



**REQUEST FOR APPLICATIONS**  
**EDUCATION RESEARCH AND DEVELOPMENT**  
**CENTER PROGRAM**  
**CFDA Number: 84.305C**

<b><u>COMPETITION ROUND</u></b>	<b><u>SEPTEMBER</u></b>
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## **PART I GENERAL OVERVIEW**

### **1. REQUEST FOR APPLICATIONS**

In this announcement, the Institute of Education Sciences (Institute) invites applications for research projects that will contribute to its Education Research and Development Center program. For the FY2011 competition, the Institute will consider only applications that meet the requirements outlined below under *Part II Education Research and Development Center Program* and *Part III Requirements of the Proposed Research*.

Separate announcements will be available on the Institute's website that pertain to the other research and research training grant programs funded through the Institute's National Center for Education Research and to the discretionary grant competitions funded through the Institute's National Center for Special Education Research (<http://ies.ed.gov/funding>).

## **PART II EDUCATION RESEARCH AND DEVELOPMENT CENTER PROGRAM**

### **2. PURPOSE**

Under the Education Sciences Reform Act of 2002, the Institute supports national research and development centers (R&D Centers) that are intended to contribute significantly to the solution of education problems in the United States by engaging in research, development, evaluation, and national leadership activities aimed at improving the education system, and ultimately, student achievement. Each of the R&D Centers conducts a focused program of education research in its topic area. In addition, each Center conducts supplemental research within its broad topic area and provides national leadership in advancing evidence-based practice and policy within its topic area. For information on existing Institute centers, please see <http://ies.ed.gov/ncer/RandD/>.

For the FY2011 Education Research and Development Center competition, the Institute invites applications for (a) the National Education Research and Development Center on Cognition and Adult Literacy, (b) the National Education Research and Development Center on State and Local Policy, and (c) the National Education Research and Development Center on Postsecondary Education and Employment.

### **3. BACKGROUND**

The Institute's R&D Centers grapple with key education issues that face our nation. Through the Institute's R&D program, researchers have greater resources to tackle more complex education problems, create innovative education solutions, and contribute to knowledge and theory in the education sciences. The Institute currently funds 15 national R&D Centers and 2 special education R&D Centers. Here are examples of the types of issues that they are addressing.

- Educators and policymakers argue that the major impediments to increasing college enrollment among low-income students are the complexity of the federal application process for financial aid and the lack of information that families have about financial aid. The *National Center for Postsecondary Research* is testing interventions to determine which combination of services, including direct assistance with completing the FAFSA (Free Application for Federal Student Aid) application process, will improve access to postsecondary education for low-income students.
- School districts are experimenting with the use of incentives for teachers, administrators, and schools to improve the quality of education in their schools. How should performance incentive programs be structured to achieve desired goals and minimize unintended negative consequences? The *National Center for Teacher Performance Incentives* is conducting a number of studies to test the effects of different parameters for incentive programs.

- Young children who have not had sufficient language and early literacy experiences prior to kindergarten face significant challenges learning to read. These children often continue to experience poor reading skills throughout school. The *Center for Response to Intervention in Early Childhood* is creating a Response to Intervention model including innovative interventions to promote the development of language and early literacy skills and an assessment system for tracking children's progress.
- Despite advances in education technology, many argue that the full potential of electronic media for educational purposes has yet to be reached. Typical products are not ones that students would naturally gravitate to outside of school — lacking high quality graphics and sounds, sophisticated user interface, a reward structure that cultivates a strong sense of motivation, and engaging activities that maintain the user's attention. The Institute is currently funding two R&D Centers in education technology. The Centers are capitalizing on rich multimedia gaming environments to create innovative instructional products: one Center is focusing on teaching mathematics to ninth graders and the other is addressing science content for seventh graders.
- The recent development of state longitudinal data systems offers the opportunity to answer a multitude of education policy-relevant questions, but requires sophisticated methodological expertise to handle complicated datasets and complex analyses. *The Center for the Analysis of Longitudinal Data in Education Research* (CALDER) brings together a group of economists with such expertise to take advantage of comprehensive education databases in Florida, Missouri, New York, North Carolina, Texas and Washington state to examine the relations between teacher workforce and governance policies (e.g., certification, compensation, accountability, and choice) and key education outcomes (e.g., student achievement, graduation rates, teacher retention).

For its FY2011 R&D Center competition, the Institute is interested in applications that offer the greatest promise for (1) contributing to the solution of a specific education problem within each R&D Center topic described below and to the generation of new knowledge and theories relevant to the focus of the R&D Center; (2) providing relatively rapid research and scholarship on supplemental questions that emerge within the R&D Center's topic area and that are not being addressed adequately elsewhere; and (3) providing national leadership within the R&D Center's topic by developing position papers, hosting meetings, and engaging in dialogue with researchers and practitioners in order to identify promising areas of research, development, and dissemination for the field and to advance evidence-based policy and practice.

## **PART III REQUIREMENTS OF THE PROPOSED RESEARCH**

### **4. TOPIC ONE: REQUIREMENTS FOR THE NATIONAL RESEARCH AND DEVELOPMENT CENTER ON COGNITION AND ADULT LITERACY**

Approximately 30 million American adults, or 14 percent of the adult population, have difficulty reading (Kutner, Greenberg, Jin, Boyle, Hsu, & Dunleavy, 2007). Some of these adults struggle to read because they are nonliterate in English, others because they have some, but not all, skills required to read and comprehend connected text. In addition, about 22 percent of the adult population have limited quantitative skills and can only use their knowledge of numbers to perform simple quantitative operations (mostly addition) when the mathematical information is concrete and familiar (Kutner et al., 2007).

Adults lacking these basic prose and quantitative literacy skills struggle to succeed in the workplace.

Approximately 44 percent of adults who scored below basic in prose literacy on the most recent National Assessment of Adult Literacy have incomes which place them below the poverty threshold (Baer, Kutner, & Sabatini, 2009). The need to improve the skills of adults with limited reading and numeracy skills has been addressed, in part, by the provision of adult education. Of the nearly 2.4 million adults who participated in adult education programs in 2008-2009, approximately 42 percent enrolled in adult basic education, an additional 44 percent participated in English literacy programs, and the remaining 14 percent were enrolled in adult secondary education.<sup>1</sup> Adult learners within each of these program types have widely varying education needs and the effectiveness of adult education programs in providing learners with the literacy and numeracy skills that they need for workforce success is mostly unknown.

In light of the need to provide effective and efficient training in basic literacy and numeracy skills for substantial numbers of adults in the United States, the Institute is establishing a National Research and Development Center on Cognition and Adult Literacy.

The knowledge base on how to support adult learners most effectively is still nascent. What are the most effective strategies for teaching this diverse group of adult learners? Can we learn from research describing typical learning trajectories in reading and mathematics, or are there distinctive trajectories of struggling adult learners? Are there underlying cognitive processes that may contribute to the difficulty these adults have experienced in learning to read and execute basic math operations that must be remediated in order for adults to master these critical skills? Appropriately answering these questions will require attention to the cognitive differences that adults bring into the learning environment. The adult education system accommodates to these differences in its division of services into adult basic education, English literacy, and adult secondary education programs. However, these distinctions are not sufficient for instructional purposes. The National Research and Development Center on Cognition and Adult Literacy will gather evidence of the cognitive processes that underlie adult acquisition of literacy and/or numeracy and use this empirical base to develop and test innovative instructional approaches for adult learners.

Many adults participating in adult basic education (ABE) struggle with basic word level skills, while others are able to comprehend short texts. Some research is beginning to accumulate that addresses these questions with respect to struggling adult readers. A recent analysis of the component skills of struggling adult readers indicates that there is substantial variability across these adult readers (e.g., Strucker, Yamamoto, & Kirsch, 2007), and that the variable patterns of reading skills look distinctly different from the patterns seen in children who are struggling to read (Greenberg, Ehri, & Perin, 2002; Mellard, Fall, & Mark, 2009). In children, a typical developmental pathway to reading includes word recognition becoming an automatic process, and differences in comprehension becoming associated, not with word level skills, but with listening comprehension measures. Struggling adult readers are not showing the

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<sup>1</sup> U.S. Department of Education, Office of Vocational Education, Reports of Aggregate National Reporting System Data. Table: Participants By Entering Educational Functioning Level, Ethnicity, And Sex; Program Year: 2008-2009; All Regions. Downloaded on December 23, 2009 from <http://wdcrobcolp01.ed.gov/CFAPPS/OVAE/NRS/reports/index.cfm>.

expected transition in which comprehension becomes more strongly correlated with listening comprehension and less dependent on word level skills. Researchers have also found that measures of underlying cognitive function (e.g., speed of processing, working memory capacity) contribute indirectly to reading comprehension in struggling adult readers. These findings suggest that theoretical models of reading comprehension that derive from the developmental trajectories of typically developing readers may not apply to these struggling adult readers. Although some research has examined the role of working memory in reading comprehension (e.g., Sabatini, 2002), little research has explored how other cognitive factors, such as executive function and knowledge organization, contribute to the difficulties experienced by struggling adult learners. Virtually no research has applied what has been learned through the cognitive sciences to improving instruction for struggling adult learners in the context of adult education.

A second type of adult education programs are English literacy programs serving adult English learners (EL). Adults in these classes span the continuum from those who are literate in their first language and highly educated to those who have limited literacy and formal education in their first language. Both types of learners seek instruction in English and may be in the same classes. The goal of most of these EL programs is to provide instruction in English, and to rapidly transition these learners to ABE or adult secondary education courses appropriate to their incoming literacy levels. However, a recent review of the literature on EL instruction found a serious shortage of materials focused on the needs of adult EL students, and on appropriate instructional strategies and program organization to support those transitions (Hector-Mason, Shaewitz, Sherman, et al., 2009). In addition, research has explored the cognitive benefits and interferences that result from learning a second language. That research literature has not been tapped in developing English literacy programs. Given the large numbers of adult English learners in adult education programs, and their variable instructional needs, it is critically important to identify effective strategies for teaching these learners.

The third major type of adult education program is adult secondary education (ASE). Much research relevant to teaching this population overlaps with postsecondary research and focuses on how best to teach the higher level skills necessary to pass the General Educational Development (GED) exams. However, passing the GED is not entirely congruent with skills needed for postsecondary (or workforce) success. An important line of research with this group of learners would be to consider how to reorganize the content of instruction to make it more aligned with postsecondary skills (e.g., move it beyond test preparation). Discovering how to deliver instruction more efficiently so that this population of learners can move into postsecondary education or the workforce could be one question of interest for the Center.

Although most research on adult learners has focused on reading, many adults also struggle with quantitative literacy skills. Results from the National Assessment of Adult Literacy, carried out in 2003, find that of adults whose highest level of education is less than high school, 64 percent have quantitative skills that are below basic.<sup>2</sup> At most, these adults are able to locate numbers and use them to perform simple quantitative operations (primarily addition) when the mathematics information is very concrete and familiar. Given the national call for adults with high levels of mathematics skill in the labor market, there is a pressing need for research to guide instruction in mathematics in adult education. A recent review of the literature in adult numeracy (Condelli et al., 2006) indicates that there is “virtually no systematic research in ABE identifying effective mathematics instruction” (pg. 62). However, there has been an increase in research focused on effective mathematics instruction in K-12 settings, and findings

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<sup>2</sup> U.S. Department of Education, National Center for Education Statistics, 1992 National Adult Literacy Survey (NALS) and 2003 National Assessment of Adult Literacy (NAAL), *A First Look at the Literacy of America's Adults in the 21st Century*, and supplemental data retrieved July 6, 2006, from [http://nces.ed.gov/naal/Excel/2006470\\_DataTable.xls](http://nces.ed.gov/naal/Excel/2006470_DataTable.xls). (This table was prepared July 2006.)

from cognitive science and from curriculum evaluation may provide insight into the development and evaluation of instructional practices for adult learners.

Through its regular research programs, the Institute has begun to develop a portfolio of research addressing the needs of adult learners. IES-supported researchers have been developing and implementing instructional strategies to support learning of students enrolled in a Job Corps program, and have identified several routines that can be successfully integrated into Job Corps training courses. The Institute is also currently supporting the development of reading assessments designed specifically for use with struggling adult readers. Finally, the Institute is investing in research designed to support the acquisition of basic literacy skills in the context of remedial or developmental courses that students are required to complete prior to matriculation into credit-accruing postsecondary courses. Although we are beginning to accumulate research on the development of reading skills among struggling adult readers, very little research has examined instruction in basic numeracy skills for adults.

The Institute recognizes that some researchers – particularly cognitive scientists who have typically conducted their research in laboratory settings – may be unfamiliar with the settings where adult education is offered. A recent survey of the 3,100 adult education programs in the United States funded under the Adult Education and Family Literacy Act identified five distinct providers: Local Education Agencies (LEAs), Community-Based Organizations (CBOs), community colleges, correctional institutions, and other settings (Tamassia, Lennon, Yamamoto, & Kirsch, 2007). Across the country, LEAs are the largest providers of adult education programs by far, with more than half (54 percent) of adult education programs being offered by public schools or districts. CBOs account for another 24 percent of the adult education programs, and community colleges account for another 21 percent of current programs. The survey also found that there is substantial regional variation in terms of which providers account for adult education (e.g., the Eastern region included almost half of all the CBOs, while LEAs were the largest providers in the Southern and Midwestern regions), as well as in the types of adult education programs offered and attended (e.g., 62 percent of participants in the Western region attended ESL classes). A list of all State offices of adult education and their websites can be found at: [http://wdcrobcolp01.ed.gov/Programs/EROD/org\\_list.cfm?category\\_cd=DAE](http://wdcrobcolp01.ed.gov/Programs/EROD/org_list.cfm?category_cd=DAE).

The purpose of the Center on Cognition and Adult Literacy is to conduct research on the underlying cognitive processes that contribute to or inhibit reading and/or basic mathematics performance of adult learners and to develop and test interventions to support instruction of adult learners in ABE, English literacy, or ASE programs. In addition to its focused program of research, the Center on Cognition and Adult Literacy will conduct supplementary studies and engage in national leadership activities relevant to improving adult literacy.

### **A. Significance of the Focused Program of Research**

Under significance of the project, applicants provide a compelling rationale justifying why the proposed research is important to conduct. Specifically, applicants should address the following three questions. (1) What is the target population of adult learners and why should the Center on Cognition and Adult Literacy focus its efforts on this group? (2) What is the theoretical and empirical rationale for the studies examining underlying cognitive processes? (3) What types of interventions have the potential to improve reading and math skills of adult learners? (4) What is the overall importance of the proposed research?

#### **a. Adult learner population**

Applicants to the Center on Cognition and Adult Literacy competition must first identify one or more of the following groups of adult learners to be the focus of their research and justify their selection: (a) adults who are learning English and who have limited literacy skills in their primary language; (b) adults participating in adult basic education programs; or (c) adults participating in adult secondary education programs.

### **b. Explore underlying cognitive processes**

For its focused program of research, the Center on Cognition and Adult Literacy is required to extend scientific knowledge on the underlying cognitive processes that impede learning in adults. The specific research questions addressed will necessarily depend on the target group of adult learners that the applicant has identified for its focused program of research (e.g., adults with reading and math skills below the fourth grade level). For example, for adults with reading and math skills below the eighth grade, but at or above the fourth grade level, the applicant could propose to examine cognitive processes that contribute to or inhibit the development of reading and/or basic mathematics skills.

Applicants should clearly describe the theoretical and empirical rationale for the studies designed to examine underlying cognitive processes that may contribute to, or inhibit, the development of reading or mathematics skills of adult learners. These studies should be designed to identify possible targets for intervention.

### **c. Develop and evaluate interventions for adult learners**

As part of its focused program of research, the Center on Cognition and Adult Literacy is required to conduct research to develop and test innovative interventions (e.g., instructional approaches, education technology, curricula) for its selected population of adult learners and to conduct an efficacy study in authentic education delivery settings (e.g., classrooms) to test the effect of the new interventions for improving the learning outcomes of adult learners. The interventions to be developed must be designed to be implemented in authentic adult education settings. The interventions may be instructional approaches that teachers would implement, curricula, adaptive computerized tutoring, or other innovative approaches for instruction of adult learners.

Applicants must describe a potential intervention (e.g., instructional approach) to be developed. The Institute recognizes that specific features or strategies to be incorporated in the proposed instructional intervention are likely to depend on the outcomes of the cognitive research to be conducted by the Center. However, the applicant needs to provide sufficient information for reviewers to evaluate the applicant's capacity for translating cognitive science into appropriate interventions for adult learners. Applicants may, for example, build on existing scientific knowledge of adult learning to propose a potential intervention. In describing the potential intervention, applicants should demonstrate that they understand (a) what types of interventions would be feasible and practical for implementation in authentic adult education settings, and (b) what types of interventions might be powerful enough to substantially enhance the growth trajectories of adult learners beyond rates of growth attained through current practices (e.g., is the proposed intervention sufficiently different from existing instructional approaches so that it might produce greater growth relative to standard practices).

### **d. Overall importance of the proposed program of research**

As described in *Sections 4.A.a* through *4.A.c*, the applicant should describe and justify the selection of a target adult learner population, present the theoretical and empirical rationale for the studies exploring cognitive processes underlying the performance of the target adult learners, and describe a potential intervention based on the application of existing cognitive science to enhance the learning of adult students. All of this information lends support to the applicant's justification for the importance of the proposed evaluation. In addition, applicants should provide a compelling argument for why the proposed focused program of research is important to fund.

By (a) clearly identifying the types of adult learners who will be the target of the proposed intervention, (b) providing a compelling theoretical and empirical rationale for the cognitive research, (c) describing a potential intervention that is grounded in basic research in the cognitive sciences, and (d) justifying the importance of the proposed research program, applicants are addressing the *significance of the focused program of research*.

## **B. Research Plan for the Focused Program of Research**

### **a. Methodological requirements for developing innovative instructional approaches and extending scientific knowledge on underlying cognitive processes**

For the Center on Cognition and Adult Literacy, applicants must propose to conduct a series of studies to develop an innovative instructional approach (or approaches) for improving instruction for adult learners and extend scientific knowledge on the underlying cognitive processes that impede reading and/or mathematics performance of adult learners. The Institute recognizes that detailing all of the studies in the series may not be possible, particularly when later experiments depend on the results of earlier experiments in the series. However, applicants must provide sufficient detail for reviewers to judge the quality of the proposed program of research. Applicants may, for example, describe the overall approach of the focused program of research and provide specific details for two or three exemplar studies.

Strong applications will include clear descriptions of: (1) the characteristics of adults who will participate in the studies; (2) the procedures for studies of underlying cognitive processes; (3) the procedures for developing the intervention; and (4) the research design and procedures (including measures, and procedures for collecting and analyzing data) for determining if the intervention functions as intended. With respect to the development of an intervention, it is helpful if applicants explain: (a) how they define "operating as intended" for the proposed intervention; (b) what data they will collect to determine how the intervention is operating; (c) how they will use the data they collect to make further revisions to the intervention; and (d) what criteria they will use to determine if the intervention operates as intended.

In strong applications, researchers make clear what needs to be developed, how it will be developed, and the timeline for the research activities.

### **b. Methodological requirements for evaluating the efficacy of new instructional approaches**

Applicants must provide a detailed research design for evaluating the efficacy of the intervention. Applicants should describe how potential threats to internal and external validity would be addressed. Studies using randomized assignment to treatment and comparison conditions are strongly preferred. *Only in circumstances in which a randomized trial is not possible* may alternatives that substantially minimize selection bias or allow it to be modeled be employed. Acceptable alternatives include appropriately structured regression-discontinuity designs or other well-designed quasi-experimental designs that come close to true experiments in minimizing the effects of selection bias on estimates of effect size.

Applicants should describe the proposed measures, provide technical information on the reliability and validity of the measures, and detail procedures for collecting and coding data. In strong applications, applicants use the proposed theory of change as a framework and make clear how the proposed measures link to the proximal and distal outcomes that the intervention is intended to change. In strong applications, applicants detail procedures for measuring the fidelity of the implementation of the intervention. If some measures need to be developed, applicants should describe what will be developed and how it will be developed, and to the extent possible, provide examples of items (examples of items may be included in Appendix B). If measures (e.g., surveys, fidelity measures) are to be developed and/or collected by another institution, that institution must be included in the application and the measures (e.g., surveys of participants) that will be used must be described, as well as the data collection procedures and the timing of the data collection. It is not acceptable to simply propose that grant funds be used to contract with an unspecified organization to develop and/or collect the measures.

Applicants must include a detailed description of their data analysis plan.

## **5. TOPIC TWO: NATIONAL RESEARCH AND DEVELOPMENT CENTER ON STATE AND LOCAL POLICY**

The past 30 to 40 years have seen an expanding State and district role in schools' academic practices through enactment of specific State or district policies. Through actions such as creating State and local curricula standards; establishing student, teacher, and school accountability measures; setting teacher training and credentialing requirements; enacting formal induction programs for beginning teachers; and initiating programs to target resources to chronically low-performing schools, State and district policies are now seen as key in the efforts to increase student achievement.

This rising importance of State and district education policies has been accompanied by increasing interest in examining the impacts of these policies and understanding the processes through which they work. The opportunities to study the effects of policies have increased with the greater collection and availability of administrative data (at different levels such as student, teacher, school, district, and State) and the greater willingness of States and districts to take part in evaluatory experiments and quasi-experiments. Research on education policies enables States and districts to judge the effectiveness of policies that they have enacted, as well as to provide information to other States and districts considering similar approaches.

Through the National Research and Development Center on State and Local Education Policy (Policy Research Center), the Institute intends to fund a Center with a focused program of research on current State or district education policies intended to improve student achievement and other education outcomes (e.g., high school graduation rates) in any grades from prekindergarten through Grade 12. The Institute is most interested in applications that demonstrate collaboration between researchers and State or district leaders, which results in a focused program of research that addresses issues and questions of interest to the State or district leaders. In addition to its focused program of research, the Policy Research Center will conduct supplementary studies and engage in national leadership activities relevant to education policy.

### **A. Significance of the Focused Program of Research**

For its focused program of research, the Policy Research Center is required to conduct a focused program of research on specific State or district education policies relevant to improving education outcomes for students in any grades from prekindergarten through Grade 12. To address the *significance of the focused program of research*, applicants should describe the theoretical and empirical rationale for the proposed research, as well as justify the importance of the proposed research for State or district education leaders. Applicants should provide a compelling rationale for why the proposed focused program of research is important to fund.

### **B. Research Plan for the Focused Program of Research**

Applicants should identify specific research questions and/or hypotheses to be addressed. The research methods that are proposed must be appropriate for addressing these proposed questions and/or hypotheses. Applicants should describe their research plan clearly and in sufficient detail for reviewers to understand what the applicants are proposing to undertake and to judge the degree to which following the plan will yield answers to the posed hypotheses or research questions. The research plans should provide evidence that the applicant anticipates and has alternative approaches if difficulties are encountered. As described below, different analytical approaches may be proposed to address the research questions. Regardless of the approach chosen applicants must provide a detailed research design and demonstrate that the study is powered to detect reasonably expected and minimally important effects.

For work involving secondary data analyses, applicants should describe clearly the data set(s) to be used in the investigation including information on sampling design, sample characteristics, variables to be used, structure of the data set, and ability to ensure access to the data set if the applicant does not already have access to it. The data set should be described in sufficient detail to allow reviewers to be

able to judge whether or not the proposed analyses may be conducted with the data set. If multiple data sets will be linked to conduct analyses, applicants should provide sufficient detail for reviewers to be able to judge the feasibility of the plan. Applicants proposing secondary data analyses must provide sufficient documentation (e.g., letters of agreement) to assure reviewers that they already have access to the data or that access can be obtained and the project can be carried out in a timely fashion.

Applicants may propose to collect original data. The applicant should carefully describe the sample (including inclusion/exclusion criteria), measures (including reliability and validity), and procedures proposed for the data collection. If some measures need to be developed, applicants should describe what will be developed and how it will be developed, and to the extent possible, provide examples of items (examples of items may be included in Appendix B). If measures (e.g., surveys, fidelity measures) are to be developed and/or collected by another institution, that institution must be included in the application and the measures (e.g., surveys of participants) that will be used must be described, as well as the data collection procedures and the timing of the data collection. It is not acceptable to simply propose that grant funds be used to contract with an unspecified organization to develop and/or collect the measures.

For studies examining the impact of specific policies on education outcomes, studies using randomized assignment to treatment and comparison conditions are strongly preferred. When a randomized trial is used, the applicant should clearly state the unit of randomization (e.g., students, classroom, teacher, or school); and choice of randomizing unit or units should be grounded in a theoretical framework. In circumstances in which a randomized trial is not possible applicants may propose alternatives that substantially minimize selection bias or allow it to be modeled. Applicants proposing to use a design other than a randomized design must make a compelling case that randomization is not possible. Acceptable alternatives include appropriately structured regression-discontinuity designs or other well-designed quasi-experimental designs that come close to true experiments in minimizing the effects of selection bias on estimates of effect size.

The Institute's interest in the impact of policies goes beyond simple determinations of whether or not something works. The Institute is interested in why policies do or do not achieve the desired effects and the processes through which effects are achieved. In well-designed studies, researchers examine relevant mediating and moderating factors. Observational, survey, or qualitative methodologies are encouraged as a complement to experimental methodologies to assist in the identification of factors that may explain the effectiveness or ineffectiveness of specific policies.

In all instances, the research plan must include detailed descriptions of data analysis procedures. Data analytic plans must have sufficient detail to permit reviewers to judge the appropriateness and adequacy of the plan for addressing the hypotheses or research questions. Where analyses of existing or new datasets are included, strong applications will include an explicit discussion of how exclusion from testing, or missing data, will be handled within the statistical analyses.

## **6. TOPIC THREE: NATIONAL RESEARCH AND DEVELOPMENT CENTER ON POSTSECONDARY EDUCATION AND EMPLOYMENT**

State education longitudinal databases provide researchers and policymakers with an opportunity to examine education processes, identify critical intervention points, generate new ideas for improving education and increasing student success, and evaluate programs and policies in practice. Much of the work using these data to examine student outcomes has addressed academic outcomes such as standardized test scores, high school completion, and postsecondary access and completion. However, as states link their education databases with employment/workforce data, more opportunities arise to examine the impacts of postsecondary education (or its absence) on labor market outcomes including hours worked, wages earned, and field of employment.

Types of postsecondary institutions submitting data to State postsecondary entities include public 2-year and 4-year, independent (not for profit), and proprietary (for profit) institutions. About one-half of U.S. postsecondary students are enrolled in education and training prior to the bachelor degree level, studying either for certificates or for associates' degrees. Although many federal surveys do not obtain information on these students or only include a small number or limited data on them, State data can include these students, as well as those attending four year institutions.

Through the National Research and Development Center on Postsecondary Education and Employment, the Institute seeks to foster State-researcher partnerships that will jointly identify key issues regarding the links between postsecondary education and labor market outcomes, identify the data available to address these issues, integrate data sets where needed, carry out the analyses, and inform policymaking.

The opportunities for these partnerships stem from the considerable variation in actual education and labor market data collected, stored and linked among states, many of which have focused their resources on collecting and compiling data and not on its analysis. The Institute has great interest in topics regarding less advantaged populations and individuals with disabilities, such as, what postsecondary education pathways they follow (e.g., their decision to choose an institution type, the specific institution and academic program, and successful completion) and why they choose these pathways (e.g., role of high school preparation, information on choices, social and financial support), the labor market outcomes of these pathways (e.g., employment, employment in their field, wages, stability of employment, and opportunities for advancement), how students might alter their pathways to improve their employment outcomes (for example, choice of coursework, field of study, completion certificate or degree, and quality of institution), and how postsecondary institutions might alter or enhance their education offerings to improve their students' labor market outcomes (e.g., remediation, academic counseling, and retention and completion support).

The Institute intends for the Center on Postsecondary Education and Employment to conduct a focused program of research examining relations between postsecondary education, including education and training prior to the bachelor degree level, and employment outcomes. In addition to its focused program of research, the Center on Postsecondary Education and Employment will conduct supplementary studies and engage in national leadership activities relevant to postsecondary education and employment.

#### **A. Significance of the Focused Program of Research**

For its focused program of research, the Center on Postsecondary Education and Employment is required to conduct a focused program of research that examines postsecondary education, including education and training prior to the bachelor degree level, and employment outcomes. To address the *significance of the focused program of research*, applicants should describe the theoretical and empirical rationale for the proposed research, as well as justify the importance of the proposed research for State education leaders or institutions of higher education. Applicants should provide a compelling rationale for why the proposed focused program of research is important to fund.

#### **B. Research Plan for the Focused Program of Research**

Applicants should clearly identify specific research questions and/or hypotheses to be addressed. The research methods that are proposed must be appropriate for addressing these proposed questions and/or hypotheses. Applicants should describe their research plan clearly and in sufficient detail for reviewers to understand what the applicants are proposing to undertake and to judge the degree to which following the plan will yield answers to the posed hypotheses or research questions. The research plans should provide evidence that the applicant anticipates and has alternative approaches if difficulties are encountered. As described below, different analytical approaches may be proposed to address the research questions. Regardless of the approach chosen applicants must provide a detailed research design and demonstrate that the study is powered to detect reasonably expected and minimally important effects.

For work involving secondary data analyses, applicants should describe clearly the data set(s) to be used in the investigation including information on sampling design, sample characteristics, variables to be used, structure of the data set, and ability to ensure access to the data set if the applicant does not already have access to it. The data set should be described in sufficient detail to allow reviewers to be able to judge whether or not the proposed analyses may be conducted with the data set. If multiple data sets will be linked to conduct analyses, applicants should provide sufficient detail for reviewers to be able to judge the feasibility of the plan. Applicants proposing secondary data analyses must provide sufficient documentation (e.g., letters of agreement) to assure reviewers that they already have access to the data or that access can be obtained and the project can be carried out in a timely fashion.

Although the Institute anticipates that most applicants are likely to propose focused programs of research that involve secondary data analyses, applicants may propose to collect original data. The applicant should carefully describe the sample (including inclusion/exclusion criteria), measures (including reliability and validity), and procedures proposed for the data collection. If some measures need to be developed, applicants should describe what will be developed and how it will be developed, and to the extent possible, provide examples of items (examples of items may be included in Appendix B). If measures (e.g., surveys, fidelity measures) are to be developed and/or collected by another institution, that institution must be included in the application and the measures (e.g., surveys of participants) that will be used must be described, as well as the data collection procedures and the timing of the data collection. It is not acceptable to simply propose that grant funds be used to contract with an unspecified organization to develop and/or collect the measures.

In all instances, the research plan must include detailed descriptions of data analysis procedures. Data analytic plans must have sufficient detail to permit reviewers to judge the appropriateness and adequacy of the plan for addressing the hypotheses or research questions. Where analyses of existing or new datasets are included, strong applications will include an explicit discussion of how exclusion from testing, or missing data, will be handled within the statistical analyses.

## **7. GENERAL REQUIREMENTS OF THE PROPOSED RESEARCH**

### **A. Basic Requirements**

#### **a. Applying to multiple competitions or topics**

Applicants may submit proposals to more than one of the Institute's FY2011 competitions or topics. In addition, within a particular competition, applicants may submit multiple proposals. However, applicants may submit a given proposal only once (i.e., applicants may not submit the same proposal or very similar proposals to multiple competitions or topics). If the Institute determines prior to panel review that an applicant has submitted the same proposal or very similar proposals to multiple topics or competitions and the proposal is judged to be compliant and responsive to the submission rules and requirements described in the Request for Applications, the Institute will select one version of the application to be reviewed by the appropriate scientific review panel. If the Institute determines after panel review that an applicant has submitted the same proposal or very similar proposals to multiple research topics or competitions and if the proposal is determined to be worthy of funding, the Institute will select the research program under which the proposal will be funded.

#### **B. Requirements for the Focused Program of Research**

The Institute intends for the work of the R&D Center to include a focused program of research that ideally will result in solutions or answers to specific education problems at the end of 5 years. The Institute expects the *focused program of research* to comprise about 50 to 75 percent of a Center's activities depending on the cost and effort required to carry out the focused program of research.

For the FY2011 R&D Center competition, the Institute expects applicants to propose a focused program of research that consists of a set of tightly linked studies that build on each other and together accomplish the goals specified under *Section 4 Requirements for the National Research and Development*

*Center on Cognition and Adult Literacy or Section 5 Requirements for the National Research and Development Center on State and Local Policy or Section 6 Requirements for the National Research and Development Center on Postsecondary Education and Employment.* The Institute strongly discourages applications that propose a model in which multiple investigators each conduct separate studies that are only loosely coordinated around the topic.

Although the Centers have much broader functions than conducting a focused program of research, the research program is the only portion of the activities of a Center that can be well-specified in advance, and thus can provide a fair basis for comparing and evaluating applications for funding. Consequently, the majority of the application should be a detailed description of the focused program of research.

#### **a. Significance of the focused program of research**

Because review panels typically read applications across a number research programs, it is most helpful if in the first sentence of the project narrative, the applicant identifies the research program to which the application has been submitted (e.g., "This is an application for a National Research and Development Center on Cognition and Adult Literacy").

The rationale for the significance of the focused program of research must address specific requirements detailed in *Section 4.A* or *Section 5.A* or *Section 6.A Significance of the Focused Program of Research*.

#### **b. Research plan for the focused program of research**

The most important consideration in the competitive review of proposals will be the applicant's articulation of the focused program of research. Applications should include well-specified objectives, a detailed research methods and data analysis plan, a plan for coordinating the work of the cooperating scientists, a timetable for accomplishing the research, and the specific outcomes of the program of research.

The methodological requirements for applications are specified in *Section 4.B* or *Section 5.B* or *Section 6.B Research Plan for the Focused Program of Research*.

#### **c. Timeline**

Along with the description of the focused program of research, applicants should include a clear timeline for the activities in their focused program of research. (The timeline may be included in Appendix A.)

### **C. Requirements for Other Center Activities**

#### **a. Requirements for supplemental research projects**

As part of the Center activities, applicants are expected to conduct smaller, supplemental research projects that speak to other issues that are important within the context of the broad topic of the Center. These projects are typically ones that can be completed within 9 to 12 months. Because these studies are expected to be completed in a relatively short period, typical supplemental studies involve secondary analyses of longitudinal data sets.

Because the Center will work cooperatively with the Institute to select and design supplemental studies to respond to pressing policy and practice needs within the topic covered by the Center, the Institute does not expect applicants to provide highly detailed research plans for these studies in the application. **The Institute expects applicants to devote no more than two or three paragraphs to the description of each supplemental study.** The applicant should, however, document capacity to conduct such studies (e.g., knowledge of the field and research experience of key personnel) and provide **two** examples of supplemental studies the applicant believes might be useful to undertake, including a short rationale explaining the need for the proposed study and a short description of the type of research approach that would be used. Applicants should bear in mind that, although this section of the proposal does not need to be long, capacity for conducting supplemental research projects will carry weight in the scoring of the application.

## **b. Requirements for national leadership activities**

As part of the Center activities, applicants are expected to provide national leadership within the Center's topic area by developing position papers, hosting meetings, and engaging in dialogue with researchers, policymakers, and practitioners to identify promising areas of research, development, and dissemination for the field.

Because the Center will work cooperatively with the Institute in the development and planning of such activities, the Institute does not expect applicants to provide highly detailed plans for the leadership activities. Applicants should explain why the proposed Center staff are qualified to fulfill this leadership role if awarded a Center and describe at least two examples of the types of activities the applicant believes might be useful to undertake, including a short rationale justifying the need for the proposed activity and a description of the applicant's capacity for conducting such projects. In addition, applicants should identify appropriate organizations and agencies with which they might work in carrying out leadership activities. Although this section of the application does not need to be long, applicants should bear in mind that capacity for carrying out leadership and national activities will carry weight in the scoring of the application.

## **D. Management and Institutional Resources**

The Institute anticipates that the focused program of research, as well as the supplemental studies, and national leadership activities will require the coordination of multiple scientists and other partners. Applicants should describe plans and procedures for the overall management of the Center. These plans should include details of procedures for coordinating with schools and districts or other education delivery settings involved in the projects of the Center.

Competitive applicants will have access to institutional resources that adequately support research activities and access to schools or other education delivery settings in which to conduct the research.

When the proposed focus program of research includes conducting research activities in schools, applicants should document that they have the capacity and experience to obtain such cooperation and to describe the steps they have taken or will take to obtain it. If the plans for the **first year** of grant activities include substantial work to be conducted in schools or other education delivery settings, strong applications will include documentation of the availability and cooperation of the schools or other education delivery settings that will be required to carry out that work via a letter of support from the education organization(s).

An applicant may involve curriculum or assessment developers or distributors (*including for-profit entities*) in the project, from having the developers as full partners in its proposal to using off-the-shelf curriculum or assessment materials without involvement of the developer or publisher. However, involvement of the developer or distributor should not jeopardize the objectivity of the research. Strong applications will carefully describe the role, if any, of the developer/distributor in the project. Applicants should describe how objectivity in the research would be maintained.

## **E. Personnel**

Competitive applicants will have leadership and staff that collectively demonstrate (a) expertise in the content areas relevant to the Center topic (e.g., adult cognition and instruction of adult learners); (b) the methodological expertise to carry out the proposed projects; (c) sufficient experience working with education delivery settings to carry out the proposed projects; and (d) experience that is relevant to national leadership activities. In the project narrative, applicants should briefly describe the qualifications, roles, responsibilities, and percent of time to be devoted to the project for key personnel.

## **PART IV GENERAL SUBMISSION AND REVIEW INFORMATION**

### **8. MECHANISM OF SUPPORT**

The Institute intends to award cooperative agreements pursuant to this request for applications. The maximum length of the award period is five years.

### **9. FUNDING AVAILABLE**

Typical awards will be in the range of \$1,000,000 to \$2,000,000 (total cost = direct + indirect) per year for 5 years. Larger awards will be considered. The size of the award depends on the scope of the project.

The Institute expects the *focused program of research* to comprise about 50 to 75 percent of a Center's activities depending on the cost and effort required to carry out the focused program of research, with the remainder of the budget devoted to supplemental studies, leadership activities, and any administrative activities not included in the focused program of research.

Although the plans of the Institute include the Education Research and Development Center program described in this announcement, awards pursuant to this request for applications are contingent upon the availability of funds and the receipt of a sufficient number of meritorious applications. The Institute anticipates funding at least one Center under each topic. However, because the Institute is committed to funding only high quality work, the Institute will make an award for a Center only if at least one application is deemed meritorious under peer review.

### **10. ELIGIBLE APPLICANTS**

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

### **11. SPECIAL REQUIREMENTS**

Research supported through this program must be relevant to U.S. schools.

Recipients of awards are expected to publish or otherwise make publicly available the results of the work supported through this program. Institute-funded investigators should submit final, peer-reviewed 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. Institutions and investigators are responsible for ensuring that any publishing or copyright agreements concerning submitted articles fully comply with this requirement.

Applicants must budget for one meeting each year in Washington, D.C., with other grantees and Institute staff for a duration of up to three days of meetings. At least one Center representative must attend the three-day meeting.

Research applicants may collaborate with, or be, for-profit entities that develop, distribute, or otherwise market products or services that can be used as interventions or components of interventions in the proposed research activities. Involvement of the developer or distributor must not jeopardize the objectivity of the evaluation.

Applicants may propose studies that piggyback onto an existing study (i.e., requires access to subjects and data from another study). In such cases, the Principal Investigator of the existing study must be one of the members of the research team applying for the grant to conduct the new project.

If an application is being considered for funding based on the technical merit scores from the scientific peer review panel and the research relies on access to secondary data sets, the applicant will need to provide documentation that they have access to the necessary data sets in order to receive a grant. This means that if an applicant does not have permission to use the proposed data sets at the time of application, the applicant will need to provide documentation to the Institute from the entity controlling the data set(s) indicating that the applicant has permission to use the data for the proposed research for the time period discussed in the proposal before the grant will be awarded.

The Institute strongly advises applicants to establish a written agreement among all key collaborators and their institutions (e.g., Principal and Co-Principal Investigators) regarding roles, responsibilities, access to data, publication rights, and decision-making procedures within three months of receipt of an award.

Through the terms of the cooperative agreement, grantees will work with the Institute to plan activities related to supplemental research and leadership activities.

## **12. DESIGNATION OF PRINCIPAL INVESTIGATOR**

The applicant institution is responsible for identifying the Principal Investigator. The Principal Investigator 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. An applicant institution may elect to designate more than one Principal Investigator. In so doing, the applicant institution identifies them as individuals who share the authority and responsibility for leading and directing the research Center intellectually and logistically. All Principal Investigators will be listed on any grant award notification. However, institutions applying for funding must designate a single point of contact for the Center. The role of this person is primarily for communication purposes on the scientific and related budgetary aspects of the Center and should be listed as the Principal Investigator. All other Principal Investigators should be listed as Co-Principal Investigators.

## **13. LETTER OF INTENT**

The Institute asks all applicants to submit a letter of intent by 4:30 p.m. Washington D.C. time on the relevant due date for the competition to which they plan to submit. The information in the Letters of Intent enable Institute staff to identify the expertise needed for the scientific peer review panels and secure sufficient reviewers to handle the anticipated number of applications. The Institute encourages all interested applicants to submit a letter of intent, even if they think that they might later decide not to submit an application. The letter of intent is not binding and does not enter into the review of a subsequent application.

The letter of intent must be submitted electronically using the instructions provided at: <https://ies.constellagroup.com>. Receipt of the letter of intent will be acknowledged via email.

### **A. Content**

The letter of intent should include:

- a. Descriptive title
- b. Center topic to which the applicant intends to submit a proposal
- c. Brief description of the proposed focused program of research
- d. Name, institutional affiliation, address, telephone number and e-mail address of the Principal Investigator(s)
- e. Name and institutional affiliation of any key Center personnel, including collaborators and contractors
- f. Duration of the proposed project

- g. Estimated total budget request (the estimate need only be a rough approximation).

## **B. Format and Page Limitation**

Fields are provided in the letter of intent for each of the content areas described above. The project description should be single-spaced and should not exceed one page (about 3,500 characters).

## **14. MANDATORY SUBMISSION OF ELECTRONIC APPLICATIONS**

Grant applications must be submitted electronically through the Internet using the software provided on the Grants.gov Web site: <http://www.grants.gov/>. Applicants must follow the application procedures and submission requirements described in the IES Grants.gov Application Submission Guide and the instructions in the User Guide provided by Grants.gov.

Applications submitted in paper format will be rejected unless the applicant (a) qualifies for one of the allowable exceptions to the electronic submission requirement described in the Federal Register notice announcing the Education Research and Development Center Program (CFDA Number 84.305C) competitions described in this Request for Applications and (b) submits, no later than two weeks before the application deadline date, a written statement to the Institute that documents that the applicant qualifies for one of these exceptions.

For more information on using Grants.gov, applicants should visit the Grants.gov web site.

## **15. APPLICATION INSTRUCTIONS AND APPLICATION PACKAGE**

### **A. Documents Needed to Prepare Applications**

To complete and submit an application, applicants need to review and use three documents: the Request for Applications, the IES Grants.gov Application Submission Guide, and the Application Package.

- The *Request for Applications* for the Education Research and Development Center Program (CFDA 84.305C) describes the substantive requirements for a research application.

✓ Request for Applications <http://ies.ed.gov/funding/>

- The *IES Grants.gov Application Submission Guide* provides the instructions for completing and submitting the forms.

✓ IES Grants.gov Application Submission Guide <http://ies.ed.gov/funding/>

Additional help navigating Grants.gov is available in the Grants.gov User Guide:

✓ Grants.gov User Guide [http://www.grants.gov/help/user\\_guides.jsp](http://www.grants.gov/help/user_guides.jsp)

- The *Application Package* provides all of the forms that need to be completed and submitted. The application form approved for use in the competitions specified in this RFA is the government-wide SF-424 Research and Related (R&R) Form (OMB Number 4040-0001). The applicant must follow the directions in *Section C* below to download the Application Package from Grants.gov.

### **B. Date Application Package is Available on Grants.gov**

The Application Package will be available on <http://www.Grants.gov/> by the following date:

Application Package Available by

July 19, 2010

## **C. Download Correct Application Package**

### **a. CFDA number**

Applicants must first search by the CFDA number for each IES Request for Applications *without* the alpha suffix to obtain the correct downloadable Application Package. For the Education Research Request for Applications, applicants must search on: **CFDA 84.305**.

### **b. Education Research and Development Center Application Package**

The Grants.gov search on CFDA 84.305 will yield more than one Application Package. For the Education Research and Development Center Grants Request for Applications, applicants must download the package for the appropriate deadline marked:

<b>Application Package:</b>	<b>CFDA 84.305C-September Education Research and Development Center Application Package</b>
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In order for the application to be submitted to the correct grant competition, applicants must download the Application Package that is designated for the grant competition and competition deadline. Using a different Application Package, even if that package is for an Institute competition, will result in the application being submitted to the wrong competition. Applications submitted to the wrong competition may not be reviewed for the Education Research and Development Center Program competition.

## **16. SUBMISSION PROCESS AND DEADLINE**

Applications must be **submitted electronically and received by 4:30:00 p.m., Washington, D.C. time** on the application deadline date, using the standard forms in the Application Package and the instructions provided on the Grants.gov website.

Potential applicants should check this site for information about the electronic submission procedures that must be followed and the software that will be required.

## **17. APPLICATION CONTENT AND FORMATTING REQUIREMENTS**

### **A. Overview**

In this section, the Institute provides instructions regarding the content of the (a) project summary/abstract, (b) project narrative, (c) bibliography and references cited, (d) Appendix A, and (e) Appendix B. Instructions for all other documents to be included in the application (e.g., forms, budget narrative, human subjects narrative) are provided in the IES Grants.gov Application Submission Guide.

### **B. General Format Requirements**

Margin, format, and font size requirements for the Center project summary/abstract, Center project narrative, bibliography and references cited, Appendix A, and Appendix B are described in this section. To ensure that the text is easy for reviewers to read and that all applicants have the same amount of available space in which to describe their projects, applicants must adhere to the type size and format specifications for the entire narrative including footnotes.

#### **a. Page and margin specifications**

For the purposes of applications submitted under this RFA, a "page" is 8.5 in. x 11 in., on one side only, with 1 inch margins at the top, bottom, and both sides.

#### **b. Spacing**

Text must be single spaced in the narrative.

#### **c. Type size (font size)**

Type must conform to the following three requirements:

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

Applicants should check the type size using a standard device for measuring type size, rather than relying on the font selected for a particular word processing/printer combination. The type size used must conform to all three requirements. Small type size makes it difficult for reviewers to read the application; consequently, the use of small type will be grounds for the Institute to return the application without peer review.

Adherence to type size and line spacing requirements is necessary so that no applicant will have an unfair advantage, by using small type or by providing more text in their applications. **Note, these requirements apply to the PDF file as submitted.** As a practical matter, applicants who use a 12-point Times New Roman font without compressing, kerning, condensing or other alterations typically meet these requirements.

Figures, charts, tables, and figure legends may be in a smaller type size but must be readily legible.

#### **d. Graphs, diagrams, tables**

Applicants must use only black and white in graphs, diagrams, tables, and charts. The application must contain only material that reproduces well when photocopied in black and white.

### **C. Project Summary/Abstract**

#### **a. Submission**

The Center project summary/abstract will be submitted as a separate .PDF attachment.

#### **b. Page limitations and format requirements**

The project summary/abstract is limited to one single-spaced page and must adhere to the margin, format, and font size requirements above.

#### **c. Content**

The Center project summary/abstract should include:

- (1) Title of the proposed Center
- (2) The topic under which the applicant is applying (i.e., National Education Research and Development Center on Cognition and Adult Literacy)
- (3) Brief description of the focused program of research
- (4) A list of the key Center personnel

### **D. Project Narrative**

#### **a. Submission**

The Center project narrative will be submitted as a .PDF attachment.

#### **b. Page limitations and format requirements**

The Center project narrative is limited to **35 single-spaced pages** for all applicants. If the narrative for the Center project is determined to exceed the 35 single-spaced page limit, the Institute will remove any pages after the thirty-fifth page of the narrative.

The 35-page limit for the project narrative does not include any of the SF-424 forms, the one-page summary/abstract, the appendices, research on human subjects information, bibliography and references cited, biographical sketches of senior/key personnel, narrative budget justification, subaward budget information or certifications and assurances.

Reviewers are able to conduct the highest quality review when applications are concise and easy to read, with pages numbered consecutively using the top or bottom right-hand corner.

**c. Format for citing references in text**

To ensure that all applicants have the same amount of available space in which to describe their Center in the project narrative, applicants should 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**

By incorporating the requirements outlined in *Part III Requirements of the Proposed Research*, the *project narrative* provides the majority of the information on which reviewers will evaluate the proposal.

To be compliant with the requirements of the Request for Applications, the Center project narrative must include five sections: (a) Significance of the Focused Program of Research, (b) Research Plan for the Focused Program of Research, (c) Other Center Activities, (d) Management and Institutional Resources, and (e) Personnel. Information to be included in each of these sections is detailed in *Part III Requirements of the Proposed Research*.

**E. Bibliography and References Cited**

**a. Submission**

The section will be submitted as a .PDF attachment.

**b. Page limitations and format requirements**

There are no limitations to the number of pages in the bibliography. The bibliography must adhere to the margin, format, and font size requirements described in *Section 17.B. General Format Requirements*.

**c. Content**

Applicants 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 research narrative.

**F. Appendix A**

**a. Submission**

Appendix A should be included at the end of the Project Narrative and submitted as part of the same .PDF attachment.

**b. Page limitations and format requirements**

Appendix A is limited to 15 pages. It must adhere to the margin, format, and font size requirements described in *Section 17.B. General Format Requirements*.

**c. Content**

**(i) Purpose**

The purpose of Appendix A is to allow the applicant to include any figures, charts, or tables that supplement the research text, examples of measures to be used in the project, and letters of agreement from partners (e.g., schools) and consultants. These are the only materials that may be included in Appendix A; all other materials will be removed prior to review of the application. Narrative text related to any aspect of the project (e.g., descriptions of the proposed sample, the design of the study, or previous research conducted by the applicant) must be included in the research narrative.

**(ii) Letters of agreement**

Letters of agreement from State or local education agencies schools, and other institutions integral to the proposed work 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. The Institute recognizes that some applicants may have more letters of agreement than will be accommodated by the 15-page limit. In such instances, applicants should include the most important letters of agreement and may list the letters of agreement that are not included in the application due to page limitations.

## **G. Appendix B (Optional)**

### **a. Submission**

If applicable, Appendix B should be included at the end of the Center Project Narrative, following Appendix A, and submitted as part of the same .PDF attachment.

### **b. Page limitations and format requirements**

The appendix is limited to 10 pages. Appendix B must adhere to the margin, format, and font size requirements described in *Section 17.B. General Format Requirements*.

### **c. Content**

The purpose of Appendix B is to allow applicants to include examples of curriculum materials, assessment items, computer screens, or other materials used in an intervention or assessment that is pertinent to the proposed project. These are the only materials that may be included in Appendix B; all other materials will be removed prior to review of the application. Narrative text related to the intervention or assessment (e.g., descriptions of research that supports the use of the revised curriculum components, the theoretical rationale for specific types of assessment items, or details regarding the implementation or use of the intervention) must be included in the 35-page Center project narrative.

## **18. APPLICATION PROCESSING**

Applications must be submitted electronically and received by **4:30:00 p.m., Washington, D.C. time** on the application deadline date listed in the heading of this request for applications. Upon receipt, each application will be reviewed for completeness and for responsiveness to this request for applications. Applications that do not address specific requirements of this request will be returned to the applicants without further consideration.

## **19. PEER REVIEW PROCESS**

Applications that are compliant and responsive to this request will be evaluated for scientific and technical merit. Reviews will be conducted in accordance with the review criteria stated below by a panel of scientists who have substantive and methodological expertise appropriate to the program of research and request for applications.

Each application will be assigned to one of the Institute's scientific review panels. At least three 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, an average overall score for each application will be calculated and a preliminary rank order of applications will be prepared before the full peer review panel convenes to complete the review of applications.

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

## **20. REVIEW CRITERIA FOR SCIENTIFIC MERIT**

The purpose of Institute-supported research is to contribute to the solution of 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. Reviewers for all applications will be expected 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 also described in *Part III Requirements of the Proposed Research*.

### **A. Significance of the Focused Program of Research**

Does the applicant provide a compelling rationale for the significance of the project as defined in the sections on the significance of the focused program of research?

### **B. Research Plan for the Focused Program of Research**

Does the applicant meet the requirements described in the sections detailing the methodological requirements for the focused program of research?

### **C. Plans for Other Center Activities**

Do the content of the examples of proposed supplemental studies and leadership activities and the description of the applicant's capacity to conduct such projects demonstrate that the applicant has the ideas, experience, and capability to successfully carry-out such projects in cooperation with the Institute?

### **D. Management and Institutional Resources**

Do the plans and procedures for the overall management of the Center indicate that the applicant has the capacity to efficiently and successfully complete the proposed research, dissemination, and leadership activities? Does the applicant have the facilities, equipment, supplies, and other resources required to support the proposed activities? Do the commitments of each partner show support for the implementation and success of the proposed Center activities?

### **E. Personnel**

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

## **21. RECEIPT AND START DATE SCHEDULE**

### **A. Letter of Intent Receipt Date**

July 19, 2010

### **B. Application Deadline Date**

September 16, 2010

### **C. Earliest Anticipated Start Date**

July 1, 2011

### **D. Latest Possible Start Date**

September 1, 2011

## **22. AWARD DECISIONS**

The following will be considered in making award decisions:

- Scientific merit as determined by peer review
- Responsiveness to the requirements of this request
- Performance and use of funds under a previous Federal award
- Contribution to the overall program of research described in this request
- Availability of funds

## **23. INQUIRIES MAY BE SENT TO**

### **A. National R&D Center on Cognition and Adult Literacy**

Dr. Elizabeth Albro  
Institute of Education Sciences  
555 New Jersey Avenue, NW  
Washington, D.C. 20208  
Telephone: (202) 219-2148  
Email: Elizabeth.Albro@ed.gov

### **B. National R&D Center on State and Local Education Policy**

Dr. Allen Ruby  
Institute of Education Sciences  
555 New Jersey Avenue, NW  
Washington, D.C. 20208  
Telephone: (202) 219-1591  
Email: Allen.Ruby@ed.gov

### **C. National R&D Center on Postsecondary Education and Employment**

Dr. Allen Ruby  
Institute of Education Sciences  
555 New Jersey Avenue, NW  
Washington, D.C. 20208  
Telephone: (202) 219-1591  
Email: Allen.Ruby@ed.gov

## **24. 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.

## **25. APPLICABLE REGULATIONS**

The Education Department General Administrative Regulations (EDGAR) in 34 CFR parts 74, 77, 80, 81, 82, 84, 85, 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.

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