A. K.**, Hinze, A. K., & Keenan, K. (2007, May). *Comorbidity of depression and conduct disorder symptoms in preadolescent girls*. Poster presented at the annual meeting of the Association for Psychological Science, Washington, DC.

Carreño, J. T., **Henneberger, A.**, Lank, A., Calahan, M., Leung, W., Lieth, J., Cohen, A., & Blanchard, J. J. (2006, May). *Dimensions of schizotypy and the expression of emotion: An examination of sex differences*. Poster presented at the annual meeting of the Association for Psychological Science, New York, NY.

Carreño, J. T., **Henneberger, A. K.**, & Blanchard, J. J. (2005, May). *Racial differences in schizophrenia-spectrum disorder characteristics within social anhedonics*. Poster

presented at the annual meeting of the Association for Psychological Science, Los Angeles, CA.

Mann, M., **Henneberger, A.**, Thompson, R., & Blanchard, J. (2005, October). *Verbal and nonverbal expressions as indicators of social and emotional functioning among social anhedonics*. Poster presented at the annual meeting of the Society for Research in Psychopathology, Coral Gables, FL.

Invited Presentations:

Rose, B.A., Mushonga, D.R., & **Henneberger, A.K.** (2018, May). *Poverty and student outcomes: Disentangling the effects of student and school poverty*. Invited presentation for the MLDS research series, University of Maryland School of Social Work.

Henneberger, A.K. (2018, March). *Using propensity score methods with administrative data: An example from the Maryland Longitudinal Data System*. Invited presentation for the Morgan State Center for Excellence in Teaching and Learning, Morgan State University.

Henneberger, A.K. & Witzen, H. (2017, October). *Applying causal inference techniques to strengthen dual enrollment program evaluation research in Maryland*. Invited presentation for the MLDS research series, University of Maryland School of Social Work.

Henneberger, A.K. (2017, February). *Dual enrollment in Maryland: Highlights from the 2016 dual enrollment report*. Invited presentation for the MLDS research series, University of Maryland School of Social Work.

Shaw, T.V., Klumpner, S., & **Henneberger A.** (2016, December). *Workforce outcomes in Maryland: Patterns among students by achievement type*. Invited presentation for the MLDS research series, University of Maryland School of Social Work.

Henneberger, A.K. (2016, October). *Remedial coursework in Maryland colleges: Examining high school predictors and college outcomes*. Invited presentation for the MLDS research series, University of Maryland School of Social Work.

Henneberger, A.K. (2016, February). *Dual enrollment in Maryland: Using data from the Maryland Longitudinal Data System to examine trends, demographics, and outcomes*. Invited presentation for the MLDS research series, University of Maryland School of Social Work.

Professional Activities

Professional Associations:

Society for Prevention Research
Society for Research on Adolescence

Society for Research on Child Development
American Educational Research Association
Society for Research on Educational Effectiveness
Society for the Teaching of Psychology
Longitudinal Data Use Research Alliance

Advisory Boards:

2015—2016 Early Career Preventionists Network (ECPN) Steering Committee;
Society for Prevention Research

Manuscript Reviews:

American Journal of Preventive Medicine; Children and Youth Services Review; Criminal Justice and Behavior; Educational Research; International Journal of Psychology; Journal of Adolescence; Journal of Social and Personal Relationships; Journal of Primary Prevention; Journal of Educational and Developmental Psychology; Prevention Science

Conference Abstract Review:

Society for Prevention Research; Abstract & Research, Policy, and Practice Thematic Review
Society for Research on Child Development; Development and Psychopathology Panel
American Educational Research Association; Out of School Time SIG
American Educational Research Association; Adolescence and Youth Development SIG
Society for Research on Adolescence; Gender and Sexuality Panel
Curry Research Conference, University of Virginia

Service

School of Social Work Service:

2017—Present Contractual and Fixed Term Faculty Review Committee
2015—Present Social Committee

Community Service:

2015—2017 Baltimore's Promise Data Analysis Workgroup, Baltimore, MD
2013—2014 Rotary Club of State College, State College, PA
2013—2014 Rotary Youth Leadership Awards Committee, State College, PA
2008—2012 Big Brothers Big Sisters of the Central Blue Ridge, Charlottesville, VA
Big sister to a high school student; Fundraising committee
2010—2012 American Association of University Women (AAUW), Charlottesville, VA, Founding Member; Director of Communications and Outreach; Elect Her Campaign
2009—2012 National Eating Disorders Association Fundraising Committee, Charlottesville, VA

2008—2009 Charlottesville/Albemarle Commission on Children and Families reading development program, Charlottesville, VA

Advanced Statistics and Methodological Trainings Attended

2016 Synthetic Data: Balancing Confidentiality and Quality in Public Use Files, Bureau of Labor Statistics
2015 Hierarchical Linear Models for Causal Inference, Carnegie Foundation at Stanford University
2015 Survival Analysis, Event History Modeling, and Duration Analysis, Berkeley, CA, ICPSR
2014 Cross-Classified and Multiple Membership Models, University of Maryland College Park
2014 SIENA for Statistical Analysis of Social Networks: An Advanced Course, Pennsylvania State University
2013 Intensive Longitudinal Data Analysis, Pennsylvania State University
2013 Social Network Analysis: A Second Course, Ann Arbor, MI, ICPSR
2013 Social Network Analysis: An Introduction, Ann Arbor, MI, ICPSR
2013 Missing data analysis workshop, San Francisco, CA, Society for Prevention Research
2012 Social Network Analysis, Tampa, FL, Society for Research on Child Development
2012 Growth Mixture Modeling Workshop, Tampa, FL, Society for Research on Child Development
2011 What Works Clearing House Certification Training, Charlottesville, VA
2011 Missing Data Analysis, Charlottesville, VA, Institute of Education Sciences
2011 Mixed Methods, Charlottesville, VA, Institute of Education Sciences
2011 Growth Modeling, Miami, FL, Institute of Education Sciences
2010 Cluster-Randomized Control Trials, Charlottesville, VA, Institute of Education Sciences
2009 Data Management, Charlottesville, VA, Institute of Education Sciences



REQUEST FOR APPLICATIONS

Partnerships and Collaborations Focused on Problems of Practice or Policy CFDA Number: 84.305H

Milestone	Date	Website
<i>Letter of Intent Due</i>	June 21, 2018	https://iesreview.ed.gov/
<i>Application Package Available</i>	June 21, 2018	http://www.grants.gov/
<i>Application Due</i>	No later than 4:30:00 p.m. Eastern Time on August 23, 2018	http://www.grants.gov/
<i>Applicants Notified</i>	By July 1, 2019	https://iesreview.ed.gov/
<i>Possible Start Dates</i>	July 1, 2019 to September 1, 2019	

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PART I: OVERVIEW AND GENERAL REQUIREMENTS

A. INTRODUCTION

In this announcement, the Institute of Education Sciences (Institute) requests applications to its Partnerships and Collaborations Focused on Problems of Practice or Policy grants program (Research Collaborations Program). The program is intended to support research that is carried out by research institutions and U.S. state and local education agencies working collaboratively on problems or issues that are a high priority for the education agencies. The research may focus on students within a wide range of education settings from prekindergarten through postsecondary and adult education, and may focus on typically developing students and/or students with or at risk for disability. The goal of this research grant program is the improvement of education outcomes for all students, particularly those at risk of failure.

For the FY 2019 competition, the Institute is accepting applications to the Research Collaborations program under two topics: 1) Researcher-Practitioner Partnerships in Education Research and 2) Evaluation of State and Local Education Programs and Policies. The Institute will consider only applications that are responsive and compliant to the requirements described in this Request for Applications (RFA) *and* submitted electronically via Grants.gov (<http://www.grants.gov>) on time. Separate funding announcements are available on the Institute's web site that pertain to the other research and research training grant programs funded through the Institute's National Center for Education Research (<http://ncer.ed.gov>) and to the discretionary grant competitions funded through the Institute's National Center for Special Education Research (<http://ncser.ed.gov>). An overview of the Institute's research grant programs is available at <http://ies.ed.gov/funding/overview.asp>.

The Institute believes that education research must address the interests and needs of education practitioners and policymakers as well as students, parents, and community members (see <http://ies.ed.gov/director/board/priorities.asp> for the Institute's priorities). Under the Research Collaborations Program, the Institute encourages the development of partnerships between researchers and education agencies to advance the relevance of education research and the accessibility and usability of the findings for the day-to-day work of education practitioners and policymakers. These partnerships are intended to increase the relevance of the research through the required inclusion of education agencies as partners from the start of the work with the identification of the research questions and design of the project, to carrying out of the research and adoption and dissemination of the results.

This Request for Applications (RFA) is organized in the following fashion. Part I sets out the general requirements for your grant application. Part II provides further detail on each topic. Part III provides general information on submission (including applicant requirements) and review. Part IV describes how to prepare your application. Part V describes how to submit your application electronically using Grants.gov. You will also find a Glossary of important terms located at the end of this RFA. The first use of each term is hyperlinked to the Glossary within each Part of this RFA.

1. Technical Assistance for Applicants

The Institute encourages you to contact the Institute's Program Officers as you develop your application. Program Officers can provide guidance on the appropriateness of your project for this competition, offer advice on substantive aspects of your application, and answer other questions prior to your submitting an application. The Program Officers for this competition are:

Dr. Allen Ruby
National Center for Education Research
Email: Allen.Ruby@ed.gov
Telephone: (202) 245-8145

Dr. Sarah Brasiel
National Center for Special Education Research
Email: Sarah.Brasiel@ed.gov
Telephone: (202) 245-6734

The Institute asks potential applicants to submit a Letter of Intent (see [Part III.C.1](#)) prior to the application submission deadline. Letters of Intent are optional but strongly encouraged. If you submit a Letter of Intent, a Program Officer will contact you regarding your proposed research. Institute staff also uses 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.

In addition, the Institute encourages you to view the Institute's Funding Opportunities On-Demand Webinars for information on its research competitions, including advice on choosing the correct research competition, grant writing, or submitting your application. For more information regarding webinar topics, and webinar procedures, see <http://ies.ed.gov/funding/webinars/index.asp>.

B. GENERAL REQUIREMENTS

Applications under the Research Collaborations Program **must meet the requirements** set out under the subheadings below (1) Student Education Outcomes, (2) Authentic Education Settings, (3) Topics, (4) Partnerships, and (5) Dissemination in order to be sent forward for scientific peer review.

1. Student Education Outcomes

All research supported under the Research Collaborations Program must address [student education outcomes](#) including measures of [student academic outcomes](#). The Institute also supports research on student [social and behavioral competencies](#) that support success in school and afterwards, and on [employment and earnings outcomes](#) when appropriate. These education outcomes may be for students from prekindergarten through postsecondary and adult education, and may include students with or at risk for disability. Student education outcomes should align with the theory of change guiding the proposed research and applicants should describe this alignment when discussing all student outcomes and their measures.

If you propose to study children at risk for developing disabilities, you should present research-based evidence of an association between risk factors in the proposed sample and the potential identification of specific disabilities. The determination of at risk for disabilities status should be made on an individual child basis, and the method used to identify at-risk status described in your application and applied to your sample during the sample selection process (general population characteristics such as low-income or English Learner are not acceptable indicators of at-risk status). If your research addresses students with or at risk for disability, you are also encouraged to include outcomes accepted under the grant programs of the National Center for Special Education Research. These outcomes include developmental outcomes for young students (cognitive, communicative, linguistic, social, emotional, adaptive, functional or physical development) and, for older students, functional outcomes that improve educational results and transitions to employment, independent living, and postsecondary education.

Academic Outcomes

The Institute supports research on a diverse set of student academic outcomes that fall under two categories. The first category includes **academic outcomes that reflect learning and achievement in the core academic content areas**. The second category includes academic outcomes that reflect **students' successful progression through the education system**.

The Institute sets out the student academic outcomes of interest by education level as follows:

- For **Prekindergarten** (3- to 5-year-olds), school readiness is the primary student academic outcome. School readiness includes pre-reading, pre-writing, and early skills in STEM (science, technology, engineering and/or mathematics) as measured by specific assessments (e.g., researcher-developed assessments, standardized tests).
- For **Kindergarten through Grade 12**, the primary student academic outcomes include learning, achievement, and higher-order thinking in the core academic content areas of reading, writing, and STEM as measured by specific assessments (e.g., researcher-developed assessments, standardized tests, grades, end-of-course exams, exit exams) and student progression through the education system (e.g., course and grade completion, retention, high school graduation, and dropout).
- For **Postsecondary Education**, the primary student academic outcomes are access to, persistence in, progress through, and completion of postsecondary education, which includes developmental and bridge programs as well as programs that lead to occupational certificates, or associate's or bachelor's degrees. For students enrolled in developmental education, undergraduate writing, CTE, and STEM courses, student academic outcomes also include learning, achievement, and higher-order thinking as measured by assessments such as researcher-developed assessments, standardized tests, grades, end-of-course exams, or exit exams. The Institute is primarily interested in research that is focused on improving outcomes for low-income and historically-disadvantaged students in postsecondary and adult education, and for students from all backgrounds who are attending open- and broad-access institutions that accept a majority of students who apply for admission.
- For **Adult Education**, the primary student academic outcomes are achievement in reading, writing, English language proficiency, and mathematics, as measured by specific assessments, as well as access to, persistence in, progress through, and completion of adult education courses and programs.

Social and Behavioral Outcomes

The Institute supports research on **social and behavioral competencies**, defined as social skills, attitudes, and behaviors that may be important to students' academic and post-academic success. Social and behavioral competencies may be the primary focus of your research so long as your application makes clear how they relate to the required academic outcomes.

Employment and Earnings Outcomes

The Institute supports research on student **employment and earnings outcomes**, such as hours of employment, job stability, wages and benefits, when appropriate. In general, such outcomes are most pertinent to studies examining career and technical education, postsecondary education, and adult education.

2. Authentic 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 (be it at the national, state, local, and/or school level). To help ensure such relevance, the Institute requires researchers to work within or with data from [authentic education settings](#).

Authentic education settings include both in-school settings (including prekindergarten centers) and formal programs that take place after school or out of school (e.g., after-school programs, distance learning programs, online programs) under the control of schools, state education agencies (SEAs), and/or local education agencies (LEAs). Formal programs not under the control of schools, SEAs, or LEAs are not considered as taking place in an authentic education setting and are not appropriate for study under the Research Collaborations program.

The Institute defines authentic education settings by education level:

- **Authentic PreK Education Settings**
 - Center-based prekindergarten settings for 3 to 5 year old children
 - Public prekindergarten programs
 - Preschools
 - Child care centers and nursery schools
 - Head Start programs
- **Authentic K-12 Education Settings**
 - Schools and alternative school settings (e.g., alternative schools or juvenile justice settings)
 - School systems (e.g., local education agencies or state education agencies)
 - Formal programs that take place after school or out of school (e.g., after-school programs, distance learning programs, online programs) under the control of schools or state and local education agencies
 - Settings that deliver direct education services (as defined in Section 1116(e) of the Elementary and Secondary Education Act of 1965, as amended by the Every Student Succeeds Act of 2015) (<http://www2.ed.gov/policy/elsec/leg/esea02/index.html>)
 - Career and Technical Education Centers affiliated with schools or school systems
- **Authentic Postsecondary Education Settings**
 - 2-year and 4-year colleges and universities that have education programs leading to occupational certificates, associate's degrees and/or bachelor's degrees
 - Career and Technical Education Centers/Colleges that lead to occupational certificates or associate's or bachelor's degrees
- **Authentic Adult Education Settings**
 - Settings where eligible participants receive one or more of the following services from eligible providers (e.g., state and local education agencies, community-based organizations, institutions of higher education, public or non-profit agencies, libraries) identified (see Title II of the Workforce Innovation and Opportunity Act (WIOA): <https://www.gpo.gov/fdsys/pkg/PLAW-113publ128/pdf/PLAW-113publ128.pdf>):

- Adult Basic Education (ABE)
- Adult civics education (e.g., Integrated English Literacy and Civics Education programs)
- Adult English language acquisition programs
- Adult Secondary Education (ASE)
- Family literacy programs (e.g., programs that aim to help improve both parents' and children's academic outcomes)
- Integrated education and training (e.g., programs that provide adult education services concurrent with training in a specific occupation)
- Workplace adult education and literacy programs (e.g., employer-sponsored or hosted adult education and literacy services that don't necessarily train in a particular occupation)

3. Topics

Your application must be directed to one of the two topics (see [Part II Topic Requirements](#)). The topic identifies the type and purpose of the work you will be doing.

- The Researcher-Practitioner Partnerships in Education Research (Research Partnerships) topic supports new or established partnerships between research institutions and state or local education agencies to carry out initial research (and plan future research) on an education issue of high priority for the education agency that has important implications for improving student education outcomes.
- The Evaluation of State and Local Education Programs and Policies (State/Local Evaluation) topic supports partnerships between research institutions and state and local education agencies to carry out rigorous evaluations of education programs or policies that are implemented by state or local education agencies and have important implications for improving student education outcomes.

4. Partnerships

The Research Collaborations program requires a partnership between research institutions and education agencies. The Institute does not endorse a specific model of research partnerships (for example, see Coburn, Penuel, and Geil, 2013 for a discussion of different models). However, the Institute views research partnerships as going well beyond two common forms of collaboration between research institutions and education agencies: (1) the researcher is hired by an education agency to perform a specific research service and to report the results to the agency or (2) the researcher has an initial research interest and obtains permission from the agency to carry out that research within the agency's schools.

The Institute envisions that work supported by the Research Collaborations Program will be collaborative from start to finish. Together, the partners are expected to develop the research questions, agree on the research design and its implementation, establish a mechanism to discuss the results as they are obtained and direct further research, consider the practice and policy implications of the results, disseminate the results to multiple audiences, and plan for future research. On the practitioner side, relevant decision-makers from across the agency are expected to take part in this process but so too are other relevant stakeholders.

Research Collaborations projects are also intended to build the capacity of the education agency to understand the process of research, carry out aspects of it, and use the results. Education agencies are

not expected to become independent research organizations, though they are expected to become more familiar with the research process and with incorporating research results into their decision-making. The collaborative process described above is to help build such capacity. Additionally, a project may include specific activities that the partners have determined will strengthen the agency's capacity in this regard (e.g., training in specific skills, combining data in ways that will allow the agency to answer additional questions, carrying out specific aspects of research).

As a science agency, the Institute considers the proposed research (and the basis it creates for future research) to be of equal importance as the development of the proposed partnership. The balance of effort devoted to each may vary by the individual partnership (e.g., new partnerships may require somewhat greater efforts for developing the partnership) or the type of research done. The research should be of value to both the education agency and to building knowledge in the education sciences. Jointly developing the research questions is to help ensure that the research will be of direct use to the education agency (the results should clearly address a practice or policy question) as well as to the field.

The Institute would consider a Research Collaborations project successful if the partnership was maintained and the proposed research and dissemination were carried out during the grant. A highly successful project would lead to an ongoing partnership after the grant ended that included further joint research activities and the education agency's use of its increased capacity to participate in and use research.

5. Dissemination

The Institute is committed to making the results of Institute-funded research available to a wide range of audiences. The Institute has a public access policy (see <http://ies.ed.gov/funding/researchaccess.asp>) that requires all grantees to submit their peer reviewed scholarly publications to the [ERIC](#) (Education Resources Information Center), and that requires grantees to share [final research data](#) from causal inference studies (i.e., as described in the required data management plan to be placed in [Appendix F](#) for Evaluation of State and Local Education Programs and Policies projects) no later than the time of publication in a peer reviewed scholarly publication.

Research Collaborations projects are intended to aid state and local education agencies in making decisions regarding specific education issues, practices, and programs. To achieve this purpose, applicants are expected to disseminate the findings from their projects so that others may apply and build upon them. The Institute **requires all applicants** to present a plan to disseminate project findings in [Appendix A: Dissemination Plan](#) of the application. The scientific peer reviewers will consider the quality of the Dissemination Plan presented in Appendix A as part of their review of the Significance section of your Research Narrative. **Applications that do not contain a Dissemination Plan in Appendix A will be deemed noncompliant and will not be accepted for review.**

In your dissemination plan, you should:

- Identify the audiences that you expect will be most likely to benefit from your research (e.g., federal policymakers and program administrators, state policymakers and program administrators, state and local school system administrators, school administrators, teachers and other school staff, parents, students, and other education researchers).
- Discuss the different ways in which you intend to reach these audiences through the major publications, presentations, and products you expect to produce.
 - Projects are expected to disseminate their findings throughout the education agency partner and the community it serves. For example,
 - Agency-wide oral briefings that include stakeholders from across the education agency.

- A written brief available free to the public and provided to the Institute's Education Resources Information Center (ERIC, <http://eric.ed.gov>). The brief should be written for a non-technical audience and should include the research questions, methodology, main results, policy implications, and possible next steps.
- Projects are expected to publish and present in venues designed for policymakers, practitioners, and the general public including practitioner journals and conferences, and electronic venues (e.g., websites, webinars, podcasts, videos). For example:
 - Give presentations and workshops at meetings of professional associations of teachers and leaders.
 - Publish in practitioner journals.
 - Engage in activities with relevant IES-funded Research and Development (R&D) Centers, Research Networks, or Regional Educational Laboratories (REL)
 - R&D Centers: <https://ies.ed.gov/ncer/RandD/>
 - Research Networks: <https://ies.ed.gov/ncer/research/researchNetworks.asp>
 - RELs: <https://ies.ed.gov/ncee/edlabs/>
- Projects are expected to publish their findings in scientific, peer-reviewed journals and present them at academic conferences.
 - Publications are to be provided to the Institute's Education Resources Information Center (ERIC, <http://eric.ed.gov>).
- Your dissemination plan should reflect the purpose of the topic under which your project was funded.
 - Research Partnerships projects are expected to carry out exploratory research to identify potentially important associations between malleable factors and student education outcomes. Findings from these projects are likely to be most useful in pointing out potentially fruitful areas for further attention from researchers, policymakers and practitioners rather than providing proof or strong evidence for adopting specific interventions.
 - State/Local Evaluation projects are to evaluate the causal impact of an education policy or program on student education outcomes. The Institute considers all types of findings from these projects to be potentially useful to researchers, policymakers, and practitioners and expects dissemination to include the following:
 - Findings of a beneficial impact on student outcomes; these support the wider use of the program/policy and the further adaptation of it to different conditions.
 - Findings of no impacts or negative impacts on student outcomes (with or without impacts on more intermediate outcomes such as a change in teacher instruction); these are important for decisions regarding the ongoing use and wider dissemination of the program/policy, the revision of the program/policy and its implementation, and the revision of its theory of change.

See [Part IV.D.3 \(Appendix A: Dissemination Plan\)](#) for more information about the **required Dissemination Plan** to include in your application.

C. APPLICANT REQUIREMENTS

Applications under the Research Collaborations program **must meet the requirements** set out under (1) Eligible Applicants and (2) Principal Investigator and Authorized Organization Representative in order to be [responsive](#) and send forward for scientific peer review.

1. Eligible Applicants

- At a minimum, applications must include a research institution and a U.S. state or local education agency proposing to work together in partnership.
- Applicants that have the ability and capacity to conduct scientific research are eligible to apply as the research institution partner(s). These include, but are not limited to, non-profit and for-profit organizations and public and private agencies and institutions, such as colleges and universities, and research firms.
- The U.S. education agency partners may include the following:
 - State education agencies such as departments, boards, and commissions that oversee early learning, elementary, secondary, postsecondary, and/or adult education. The term *state education agencies* includes U.S. Territories' education agencies and tribal education agencies.
 - Local education agencies are primarily public school districts¹ and may also include county or city agencies that have primary responsibility for prekindergarten or adult education.
 - Intermediate districts (sometimes called service districts) that provide services to multiple districts but do not have decision-making authority over implementing programs and policies cannot serve as the agency partner. Applications that include them will need to include one or more districts that have decision-making authority as the agency partner.
 - Non-public organizations that oversee or administer schools (e.g., charter or education management organizations) can apply as long as they include the state or local education agency with oversight of the schools they manage as an agency partner.
 - Individual schools or groups of schools that do not form a school district are not eligible to apply as the local education agency partner. In the case that a single school is recognized as a local education agency, it is eligible to apply as the agency partner, but the Institute notes that reviewers may consider the work less significant than projects that involve education agencies having multiple schools.
 - Community college districts.
 - State and city postsecondary systems.
 - The postsecondary system must apply as the agency partner. Individual postsecondary institutions may not apply as the agency partner.
 - A postsecondary system that applies as an education agency partner cannot also serve as the research institution partner in the same project.
 - In places where state or local education agencies do not oversee adult education the adult education providers, defined as eligible providers (e.g., community-based organizations, institutions of higher education, public or non-profit agencies, libraries) by Title II of the Workforce Innovation and Opportunity Act (WIOA):

¹ As defined in the Elementary and Secondary Education Act (ESEA), a local education agency is a public board of education or other public authority legally constituted within a State for either administrative control or direction of, or to perform a service function for, public elementary schools or secondary schools in a city, county, township, school district, or other political subdivision of a State, or for a combination of school districts or counties that is recognized in a State as an administrative agency for its public elementary schools or secondary schools.

<https://www.gpo.gov/fdsys/pkg/PLAW-113publ128/pdf/PLAW-113publ128.pdf>), can serve as the agency partner.

- The Institute encourages partnerships to include other organizations that can contribute to the successful outcome of the work such as other state or local agencies (e.g., juvenile justice, social services), community organizations, parent organizations, and teacher and staff organizations.
- Partnerships may include more than one state or local education agency. Having more than one education agency partner may increase the significance of the research, but the inclusion of more than one education agency should be justified based on their similarities and shared interests in the proposed work (e.g., contiguous school districts or similar types of districts that seek to address the same issue), and the capacity of the research institution to successfully work with multiple partner agencies within the funding provided by the grant. You should avoid the appearance of creating a convenience partnership, that is, a group of state or district education agencies that have little in common outside of their relationship with the research institution.
 - A research network that links one or more research institutions with multiple schools cannot apply as the partnership. The research institution would have to partner with an education agency and could then work with the schools in the network that fall under the education agency partner.
- Partnerships may include more than one research institution. The inclusion of more than one research institution should be justified based on their shared interests in the proposed work, the research complementarities they bring to the partnership, and their ability to maintain a long-term working relationship within the partnership.
- To help demonstrate a working partnership, the Institute recommends that the key research institution(s) and education agency(ies) forming the partnership submit a joint Letter of Agreement (placed in Appendix E of the application), rather than separate letters, documenting their participation and cooperation in the partnership and clearly setting out their expected roles and responsibilities in the partnership. All other institutions involved in the proposed partnership should submit similar separate Letters of Agreement.

2. The Principal Investigator and Authorized Organization Representative

The Principal Investigator

Applications must include at least one Principal Investigator (PI) from a research institution and at least one PI from a state or local education agency. When you discuss the PIs in your application, it is helpful to the reviewers to identify which partner they represent.

The partnership must choose one PI (from either the research institution or education agency) to have overall responsibility for the administration of the award and interactions with the Institute. 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.² This person should be identified on the application as the Project Director/Principal Investigator. All other PIs should be listed as co-Principal Investigators (Co-PIs).

² The Institute uses the uniform format for reporting performance progress on Federally-funded research projects, the Research Performance Progress Report (RPPR <http://www.nsf.gov/bfa/dias/policy/rppr/>) for these reports.

The Institute does not have a preference for whether the PI is based at the research institution or education agency, and expects the partnership to choose the person it feels can best lead the project. The Institute recommends that the person chosen as PI has the qualifications and experience to manage the grant and that the PI's organization has the capacity to fulfill the administrative, financial and reporting requirements of the grant.

The PI and a Co-PI (representing the research institution and the education agency) will attend a 2-day meeting each year in Washington, DC with other grantees and Institute staff. The project's budget should include this meeting. Should the PI or Co-PI not be able to attend the meeting, he/she may designate another person who is key personnel on the project team to attend.

The Institute has funded two National Research and Development Centers on how research is used by education practitioners (<http://ies.ed.gov/funding/grantsearch/details.asp?ID=1466> and <http://ies.ed.gov/funding/grantsearch/details.asp?ID=1641>). As part of this effort, PIs and Co-PIs may be asked to participate in occasional interviews or meetings or to respond to surveys sponsored by these R&D Centers.

The Authorized Organization Representative

The Authorized Organization Representative (AOR) for the applicant institution is the official who has the authority to legally commit the applicant to (1) accept federal funding and (2) execute the proposed project. When your application is submitted through Grants.gov, the AOR automatically signs the cover sheet of the application, and in doing so, assures compliance with Institute's policy on public access to scientific publications and data as well as other policies and regulations governing research awards (see [Part III.B. Additional Award Requirements](#)).

3. Common Applicant Questions

- *May I submit an application if I did not submit a Letter of Intent?* Yes, but the Institute strongly encourages you to submit one. If you miss the deadline for submitting a Letter of Intent, contact the appropriate Program Officer for the topic you are interested in and that seems to best fit your research. Please see [Part III.C.1 Submitting a Letter of Intent](#) for more information.
- *Is there a limit on the number of times I may revise and resubmit an application?* No. Currently, there is no limit on resubmissions. Please see [Part III.D.2. Resubmissions and Multiple Submissions](#) for information about the requirements for resubmissions.
- *May I submit the same application to more than one of the Institute's grant programs?* No.
- *May I submit multiple applications?* Yes. You may submit multiple applications if they are substantively different from one another. Multiple applications may be submitted within the same topic, across different topics, or across the Institute's grant programs.
- *May I apply if I work at a for-profit developer or distributor of an intervention or assessment?* Yes. You may apply if you or your collaborators develop, distribute, or otherwise market products or services (for-profit or non-profit) that can be used as interventions, components of interventions, or assessments in the proposed research activities. However, the involvement of the developer or distributor must not jeopardize the objectivity of the research. In cases where the developer or distributor is part of the proposed research team, you should discuss how you will ensure the objectivity of the research in the project narrative.

- *May I apply if I intend to copyright products (e.g., curriculum) developed using grant funds?* Yes. Products derived from Institute-funded grants may be copyrighted and used by the grantee for proprietary purposes, but the Department reserves a royalty-free, non-exclusive, and irrevocable right to reproduce, publish, or otherwise use such products for Federal purposes and to authorize others to do so [[2 C.F.R. § 200.315\(b\) \(2014\)](#)].
- *I am submitting an application to the State/Local Evaluation topic for which a Data Management Plan (DMP) is required in Appendix F. How will IES review my Data Management Plan?* Program Officers will review the DMP for completeness and clarity, and if your application is recommended for funding, you may be required to provide additional detail regarding your DMP (see [Pre-Award Requirements](#)). Be sure to address all parts of the DMP as described under Appendix F and clearly describe your justification for your proposed plans and how they meet the expectations of the IES Data Sharing Policy. Please visit <http://ies.ed.gov/funding/researchaccess.asp> for information on the IES Data Sharing Policy and https://ies.ed.gov/funding/datasharing_implementation.asp for information on preparing your DMP.
- *May I apply if I am not located in the United States or if I want to collaborate with researchers located outside of the United States?* The research institution partner may be located outside the territorial United States, but the education agency partner must be a U.S. agency. You may also propose working with subawardees who are not located in the territorial United States. Your proposed work must be relevant to education in the United States. Institutions not located in the territorial United States (both primary grantees and subawardees) may not charge indirect costs.

D. PRE-AWARD REQUIREMENTS

Applicants considered for funding following scientific peer review are required to provide further information about the proposed research activities before a grant award is made (see [Part IV.B](#)). For example, you will be required to provide updated Letters of Agreement showing access to the authentic education settings where your work is to take place or to the secondary data sets you have proposed to analyze. You may be asked for additional information about your Research Plan and Dissemination Plan (required for all applications) or your Data Management Plan (only required for applications submitted under the State/Local Evaluation topic). If significant revisions to the project arise from these information requests they will have to be addressed under the original budget.

E. CHANGES IN THE FY 2019 REQUEST FOR APPLICATIONS

The FY 2019 Request for Applications (RFA) for the Research Collaborations Grants program includes the following major changes.

- The Institute has expanded its definition of Student Education Outcomes to include employment and earnings outcomes when appropriate.
- Appendix A: Dissemination Plan will now be considered by the scientific peer reviewers as part of their review of the Significance section of your Research Narrative. In addition, they are to consider the resources you have available for dissemination as part of their review of the Resources section of the Project Narrative (see [Part IV.D PDF Attachments](#) for more information).
- Revisions were made in the Research Plan section of the Evaluation of State and Local Education Programs and Policies topic including:
 - Revisions in the Research Design section based on updates in the WWC Standards Handbook. For the full updates, please see the WWC's Standards Handbook, Version 4.0, available at <https://ies.ed.gov/ncee/wwc/Handbooks>.
 - A requirement to describe your plans to conduct a cost-effectiveness study in addition to the previously required cost analysis.

- A requirement to describe your plans to conduct analyses related to implementation and analyses of key moderators and/or mediators. Previously, these analyses were recommended but not required.
- For the grant submission process, applicants must use Workspace on the Grants.gov website (see [Part V.C Workspace](#)).

F. READING THE REQUEST FOR APPLICATIONS

Both **Principal Investigators and Authorized Organization Representatives** should read the Request for Applications to learn how to prepare an application that meets the following criteria:

1. Maximum Budget and Duration (described below and under Part II).
2. Criteria required for an application to be sent forward for peer review (Requirements).
3. Criteria that make for a strong (competitive) application and are used by the peer reviewers (Recommendations for a Strong Application).

1. Maximum Budget and Duration

Topic	Maximum Grant Duration	Maximum Grant Award
Researcher-Practitioner Partnerships in Education Research	2 years	\$400,000
Evaluation of State and Local Education Programs and Policies	5 years	\$5,000,000

2. Requirements

The Institute's Office of Standards and Review will examine all applications and determine whether they meet the following criteria. Applications that do not meet these criteria will not be sent forward for peer review.

- **RESPONSIVENESS**
 - ✓ Meets **General requirements** (see [Part I.B](#))
 - ✓ Meets **Applicant requirements** (see [Part I.C](#))
 - ✓ Meets **Project Narrative requirements** for the selected *Topic* (see [Part II](#))
- **COMPLIANCE** (see [Part IV](#))
 - ✓ Includes all **required content** (see [Part IV.D](#))
 - ✓ Include all **required appendices** (see [Part IV.D](#))
 - Appendix A: Dissemination Plan (all applications)
 - Appendix B: Response to Reviewers (resubmissions)
 - Appendix F: Data Management Plan (for the State/Local Evaluation topic)
- **SUBMISSION** (see Parts [IV](#) and [V](#))
 - ✓ Submit electronically via Grants.gov no later than **4:30:00 p.m. Eastern Time on August 23, 2018**.

- ✓ Use the **correct application package** downloaded from Grants.gov (see [Part IV.B](#)).
- ✓ Include **PDF files** that are **named and saved appropriately** and that are **attached to the proper forms** in the application package (see Parts [IV.D](#) and [V](#)).

3. Recommendations for a Strong Application

Under Part II: Topic Requirements, the Institute provides recommendations to improve the quality of your application. The scientific peer reviewers who will evaluate the scientific merit of your application are asked to consider these recommendations when scoring your application. The Institute strongly encourages you to incorporate the recommendations into your Project Narrative and relevant appendices.

PART II: TOPIC REQUIREMENTS

A. APPLYING TO A TOPIC

For the FY 2019 Partnerships and Collaborations Focused on Problems of Practice or Policy (Research Collaborations Program) grants program, you must submit your application to one of the two topics described here in Part II.³ Each topic has specific requirements that must be met for an application to be found [responsive](#) and sent forward to scientific peer review. The Institute strongly encourages you to contact the Program Officer if you have questions regarding the appropriateness of a particular project for submission under a specific topic.

The Institute developed the topic structure to help focus the work proposed by researchers. The topics differ by the work to be done to support the partnership and the joint research to be done (see table below). Research under either topic must include measures of student education outcomes. Research may focus on directly improving student education outcomes or indirect improvement through changing the knowledge and practices of instructional personnel and other school or education agency staff. Research of the latter type must also include measures of outcomes for the personnel being studied as well as measures of student education outcomes. The research can be focused specifically on students without disabilities, students with or at risk for disabilities, or a combination of the two.

Topics within the Research Collaborations Program

Topic	Partnership	Partnership Work	Research
Researcher-Practitioner Partnerships in Education Research	New or Existing	Joint activities to build or strengthen the partnership to carry out the initial research, to maintain a longer-term collaboration, and to increase the agency's capacity to take part in and use research	Explore a specific problem/issue linked to student education outcomes of high importance to an education agency. Develop a plan for future joint research
Evaluation of State and Local Education Programs and Policies	New or Existing	Joint activities to carry out the proposed evaluation and to increase the agency's capacity to take part in and use research	Causal evaluation of an important agency program or policy intended to improve student education outcomes

The Institute's Education Research Grants program (84.305A) and Special Education Research Grants Program (84.324A) also fund research done by partnerships of research institutions and education agencies (e.g., the evaluation of education [interventions](#) or the development and validation of [assessments](#)), and partnerships between different sets of organizations (e.g., research institutions and individual schools or groups of schools).

The following pages describe the topic requirements and recommendations for your application.

³ You must identify your chosen topic area on the SF-424 Form (Item 4b) of the Application Package (see [Part V.E.1](#)), or the Institute may reject your application as nonresponsive to the requirements of this RFA.

1. Researcher-Practitioner Partnerships in Education Research

Program Officers: Dr. Allen Ruby (202-245-8145; Allen.Ruby@ed.gov)

National Center for Education Research

Dr. Sarah Brasiel (202-245-6734; Sarah.Brasiel@ed.gov)

National Center for Special Education Research

a) Purpose

The Researcher-Practitioner Partnerships in Education Research (Research Partnerships) topic supports partnerships composed of research institutions and state or local education agencies that have identified an education issue or problem of high priority for the education agency that has important implications for improving [student education outcomes](#). These partnerships are to carry out initial research and develop a plan for future research on that education issue. Through this joint research, the education agency's capacity for taking part in research and using research results is expected to increase. The ultimate goal of the partnerships supported under this topic is to conduct and promote research during and after the grant that has direct implications for improving programs, processes, practices, assessments, or policies that will result in improved student education outcomes.

The Research Partnerships topic provides funds to develop new partnerships and to support the expansion of existing partnerships into new areas of research. Partnerships are expected to complete initial research to help understand their education issue and develop a plan for future research. To this end, partnerships may analyze secondary data and/or collect primary data and analyze it. However, given the limit on the size of the grant award, the Institute does not expect large-scale data collection (quantitative or qualitative) during a Research Partnerships project. More comprehensive data collection activities can be proposed in the plan for future research.

Projects under the Research Partnerships topic will result in the following:

- A description of the partnership as developed over the course of the grant.
- A description of the education issue addressed by the partnership.
- Findings from the completed initial research and any conclusions drawn from it.
- A plan for the partnership to carry out further research on the education issue. Future research may be of different types, for example:
 - Further exploration of the issue (e.g., an Exploration project under the Institute's Education Research Grants program - 84.305A or Special Education Research Grants Program - 84.324A).
 - The development of an intervention to address the issue (e.g., a Development and Innovation project under 84.305A or 84.324A).
 - The evaluation of an intervention that is to address the issue (e.g., a State/Local project, an Efficacy project under 84.305A or 84.324A, or a low-cost, short duration evaluation under 84.305L or 84.324L).
 - Development and/or validation of an assessment (e.g., a Measurement project under 84.305A or 84.324A).
 - Research of other types supported by a funder other than IES.
- A description of the agency capacity-building activities carried out.
- Recommendations for how the partnership can be maintained over the longer term.

- Lessons learned from developing the partnership that could be used by others in forming such partnerships.

b) Requirements and Recommendations

Applications under the Research Partnerships topic **must meet the requirements set out under (1) Project Narrative** in order to be [responsive](#) and sent forward for scientific peer review. In addition, Award criteria place limits on project duration and cost.

The requirements are the minimum necessary for an application to be sent forward for peer review. In order to improve the quality of your application, the Institute offers recommendations following each set of Project Narrative requirements.

(1) Project Narrative

The project narrative (recommended length: no more than 25 pages) for a Research Partnerships project **must** include five sections: Significance, Partnership, Research Plan, Personnel, and Resources.

- a. **Significance** – The purpose of this section is to justify the importance of the specific education issue or problem and the proposed research on it.

Requirements: In order to be responsive and sent forward for peer review, applications under the Research Partnerships topic **must** describe

- (i) The education issue or problem to be addressed by the partnership.

Recommendations for a Strong Application: In order to address the above requirement, the Institute recommends that you include the following in your Significance section to provide a compelling rationale for the proposed initial research.

- As you describe the specific issue or problem the partnership will address and its importance to the education agency:
 - Describe both theoretical and empirical links between the issue and student education outcomes (it can be helpful to include a simple [theory of change](#)).
 - Discuss how addressing the issue could contribute to the improvement of student education outcomes.
 - Provide evidence that the issue is a priority for the education agency partner. Describe any current work on the issue being done by the education agency.
 - Note the issue's importance to other education agencies, policymakers and stakeholders (this point is of secondary importance for the significance of the proposed project).
 - Describe how the agency partner will use the project's findings in its decision-making.
- Describe the education system in which you will examine the issue or problem including the level(s) you will be looking at (e.g., classroom, school, district, postsecondary system, or state).
- In Appendix A, describe how you will make the results of your proposed research available to a wide range of audiences in a manner that reflects the purpose of the [Researcher-Practitioner Partnership topic](#).

b. Partnership – The purpose of this section is to describe the partnership including any previous joint work, its current state, and your plans for its development over the course of the project.

Requirements: In order to be responsive and sent forward for peer review, applications under the Research Partnerships topic **must** describe

- (i) The research institution and the education agency that together form the basis of the partnership; and
- (ii) The partnership development plan.

Recommendations for a Strong Application: The Institute recommends that, in order to address the above requirements, you include the following in your Partnership section to demonstrate the initial strength of your partnership along with your plans to develop the partnership, build the capacity of both the partnership and the education agency for taking part in and using the results of research, and maintain the partnership in the long term.

Description of the Partnership:

- Describe all organizations that will form the partnership.
- Describe the stage of the partnership (e.g., an early partnership or a mature one) and explain how the partnership's stage will affect the type of work proposed, the roles of the partners, and the expectations for the results of the partnership (including both the research produced and the future research to be carried out by the partnership).
 - Describe the process through which the involved organizations decided to propose a Research Partnerships project.
 - Discuss any past or ongoing collaborations between members of the partnership and the results of those joint efforts.
- Describe how the research questions posed in your application were developed by the partnership. Note the partners' common interest in answering them and how all partners will contribute to and benefit from the project.
- Identify the management structure and procedures that will be used to keep the project on track and ensure the quality of its work. This is especially important for partnerships involving multiple institutions carrying out coordinated or integrated tasks.
- Describe any other research partnerships the education agency already has in place and the research topics they address. You should discuss how the partnership proposed in this application and the work it will do differs from any existing collaborations and how it would provide non-overlapping research support to the education agency.

Partnership Development Plan:

- Identify the expectations for the partnership by the end of the project.
- Describe the activities and processes the partnership will use to establish and develop the partnership. These activities should contribute to the proposed research, education agency capacity building, and the longer-term collaboration.
- Discuss the partnership's decision-making process, e.g., how it will determine research direction, capacity building activities, release of research results, future research plans.
- Discuss how the proposed project will improve the education agency's capacity to participate in and/or use research. The Institute's expectations for capacity building depend upon the initial capacity of the education agency. For some, the process of taking

part in jointly setting research questions and considering the implications of the results will build their capacity while others may also be ready, with support, to be involved in the design, choice of measures, data collection and/or analysis.

Partnership Tracking Strategy:

- The Institute recommends that you also include a partnership tracking strategy that will be used to monitor the partnership as it carries out the research.
 - Include measures of the partnership's success in completing the initial research, developing a future research plan, increasing the education agency's capacity to participate in and use research, and promoting the continuation of the partnership beyond the grant's end. The Institute encourages you to include indicators that you would value as signs of the project's success and could be used by others carrying out similar collaborative work.
- c. **Research Plan** – The purpose of this section is to describe the plan for carrying out the initial research and preparing for the future research that is to take place after the grant ends.

Requirements: In order to be responsive and sent forward for peer review, applications under the Research Partnerships topic **must** describe

- (i) The research design;
- (ii) Data analysis procedures; and
- (iii) The plan for developing future research to be done after the grant ends.

Recommendations for a Strong Application: The Institute expects the research to be exploratory and descriptive. It may include primary data collection and analysis, secondary data analysis, or a combination of both. The Institute expects that a combination of quantitative and qualitative methods will yield the most useful findings.

In order to address the above requirements, the Institute recommends that you include the following in your Research Plan section.

Research Plan:

- Note: Applications may propose the pre-work necessary for either the development or evaluation of an education program or policy. Applications should not propose the full development of an intervention or the evaluation of an intervention. The Institute expects to support development and evaluation work under its other grant topics and programs. Under the Research Collaborations program, the Evaluation of State and Local Education Programs and Policies topic supports evaluations of education agency programs and policies. In addition, low-cost, short-duration evaluations of education interventions are funded under 84.305L and 84.324L. The Education Research Grants Program (84.305A) and the Special Education Research Grants Program (84.324A) support development work under Goal 2: Development and Innovation and evaluation under Goal 3: Efficacy and Follow-Up.
- Describe the main research objectives of the partnership's work and include your research questions. The Institute expects that research conducted under the Researcher-Practitioner topic will be exploratory in nature, seeking to better understand the links between the education system's characteristics (e.g., student, teacher, or school factors; education agency policies, programs, or practices) and student education outcomes, without establishing causal linkages.

- Provide a detailed description of the sample to be studied, the research design, the measures you will use, how you will collect the data, and the analyses you will conduct and the variables to be included in them. If necessary, work may involve cleaning, recoding, and/or merging data.

Purpose of the Research

- Discuss how the research will contribute to the education agency's work on the issue or problem.
- Discuss whether the initial research is being done to prepare for a specific type of future research, for example,
 - In-depth exploratory analysis on the issue or problem (e.g., an Exploration project under 84.305A or 84.324A).
 - Development of an intervention to address the issue (e.g., a Development and Innovation project under 84.305A or 84.324A).
 - Evaluation of an intervention already in place to address the issue (e.g., a State/Local project, a Low-Cost Evaluation project under 84.305L or 84.324L, or an Efficacy project under 84.305A or 84.324A).
 - Development and/or validation of assessment (e.g., a Measurement project under 84.305A or 84.324A).
 - A research or evaluation project supported by other funding sources.
- Make clear why this research will benefit from being done within a partnership project, e.g., how or why the work differs from similar research proposed under another grant program that does not require the same degree of collaboration between the research institution and the SEA/LEA.

Plan for Future Research:

- Describe how the partnership will develop a plan for research that continues beyond the end of the grant.
- Describe how the plan will ensure that the future research will be of value to the education agency.

Timeline:

- Provide a timeline for your project (include in the Project Narrative or Appendix C).

d. Personnel – The purpose of this section is to describe the relevant expertise of your research team, the responsibilities of each team member, and each team member's time commitments.

Requirements: In order to be responsive and sent forward for peer review, applications under the Research Partnership topic **must** describe

- (i) The PI or Co-PI from the research institution;
- (ii) The PI or Co-PI from the education agency; and
- (iii) Remaining key personnel at both the primary applicant institution and any subaward institutions.

Recommendations for a Strong Application: In order to address the above requirements, the Institute recommends that you include the following in your Personnel section to demonstrate that your team possesses the appropriate training and experience, has oversight over the issue being studied, and will commit sufficient time to competently implement the proposed research (i.e., maintaining the partnership; completing the initial research and the plan for future research; and building the capacity of both the partnership and the education agency for taking part in and using the results of research).

- Identify and briefly describe the following for all key personnel (i.e., Principal Investigator, co-Principal Investigators, co-Investigators) on the project team:
 - 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 working in similar partnerships and producing products of value to an education agency.
- Describe the education agency PI's (or Co-PI's) role in making decisions regarding the issue being examined. Agency personnel should include persons with oversight of the issue being studied. School-based personnel (unless holding district-wide authority) and personnel from an institutional research office (unless the issue falls under this office) are normally not the appropriate personnel to serve as the agency PI or Co-PI.
- Describe the PI's qualifications and experience for managing a grant of this size.
- Make sure at least one key person has a large enough time commitment to help maintain the progress of the work throughout the project.
- If any key personnel intend to donate time to the project, his or her donated time must be listed in the budget and budget narrative and described as cost sharing. The Institute does not require or request such cost sharing nor consider it in award decisions but does require that it be documented. Personnel proposing to donate time must demonstrate that they have such time available.
- Do **not** propose to hire experts in specific methodological or policy issues after the grant is received.

e. **Resources** – The purpose of this section is to describe how the partnership has the institutional capacity to complete a project of this type and the access to the resources needed to successfully complete this project.

Requirements: In order to be responsive and sent forward for peer review, applications under the Research Partnerships topic **must** describe

- (i) The resources available to conduct the project.

Recommendations for a Strong Application: In order to address the above requirement, the Institute recommends that you include the following in your Resources section to demonstrate that your team has a plan for acquiring or accessing the facilities, equipment, supplies, and other resources required to support the proposed work and the commitments of each partner for the implementation and success of the project.

Resources to conduct the project:

- Describe your institutional capacity and experience to manage a grant of this size.
- Describe your access to resources available at the primary institution and any subaward institutions (including the partner organization).
- Include a joint Letter of Agreement in [Appendix E](#) from the primary partnering institutions (the research institution and the education agency) documenting their participation and cooperation and clearly setting out their expected roles and responsibilities in the partnership. Include separate similar Letters of Agreement from the other members of the partnership.
- Describe your plan for acquiring any major resources that are not currently accessible and that are necessary for the successful completion of the project (e.g., equipment, test materials, curriculum or training materials).
- Describe your access to the schools (or other [authentic education settings](#)) in which the research will take place. Include Letters of Agreement in Appendix E documenting the participation and cooperation of the schools. Convincing letters will convey that the organizations understand what their participation in the study will involve (e.g., ongoing student and teacher surveys, student assessments, classroom observations).
- Include information about student, teacher, and school incentives, if applicable.
- Describe your access to any data sets that you will require. Include Letters of Agreement, data licenses, or existing Memoranda of Understanding in Appendix E to document that you will be able to access the data for your proposed use.
- If teachers or other school staff are expected to play an important role in the research (e.g., through teacher observations, surveys, logs), you should discuss how their cooperation will be obtained and how much they already know about and support the work. Discuss any evidence of high teacher or staff involvement from a previous study.
- Describe your resources to carry out your plans to disseminate the results from your research partnership as described in the required [Appendix A: Dissemination Plan](#).
- Note any specific offices or team members expected to take part in your dissemination plans and their specific roles.

(2) Awards

A Research Partnerships project **must** conform to the following limits on duration and cost:

- **The maximum duration of a Research Partnerships project is 2 years.**
- **The maximum award for a Research Partnerships project is \$400,000 (total cost = direct costs + indirect costs).**

2. Evaluation of State and Local Education Programs and Policies

Program Officers: Dr. Allen Ruby (202-219-1591; Allen.Ruby@ed.gov)

National Center for Education Research

Dr. Sarah Brasiel (202-245-6734; Sarah.Brasiel@ed.gov)

National Center for Special Education Research

b) Purpose

The Evaluation of State and Local Education Programs and Policies (State/Local Evaluation) topic supports the evaluation of fully-developed programs and policies implemented by state and local education agencies to determine whether they produce a beneficial impact on student education outcomes relative to a counterfactual when they are implemented under routine conditions in authentic education settings.⁴ These evaluations are to determine both the overall impact of the programs/policies and the impact across a variety of conditions.

The Institute supports the evaluation of programs and policies that substantially modify or differ from existing practices. The modest changes in programs/policies that States and districts make on an ongoing basis, such as small changes in daily schedules or minor adjustments to teacher certification systems, are not the targets of this research program.

Through the State/Local Evaluation topic, the Institute seeks to establish long-term partnerships between research institutions and education agencies that will focus their research efforts on programs/policies of relevance to policymakers and practitioners. The Institute expects the education agencies to identify research questions of high importance to their work, help shape the evaluation to meet their conditions, and have direct access to the results. These education agencies may lack the funds and/or the research capacity to evaluate such programs/policies, yet such evaluations are necessary to distinguish those programs/policies producing the expected outcomes from those that do not, to identify the particular groups (e.g., types of students, teachers, or schools) for which programs/policies work, and to determine which aspects of programs/policies need to be modified. The

Fully-developed

A fully-developed program or policy has already been or is ready to be implemented by schools and districts. All materials and products required for its implementation by the intended end user are readily available for use in authentic education settings.

Routine conditions

Conditions under which a program or policy is implemented that reflect (1) the everyday practice occurring in classrooms, schools, and districts and (2) the heterogeneity of the target population, and (3) typical or standard implementation support.

Overall Impact

The degree to which a program/policy has on average a net positive impact on the outcomes of interest in relation to the program or practice to which it is being compared.

Impact Across a Variety of Conditions

Determining whether a program or policy improves student education outcomes for certain subgroups (e.g., students or schools) or under certain conditions (e.g., moderating factors).

⁴ Evaluations of programs and policies may also be submitted to the Education Research Grants program (CFDA 84.305A) or Special Education Research Grants (CFDA 84.324A) under the Efficacy goal. The State/Local Evaluation topic offers a longer grant duration and larger grant amount than the Efficacy goal and requires (a) the program/policy be implemented by a state or local education agency under routine conditions, (b) a partnership between a research institution and a state or local education agency, and (c) that grant funds not be used to support implementation of the program or policy.

results of such evaluations are of value not only to the education agency directly involved, but also to other states and districts that may be using or considering the use of similar programs/policies.

Projects under the State/Local Evaluation topic will result in the following:

- Evidence regarding the impact of a fully-developed program/policy, implemented by a state or local education agency, on relevant student academic outcomes relative to a comparison condition using a rigorous research design that meets the Institute's What Works Clearinghouse evidence standards (with or without reservations) (<http://ies.ed.gov/ncee/wwc>). The impacts include both overall impacts and impacts under a variety of conditions.
- Conclusions on and revisions to the [theory of change](#) that guides the program or policy and a discussion of the broader contributions to the theoretical and practical understanding of education processes and procedures.
- Information needed for future research on the program or policy.
 - If a beneficial impact is found, the identification of the resources, tools, and procedures needed for implementation of the core components of the program or policy.
 - If no beneficial impact is found, a determination of whether and how to revise the program or policy and/or its implementation to achieve desired outcomes.
- Information about the financial costs and cost effectiveness of the program/policy.

c) Requirements and Recommendations

Applications under the State/Local Evaluation topic **must meet the requirements set out under (1) Project Narrative and (3) Data Management Plan** in order to be [responsive](#) and sent forward for scientific peer review. In addition, Award criteria place limits on project duration and cost.

The requirements are the minimum necessary for an application to be sent forward for scientific peer review. In order to improve the quality of your application and its peer review, the Institute offers recommendations following each set of Project Narrative requirements.

(1) Project Narrative

The project narrative (recommended length: no more than 25 pages) for a State/Local Evaluation project **must** include five sections: Significance, Partnership, Research Plan, Personnel, and Resources.

- a. **Significance** – The purpose of this section is to justify the importance of the partnership's research aims (i.e., evaluating the education agency's program or policy).

Requirements: In order to be responsive and sent forward for peer review, applications under the State/Local Evaluation topic **must** describe

- (i) The specific education program or policy to be evaluated.

Recommendations for a Strong Application: In order to address the above requirement, the Institute recommends that you include the following in your Significance section to provide a compelling rationale for the proposed research.

- A detailed description of the fully-developed program or policy, including:
 - Its goals, objectives, and components.
 - The components of the program or policy.

- The student group(s) that the program or policy is trying to affect.
- Evidence that the program or policy is fully developed and ready for implementation in authentic education settings (e.g., it is already being implemented, or if it is to be implemented then all materials and implementation supports required for implementation are in place).
- How the program or policy substantially modifies or differs from existing practice (either in the same location or in other locations).
- Describe the implementation of the program or policy, including evidence that it has adequate funding and is being managed or overseen by the education agency.
 - Make clear that the education agency has adopted the intervention and will manage and/or oversee its implementation. The evaluation is **not** to be of an intervention that the agency is allowing a researcher or organization to try out in the state or district.⁵
 - Identify the date implementation began, will begin, or will be expanded. For the latter two conditions, provide evidence that the program or policy will begin or be expanded (e.g., new laws or regulations, appropriation of funds, training of personnel).
 - Describe the processes and materials (e.g., manuals, websites, training, coaching) that will be used to support its implementation.
 - Identify the target population and where implementation will take place.
 - Identify who the end users of the program or policy are and how they will carry out implementation of the program or policy.
 - Identify the routine conditions under which the study will take place. Routine conditions reflect the everyday practice occurring in classrooms, schools, and districts including the expected level of implementation that would take place if no study was being done and a sample that represents the heterogeneity of the students, teachers, schools, and districts being studied.
- Describe the initial theory of change for the program or policy (Figure 1 provides an example of one way that you could conceptualize a simple theory of change), along with theoretical justifications and empirical evidence that support it. Programs or policies implemented by state and local education agencies may emerge out of a practice context and lack a formal theory of change. However, you should articulate the underlying logic or sequence of events that is to result in improvements to student education outcomes.
 - Your theory of change should describe the component or components of the program or policy that are to lead to changes in one or multiple underlying processes, which in turn will foster better student education outcomes directly or through intermediate outcomes (e.g., changed teacher practices). A more complete theory of change could include further details such as the sample representing the target population, level of exposure to the components, key moderators (such as setting, context, student and family characteristics), and the specific measures used for the outcomes.
 - For programs or policies designed to directly affect the teaching and learning environment and, thereby, indirectly affect student education outcomes, identify

⁵ For funding to evaluate programs or policies that an education agency is allowing a researcher to pilot but have not been adopted by the education agency, you should apply to the Education Research Grants program (84.305A) or Special Education Grants program (84.324A) under the Efficacy goal.

any intermediate outcomes that are to be affected (e.g., teacher practices) and how these outcomes affect the student education outcomes of interest.

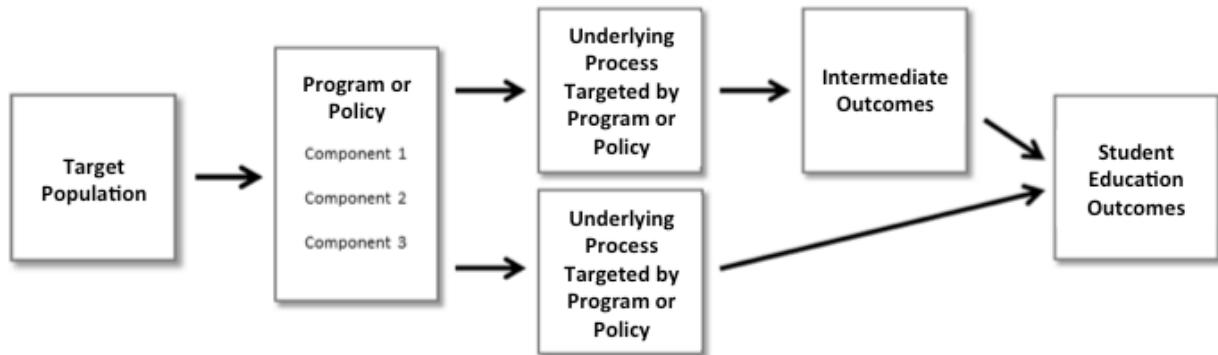


Figure 1. A diagram of a simple theory of change.

- Provide the rationale for the evaluation of the program or policy.
 - Describe why the program or policy is likely to produce better student outcomes relative to current practice (or indicate that the program or policy is current practice if widely used).
 - Describe how the agency partner will use the project's findings in its decision-making (both during and after the project).
 - Explain why education practitioners and policymakers outside of the agency partner would care about the results of the proposed evaluation.
 - Describe any studies that have attempted to evaluate the program or policy, note their findings (e.g., on feasibility, costs, and impact) and discuss why your proposed study would be an important improvement on past work. Note whether your proposed evaluation would be considered a replication of any prior studies.
- In Appendix A, describe how you will make the results of your proposed research available to a wide range of audiences in a manner that reflects the purpose of the [State/Local Evaluation topic](#).

b. Partnership – The purpose of this section is to describe the current state of your partnership and your plans for its development over the course of the project.

Requirements: In order to be responsive and sent forward for peer review, applications under the State/Local Evaluation topic **must** describe

- (i) The research institution and the state or local education agency that together form the basis of the partnership; and
- (ii) The partnership development plan.

Recommendations for a Strong Application: In order to address the above requirements, the Institute recommends that you include the following in your Partnership section to demonstrate the initial strength of your partnership along with your plans to develop the partnership, build the capacity of both the partnership and the education agency

for taking part in and using the results of research, and maintain the partnership in the long term.

Description of the Partnership

- Describe all organizations that will form the partnership.
- Describe the stage of the partnership (i.e., an early partnership or a mature one)⁶ and how the partnership's stage will affect the type of work proposed under the grant, the roles of the partners, and the expectations for the results of the project including both the research produced and the future of the partnership.
- Describe how the partnering organizations decided to propose a State/Local Evaluation project and how they went about identifying the research questions and designing the project. Discuss how each partner will contribute to and benefit from the project.
- Identify the management structure and procedures that will be used to keep the project on track and ensure the quality of its work. This is especially important for projects involving multiple institutions carrying out different tasks that must be coordinated and/or integrated.
 - Include the organizational structure (e.g., advisory boards, governing boards, management teams) that will be used to maintain the mutual participation and input of all partners.
- Discuss the partnership's agreement and strategy for sharing and housing data including the main sources of data that will be shared, where the data will be housed, how they will be managed, who will develop the documentation necessary for their use, and the availability of the data to partners and other interested parties.

Partnership Development Plan:

- Describe the activities and processes that will be used to further develop the partnership. These activities should contribute to the proposed research, education agency capacity building, and, if planned, a longer-term collaboration.
- Discuss the partnership's decision-making process, e.g., how it will determine research direction, capacity building activities, release of research results, and future research plans.
- Discuss how the proposed project will improve the education agency's capacity to participate in and use research. For some, the process of taking part in jointly setting research questions and considering the implications of the results will build their capacity while others may also be ready, with support, to be involved in the research design, choice of measures, data collection, and/or analysis.

Partnership Tracking Strategy:

- The Institute recommends that you also include a partnership tracking strategy that will be used to monitor the partnership as it carries out the research.
 - Include measures of the partnership's progress in gathering and analyzing data, completing the evaluation, conducting briefings and other dissemination activities, and, increasing the education agency's capacity to participate in and use research. Include indicators that you would value as signs of the project's success and could be used by others carrying out similar collaborative work.

⁶ Partnerships at any stage are acceptable for a State/Local Evaluation project, but it is important to show that the partnership is prepared to carry out the proposed evaluation.

c. **Research Plan** – The purpose of this section is to describe your plans for the evaluation of the education agency's program or policy.

Requirements: In order to be responsive and sent forward for peer review, applications under the State/Local Evaluation topic **must** describe

- (i) The research design;
- (ii) The power analysis;
- (iii) Data analysis procedures; and
- (iv) Plans for an implementation study, cost analysis, and cost-effectiveness analysis.

Recommendations for a Strong Application: In order to address the above requirements, the Institute recommends that you include the following in your Research Plan section to strengthen the methodological rigor of the proposed State/Local Evaluation work. As you address the recommendations, make clear why the research plan will benefit from being done within a partnership project, i.e., how or why this evaluation would differ from one proposed under another grant program that does not require the same degree of collaboration between the research institution and the SEA/LEA.

Sample and Setting:

- Discuss the population you intend to study and how your sample and sampling procedures will allow you to draw inferences for this population.
- Define your sample and sampling procedures for the proposed study, including justification for exclusion and inclusion criteria.
- Describe strategies to increase the likelihood that participants (e.g., schools, postsecondary institutions, teachers, and/or students) will join the study and remain in the study over the course of the evaluation.
- Describe the setting in which the study will take place (e.g., characteristics of the schools, districts, postsecondary system, and/or state), and how this may affect the generalizability of your study.

Research Design:

- Describe how you will be able to make causal inferences based on the results from your design and how potential threats to internal validity will be addressed. Typical designs for State/Local Evaluation projects include:
 - Randomized controlled trials (using random assignment to the treatment and comparison conditions) have the strongest internal validity for causal conclusions and, thus, are preferred whenever feasible.
 - Describe the randomization process:
 - The unit of randomization (e.g., student, classroom, teacher, or school) and a convincing rationale for this choice.
 - The probability for each unit of randomization to be assigned to the treatment or control groups.
 - The procedures for random assignment and how the integrity of the assignment process will be ensured.

- The informed consent process for students, parents, teachers, faculty, other agency staff.
- Random assignment is often done through one of the following:
 - Assignment of all appropriate units or a subset of units (e.g., volunteers for a program).
 - Lotteries when a program cannot be received by all who wish to receive it. For lotteries, it is important to document oversubscription and how the design will address participants who participate in multiple lotteries or participants who are assigned to the control condition but seek alternative programs (e.g., control students who do not gain entry to a magnet school may go to a private school and be lost to the study).
 - A staggered roll-out of the program or policy under which the control group will receive the program or policy at a later time while the treatment group receives it immediately. For staggered roll-outs, it is important to justify that the time between roll-out for the treatment group and the control group is long enough to expect to see an improvement in the treatment students' education outcomes.
 - Randomly assigning groups to different versions of the program or policy.
- Explain how you will document that the treatment and comparison groups are equivalent at baseline (at the outset of the study) for each outcome domain being examined.
- Regression discontinuity designs can also provide unbiased estimates of the effects of education programs or policies.
 - For a regression discontinuity design, describe the following:
 - The appropriateness of the assignment variable, the assignment variable's resistance to manipulation, the level of independence of the cutoff point from the assignment variable, and the policy relevance of the cutoff point.
 - The sensitivity analyses and robustness checks that will be used to assess the influence of key procedural or analytic decisions (e.g., functional forms and bandwidths) on the results.
 - How you will determine whether
 - There is a true discontinuity at the cutoff point (and not at other points where a discontinuity would not be expected).
 - No manipulation of the assignment variable has occurred.
 - The treatment and comparison groups have similar baseline characteristics (especially around the cut-off point), i.e., they do not differ in ways that would indicate selection bias except for the assignment variable.

- There are high levels of compliance to assignment, (i.e., most treatment group members receive the intervention and most comparison group members do not).
- Research teams with access to retrospective data on assignment to the intervention can prepare stronger applications by including the results from the analyses identified above on the retrospective data to check for 1) a true discontinuity, 2) no signs of manipulation of the assignment variable, 3) similar baseline characteristics in the treatment and comparison groups and 4) high levels of compliance to assignment.
- Research teams that do not have access to retrospective data on assignment to the intervention while preparing their applications should make a persuasive case that the intervention will be implemented in a manner likely to lead to the findings of 1) a true discontinuity, 2) no signs of manipulation of the assignment variable, 3) similar baseline characteristics in the treatment and comparison groups, and 4) high levels of compliance to assignment.
- Quasi-experimental designs (other than a regression discontinuity design) can be proposed when randomization is not possible. If a quasi-experimental design is proposed:
 - Justify how the proposed design permits drawing causal conclusions about the effect of the program or policy on the intended student education outcomes, explain how selection bias will be minimized or modeled,⁷ discuss those threats to internal validity that are not addressed convincingly by the design, and explain how conclusions from the research will be tempered in light of these threats.
 - Because quasi-experimental designs can meet the WWC's standards for evidence with reservations only, it is also important to detail how you will ensure that the study will meet these standards (e.g., by establishing equivalence between treatment and comparison groups at baseline and preventing high and/or differential attrition).
- Describe how you will document:
 - The levels of no shows (treatment group members who do not receive the intervention) and crossovers (comparison group members who receive the intervention).
 - The level of bias occurring from overall and differential attrition rates.
 - Any bias that may stem from individuals who join or leave after assignment, (i.e., impacts due to compositional changes within clusters).
- Describe and justify the counterfactual. In evaluations of education programs and policies, individuals in the comparison group typically receive some kind of treatment. It may be a well-defined alternative treatment or a less well-defined standard practice across the district, postsecondary system, or region. A clear description of the program or policy and the counterfactual helps reviewers decide whether the program or policy is sufficiently different from what the comparison group receives to produce different student education outcomes.

⁷ For more information, see Shadish, W. R., Cook, T. D., and Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston, MA: Houghton Mifflin Company.

- Describe strategies or existing conditions that will reduce potential contamination between treatment and comparison groups.
- Discuss how your study, if well implemented, will meet WWC evidence standards (with or without reservations).⁸

Power Analysis:

- Discuss the statistical power of the research design to detect a reasonably expected and minimally important effect of the program or policy on the student education outcomes and consider how the clustering of participants (e.g., students in classrooms and/or schools) will affect statistical power.
- Identify the minimum effect of the program or policy that you will be able to detect, justify why this level of effect would be expected, and explain why this would be a practically important effect.
- Detail the procedure used to calculate either the power for detecting the minimum effect or the minimum detectable effect size. Include the following:
 - The statistical formula you used.
 - The parameters with known values used in the formula (e.g., number of clusters, number of participants within the clusters).
 - The parameters whose values are estimated and how those estimates were made (e.g., intraclass correlations, role of covariates).
 - Other aspects of the design and how they may affect power (e.g., stratified sampling/blocking, repeated observations).
 - Predicted attrition and how it was addressed in the power analysis.
- Provide a similar discussion regarding power for any causal analyses to be done using subgroups of the proposed sample or tests of mediation or moderation, even if those analyses are considered exploratory/secondary.

Include power analyses for all proposed causal analyses.
Include enough information so that reviewers can duplicate your power analysis.

Outcome Measures:

- Discuss how your student education outcome measures are of practical interest to schools and districts, postsecondary institutions and systems, and states. Include [student academic outcomes](#) as well as any [social and behavioral competencies](#) and [employment and earnings outcomes](#) that are of interest to the education agency. The Institute recommends that, where possible, administrative data is used in the evaluation.
- Make clear how the measures align with the theory of change and that the skills or content the program or policy is designed to address are captured in the measures.
- Describe the psychometric properties ([reliability](#) and [validity](#)) of your student education outcome measures and any intermediate outcome measures.
- For programs and policies designed to directly change the teaching and learning environment and, in doing so, indirectly affect student outcomes, provide measures of

⁸ See the WWC's Standards Handbook, Version 4.0 at: <https://ies.ed.gov/ncee/wwc/Handbooks>.

the intermediate outcomes (e.g., teacher or leader behaviors), as well as measures of student education outcomes.

Implementation Study:

In addition to examining levels of [fidelity of implementation](#) and considering them in the impact analysis (as described below), State/Local Evaluation projects must also include an Implementation Study.⁹ The primary goals are to better understand how an intervention is delivered and the factors (e.g., end user characteristics; classroom, school, and district organizational factors; attributes of the intervention) that influence implementation.

Implementation analyses are usually descriptive or correlational, and help identify the key supports and inhibitors to implementation, and adaptations made in response to local context. The results may be used to improve the efficiency of the intervention, e.g., through improvements in design, use, and support; targeting or scaling the intervention; and preparing for adaptations to different local contexts. Relatedly, the results are expected to improve the intervention's theory of change which may inform future designs of this and other interventions.

- Identify the characteristics that may affect implementation you will examine and your rationale for choosing them.
- Identify your measures of these characteristics.
- Describe how you will examine the influence of these characteristics on implementation (e.g., how they inhibit or support implementation).
- Describe how you will identify end user adaptations of the program or policy, and examine what local contexts have led to them and whether they may be correlated with student education outcomes.

Fidelity of Implementation and Comparison Group Practice:

Analyses of fidelity of implementation and comparison group practice help to confirm the integrity of evaluation studies.¹⁰ Fidelity of implementation studies may confirm that the intervention was implemented or, more helpfully, implemented at a level expected to produce beneficial student outcomes. Findings on comparison group practice, when compared or combined with fidelity findings, may confirm that there is a contrast between what the treatment and comparison group receive. Together, they increase the confidence in the findings of an evaluation as they support both beneficial findings (an alternative explanation may be less acceptable once a treatment contrast is identified) and negative or zero impact findings (e.g., weak implementation and lack of treatment contrast are removed as possible causes for null effects). Further, if fidelity measures are incorporated into the impact analysis, they can provide indications (usually not causal) that certain levels or types (e.g., components) of implementation are linked to student outcomes. Such findings provide additional confidence in impact findings as well as useful information for the wider adoption of the intervention.¹¹

⁹ Century and Cassata (2016) describe different approaches to and purposes of implementation analyses.

¹⁰ Weiss, Bloom, and Brock (2014) provide a framework for understanding implementation within program evaluation.

¹¹ For tests of different implementation approaches (e.g., a professional developing program that uses on-line or in-person coaching) to determine differences in their impacts, their design would be considered part of the main impact analysis as they are a comparison of different forms of an intervention. The analysis of the fidelity of implementation under each approach can then be discussed as outlined here.

- Identify the measures of the fidelity of implementation of the program or policy and describe how they capture its core components.¹²
 - If the program or policy includes training of district personnel, you should also identify the measures of fidelity of implementation of the training/trainers.
- Identify the measures of comparison group practices.
- Show that measures of fidelity of implementation of the intervention and comparison group practice are sufficiently comprehensive and sensitive to identify and document critical differences between what the treatment and comparison groups receive.
- Describe your plan for determining the fidelity of implementation of the program or policy within the treatment group and the identification of practice (especially practices that are similar to the treatment) in the comparison group.
 - Include early studies of [fidelity of implementation](#) and comparison group practice to be completed within the first year the program or policy is implemented.¹³
 - Include studies on the fidelity of training and coaching provided to those implementing the intervention.
- Include a plan for how you would respond if either low fidelity (of implementation or training) or similar comparison group practice is found in the early fidelity studies. Such actions are to prevent studies that find no impacts of an intervention but cannot determine whether the finding was due to the intervention or its implementation.
- Describe your plan for incorporating the fidelity measures into your impact analysis, for example,
 - To examine, how different levels of fidelity are related to the intervention's impacts.
 - To identify what level of overall fidelity or levels of fidelity for core components are associated with beneficial impacts.

Determining fidelity of implementation and comparison group practice early on is essential to preventing a confounding of implementation failure with program or policy failure.

Data Analysis:

- Detail your data analysis procedures for all analyses (e.g., impact study, subgroup analyses, fidelity of implementation study, analysis of baseline equivalence), including both quantitative and qualitative methods.
- For your impact analyses,
 - Include and explain the model(s) you will estimate to determine the impact of the intervention.

¹² If needed, you can propose devoting a short period of time (e.g., 2-6 months) to develop a measure of fidelity of implementation or comparison group practice.

¹³ A State/Local Evaluation project can disseminate findings of low fidelity of implementation (or similar comparison group practice) but cannot provide resources for improving implementation.

- Describe your Intention-to-Treat analysis and any additional analyses, e.g., Treatment-on-the-Treated (such as complier average causal effect), variation in impacts for subgroups or sites.
- For regression discontinuity designs, show how your analysis reflects whether you expect to have a sharp or fuzzy design and describe how you will analyze impacts at the cutoff point.
 - If you expect to have a sharp design, indicate how you will handle any no-shows and crossovers.
 - If you expect to have a fuzzy design, describe how you will determine whether the assignment variable is a strong predictor of participation in the intervention.
 - Describe how the analysis will address any use of multiple assignment variables (e.g., reduction to a single assignment variable, separate analysis for each assignment variable).
- Describe the sensitivity analyses you will do to check the robustness of any choices you have made (e.g., the bandwidth used for a regression discontinuity design).
- If you intend to impute missing data, describe the approach you will use to provide unbiased impact estimates.
- Make clear how the data analyses directly answer your research questions.
- Explain how you will measure and report on effect sizes in ways that policymakers and practitioners can readily understand. For example, an evaluation of a reading or math program might report on the number of months gained in reading or math skills as result of the intervention.
- Address any clustering of students in classes and schools.
- Discuss how exclusion from testing and missing data will be handled in your analysis.
- If you intend to link multiple data sets, provide sufficient detail for reviewers to judge the feasibility of the linking plan.

Moderators and Mediators:

In addition to determining overall impacts, State/Local Evaluations are to determine impact for a variety of conditions. Analyses of [moderators](#) and [mediators](#) can make your research more useful to policymakers and practitioners by helping to explain how or under what conditions a program or policy improves student education outcomes and can help explain the often-found variation in impacts across sites. Such analyses can also improve the quality and usefulness of future research syntheses or meta-analyses that may draw upon your work.

- Moderation Analysis: Focus on a small set of moderators for which there is a strong theoretical and/or empirical base to expect they will moderate the impact of the program or policy on the student education outcomes measured. Give particular consideration to factors that may affect the generalizability of the study (e.g., whether the intervention works for some groups of students but not for others, or in schools or neighborhoods with particular characteristics).
- Mediation Analyses: Conduct analyses of potential mediators of the program or policy for which there is a strong theoretical and/or empirical base to expect they will mediate the impact of the intervention on the student education outcomes measured.

- Describe the measures of the moderators and mediators you will examine, how they will be collected, and how they will be analyzed.
- Consider the value of designing the evaluation to also causally test the role of a mediator or moderator for which a strong theoretical and/or empirical base exists regarding its role in the impact of the program or policy on student education outcomes.

Cost Analysis

- The cost analysis is intended to help schools, districts, and states understand the monetary costs of implementing the intervention (e.g., expenditures for personnel, facilities, equipment, materials, training, and other relevant inputs).
 - Describe how you will identify all potential expenditures and compute the following costs.
 - Annual cost and a cost across the lifespan of the program.
 - Cost at each level (e.g., state, district, school, classroom, student) individually as well as overall cost.
 - Cost per component (for any intervention composed of multiple components).
 - For new policies and programs (and for ongoing ones where available), the breakdown between start-up costs and maintenance costs.
 - Intervention costs may be contrasted with the costs of comparison group practice to reflect the difference between them.
 - Based on the sample you will use in the cost analysis, describe what population of districts, schools, classrooms, and/or students the cost analysis will be generalizable to.

Cost-Effectiveness Analysis

- The cost-effectiveness analysis is intended to help schools, districts and states consider the effectiveness and cost of the intervention together in order to be able to compare different interventions and identify which may lead to the greatest gains in student outcomes for the lowest costs.
 - A cost-effectiveness analysis is expected for only the primary student outcome measures. The analysis should be conducted at the level that is most relevant for the intervention being studied, whether the school, classroom, or individual student level.
 - Describe the cost-effectiveness method you intend to use.¹⁴
 - If you are evaluating the impact of any specific component(s) of the intervention—in addition to the overall impact of the intervention—you should provide additional cost-effectiveness analysis for the separate components evaluated.

¹⁴ Examples of methods used in the field include Columbia University's ingredients costing method (<http://www.tc.columbia.edu/articles/2015/september/cost-effectiveness-analysis-made-easy-a-new-tool-from-teachers-college-/>) for which a cost analysis tool has been developed (<https://www.cbcsecosttoolkit.org/>) and the UK's Education Endowment Foundation's approach (https://educationendowmentfoundation.org.uk/public/files/Evaluation/Setting_up_an_Evaluation/EEF_guidance_to_evaluators_on_cost_evaluation_2016_revision_FINAL.pdf). Other accepted methods may also be proposed.

Timeline:

- Provide a timeline for each step in your evaluation including such actions as sample selection and assignment, baseline data collection, implementation, ongoing data collections, fidelity of implementation and comparison group practice study, impact analysis, and dissemination.
- Indicate procedures to guard against bias entering into the data collection process (e.g., pretests occurring after the program or policy has been implemented or differential timing of assessments for treatment and control groups).
- The timeline may be placed in either the Project Narrative or Appendix C. However, the discussion of your project's timeline is only allowed in the Project Narrative.

d. Personnel – The purpose of this section is to describe the relevant expertise of your research team, the responsibilities of each team member, and each team member's time commitments.

Requirements: In order to be responsive and sent forward for peer review, applications under the State/Local Evaluation topic **must** describe

- (i) The PI or Co-PI from the research institution;
- (ii) The PI or Co-PI from the state or local educational agency; and
- (iii) Other key personnel at both the primary applicant institution and any subaward institutions.

Recommendations for a Strong Application: In order to address the above requirements, the Institute recommends that you include the following in your Personnel section to demonstrate that your team possesses the appropriate training and experience, has oversight over the program or policy, and will commit sufficient time to competently implement the proposed research.

- Identify and briefly describe the following for all key personnel (i.e., Principal Investigator, Co-Principal Investigators, Co-Investigators) on the project team:
 - 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 working in similar partnerships, producing products of value to an education agency, and disseminating research findings in peer-reviewed scientific journals and other venues targeting policymakers and practitioners.
- Identify the key personnel responsible for the cost analysis and cost-effectiveness analysis and describe their qualifications to carry out these analyses.
- Describe the education agency personnel's role in making decisions regarding the program or policy being evaluated. Agency personnel should include persons with responsibility for the program or policy and its implementation across the district or state. School-based personnel (unless holding district-wide authority) and personnel from an institutional research office (unless the issue falls under this office) are normally not the appropriate personnel to serve as the agency PI or Co-PI.
 - If a separate office in the education agency is providing data to the project, it can be helpful to include a person from that office in the key personnel.

- Describe the project team's expertise with the evaluation design proposed. This expertise may include past experience using such a design and/or training in the design's use.
- Describe the PI's qualifications and experience for managing a grant of this size.
- Make sure at least one key person has a large enough time commitment to help maintain the progress of the work throughout the project.
- If any key personnel intend to donate time to the project, his or her donated time must be listed in the budget and budget narrative and described as cost sharing. The Institute does not require or request such cost sharing nor consider it in award decisions but does require that it be documented. Personnel proposing to donate time must demonstrate that they have such time available.
- Include a plan to ensure the objectivity of the research if key personnel were involved in the development of the program or policy, are from for-profit entities (including those involved in its commercial production or distribution), or have a financial interest in the outcome of the research.
 - Show that the key personnel who are responsible for the design of the evaluation, the assignment to treatment and comparison groups, and the data analyses did not and do not participate in the development or distribution of the intervention and do not have a financial interest in the intervention.
 - The developer or distributor of the intervention should not serve as Principal Investigator on the project. However, the developer or distributor of the intervention may be a part of the project team if they are providing routine implementation support (e.g., professional development) that is no greater than a school, district, or postsecondary institution would routinely receive (e.g., if not taking part in the study). If the developer or distributor is included in this way, discuss how their involvement will not jeopardize the objectivity of the evaluation of the impact of the intervention.
- If you have previously received an award from any source to evaluate a program or policy, discuss any theoretical and practical contributions made by your previous work.
- Do not propose to hire experts in specific methodological or policy issues after the grant is received.

e. **Resources** – The purpose of this section is to describe how the partnership has both the institutional capacity to complete a project of this type and the access to the resources needed to successfully complete this project.

Requirements: In order to be responsive and sent forward for peer review, applications under the State/Local Evaluation topic **must** describe

- (i) The resources available to conduct the project.

Recommendations for a Strong Application: In order to address the above requirement, the Institute recommends that you include the following in your Resources section to demonstrate that your team has a plan for acquiring or accessing the facilities, equipment, supplies, and other resources required to support the proposed work and the commitments of each partner for the implementation and success of the project.

- Describe your institutional capacity and experience to manage a grant of this size.

- Describe your access to resources available at the primary institution and any subaward institutions (including the partner organization).
- Include a joint Letter of Agreement in [Appendix E](#) from the primary partnering institutions (the research institution and the education agency) documenting their participation and cooperation and clearly setting out their expected roles and responsibilities in the partnership. Include separate similar Letters of Agreement from the other members of the partnership.
- Describe your plan for acquiring any resources that are not currently accessible, will require significant expenditures, and are necessary for the successful completion of the project (e.g., equipment, test materials, curriculum or training materials).
- Describe your access to the schools (or other authentic education settings) in which the research will take place. Include letters of agreement in Appendix E documenting the participation and cooperation of the schools. Convincing letters will convey that the organizations understand what their participation in the study will involve (e.g., ongoing student and teacher surveys, student assessments, classroom observations).
- Include information about student, teacher and school incentives, if applicable.
- Describe your access to any data sets that you will require. Include letters of agreement, data licenses, or existing Memoranda of Understanding in Appendix E to document that you will be able to access the data for your proposed use.
- If teachers or other school staff are expected to play an important role in the research (e.g., through teacher observations, surveys, logs), you should discuss how their cooperation will be obtained and how much they already know about and support the work. It would also be helpful to provide evidence from past work of high teacher or staff involvement in a study.
- Describe your resources to carry out your plans to disseminate the results from your evaluation as described in the required [Appendix A](#).
- Note any specific team members, offices, or organizations expected to take part in your dissemination plans and their specific roles.

(2) Awards

A State/Local Evaluation project **must** conform to the following limits on duration and cost:

- **The maximum duration of a State/Local Evaluation project is 5 years.**
- **The maximum award for a State/Local Evaluation project is \$5,000,000 (total cost = direct costs + indirect costs).**
 - Grant funding must be used solely for evaluation purposes. Funds must not be used to support implementation of the policy or the program (e.g., materials, texts, software, computers, assessments, training, or coaching required for implementation).
 - It is permissible to use grant funds to pay participants for completing questionnaires, surveys, and assessments that are part of evaluation so long as researchers obtain approval from an Institutional Review Board.

(3) Data Management Plan

Applications under the State/Local Evaluation topic must include a Data Management Plan (DMP) placed in [Appendix F](#). Your DMP (recommended length: no more than 5 pages) describes your plans

for making the [final research data](#) from the proposed project accessible to others. **Applications that do not contain a DMP in Appendix F 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 <http://ies.ed.gov/funding/researchaccess.asp>.

DMPs are expected to differ depending on the nature of the project and the data collected. By addressing the items identified below, your DMP describes how you will meet the requirements of the Institute's policy for data sharing. The DMP should include the following:

- Plan for pre-registering any causal impact studies in an appropriate registry for education evaluations (e.g., 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 persons seeking to use the data will be required to sign an agreement that specifies conditions under which the data may be used. If so you may wish to provide a copy of the agreement in Appendix F.
- 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 budget narrative. The peer-review process will not include the DMP in the scoring of the scientific merit of the application; rather the Institute's 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 peer-review process but your DMP is determined incomplete, you will be required to provide additional detail regarding your DMP (see [Pre-Award Requirements](#)).

PART III: COMPETITION REGULATIONS AND REVIEW CRITERIA

A. FUNDING MECHANISMS AND RESTRICTIONS

1. Mechanism of Support

The Institute intends to award grants pursuant to this Request for Applications.

2. Funding Available

Although the Institute intends to support the research 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. The Institute makes its awards to the highest quality applications, as determined through scientific peer review regardless of topic.

The size of the award depends on the research topic and scope of the project. Please attend to the duration and budget maximums in Part II Topic Requirements.

Topic	Maximum Grant Duration	Maximum Grant Award
Researcher-Practitioner Partnerships in Education Research	2 years	\$400,000
Evaluation of State and Local Education Programs and Policies	5 years	\$5,000,000

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 may not 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](#).

In particular, 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 (e.g., working lunches); however, the Institute will determine whether these costs are allowable in keeping with the Uniform Guidance Cost Principles. Grantees are responsible for the proper use of their grant awards and may have to repay funds to the Department if they violate the rules for meeting- and conference-related expenses or other disallowed expenditures.

4. Program Authority

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

5. Applicable Regulations

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

B. ADDITIONAL AWARD REQUIREMENTS

1. Public Availability of Data and Results

You must include a Data Management Plan (DMP) in [Appendix F: Data Management Plan](#) if you are submitting an application under the State/Local Evaluation topic. The scientific peer-review process will not include the DMP in the scoring of the scientific merit of the application. Instead, the Institute's 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.

Recipients of awards are expected to publish or otherwise make publicly available the results of the work supported through this program. Institute-funded investigators must submit [final manuscripts](#) resulting from research supported in whole or in part by the Institute to the Educational Resources Information Center (ERIC, <http://eric.ed.gov>) upon acceptance for publication. An author's final manuscript is defined as the final version accepted for journal publication and includes all graphics and supplemental materials that are associated with the article. The Institute will make the manuscript available to the public through ERIC no later than 12 months after the official date of publication. Investigators and their institutions are responsible for ensuring that any publishing or copyright agreements concerning submitted articles fully comply with this requirement.

2. Special Conditions on Grants

The Institute 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.

3. Demonstrating Access to Data and Authentic Education Settings

The research you propose to do under a specific topic will most likely require that you have (or will obtain) access to [authentic education settings](#) (e.g., classrooms, schools and districts, postsecondary institutions and systems), 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 E from those who have responsibility for or access to the data or settings you wish to incorporate when you submit your application. Even in circumstances where you have included such letters with your application, **the Institute will require additional supporting evidence prior to the release of funds**. If you cannot provide such documentation, the Institute may not award the grant or may withhold funds.

You will need supporting evidence of partnership or access if you are:

- *Conducting research in or with authentic 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 authentic 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 the Institute 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, the Institute will 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 the Institute 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, the Institute will 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, the Institute strongly advises applicants to establish a written agreement, within 3 months of receipt of an award, among all key collaborators (e.g., Principal and co-Principal Investigators) and their institutions regarding roles, responsibilities, access to data, publication rights, and decision-making procedures.

C. OVERVIEW OF APPLICATION AND SCIENTIFIC PEER REVIEW PROCESS

1. Submitting a Letter of Intent

The Institute strongly encourages potential applicants to submit a Letter of Intent by June 21, 2018. Letters of Intent are optional, non-binding, and not used in the scientific peer review of a subsequent application. If you submit a Letter of Intent, one of the Institute's Program Officers will contact you regarding your proposed research to offer assistance. The Institute also uses the Letter 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.

Should you miss the deadline for submitting a Letter of Intent, you still may submit an application. If you miss the Letter of Intent deadline, the Institute asks that you inform the relevant Program Officer of your intention to submit an application.

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).

- Descriptive title
- Topic (Researcher-Practitioner Partnerships or State/Local Evaluation)
- Brief description of the proposed project
- Name, institutional affiliation, address, telephone number and e-mail address of the Principal Investigator and any co-Principal Investigators
- Name and institutional affiliation of any key collaborators and contractors
- Duration of the proposed project (attend to the Duration maximums for the topic)
- Estimated total budget request (attend to the Budget maximums for the topic)

2. Resubmissions and Multiple Submissions

If you intend to revise and resubmit an application that was submitted to one of the Institute's previous competitions but that was not funded, you must indicate on the [SF-424 Form of the Application Package \(Items 4a and 8\) \(see Part V.E.1.\)](#) that the FY 2019 application is a resubmission and include the application number of the previous application (an 11-character alphanumeric identifier beginning "R305" entered in Item 4a). Prior reviews will be sent to this year's reviewers along with the resubmitted application. You must describe your response to the prior reviews using [Appendix B \(see Part IV.D.4.\)](#). Revised and resubmitted applications will be reviewed according to this FY 2019 Request for Applications. Please note that resubmissions of applications previously submitted to the Continuous Improvement Research in Education topic will not be accepted under the FY2019 competition.

If you submitted a somewhat similar application in the past and did not receive an award but are submitting the current application as a new application, you should indicate on the application form that the FY 2019 application is a new application. In [Appendix B \(see Part IV.D.4.\)](#), you should provide a rationale explaining why your FY 2019 application should be considered a new application rather than a revision. If you do not provide such an explanation, then the Institute may send the reviews of the prior unfunded application to this year's reviewers along with the current application.

You may submit applications to more than one of the Institute's FY 2019 grant programs. In addition, within a particular grant program or topic, you may submit multiple applications. However, you may submit a given application only once for the FY 2019 grant competitions (i.e., 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, the Institute 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 4:30:00 p.m. Eastern Time on August 23, 2018 through the Internet using the software provided on the Grants.gov website <http://www.grants.gov/>. You must follow the application procedures and submission requirements described in [Part IV Preparing Your Application](#) and [Part V Submitting Your Application](#) and the instructions in the User Guides provided by Grants.gov, https://www.grants.gov/help/html/help/GetStarted/Get_Started.htm.

After receiving the applications, Institute staff will review each application for [compliance](#) and [responsiveness](#) to this Request for Applications. Applications that do not address specific requirements of this request will not be considered further.

Once you formally submit an application, Institute staff will not comment on its status until the award decisions are announced (no later than July 1, 2019) except with respect to issues of compliance and responsiveness. This communication will come through the Applicant Notification System (<http://iesreview.ed.gov>).

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

4. Scientific Peer Review Process

The Institute 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 Institute's website, http://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 Institute's scientific review panels http://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, the Institute 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 Institute-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 students. The Institute 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 goal. Information pertinent to each of these criteria is described in [Part II Topic Requirements](#).

a) Significance

Does the applicant provide a compelling rationale for the significance of the research as defined in the Significance section for the topic under which the applicant is submitting the application?

b) Partnership

Does the applicant provide a description of the current partnership and plans for the development of the partnership in line with what is requested in the Partnership section for the topic under which the applicant is submitting the application?

c) Research Plan

Does the applicant meet the Requirements and Recommendations in the Research Plan section for the topic under which the applicant is submitting the application?

d) Personnel

Does the description of the personnel make it apparent that the Principal Investigator and other key personnel possess appropriate training and experience and will commit sufficient time to competently implement the proposed research?

e) Resources

Does the applicant have the facilities, equipment, supplies, and other resources required to support the proposed activities? Do the commitments of each partner show support for the implementation and success of the project and the dissemination of its findings to a range of audiences?

6. Award Decisions

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

- Scientific merit as determined by 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;
- Alignment of project budget and duration with duration and budget maximums specified in the Request for Applications, i.e., the proposed research can be carried out with the proposed budget and project duration after making any necessary adjustments to meet the duration and budget maximums; and
- Availability of funds.

PART IV: PREPARING YOUR APPLICATION

A. OVERVIEW

The application contents—individual forms and their PDF attachments—represent the body of an application to the Institute. **All applications for Institute funding must be self-contained.** As an example, reviewers are under no obligation to view an Internet website if you include the site address (URL) in the application. In addition, **you may not submit additional materials or information directly to the Institute after the application package is submitted.**

B. GRANT APPLICATION PACKAGE

The Application Package for this competition (84-305H2019) provides all of the forms that you must complete and submit. The application forms approved for use in the competition specified in this Request for Applications is the government-wide SF-424 Research and Related (R&R) Form Family (OMB Number 4040-0001).¹⁵

1. Date Application Package is Available on Grants.gov

The Application Package will be available on <http://www.grants.gov/> by June 21, 2018.

2. How to Download the Correct Application Package

To find the correct downloadable Application Package, you must first search by the CFDA number for this research competition without the alpha suffix. To submit an application to the Partnerships and Collaborations Focused on Problems of Practice or Policy Grants program, you must search on: CFDA 84.305.

The Grants.gov search on CFDA 84.305 will yield more than one Application Package. For the Partnerships and Collaborations Focused on Problems of Practice or Policy Grants program, you must download the Application Package marked:

- Partnerships and Collaborations Focused on Problems of Practice or Policy CFDA 84.305H

You must download the Application Package that is designated for this grant competition. If you use a different Application Package, even if it is for another Institute competition, the application will be submitted to the wrong competition. Applications submitted using the incorrect application package run the risk of not being reviewed according to the requirements and recommendations for the Partnerships and Collaborations competition.

See [Part V Submitting Your Application](#), for a complete description of the forms that make up the application package and directions for filling out these forms.

¹⁵ According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. The valid OMB control numbers for this information collection are 4040-0001 and 4040-0010. The time required to complete this information collection is estimated to average 40 hours per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collection. If you have any comments concerning the accuracy of the time estimate(s) or suggestions for improving this family of forms, please write to: U.S. Department of Education, Washington, D.C. 20202-4537.

C. GENERAL FORMATTING

For a complete application, you must submit the following as individual attachments to the R&R forms that are contained in the application package for this competition in Adobe Portable Document Format (PDF):

- Project Summary/Abstract;
- Project Narrative; and if applicable, Appendix A, Appendix B, Appendix C, Appendix D, and Appendix E (all together as one PDF file);
- Bibliography and References Cited;
- Research on Human Subjects Narrative (i.e., Exempt or Non-Exempt Research Narrative);
- A Biographical Sketch for each senior/key person;
- A Narrative Budget Justification for the total Project budget; and
- Subaward Budget(s) that has (have) been extracted from the R&R Subaward Budget (Fed/Non-Fed) Attachment(s) Form, if applicable.

Information about formatting for all of these documents except the [Subaward budget attachment \(see Part V.E.6.\)](#) is provided below.

1. Page and Margin Specifications

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

2. Page Numbering

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

3. Spacing

We recommend that you use single spacing.

4. Type Size (Font Size)

Small type size makes it difficult for reviewers to read the application. To ensure legibility, we recommend the following:

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

As a practical matter, if you use a 12-point Times New Roman font without compressing, kerning, condensing, or other alterations, the application will typically meet these recommendations. When converting documents into PDF files, you should check that the resulting type size is consistent with the original document.

5. Graphs, Diagrams, and Tables

We recommend that you use black and white in graphs, diagrams, tables, and charts. If color is used, you should ensure that the material reproduces well when printed or photocopied in black and white. Text in figures, charts, and tables, including legends, should be readily legible.

D. PDF ATTACHMENTS

The information you include in these PDF attachments provides the majority of the information on which reviewers will evaluate the application.

1. Project Summary/Abstract

a) Submission

You must submit the project summary/abstract as a separate PDF attachment at Item 7 of the Other Project Information form (see [Part V.E.4 Research & Related Other Project Information](#)).

b) Recommended page length

We recommend that the Project Summary/Abstract be no more than one page.

c) Content

The project summary/abstract should include the following:

- **Title** of the project.
- The **topic** to which you are applying (Research Partnerships or State/Local Evaluations).
- **Partner Institutions:** Identification of the institutions working together on the project.
- **Education Issue:** Identification of the education issue the partnership will examine.
- **Purpose:** A brief description of the purpose of the project (e.g., to examine the potential reasons for low student attendance) and its significance in improving education outcomes for U.S. students.
- **Setting:** A brief description of the location (e.g., schools, district, state) where the research will take place and other important characteristics of the locale (e.g., urban/suburban/rural).
- **Population/Sample:** A brief description of the sample that will be involved in the study (e.g., number of participants (e.g., schools or students), its composition (e.g., age or grade level, race/ethnicity, SES), and the population the sample is intended to represent).
- **Partnership Activities:** A brief description of activities that will be used to build the partnership.
- **Research Design and Methods:** Briefly describe the major features of the design and methodology to be used. (e.g., exploratory data analysis, representative survey).
- **Key Measures:** A brief description of key measures and outcomes.
- **Data Analytic Strategy:** A brief description of the data analytic strategy that will be used to answer research questions.

Please see <http://ies.ed.gov/ncer/projects> for examples of the content to be included in your project summary/abstract.

2. Project Narrative

a) Submission

You must submit the project narrative as a separate PDF attachment at Item 8 of the Other Project Information form (see [Part V.E.4 Research & Related Other Project Information](#)).

b) Recommended page length

We recommend that the Project Narrative be no more than 25 pages. To help reviewers locate information and conduct the highest quality review, write a concise and easy to read narrative, with

pages numbered consecutively using the header or footer function to place numbers at the top or bottom right-hand corner.

c) Citing references in text

We recommend you use the author-date style of citation (e.g., James, 2004), such as that described in the Publication Manual of the American Psychological Association, 6th Ed. (American Psychological Association, 2009).

d) Content

Your project narrative **must** include five sections in order to be compliant with the requirements of this Request for Applications: (1) Significance, (2) Partnership, (3) Research Plan, (4) Personnel, and (5) Resources. Information to be included in each of these sections is detailed in [Part II Topic Requirements](#). **The information you include in each of these five sections will provide the majority of the information on which reviewers will evaluate the application.**

3. Appendix A: Dissemination Plan (Required)

a) Submission

All applications **must** include Appendix A after the project narrative as part of the same PDF attachment at Item 8 of the Other Project Information form (see [Part IV.E.4 Research & Related Other Project Information](#)).

b) Recommended page length

We recommend that Appendix A be no more than two pages.

c) Content

In Appendix A, describe your required plan to disseminate the findings from the proposed project. In your dissemination plan, you should:

- Identify the audiences that you expect will be most likely to benefit from your research (e.g., federal policymakers and program administrators, state policymakers and program administrators, state and local school system administrators, school administrators, teachers and other school staff, parents, students, and other education researchers).
- Discuss the different ways in which you intend to reach these audiences through the major publications, presentations, and products you expect to produce.
 - Projects are expected to disseminate their findings throughout the education agency partner and the community it serves. For example:
 - An agency-wide oral briefing that includes stakeholders from across the education agency.
 - A written brief available free to school staff, parents, students, and the community written for a non-technical audience that describes the research questions, methodology, main results, policy implications, and possible next steps.
 - Projects are expected to publish and present in venues designed for policymakers, practitioners, and the general public including practitioner journals and conferences, and electronic venues (e.g., websites, webinars, podcasts, videos). For example:
 - Give presentations and workshops at meetings of professional associations of teachers and leaders
 - Publish in practitioner journals
 - Engage in activities with relevant IES-funded Research and Development (R&D) Centers, Research Networks, or Regional Educational Laboratories (REL)

- R&D Centers: <https://ies.ed.gov/ncer/RandD/>
 - Research Networks: <https://ies.ed.gov/ncer/research/researchNetworks.asp>
 - RELs: <https://ies.ed.gov/ncee/edlabs/>
- Projects are expected to publish their findings in scientific, peer-reviewed journals and present them at academic conferences.
 - Publications are expected to be provided to the Institute's Education Resources Information Center (ERIC, <http://eric.ed.gov>)
- Be cognizant of the particular research topic of your project and how this affects the type and use of your findings.
 - Research Partnerships projects are expected to carry out exploratory research to identify potentially important associations between malleable factors and student education outcomes. Findings from these projects are likely to be most useful in pointing out potentially fruitful areas for further attention from researchers, policymakers and practitioners rather than providing proof or strong evidence for adopting specific interventions.
 - State/Local Evaluation projects are to evaluate the causal impact of an education policy or program on student education outcomes. The Institute considers all types of findings from these projects to be potentially useful to researchers, policymakers, and practitioners.
 - Findings of a beneficial impact on student outcomes could support the wider use of the program/policy and the further adaptation of it to different conditions.
 - Findings of no impacts on student outcomes (with or without impacts on more intermediate outcomes such as a change in teacher instruction) are important for decisions regarding the ongoing use and wider dissemination of the program/policy, the revision of the program/policy and its implementation, and the revision of the theory of change underlying it.

The Dissemination Plan is the only information that should be included in Appendix A.

4. Appendix B: Response to Reviewers (Required for Resubmissions)

a) Submission

If your application is a resubmission, you **must** include Appendix B at the end of the project narrative. If your application is one that you consider to be new but that is similar to a previous application, you should include Appendix B. Include Appendix B after Appendix A and submit it as part of the same PDF attachment at Item 8 of the Other Project Information form (see [Part V.E.4 Research & Related Other Project Information](#)).

b) Recommended page length

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

c) Content

Use Appendix B to describe how the revised application is responsive to prior reviewer comments.

If you have submitted a somewhat similar application in the past but are submitting the current application as a new application, you should use Appendix B to provide a rationale explaining why the current application should be considered a "new" application rather than a "resubmitted" application.

This response to the reviewers is the only information that should be included in Appendix B.

5. Appendix C: Supplemental Figures, Charts, and Tables (Optional)

a) Submission

If you choose to have an Appendix C, you must include it at the end of the project narrative, following Appendix B (if included) and Appendix A, and submit it as part of the same PDF attachment at Item 8 of the Other Project Information form (see [Part V.E.4 Research & Related Other Project Information](#)).

b) Recommended page length

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

c) Content

You may include figures, charts, tables (e.g., a timeline for your research project, a diagram of the management structure of your partnership), or measures (e.g., individual items, tests, surveys, observation and interview protocols) used to collect data for your project. These are the only materials that should be included in Appendix C.

6. Appendix D: Examples of Materials or Assessments (Optional)

a) Submission

If you choose to have an Appendix D, you must include it at the end of the project narrative, following Appendix C if included (if not it should follow any Appendices included) and submit it as part of the same PDF attachment at Item 8 of the Other Project Information form (see [Part V.E.4 Research & Related Other Project Information](#)).

b) Recommended page length

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

c) Content

In Appendix D, if you are proposing to study an education issue, approach or program or policy you may include examples of curriculum material, computer screen shots, assessment items, or other materials used to be studied. These are the only materials that should be included in Appendix D.

7. Appendix E: Letters of Agreement (Optional)

a) Submission

You must include an Appendix E at the end of the project narrative, following Appendix D if included (if not it should follow any Appendices included) and submit it as part of the same PDF attachment at Item 8 of the Other Project Information form (see [Part V.E.4 Research & Related Other Project Information](#)).

b) Recommended page length

We do not recommend a page length for Appendix E.

c) Content

Include in Appendix E the Letters of Agreement from partners (e.g., research institutions, state and local education agencies, other partnering institutions), sites in which the research will take place (e.g., schools), data sources (e.g., state agencies holding administrative data), and consultants. The key research institution(s) and education agency(s) forming the partnership **should** submit a joint Letter of Agreement documenting their participation and cooperation in the partnership and clearly setting out their expected roles and responsibilities in the partnership. Other members of the partnership should submit similar separate letters. Ensure that the letters reproduce well so that reviewers can easily read them. Do not reduce the size of the letters. Although, see [Part V.D.4. Attaching Files](#) 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 E.

8. Appendix F: Data Management Plan (Required for Applications under the State/Local Evaluation topic)

a) Submission

If you are applying under the State/Local Evaluation topic, you **must** include Appendix F following the other Appendices included at the end of the project narrative and submit it as part of the same PDF attachment at Item 8 of the Other Project Information form (see [Part V.E.4 Research & Related Other Project Information](#)). If you are applying under the Researcher-Practitioner Partnership topic, do not include Appendix F.

b) Recommended page length

We recommend that Appendix F be no more than five pages.

c) Content

Include in Appendix F your Data Management Plan (DMP). The [content of the DMP](#) is discussed under the State/Local Evaluation topic in [Part II.2.b.\(3\)](#). These are the only materials that should be included in Appendix F.

9. Bibliography and References Cited

a) Submission

You must submit this section as a separate PDF attachment at Item 9 of the Other Project Information form (see [Part V.E.4 Research & Related Other Project Information](#)).

b) Recommended page length

We do not recommend a page length for the Bibliography and References cited.

c) Content

You should include complete citations, including the names of all authors (in the same sequence in which they appear in the publication), titles (e.g., article and journal, chapter and book, book), page numbers, and year of publication for literature cited in the project narrative.

10. Research on Human Subjects Narrative

a) Submission

The human subjects narrative must be submitted as a PDF attachment at Item 12 of the Other Project Information form (see [Part V.E.4 Research & Related Other Project Information](#)).

b) Recommended page length

We do not recommend a page length for the Human Subjects Narrative.

c) Content

The human subjects narrative should address the information specified by the U.S. Department of Education's Regulations for the Protection of Human Subjects (see <http://www2.ed.gov/about/offices/list/ocfo/humansub.html> for additional information).

Exempt Research on Human Subjects Narrative

Provide an "exempt" narrative if you checked "yes" on Item 1 of the Research & Related Other Project Information form (see [Part V.E.4 Research & Related Other Project Information](#)). The narrative must contain sufficient information about the involvement of human subjects in the proposed research to allow a determination by the Department that the designated exemption(s) are appropriate. The six categories of research that qualify for exemption from coverage by the regulations are described on the Department's website <http://www2.ed.gov/policy/fund/guid/humansub/overview.html>.

Non-exempt Research on Human Subjects Narrative

If some or all of the planned research activities are covered (not exempt) from the Human Subjects Regulations and you checked "no" on Item 1 of the Research & Related Other Project Information form (see [Part V.E.4 Research & Related Other Project Information](#)), provide a "non-exempt research" narrative. The non-exempt narrative should describe the following: the characteristics of the subject population; the data to be collected from human subjects; recruitment and consent procedures; any potential risks; planned procedures for protecting against or minimizing potential risks; the importance of the knowledge to be gained relative to potential risks; and any other sites where human subjects are involved.

Note that 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/selected 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 after the formal request.

11. Biographical Sketches of Senior/Key Personnel

a) Submission

Each sketch will be submitted as a separate PDF attachment and attached to the Research & Related Senior/Key Person Profile (Expanded) form (see [Part V.E.2 Research & Related Senior/Key Person Profile \[Expanded\]](#)). The Institute encourages you to use the [IES Biosketch template](#) available through [SciENcv](#) or you may develop your own biosketch format.

b) Recommended page length

We recommend that each Biographical Sketch be no more than five pages, which includes Current and Pending Support.

c) Content

Provide a biographical sketch for the Principal Investigator, each co-Principal Investigator, and each co-Investigator that includes information sufficient to demonstrate that key personnel possess training and expertise commensurate with their specified duties on the proposed project (e.g., publications, grants, and relevant research experience). If you'd like, you may also include biographical sketches for consultants (this form will allow for up to 40 biographical sketches in total).

Provide a list of current and pending grants for the Principal Investigator, each Co-Principal Investigator, and other key personnel, along with the proportion of his/her time, expressed as percent effort over a 12-month calendar year, allocated to each project. Include the proposed grant as one of the pending grants in this list. If the total 12-month calendar year percent effort across all current and pending projects exceeds 100 percent, you must explain how time will be allocated if all pending applications are successful in the Narrative Budget Justification. If you use [SciENcv](#), the information on current and pending support will be entered into the IES biosketch template. If you use your own format, you will need to provide this information in a separate table.

12. Narrative Budget Justification

a) Submission

The narrative budget justification must be submitted as a PDF attachment at Section K of the first project period of the Research & Related Budget (SF 424) Sections A & B; C, D, & E; and F-K form for the Project (see [Part V.E.5 Research & Related Budget \(Total Federal + Non-Federal\) - Sections A & B; C, D, & E; and F-K](#)). For grant submissions with a subaward(s), a separate narrative budget justification for each subaward must be submitted and attached at Section K of the Research & Related Budget (SF 424) for the specific Subaward/Consortium that has been extracted and attached using the R&R Subaward Budget (Fed/Non-Fed) Attachment(s) Form (see [Part V.E.6](#)).

b) Recommended page length

We do not recommend a page length for the Narrative Budget Justification.

c) Content

A narrative budget justification must be submitted for the Project budget, and a separate narrative budget justification must be submitted for any subaward budgets included in the application. Each narrative budget justification should provide sufficient detail to allow reviewers to judge whether reasonable costs have been attributed to the project and its subawards, if applicable. The budget justification should correspond to the itemized breakdown of project costs that is provided in the corresponding Research & Related Budget (SF 424) Sections A & B; C, D, & E; and F-K form for each year of the project. The narrative should include the time commitments for key personnel expressed as annual percent effort (i.e., calculated over a 12-month period) and brief descriptions of the responsibilities of key personnel. For consultants, the narrative should include the number of days of anticipated consultation, the expected rate of compensation, travel, per diem, and other related costs. A justification for equipment purchases, supplies, travel (including information regarding number of days of travel, mode of transportation, per diem rates, number of travelers, etc.), and other related project costs should also be provided in the budget narrative for each project year outlined in the Research & Related Budget (SF 424).

d) Indirect Cost Rate

You must use your institution's federally negotiated indirect cost rate (see [Part III.A.3 Special Considerations for Budget Expenses](#)). When calculating your indirect costs on expenses for research conducted in field settings, you should apply your institution's federally negotiated off-campus indirect cost rate.

If your institution does not have a federally negotiated indirect cost rate you should consult a member of the Indirect Cost Group (ICG) in the U.S. Department of Education's Office of the Chief Financial Officer <http://www2.ed.gov/about/offices/list/ocfo/fipao/icgreps.html> to help you estimate the indirect cost rate to put in your application.

PART V: SUBMITTING YOUR APPLICATION

This part of the RFA describes important Grants.gov submission procedures you need to be aware of to ensure your application is received on time (no later than 4:30:00 p.m. Eastern Time on August 23, 2018) and accepted by the Institute. Any questions that you have about submitting your application through Grants.gov should be addressed to the Grants.gov Contact Center (support@grants.gov or 1-800-518-4726). You can also access the Grants.gov Self-Service Knowledge Base web portal at <https://grants-portal.psc.gov/Welcome.aspx?pt=Grants> for further guidance and troubleshooting tips.

A. MANDATORY ELECTRONIC SUBMISSION OF APPLICATIONS AND DEADLINE

Applications must be submitted electronically through the Grants.gov web site, <http://www.grants.gov/> and must be received (fully uploaded and processed by Grants.gov) no later than 4:30:00 p.m. Eastern Time on August 23, 2018. **Applications received by Grants.gov after the 4:30:00 p.m. Eastern Time application deadline will be considered late and will not be sent forward for scientific peer review.**

Submission through Grants.gov is required unless you qualify for one of the exceptions to the electronic submission requirement and submit, no later than 2 weeks before the application deadline date, a written statement to the Institute that you qualify for one of these exceptions. A description of the Allowable Exceptions to Electronic Submissions is provided at the end of this document.

Please consider submitting your application ahead of the deadline date (the Institute recommends 3 to 4 days in advance of the closing date and time) to avoid running the risk of a late submission that will not be reviewed. **The Institute does not accept late applications.**

B. REGISTER ON GRANTS.GOV

To submit an application to the Institute via Grants.gov, your organization must have four things:

- A Data Universal Numbering System (DUNS) number,
- An active System for Award Management (SAM) registration,
- An active Grants.gov account, and
- A workspace for your application within Grants.gov.

1. Register Early

Grants.gov registration involves many steps including obtaining a DUNS number if you do not already have one. The DUNS number is necessary to complete registration on SAM (www.sam.gov), which itself may take approximately one week to complete. Note: SAM registration can take several weeks to complete, depending upon the completeness and accuracy of the data entered into the SAM database by the applicant organization. During SAM registration the E-Business Point of Contact (eBIZ POC) role for the organization is assigned. The eBIZ POC is the individual within the organization who oversees all activities within Grants.gov and gives permissions to Authorized Organization Representatives (AORs). AORs are allowed to submit grant applications on behalf of their organization. It is the eBIZ POC's responsibility to renew the organization's SAM registration annually.

There have been some changes to the SAM registration process. Beginning on April 27, 2018, new entities, or entities renewing or updating their registration will be required to submit an original, signed notarized letter confirming the authorized Entity Administrator associated with the DUNS number before the registration is activated. Visit this FAQ page for more information: <https://www.gsa.gov/about->

[us/organization/federal-acquisition-service/office-of-systems-management/integrated-award-environment-iae/sam-update](https://www.usa.gov/organization/federal-acquisition-service/office-of-systems-management/integrated-award-environment-iae/sam-update)

You may begin working on your application while completing the registration process, but you cannot submit an application until all of the Registration steps are complete. Please note that once your SAM registration is active, it will take 24 to 48 hours for the information to be available in Grants.gov, and before you can submit an application through Grants.gov.

For additional assistance with registering your DUNS number in SAM or updating your existing SAM account, the Department of Education has prepared a SAM.gov Tip Sheet which you can find at: <http://www2.ed.gov/fund/grant/apply/sam-faqs.html>.

2. Create a Grants.gov Account

If your organization is new to federal grants or Grants.gov, review the Organization Registration page <https://www.grants.gov/web/grants/applicants/organization-registration.html>. If you already have a Grants.gov account, you do not need to register another account.

- Click the Register link <https://www.grants.gov/web/grants/register.html> in the top-right corner of the Grants.gov banner.
- Click the **Get Registered Now** button on the Register page.
- Complete the **Contact Information** and **Account Details** sections. All fields with a red asterisk (*) are required.
 - Email Address - When entering an email address, please keep in mind that all correspondence with Grants.gov will be sent to that email address.
- Select whether to subscribe or unsubscribe from Grants.gov Communications. The **Alerts** are important messages about time-sensitive or major system changes. The **Newsletter** features training, system enhancement updates, and other resources to help the federal grants community.
- Decide if you would like to add a profile to your Grants.gov account or click the **Continue** button to log in. You need to add a profile <https://www.grants.gov/web/grants/applicants/registration/add-profile.html> to submit an application.

3. Add a Profile to a Grants.gov Account

A profile in Grants.gov corresponds to a single applicant organization the user represents (i.e., an applicant) or an individual applicant. If you work for or consult with multiple organizations and have a profile for each, you may log in to one Grants.gov account to access all of your grant applications. To add an organizational profile to your Grants.gov account, enter the DUNS Number for the organization in the DUNS field while adding a profile. For more detailed instructions about creating a profile on Grants.gov see <https://www.grants.gov/web/grants/applicants/registration/add-profile.html>.

- After you register with Grants.gov and create an Organization Applicant Profile, the organization applicant's request for Grants.gov roles and access is sent to the eBiz POC. Each organization has one eBIZ POC that is assigned in SAM. Authorized Organization Representatives (AORs) are allowed to submit grant applications on behalf of their organization. The eBIZ POC will then log into Grants.gov and authorize the appropriate roles, including the AOR. The application can be submitted online by any person assigned the AOR role.
- When applications are submitted through Grants.gov, the name of the organization applicant with the AOR role that submitted the application is inserted into the signature line of the application,

serving as the electronic signature. The eBiz POC **must** authorize people who are able to make legally binding commitments on behalf of the organization as a user with the AOR role; **this step is often missed and it is crucial for valid and timely submissions.**

C. WORKSPACE

To submit your application, you must create or use an existing workspace within Grants.gov. Workspace is a shared, online environment where multiple people may simultaneously access and edit different forms within the application <https://www.grants.gov/web/grants/applicants/workspace-overview.html>. Creating a workspace for your application allows you to complete it online and route it through your organization for review before submitting. Participants who have assigned roles in the workspace can complete all the required forms online (or by downloading PDF versions and working offline) and check for errors before submission.

The Workspace progress bar will display the state of your application process as you apply. Click the blue question mark icon near the upper-right corner of each page for additional help if needed. Once the application is complete and ready to be submitted, click the Sign and Submit button on the Manage Workspace page, under the Forms tab.

- **Adobe Reader:** If you do not want to complete the forms online, you can download individual PDF forms in Workspace and complete them offline. The individual PDF forms can be downloaded and saved to your local device storage, network drive(s), or external drives, then accessed through Adobe Reader. See the Adobe Software Compatibility page on Grants.gov to download the appropriate version if needed <https://www.grants.gov/web/grants/applicants/adobe-software-compatibility.html>.

For additional training resources on Workspace, including video tutorials, please see <https://www.grants.gov/web/grants/applicants/applicant-training.html>. The Institute also offers webinars on the application submission process <http://ies.ed.gov/funding/webinars/index.asp>.

D. SUBMISSION AND SUBMISSION VERIFICATION

1. Submit Early

The Institute strongly recommends that you not wait until the deadline date to submit an application. Grants.gov will put a date/time stamp on the application and then process it after it is fully uploaded. **The time it takes to upload an application will vary depending on a number of factors including the size of the application and the speed of your internet connection.** If Grants.gov rejects your application due to errors in the application package, you will need to resubmit successfully before 4:30:00 p.m. Eastern Time on the deadline date. As an example, if you begin the submission process at 4:00:00 p.m. Eastern Time on the deadline date, and Grants.gov rejects the application at 4:15:00 p.m. Eastern Time, there may not be enough time for you to locate the error that caused the submission to be rejected, correct it, and then attempt to submit the application again before the 4:30:00 p.m. Eastern Time deadline. **Grants.gov recommends that you begin the submission process 24 to 48 hours before the deadline date and time to ensure a successful, on-time submission.**

Note: To submit successfully, **you must provide the DUNS number on your application that was used when you were registered as an Authorized Organization Representative (AOR) on Grants.gov.** This DUNS number should be the same number used when your organization registered with the SAM. If you do not enter the same DUNS number on your application as the DUNS you registered with, Grants.gov will reject your application.

2. Verify Submission is OK

The Institute urges you to verify that Grants.gov and the Institute have received the application on time and that it was validated successfully. To see the date and time that your application was received by Grants.gov, you need to log on to Grants.gov and click on the "Track My Application" link <http://www.grants.gov/web/grants/applicants/track-my-application.html>. For a successful submission, the date/time received should be no later than 4:30:00 p.m. Eastern Time on the deadline date, and the application status should be: (1) Validated (i.e., no errors in submission), (2) Received by Agency (i.e., Grants.gov has transmitted the submission to the U.S. Department of Education), or (3) Agency Tracking Number Assigned (the U.S. Department of Education has assigned a unique PR/Award Number to the application).

Note: If the date/time received is later than 4:30:00 p.m. Eastern Time on the deadline date, the application is late. If the application has a status of "Received" it is still awaiting validation by Grants.gov. Once validation is complete, the status will change either to "Validated" or "Rejected with Errors." If the status is "Rejected with Errors," the application has not been received successfully. Grants.gov provides information on reasons why applications may be rejected in its Frequently Asked Questions (FAQ) page (<http://www.grants.gov/web/grants/applicants/encountering-error-messages.html>).

You will receive four emails regarding the status of your submission; the first three will come from Grants.gov and the fourth will come from the U.S. Department of Education. Within 2 days of submitting a grant application to Grants.gov, you will receive three emails from Grants.gov:

- The first email message will confirm receipt of the application by the Grants.gov system and will provide you with an application tracking number beginning with the word "GRANT", for example GRANT00234567. You can use this number to track your application on Grants.gov using the "Track My Application" link <http://www.grants.gov/web/grants/applicants/track-my-application.html> before it is transmitted to the U.S. Department of Education.
- The second email message will indicate that the application EITHER has been successfully validated by the Grants.gov system prior to transmission to the U.S. Department of Education OR has been rejected due to errors, in which case it will not be transmitted to the Department.
- The third email message will indicate that the U.S. Department of Education has confirmed retrieval of the application from Grants.gov once it has been validated.

If the second email message indicates that the application, as identified by its unique application tracking number, is valid and the time of receipt was no later than 4:30:00 p.m. Eastern Time, then the application submission is successful and on-time.

Note: You should not rely solely on e-mail to confirm whether an application has been received on time and validated successfully. The Institute urges you to use the "Track My Application" link on Grants.gov to verify on-time, valid submissions in addition to the confirmation emails available at <http://www.grants.gov/web/grants/applicants/track-my-application.html>

Once Grants.gov validates the application and transmits it to the U.S. Department of Education, you will receive an email from the U.S. Department of Education.

- This fourth email message will indicate that the application has been assigned a PR/Award number unique to the application beginning with the letter R, followed by the section of the CFDA number unique to that research competition (e.g., 305H), the fiscal year for the submission (e.g., 19 for fiscal year 2019), and finally four digits unique to the application, for example

R305H19XXXX. If the application was received after the closing date/time, this email will also indicate that the application is late and will not be given further consideration.

Note: The Institute strongly recommends that you begin the submission process at least 3 to 4 days in advance of the deadline date to allow for a successful and timely submission.

3. Late Applications

If your application is submitted after 4:30:00 p.m. Eastern Time on the application deadline date, your application will not be accepted and will not be reviewed. **The Institute does not accept late applications.**

Late applications are often the result of one or more common submission problems that could not be resolved because there was not enough time to do so before the application deadline. Some of the reasons Grants.gov may reject an application can be found on the Grants.gov site <http://www.grants.gov/web/grants/applicants/encountering-error-messages.html>. For more detailed information on troubleshooting Adobe errors, you can review the Adobe Reader Software Tip Sheet at <http://www.grants.gov/web/grants/applicants/adobe-software-compatibility.html>.

If after consulting these resources you still experience problems, contact Grants.gov Customer Support (1-800-518-4726 or support@grants.gov) or access the Grants.gov Self-Service Knowledge Base web portal <https://grants-portal.psc.gov/Welcome.aspx?pt=Grants>.

If the Grants.gov Support Desk determines that a technical problem occurred with the Grants.gov system, and determines that the problem affected your ability to submit the application by the submission deadline, you may petition the Institute to review your application (email the relevant Program Officer with the Grants.gov case number and related information). However, if Grants.gov determines that the problem you experienced is one of those identified by Grants.gov as common application errors, do not petition the Institute to have your case reviewed because these common submission problems are not grounds for petition. **The Institute will not accept an application that was late due to failure to follow the submission guidelines provided by Grants.gov and summarized in this RFA.**

E. TIPS FOR WORKING WITH GRANTS.GOV

Please go to <http://www.grants.gov/web/grants/support.html> for help with Grants.gov. For additional tips related to submitting grant applications, refer to the Grants.gov Applicant FAQs <http://www.grants.gov/web/grants/applicants/applicant-faqs.html>.

1. Internet Connections

The time required to upload and submit your application will vary depending upon a number of factors including the type of internet connection you are using (e.g., high speed connection versus dial up). Plan your submission accordingly.

2. Browser Support

The latest versions of Microsoft Internet Explorer (IE), Mozilla Firefox, Google Chrome, and Apple Safari are supported for use with Grants.gov. However, these web browsers undergo frequent changes and updates so we recommended you have the latest version when using Grants.gov. Legacy versions of these web browsers may be functional, but you may experience issues.

For additional information or updates, please see the Grants.gov Browser Information in the Applicant FAQs.

3. Software Requirements

Grants.gov recommends using Adobe Acrobat Reader for Windows or MAC OS. Grants.gov has an Adobe Software Compatibility page <http://www.grants.gov/web/grants/applicants/adobe-software-compatibility.html> where you can download the appropriate version of Adobe if needed.

4. Attaching Files

You must attach **read-only, flattened .PDF files** to the forms in the application package (see Part IV.D PDF Attachments).

- PDF files are the only approved file type accepted by the Department of Education as detailed in the Federal Register application notice. Applicants must submit individual .PDF files only when attaching files to their application. Specifically, the Department will not accept any attachments that contain files within a file, such as PDF Portfolio files, or an interactive or fillable .PDF file. Any attachments uploaded that are not .PDF files or are password protected files will not be read.
- Grants.gov cannot process an application that includes two or more files that have the same name within a grant submission. Therefore, each file uploaded to your application package should have a unique file name.
- When attaching files, applicants should follow the guidelines established by Grants.gov on the size and content of file names. Uploaded file names must be fewer than 50 characters, and, in general, applicants should not use any special characters. However, Grants.gov does allow for the following UTF-8 characters when naming your attachments: A-Z, a-z, 0-9, underscore, hyphen, space, period, parenthesis, curly braces, square brackets, ampersand, tilde, exclamation point, comma, semi colon, apostrophe, at sign, number sign, dollar sign, percent sign, plus sign, and equal sign. Applications submitted that do not comply with the Grants.gov guidelines will be rejected at Grants.gov and not forwarded to the Department.
- Applicants should limit the size of their file attachments. Documents submitted that contain graphics and/or scanned material often greatly increase the size of the file attachments and can result in difficulties opening the files. For reference, the average discretionary grant application package with all attachments is less than 5 MB. Therefore, you may want to check the total size of your package before submission

F. REQUIRED RESEARCH & RELATED (R&R) FORMS AND OTHER FORMS

You must complete and submit the R&R forms described below. All of these forms are provided in the application package for this competition (84-305H2019). Please note that fields marked by an asterisk, highlighted in yellow and outlined in red on these forms are required fields and must be completed to ensure a successful submission.

Note: Although not required fields, Items 4a (Federal Identifier) and b (Agency Routing Number) on the Application for Federal Assistance SF 424 (R&R) form provide critical information to the Institute and should be filled out for an application to this research grant competition.

1. Application for Federal Assistance SF 424 (R&R)

This form asks for general information about the applicant, including but not limited to the following: contact information; an Employer Identification Number (EIN); a DUNS number; a descriptive title for the project; an indication of the project topic; Principal Investigator contact information; start and end dates for the project; congressional district; total estimated project funding; and Authorized Representative contact information.

Because information on this form populates selected fields on some of the other forms described below, you should complete this form first. This form allows you to attach a cover letter; however, the Institute does not require a cover letter so you should not attach one here.

Provide the requested information using the drop down menus when available. Guidance for completing selected items follows.

- Item 1

Type of Submission. Select either "Application" or "Changed/Corrected Application".

"Changed/Corrected Application" should only be selected in the event that you need to submit an updated version of an already submitted application (e.g., you realized you left something out of the first application submitted). The Institute does not require pre-applications for its grant competitions.

- Item 2

Date Submitted. Enter the date the application is submitted to the Institute.

Applicant Identifier. Leave this blank.

- Item 3

Date Received by State and State Application Identifier. Leave these items blank.

- Item 4

Note: This item provides important information that is used by the Institute to screen applications for responsiveness to the competition requirements and for assignment to the appropriate scientific peer review panel. **It is critical that you complete this information completely and accurately or the application may be rejected as nonresponsive or assigned inaccurately for scientific review of merit.**

- Item 4a: Federal Identifier. **Enter information in this field if this is a Resubmission.** If this application is a revision of an application that was submitted to an Institute grant competition in a prior fiscal year (e.g., FY 2018) that received reviewer feedback, then this application is considered a "Resubmission" (see Item 8 Type of Application). You should **enter the PR/Award number that was assigned to the prior submission (e.g., R305H18XXXX) in this field.**
- Item 4b: Agency Routing Number. **Enter the code for the topic that the application addresses in this field.** Applications to the Research Collaborations (CFDA 84.305H) program must be submitted to a particular topic (see Part II Topic Requirements for additional information).

Topics	Codes
Researcher-Practitioner Partnerships in Education Research	NCER-RPP
Evaluation of State and Local Education Programs and Policies	NCER-State/Local

It is critical that you use the appropriate code in this field and that the code shown in this field agrees with the information included in the application abstract. Indicating the correct code facilitates the appropriate processing and review of

the application. Failure to do so may result in delays to processing and puts your application at risk for being identified as nonresponsive and not considered for further review.

- Item 4c: Previous Grants.gov Tracking ID. If you are submitting a "Changed/Corrected" application (see Item 1) to correct an error, enter the Grants.gov Tracking Number associated with the application that was already submitted through Grants.gov. Contact the Program Officer listed on the application package and provide the Grants.gov tracking numbers associated with both applications (the one with the error and the one that has been corrected) to ensure that the corrected application is reviewed.
- Item 5

Applicant Information. Enter all of the information requested, including the legal name of the applicant, the name of the primary organizational unit (e.g., school, department, division, etc.) that will undertake the activity, and the address, including the county and the 9-digit ZIP/Postal Code of the primary performance site (i.e., the Applicant institution) location. This field is required if the Project Performance Site is located in the United States. The field for "Country" is pre-populated with "USA: UNITED STATES." For applicants located in another country, contact the Program Officer before submitting the application. Use the drop down menus where they are provided.

Organizational DUNS. Enter the DUNS or DUNS+4 number of the applicant organization. A **Data Universal Numbering System (DUNS)** number is a unique 9-character identification number provided by the commercial company Dun & Bradstreet (D&B) to identify organizations. If your institution does not have a DUNS number and therefore needs to register for one, a DUNS number can be obtained through the Dun & Bradstreet website <http://fedgov.dnb.com/webform/displayHomePage.do>.

Note: The DUNS number provided on this form must be the same DUNS number used to register on Grants.gov (and the same as the DUNS number used when registering with the SAM). **If the DUNS number used in the application is not the same as the DUNS number used to register with Grants.gov, the application will be rejected with errors by Grants.gov.**

Person to Be Contacted on Matters Involving this Application. Enter all of the information requested, including the name, telephone and fax numbers, and email address of the person to be contacted on matters involving this application. The role of this person is primarily for communication purposes on the budgetary aspects of the project. As an example, this may be the contact person from the applicant institution's office of sponsored projects. Use the drop down menus where they are provided.

- Item 6

Employer Identification (EIN) or (TIN). Enter either the Employer Identification Number (EIN) or Tax Identification Number (TIN) as assigned by the Internal Revenue Service. If the applicant organization is not located in the United States, enter 44-4444444.

- Item 7

Type of Applicant. Use the drop down menu to select the type of applicant. If Other, please specify.

Small Business Organization Type. If "Small Business" is selected as Type of Applicant, indicate whether or not the applicant is a "Women Owned" small business – a small business that is at least 51% owned by a woman or women, who also control and operate it. Also indicate whether or not the applicant is a "Socially and Economically Disadvantaged" small business, as determined by the U.S. Small Business Administration pursuant to section 8(a) of the Small Business Act U.S.C. 637(a).

- Item 8

Type of Application. Indicate whether the application is a "New" application or a "Resubmission" of an application that was submitted under a previous Institute competition and received reviewer comments. Only the "New" and "Resubmission" options apply to Institute competitions. Do not select any option other than "New" or "Resubmission."

Submission to Other Agencies. Indicate whether or not this application is being submitted to another agency or agencies. If yes, indicate the name of the agency or agencies.

- Item 9

Name of Federal Agency. Do not complete this item. The name of the federal agency to which the application is being submitted will already be entered on the form.

- Item 10

Catalog of Federal Domestic Assistance Number. Do not complete this item. The CFDA number of the program competition to which the application is being submitted will already be entered on the form. The CFDA number can be found in the Federal Register Notice and on the face page of the Request for Applications.

- Item 11

Descriptive Title of Applicant's Project. **Enter a distinctive, descriptive title for the project.** The maximum number of characters allowed in this item field is 200.

- Item 12

Proposed Project Start Date and Ending Date. Enter the proposed start date of the project and the proposed end date of the project. The start date must not be earlier than July 1, 2019, which is the Earliest Anticipated Start Date listed in this Request for Applications, and must not be later than September 1, 2019. The end date is restricted based on the duration maximum for the topic selected.

- Item 13

Congressional District of Applicant. For both the applicant and the project, enter the Congressional District in this format: 2-character State Abbreviation and 3-character District Number (e.g., CA-005 for California's 5th district, CA-012 for California's 12th district). Grants.gov provides help for finding this information <http://www.grants.gov/web/grants/applicants/applicant-faqs.html> under "How can I find my congressional district code?" If the program/project is outside the U.S., enter 00-000.

- Item 14

Project Director/Principal Investigator Contact Information. Enter all of the information requested for the Project Director/Principal Investigator, including position/title, name, address (including county), organizational affiliation (e.g., organization, department, division, etc.), telephone and fax numbers, and email address. Use the drop down menus where they are provided.

- Item 15

Estimated Project Funding

- Total Federal Funds Requested. Enter the total Federal funds requested for the entire project period.
- Total Non-federal Funds. Enter the total Non-federal funds requested for the entire project period.
- Total Federal & Non-Federal Funds. Enter the total estimated funds for the entire project period, including both Federal and non-Federal funds.
- Estimated Program Income. Identify any program income estimated for the project period, if applicable.

- Item 16

Is Application Subject to Review by State Executive Order 12372 Process? The Institute is not soliciting applications that are subject to review by Executive Order 12372; therefore check the box "Program is not covered by E.O. 12372" to indicate "No" for this item.

- Item 17

This is the Authorized Organization Representative's electronic signature.

By providing the electronic signature, the Authorized Organization Representative certifies the following:

- To the statements contained in the list of certifications
- That the statements are true, complete and accurate to the best of his/her knowledge.

By providing the electronic signature, the Authorized Organization Representative also provides the required assurances, agrees to comply with any resulting terms if an award is accepted, and acknowledges that any false, fictitious, or fraudulent statements or claims may subject him/her to criminal, civil, or administrative penalties.

Note: The certifications and assurances referred to here are described in Part V.E.7 Other Forms Included in the Application Package.

- Item 18

SF LLL or other Explanatory Documentation. Do not add the SF LLL here. A copy of the SF LLL is provided as an optional document within the application package. See Part V.E.7 Other Forms Included in the Application Package to determine applicability. If it is applicable to the grant

submission, choose the SF LLL from the optional document menu, complete it, and save the completed SF LLL form as part of the application package.

- Item 19

Authorized Organization Representative. The Authorized Organization Representative is the official who has the authority both to legally commit the applicant to (1) accept federal funding and (2) execute the proposed project. Enter all information requested for the Authorized Organization Representative including name, title, organizational affiliation (e.g., organization, department, division, etc.), address, telephone and fax numbers, and email address of the Authorized Organization Representative. Use the drop down menus where they are provided.

Signature of Authorized Organization Representative. Leave this item blank as it is automatically completed when the application is submitted through Grants.gov.

Date Signed. Leave this item blank as the date is automatically generated when the application is submitted through Grants.gov.

- Item 20

Pre-application. Do not complete this item as the Institute does not require pre-applications for its grant competitions.

- Item 21

Cover Letter. Do not complete this item as the Institute does not require cover letters for its grant competitions.

2. Research & Related Senior/Key Person Profile (Expanded)

This form asks you to: (1) identify the Project Director/Principal Investigator and other senior and/or key persons involved in the project; (2) specify the role key staff will serve; and (3) provide contact information for each senior/key person identified. The form also requests information about the highest academic or professional degree or other credentials earned and the degree year. This form includes a "Credential/Agency Log In" box that is optional.

This form also provides the means for attaching the Biographical Sketches of senior/key personnel as PDF files. This form will allow for the attachment of a total of 40 biographical sketches: one for the project director/principal investigator and up to 39 additional sketches for senior/key staff. See Part IV.D.11 Biographical Sketches of Senior/Key Personnel for information on page and format recommendations, and content to be included in the biographical sketches. The persons listed on this form should be the same persons listed in the Personnel section of the Project Narrative. If consultants are listed there, you may include a biographical sketch for each one listed. The Institute encourages the use of SciENcv to create IES Biosketches for grant applications to the Institute.

3. Project/Performance Site Location(s)

This form asks you to identify the primary site where project work will be performed. You must complete the information for the primary site. If a portion of the project will be performed at any other site(s), the form also asks you to identify and provide information about the additional site(s). As an example, a research proposal to an Institute competition may include the applicant institution as the primary site and one or more schools where data collection will take place as additional sites. The form permits the identification of eight project/performance site locations in total. This form requires the applicant to identify the Congressional District for each site. See above, Application for Federal Assistance SF 424

(R&R), Item 13 for information about Congressional Districts. DUNS number information is optional on this form.

4. Research & Related Other Project Information

This form asks you to provide information about any research that will be conducted involving Human Subjects, including: (1) whether human subjects are involved; (2) if human subjects are involved, whether or not the project is exempt from the human subjects regulations; (3) if the project is exempt from the regulations, an indication of the exemption number(s); and, (4) if the project is not exempt from the regulations, whether an Institutional Review Board (IRB) review is pending; and if IRB approval has been given, the date on which the project was approved; and, the Human Subject Assurance number. This form also asks you: (1) whether there is proprietary information included in the application; (2) whether the project has an actual or potential impact on the environment; (3) whether the research site is designated or eligible to be designated as a historic place; and, (4) if the project involves activities outside the U.S., to identify the countries involved.

This form also provides the means for attaching a number of PDF files (see Part IV.D PDF Attachments for information about content and recommended formatting and page lengths) including the following:

- Project Summary/Abstract,
- Project Narrative and Appendices,
- Bibliography and References Cited, and
- Research on Human Subjects Narrative.

• Item 1

Are Human Subjects Involved? If activities involving human subjects are planned at any time during the proposed project at any performance site or collaborating institution, you must check "Yes." (You must check "Yes" even if the proposed project is exempt from Regulations for the Protection of Human Subjects.) If there are no activities involving human subjects planned at any time during the proposed project at any performance site or collaborating institution, you may check "No" and skip to Item 2.

Is the Project Exempt from Federal Regulations? If all human subject activities are exempt from Human Subjects regulations, then you may check "Yes." You are required to answer this question if you answered "yes" to the first question "Are Human Subjects Involved?"

If you answer "yes" to the question "Is the Project Exempt from Federal Regulations?" you are required to check the appropriate exemption number box or boxes corresponding to one or more of the exemption categories. The six categories of research that qualify for exemption from coverage by the regulations are described on the U.S. Department of Education's website <http://www2.ed.gov/policy/fund/guid/humansub/overview.html>. Provide an Exempt Research on Human Subjects Narrative at Item 12 of this form (see Part IV.D.10 Research on Human Subjects Narrative).

If you answer "no" to the question "Is the Project Exempt from Federal Regulations?" you will be prompted to answer questions about the Institutional Review Board (IRB) review.

If no, is the IRB review pending? Answer either "Yes" or "No."

If you answer "yes" because the review is pending, then leave the IRB approval date blank. If you answer "no" because the review is not pending, then you are required to enter the latest IRB

approval date, if available. Therefore, you should select "No" only if a date is available for IRB approval.

Note: IRB Approval may not be pending because you have not begun the IRB process. In this case, an IRB Approval Date will not be available. However, a date must be entered in this field if "No" is selected or the application will be rejected with errors by Grants.gov. Therefore, you should check "Yes" to the question "Is the IRB review pending?" if an IRB Approval date is not available.

If you answer "no" to the question "Is the Project Exempt from Federal Regulations?" provide a Non-exempt Research on Human Subjects Narrative at Item 12 of this form (see Part IV.D.10 Research on Human Subjects Narrative).

Human Subject Assurance Number: Leave this item blank.

- Item 2

Are Vertebrate Animals used? Check whether or not vertebrate animals will be used in this project.

- Item 3

Is proprietary/privileged information included in the application? Patentable ideas, trade secrets, privileged or confidential commercial or financial information, disclosure of which may harm the applicant, should be included in applications only when such information is necessary to convey an understanding of the proposed project. If the application includes such information, check "Yes" and clearly mark each line or paragraph on the pages containing the proprietary/privileged information with a legend similar to: "The following contains proprietary/privileged information that (name of applicant) requests not be released to persons outside the Government, except for purposes of review and evaluation."

- Item 4

Does this project have an actual or potential impact on the environment? Check whether or not this project will have an actual or potential impact on the environment.

- Item 5

Is the research site designated, or eligible to be designated as a historic place? Check whether or not the research site is designated, or eligible to be designated as a historic place. Explain if necessary.

- Item 6

Does the project involve activities outside of the United States or partnerships with international collaborators? Check "Yes" or "No." If the answer is "Yes," then you need to identify the countries with which international cooperative activities are involved. An explanation of these international activities or partnerships is optional.

- Item 7.

Project Summary/Abstract. Attach the Project Summary/Abstract as a PDF file here. See Part IV.D PDF Attachments for information about content and recommended formatting and page length for this PDF file.

- Item 8.

Project Narrative. Create a single PDF file that contains the Project Narrative as well as, when applicable, Appendix A (required), Appendix B (required for resubmissions), Appendix C (optional), Appendix D (optional), Appendix E (optional), and Appendix F (required for State/Local Evaluation). Attach that single PDF file here. See Part IV.D PDF Attachments for information about content and recommended formatting and page length for the different components of this PDF file.

- Item 9.

Bibliography and References Cited. Attach the Bibliography and References Cited as a PDF file here. See Part IV.D PDF Attachments for information about content and recommended formatting and page length for this PDF file.

- Item 10.

Facilities and Other Resources. The Institute does not want an attachment here. Explanatory information about facilities and other resources must be included in the Resources Section of the 25-page Project Narrative for the application and may also be included in the Narrative Budget Justification. In the project narrative of competitive proposals, applicants describe having access to institutional resources that adequately support research activities, access to data, and access to schools in which to conduct the research. Strong applications document the availability and cooperation of the data holders, schools, or other education delivery settings that will be required to carry out the research proposed in the application via a Letter of Agreement from the education organization. Include Letters of Agreement in Appendix E.

- Item 11.

Equipment. The Institute does not want an attachment here. Explanatory information about equipment may be included in the Narrative Budget Justification.

- Item 12.

Other Attachments. Attach a Research on Human Subjects Narrative as a PDF file here. You must attach either an Exempt Research on Human Subjects Narrative or a Non-Exempt Research on Human Subjects Narrative. See Part IV.D PDF Attachments for information about content and recommended formatting and page length for this PDF file.

If you checked "Yes" to Item 1 of this form "Are Human Subjects Involved?" and designated an exemption number(s), then you must provide an "Exempt Research" narrative. If some or all of the planned research activities are covered by (not exempt from) the Human Subjects Regulations, then you must provide a "Non-exempt Research" narrative.

5. Research & Related Budget (Total Federal+Non-Federal)-Sections A & B; C, D, & E; F-K

This form asks you to provide detailed budget information for each year of support requested for the applicant institution (i.e., the Project Budget). The form also asks you to indicate any non-federal funds

supporting the project. You should provide this budget information for each project year using all sections of the R&R Budget form. Note that the budget form has multiple sections for each budget year: A & B; C, D, & E; and F-K.

- Sections A & B ask for information about Senior/Key Persons and Other Personnel.
- Sections C, D & E ask for information about Equipment, Travel, and Participant/Trainee Costs.
- Sections F - K ask for information about Other Direct Costs and Indirect Costs.

You must complete each of these sections for as many budget periods (i.e., project years) as you are requesting funds.

Note: The narrative budget justification for each of the project budget years must be attached at Section K of the first budget period; otherwise, you will not be able to enter budget information for subsequent project years.

Note: Budget information for a subaward(s) on the project must be entered using a separate form, the R&R Subaward Budget (Fed/Non-Fed) Attachment(s) Form, described in Part V.E.6. This is the only form that can be used to extract the proper file format to complete subaward budget information. **The application will be rejected with errors by Grants.gov if subaward budget information is included using any other form or file format.**

Enter the Federal Funds requested for all budget line items as instructed below. If any Non-Federal funds will be contributed to the project, enter the amount of those funds for the relevant budget categories in the spaces provided. Review the cost maximums for the topic selected.

All fields asking for total funds in this form will auto-calculate.

- Organizational DUNS.

If you completed the SF 424 R&R Application for Federal Assistance form first, the DUNS number will be pre-populated here. Otherwise, the [organizational DUNS](#) number must be entered here.

- Budget Type.

Check the box labeled "Project" to indicate that this is the budget requested for the primary applicant organization. If the project involves a subaward(s), you must access the R&R Subaward Budget (Fed/Non-Fed) Attachment(s) Form to complete a subaward budget (see Part V.E.6 below for instructions regarding budgets for a subaward).

- Budget Period Information.

Enter the start date and the end date for each budget period. **Enter only the number of budget periods allowed for the project as determined by the Award Duration Maximums for the relevant research topic selected for your project** (see [Part II Topic Requirements](#)). Note: If you activate an extra budget period and leave it blank this may cause your application to be rejected with errors by Grants.gov.

- Budget Sections A & B

A. Senior/Key Person. The project director/principal investigator information will be pre-populated here from the SF 424 R&R Application for Federal Assistance form if it was completed first. Then,

enter all of the information requested for each of the remaining senior/key personnel, including the project role of each and the number of months each will devote to the project, i.e., calendar or academic + summer. You may enter the annual compensation (base salary – dollars) paid by the employer for each senior/key person; however, you may choose to leave this field blank. Regardless of the number of months devoted to the project, indicate only the amount of salary being requested for each budget period for each senior/key person. Enter applicable fringe benefits, if any, for each senior/key person. Enter the Federal dollars and, if applicable, the Non-Federal dollars. If any personnel intend to donate time, this donated time must be listed in the budget and budget narrative and described as cost sharing. The Institute does not require or request such cost sharing nor consider it in award decisions but does require that it be documented. Personnel proposing to donate time must demonstrate that they have such time available.

B. Other Personnel. Enter all of the information requested for each project role listed – for example postdoctoral associates, graduate students, undergraduate students, secretary/clerical, etc. – including, for each project role, the number of personnel proposed and the number of months devoted to the project (calendar or academic + summer). Regardless of the number of months devoted to the project, indicate only the amount of salary/wages being requested for each project role. Enter applicable fringe benefits, if any, for each project role category. Enter the Federal dollars and, if applicable, the non-Federal dollars.

Total Salary, Wages, and Fringe Benefits (A + B). This total will auto calculate.

- Budget Sections C, D & E

C. Equipment Description. Enter all of the information requested for equipment. Equipment is defined as an item of property that has an acquisition cost of \$5,000 or more (unless the applicant organization has established lower levels) and an expected service life of more than 1 year. List each item of equipment separately and justify each in the narrative budget justification. Allowable items ordinarily will be limited to research equipment and apparatus not already available for the conduct of the work. General-purpose equipment, such as a personal computer, is not eligible for support unless primarily or exclusively used in the actual conduct of scientific research. Enter the Federal dollars and, if applicable, the non-Federal dollars.

Total C. Equipment. This total will auto calculate.

D. Travel. Enter all of the information requested for Travel.

Enter the total funds requested for domestic travel. In the narrative budget justification, include the purpose, destination, dates of travel (if known), applicable per diem rates, and number of individuals for each trip. If the dates of travel are not known, specify the estimated length of the trip (e.g., 3 days). Enter the Federal dollars and, if applicable, the non-Federal dollars.

Enter the total funds requested for foreign travel. In the narrative budget justification, include the purpose, destination, dates of travel (if known), applicable per diem rates, and number of individuals for each trip. If the dates of travel are not known, specify the estimated length of the trip (e.g., 3 days). Enter the Federal dollars and, if applicable, the non-Federal dollars.

Total D. Travel Costs. This total will auto calculate.

E. Participant/Trainee Support Costs. Do not enter information here; this category is not used for project budgets for this competition.

Number of Participants/Trainees. Do not enter information here; this category is not used for project budgets for this competition.

Total E. Participants/Trainee Support Costs. Do not enter information here; this category is not used for project budgets for this competition.

- Budget Sections F-K

F. Other Direct Costs. Enter all of the information requested under the various cost categories. Enter the Federal dollars and, if applicable, the non-Federal dollars.

Materials and Supplies. Enter the total funds requested for materials and supplies. In the narrative budget justification, indicate the general categories of supplies, including an amount for each category. Categories less than \$1,000 are not required to be itemized.

Publication Costs. Enter the total publication funds requested. The proposed budget may request funds for the costs of documenting, preparing, publishing or otherwise making available to others the findings and products of the work conducted under the award. In the narrative budget justification, include supporting information.

Consultant Services. Enter the total costs for all consultant services. In the narrative budget justification, identify each consultant, the services he/she will perform, total number of days, travel costs, and total estimated costs. Note: Travel costs for consultants can be included here or in Section D. Travel.

ADP/Computer Services. Enter the total funds requested for ADP/computer services. The cost of computer services, including computer-based retrieval of scientific, technical, and education information may be requested. In the narrative budget justification, include the established computer service rates at the proposing organization if applicable.

Subaward/Consortium/Contractual Costs. Enter the total funds requested for: (1) all subaward/consortium organization(s) proposed for the project and (2) any other contractual costs proposed for the project. Use the R&R Subaward Budget (Fed/Non-Fed) Attachment(s) Form to provide detailed subaward information (see Part V.E.6).

Equipment or Facility Rental/User Fees. Enter the total funds requested for equipment or facility rental/user fees. In the narrative budget justification, identify each rental user fee and justify.

Alterations and Renovations. Leave this field blank. The Institute does not provide funds for construction costs.

Other. Describe any other direct costs in the space provided and enter the total funds requested for this "Other" category of direct costs. Use the narrative budget justification to further itemize and justify.

Total F. Other Direct Costs. This total will auto calculate.

- G. Direct Costs

Total Direct Costs (A thru F). This total will auto calculate.

- H. Indirect Costs

Enter all of the information requested for Indirect Costs. Principal investigators should note that if they are requesting reimbursement for indirect costs, this information is to be completed by their Business Office.

Indirect Cost Type. Indicate the type of base (e.g., Salary & Wages, Modified Total Direct Costs, Other [explain]). In addition, indicate if the Indirect Cost type is Off-site. If more than one rate/base is involved, use separate lines for each. When calculating your expenses for research conducted in field settings, you should apply your institution's negotiated off-campus indirect cost rate, as directed by the terms of your institution's negotiated agreement with the federal government.

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

If you do not have a current indirect rate(s) approved by a Federal agency, indicate "None--will negotiate". **If your institution does not have a federally negotiated indirect cost rate**, you should consult a member of the Indirect Cost Group (ICG) in the U.S. Department of Education's Office of the Chief Financial Officer <http://www2.ed.gov/about/offices/list/ocfo/fipao/icgreps.html> to help you estimate the indirect cost rate to put in your application.

Indirect Cost Rate (%). Indicate the most recent Indirect Cost rate(s) (also known as Facilities & Administrative Costs [F&A]) established with the cognizant Federal office, or in the case of for-profit organizations, the rate(s) established with the appropriate agency.

If your institution has a cognizant/oversight agency and your application is selected for an award, you must submit the indirect cost rate proposal to that cognizant/oversight agency office for approval.

Indirect Cost Base (\$). Enter the amount of the base (dollars) for each indirect cost type. Depending on the grant program to which you are applying and/or the applicant institution's approved Indirect Cost Rate Agreement, some direct cost budget categories in the grant application budget may not be included in the base and multiplied by the indirect cost rate. Use the narrative budget justification to explain which costs are included and which costs are excluded from the base to which the indirect cost rate is applied. If your grant application is selected for an award, the Institute will request a copy of the applicant institution's approved Indirect Cost Rate Agreement.

Indirect Cost Funds Requested. Enter the funds requested (Federal dollars and, if applicable, Non-Federal dollars) for each indirect cost type.

Total H. Indirect Costs. This total will auto calculate.

Cognizant Agency. Enter the name of the Federal agency responsible for approving the indirect cost rate(s) for the applicant. Enter the name and telephone number of the individual responsible for negotiating the indirect cost rate. If a Cognizant Agency is not known, enter "None."

- I. Total Direct and Indirect Costs

Total Direct and Indirect Costs (G + H). This total will auto calculate.

- J. Fee.

Do not enter a dollar amount here as you are not allowed to charge a fee on a grant or cooperative agreement.

- K. Budget Justification.

Attach the Narrative Budget Justification as a PDF file at Section K of the first budget period (see [Part IV.D.12](#) for information about content and recommended formatting and page length for this PDF file). Note that if the justification is not attached at Section K of the first budget period, you will not be able to access the form for the second budget period and all subsequent budget periods. The single narrative must provide a budget justification for each year of the entire project.

- Cumulative Budget. This section will auto calculate all cost categories for all budget periods included.

Final Note: The overall grant budget cannot exceed the maximum grant award for the Research Topic being applied under as listed in the table below.

Topic	Maximum Grant Duration	Maximum Grant Award
Researcher-Practitioner Partnerships in Education Research	2 years	\$400,000
Evaluation of State and Local Education Programs and Policies	5 years	\$5,000,000

6. R&R Subaward Budget (Fed/Non-Fed) Attachment(s) Form

This form provides the means to both extract and attach the Research & Related Budget (Total Fed + Non-Fed) form that is to be used by an institution that will hold a subaward on the grant. Please note that separate budgets are required only for subawardee/consortium organizations that perform a substantive portion of the project. As with the Primary Budget, the extracted Research & Related Budget (Total Fed + Non-Fed) form asks you to provide detailed budget information for each year of support requested for a subaward/consortium member with substantive involvement in the project. The budget form also asks for information regarding non-federal funds supporting the project at the subaward/consortium member level. You should provide this budget information for each project year using all sections of the R&R Budget form. Note that the budget form has multiple sections for each budget year: A & B; C, D, & E; and F-K.

- Sections A & B ask for information about Senior/Key Persons and Other Personnel.
- Sections C, D & E ask for information about Equipment, Travel, and Participant/Trainee Costs.
- Sections F - K ask for information about Other Direct Costs and Indirect Costs.

"Subaward/Consortium" must be selected as the Budget Type, and all sections of the budget form for each project year must be completed in accordance with the R&R (Federal/Non-Federal) Budget instructions provided above in Part V.E.5. Note that subaward organizations are also required to provide their DUNS or DUNS+4 number.

You may extract and attach up to 10 subaward budget forms. When you use the button "Click here to extract the R&R Budget (Fed/Non-Fed) Attachment," a Research & Related Budget (Total Fed + Non-Fed) form will open. Each institution that will hold a subaward to perform a substantive portion of the project must complete one of these forms and save it as a PDF file with the name of the subawardee organization. Once each subawardee institution has completed the form, you must attach these completed subaward budget form files to the R&R Subaward Budget (Fed/Non-Fed) Attachment(s) Form. Each subaward budget form file attached to this form must have a unique name.

Note: This R&R Subaward Budget (Fed/Non-Fed) Attachment(s) Form must be used to attach only one or more Research & Related Budget (Total Fed + Non-Fed) form(s) that have been extracted from this form. Note the form's instruction: "Click here to extract the R&R Budget (Fed/Non-Fed) Attachment". **If you attach a file format to this form that was not extracted from this attachment form your application will be rejected with errors by Grants.gov.**

7. Other Forms Included in the Application Package

You are required to submit the first two forms identified here. You are not required to submit the third form, Disclosure of Lobbying Activities – Standard Form LLL, unless it is applicable.

- SF 424B-Assurances-Non-Construction Programs.
- Grants.gov Lobbying form (formerly, ED 80-0013 form).
- Disclosure of Lobbying Activities – Standard Form LLL (if applicable).

G. SUMMARY OF REQUIRED APPLICATION CONTENT

R&R Form	Instructions Provided	Additional Information
Application for Federal Assistance SF 424 (R & R)	Part V.E.1	Form provided in Grants.gov application package
Senior/Key Person Profile (Expanded)	Part V.E.2	Form provided in Grants.gov application package
Project/Performance Site Location(s)	Part V.E.3	Form provided in Grants.gov application package
Other Project Information	Part V.E.4	Form provided in Grants.gov application package
Budget (Total Federal + Non-Federal):	Part V.E.5	Form provided in Grants.gov application package
R&R Subaward Budget (Fed/Non-Fed) Attachment(s) Form	Part V.E.6	Form provided in Grants.gov application package. Use this form to <i>extract and attach</i> a subaward budget(s).
SF 424B Assurances – Non-Construction Programs Grants.gov Lobbying form Disclosure of Lobby Activities – Standard Form LLL (if applicable)	Part V.E.7	Forms provided in Grants.gov application package
Project Summary/Abstract	Part IV.D.1	Attach PDF at Item 7 of "Other Project Information" form
Project Narrative and Appendices <ul style="list-style-type: none"> • Narrative • Appendix A • Appendix B • Appendix C • Appendix D • Appendix E • Appendix F 	Part IV.D.2-8	Project Narrative and Appendix A, and if applicable, Appendices B, C, D, E, and F must ALL be included together in one PDF attached at Item 8 of "Other Project Information" form.
Bibliography and References Cited	Part IV.D.9	Attach PDF at Item 9 of "Other Project Information" form.
Research on Human Subjects Narrative, if human subjects are involved	Part IV.D.10	Attach PDF at Item 12 of "Other Project Information" form.
Biographical Sketches of Senior/Key Personnel (including Current & Pending Support)	Part IV.D.11	Add each as a separate attachment (PDF file) using the "Senior/Key Person Profile (Expanded)" form.
Narrative Budget Justification	Part IV.D.12	Add as an attachment (PDF file) using <i>Section K – Budget Period 1</i> of the "Budget (Total Federal + Non-Federal)" form.

H. APPLICATION CHECKLIST

Have each of the following forms been completed?	
	SF 424 Application for Federal Assistance
	For item 4a, is the PR/Award number entered if this is a Resubmission following the instructions in Part V.E.1?
	For item 4b, is the correct topic code included following the instructions in Part V.E.1?
	For item 8, is the Type of Application appropriately marked as either "New" or "Resubmission" following the instructions in Part V.E.1?
	Senior/Key Person Profile (Expanded)
	Project/Performance Site Location(s)
	Other Project Information
	Budget (Total Federal + Non-Federal): Sections A & B; Sections C, D, & E; Sections F - K
	R&R Subaward Budget (Federal/Non-Federal) Attachment(s) form (if applicable)
	SF 424B Assurances – Non-Construction Programs
	Grants.gov Lobbying form (formerly ED 80-0013 form)
	Disclosure of Lobbying Activities – Standard Form LLL (if applicable)
Have each of the following items been attached as PDF files in the correct place?	
	Project Summary/Abstract, using Item 7 of the "Other Project Information" form
	Project Narrative and Appendix A, and where applicable, Appendix B, Appendix C, Appendix D, Appendix E, and Appendix F as a single file using Item 8 of the "Other Project Information" form
	Bibliography and References Cited, using Item 9 of the "Other Project Information" form
	Research on Human Subjects Narrative, either the Exempt Research Narrative or the Non-exempt Research Narrative, using Item 12 of the "Other Project Information" form
	Biographical Sketches of Senior/Key Personnel, using "Attach Biographical Sketch" of the "Senior/Key Person Profile (Expanded)" form that includes Current & Pending Support of the Senior/Key Personnel
	Narrative Budget Justification, using Section K – Budget Period 1 of the "Budget (Total Federal + Non-Federal)" form
	Budget (Total Federal + Non-Federal): Sections A & B; Sections C, D, & E; Sections F – K for the Subaward(s), using the "R&R Subaward Budget (Federal/Non-Federal) Attachment(s)" form, as appropriate, that conforms to the Award Duration, Annual Cost Maximum and Total Cost Maximum for the Topic selected.
Have the following actions been completed?	
	The correct PDF files are attached to the proper forms in the Grants.gov application package.
	The "Check Package for Errors" button at the top of the grant application package has been used to identify errors or missing required information that prevents an application from being processed.
	The "Track My Application" link has been used to verify that the upload was fully completed and that the application was processed and validated successfully by Grants.gov before 4:30:00 p.m., Eastern Time on the deadline date.

I. PROGRAM OFFICER CONTACT INFORMATION

Please contact the Institute's Program Officers with any questions you may have about the best grant program for your application. Program Officers function as knowledgeable colleagues who can provide substantive feedback on your research idea, including reading a draft of your project narrative. Program Officers can also help you with any questions you may have about the content and preparation of PDF file attachments. However, any questions you have about individual forms within the application package and electronic submission of your application through Grants.gov should be directed first to the Grants.gov Contact Center at support@grants.gov, <http://www.grants.gov/web/grants/support.html>, or call 1-800-518-4726. The Program Officers for this competition are:

Dr. Allen Ruby
National Center for Education Research
Email: Allen.Ruby@ed.gov
Telephone: (202) 245-8145

Dr. Sarah Brasiel
National Center for Special Education Research
Email: Sarah.Brasiel@ed.gov
Telephone: 202-245-6734

GLOSSARY

Assessment: “Any systematic method of obtaining information, used to draw inferences about characteristics of people, objects, or programs; a systematic process to measure or evaluate the characteristics or performance of individuals, programs, or other entities, for purposes of drawing inferences; sometimes used synonymously with test” (AERA, 2014).

Authentic education setting: Proposed research must be relevant to education in the United States and must address factors under the control of the U.S. education system (be it at the national, state, local, and/or school level). To help ensure such relevance, the Institute requires research to work within or with data from authentic education settings. Authentic education settings include both in-school settings (including PreK centers and adult education centers) and formal programs that take place after school or out of school (e.g., after-school programs, distance learning programs, online programs) under the control of schools or state and local education agencies. Formal programs not under the control of schools or state and local education agencies are not considered as taking place in an authentic education setting and are not appropriate for study under the Research Collaborations program. Authentic education settings can be identified for the following education levels:

- **Authentic PreK Education Settings** are defined as center-based prekindergarten settings that include:
 - Public prekindergarten programs.
 - Child care centers.
 - Head Start programs.
- **Authentic K-12 Education Settings** are defined as the following:
 - Schools and alternative school settings (e.g., alternative schools or juvenile justice settings).
 - School systems (e.g., local education agencies or state education agencies).
 - Settings that deliver supplemental education services (as defined in Section 1116(e) of the Elementary and Secondary Education Act of 1965, as amended by the No Child Left Behind Act of 2001) (<http://www2.ed.gov/policy/elsec/leg/esea02/index.html>).
 - Career and Technical Education Centers affiliated with schools or school systems.
- **Authentic Postsecondary Education Settings** are defined as the following:
 - 2-year and 4-year colleges and universities that have education programs leading to occupational certificates or associate's or bachelor's degrees.
 - Career and Technical Education Centers that lead to occupational certificates or associate's or bachelor's degrees.
- **Authentic Adult Education Settings** are defined as settings where eligible participants receive one or more of the following services from eligible providers (e.g., state and local education agencies, community-based organizations, institutions of higher education, public or non-profit agencies, libraries) identified (see Title II of the Workforce Innovation and Opportunity Act (WIOA: <https://www.gpo.gov/fdsys/pkg/PLAW-113publ128/pdf/PLAW-113publ128.pdf>):
 - Adult Basic Education (ABE)
 - Adult civics education (e.g., Integrated English Literacy and Civics Education programs)
 - Adult English language acquisition programs.
 - Adult Secondary Education (ASE)

- Family literacy programs (e.g., programs that aim to help improve both parents' and children's academic outcomes)
- Integrated education and training (e.g., programs that provide adult education services concurrent with training in a specific occupation)

Center-based prekindergarten settings: Center-based settings include public prekindergarten programs, child care centers and Head Start programs.

Compliant: The part of the process of screening applications for acceptance for review that focuses on compliance with the application rules (e.g., completion of all parts of the application, inclusion of the required appendices).

End user: The person intended to be responsible for the implementation of the intervention. State/Local Evaluation projects should test an intervention implemented by the end user.

Feasibility: The extent to which the intervention can be implemented within the requirements and constraints of an authentic education setting.

Fidelity of implementation: The extent to which the intervention is being delivered as it was designed to be by end users in an authentic education setting.

Final manuscript: The author's final version of a manuscript accepted for publication that includes all modifications from the peer-review process.

Final research data: The recorded factual materials commonly accepted in the scientific community as necessary to document and support research findings. For most studies, an electronic file will constitute the final research data. This dataset will include both raw data and derived variables, which will be fully described in accompanying documentation. Researchers are expected to take appropriate precautions to protect the privacy of human subjects. Note that final research data does not mean summary statistics or tables, but rather, the factual information on which summary statistics and tables are based. Final research data do not include laboratory notebooks, preliminary analyses, drafts of scientific papers, plans for future research, peer-reviewed reports, or communications with colleagues.

Impact Across a Variety of Conditions: Determining whether a program or policy produces benefits for certain subgroups (e.g., students or schools) or under certain conditions (e.g., moderating factors).

Intervention: The wide range of education curricula, instructional approaches, professional development, technology, and practices, programs, and policies that are implemented at the student, classroom, school, district, state, or federal level to improve student education outcomes.

Moderators: Factors that affect the strength or the direction of the relationship between the intervention and student education outcomes (e.g., an intervention's impacts may differ by such student characteristics as achievement level, motivation, or social-economic status; and by organizational or contextual factors, such as school or neighborhood characteristics).

Mediators: Factors through which the relationship between the intervention and student education outcomes occurs (e.g., many interventions aimed at changing individual student education outcomes work through changing teacher behavior, student peer behavior, and/or student behavior).

Overall Impact: The degree to which a program/policy has on average a net positive impact on the outcomes of interest in relation to the program or practice to which it is being compared.

Reliability: The stability or dependability of measures when taken over repeated applications.

Replication Evaluation: The evaluation of a fully developed program or policy that has been found to have a beneficial impact on student education outcomes by at least one prior causal impact study.

Responsive: The part of the process of screening applications for acceptance for review that focuses on responsiveness to the Request for Applications. This screening includes making sure applications 1) are submitted to the correct competition and/or topic and 2) meet the basic requirements set out in the Request for Applications.

Routine conditions: Conditions under which an intervention is implemented that reflect (1) the everyday practice occurring in classrooms, schools, and districts, (2) the heterogeneity of the target population, and (3) typical or standard implementation support.

Student education outcomes: The outcomes to be changed by the intervention. The intervention may be expected to directly affect these outcomes or indirectly affect them through intermediate student or instructional personnel outcomes. There are two types of student education outcomes.

- Student academic outcomes: The Institute supports research on a diverse set of student academic outcomes that fall under two categories. The first category includes academic outcomes that reflect learning and achievement in the core academic content areas (e.g., measures of understanding and achievement in reading, writing, math, and science). The second category includes academic outcomes that reflect students' successful progression through the education system (e.g., course and grade completion and retention in grade K through 12; high school graduation and dropout; postsecondary enrollment, progress, and completion).
- Social and behavioral competencies: Social skills, attitudes, and behaviors that may be important to students' academic and post-academic success.
- Employment and Earnings Outcomes: Long-term, post-school student outcomes that include indicators such as hours of employment, job stability, wages and benefits.

In addition, research addressing students with or at risk for disability are encouraged to also include outcomes associated with research funded under the grant programs of the National Center for Special Education Research. These outcomes include developmental outcomes (cognitive, communicative, linguistic, social, emotional, adaptive, functional or physical development) and, for older students, functional outcomes that improve educational results and transitions to employment, independent living, and postsecondary education.

Theory of change: The underlying process through which key components of a specific intervention are expected to lead to the desired student education outcomes. A theory of change should be specific enough to guide the design of the evaluation (e.g., selecting an appropriate sample, measures and comparison condition).

Usability: The extent to which the intended user understands or can learn how to use the intervention effectively and efficiently, is physically able to use the intervention, and is willing to use the intervention.

Validity: The degree to which a measure provides a true indication of whatever it is intended to represent.

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ALLOWABLE EXCEPTIONS TO ELECTRONIC SUBMISSIONS

You may qualify for an exception to the electronic submission requirement and submit an application in paper format if you are unable to submit the application through the Grants.gov system because: (a) you do not have access to the Internet; or (b) you do not have the capacity to upload large documents to the Grants.gov system; and (c) no later than 2 weeks before the application deadline date (14 calendar days or, if the fourteenth calendar date before the application deadline date falls on a Federal holiday, the next business day following the Federal holiday), you mail or fax a written statement to the Institute explaining which of the two grounds for an exception prevents you from using the Internet to submit the application. If you mail the written statement to the Institute, it must be postmarked no later than 2 weeks before the application deadline date. If you fax the written statement to the Institute, the faxed statement must be received no later than 2 weeks before the application deadline date. The written statement should be addressed and mailed or faxed to:

Ellie Pelaez, Office of Administration and Policy
Institute of Education Sciences, U.S. Department of Education
550 12th Street, S.W.
Potomac Center Plaza - Room 4126
Washington, DC 20202
FAX: 202-245-6752

If you request and qualify for an exception to the electronic submission requirement you may submit an application via mail, commercial carrier or hand delivery. To submit an application by mail, mail the original and two copies of the application on or before the deadline date to:

U.S. Department of Education
Application Control Center
Attention: CFDA# (84.305H)
LBJ Basement Level 1
400 Maryland Avenue, S.W.
Washington, DC 20202 – 4260

You must show one of the following as proof of mailing: (a) a legibly dated U.S. Postal Service Postmark; (b) a legible mail receipt with the date of mailing stamped by the U.S. Postal Service; (c) a dated shipping label, invoice, or receipt from a commercial carrier; or (d) any other proof of mailing acceptable to the U.S. Secretary of Education (a private metered postmark or a mail receipt that is not dated by the U.S. Postal Services will not be accepted by the Institute). Note that the U.S. Postal Service does not uniformly provide a dated postmark. Before relying on this method, you should check with your local post office. If your application is postmarked after the application deadline date, the Institute will not consider your application. The Application Control Center will mail you a notification of receipt of the grant application. If this notification is not received within 15 business days from the application deadline date, call the U.S. Department of Education Application Control Center at (202) 245-6288.

To submit an application by hand, you or your courier must hand deliver the original and two copies of the application no later than 4:30:00 p.m. (Eastern Time) on or before the deadline date to:

U.S. Department of Education
Application Control Center
Attention: CFDA# (84.305H)
550 12th Street, S.W.
Potomac Center Plaza - Room 7039
Washington, DC 20202 – 4260

The Application Control Center accepts application deliveries daily between 8:00 a.m. and 4:30 p.m. (Eastern Time) except Saturdays, Sundays and Federal holidays.