Interventions for Struggling Adolescent/Adult Readers and Writers

Agency: U.S. Department of Education

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Program Synopsis:
The Institute of Education Sciences (IES) intends to contribute to improvement of reading and writing skills among struggling adolescent and adult readers and writers. The long-term outcome of this program will be an array of tools and strategies (e.g., assessments, instructional approaches) that have been documented to be effective for improving reading and writing skills.

Website: http://ies.ed.gov/funding
Deadline: June 25, 2009 or October 1, 2009

GRC Number: 2020
CFDA Number: 84.305A
IES Research and Research Training Grant Programs: Future Competitions

The Institute of Education Sciences accepts applications twice each year for its research and research training grant programs – generally, the fourth Thursday in June and the first Thursday in October. We anticipate that due dates for 2009 will be:

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<th>Competition Round</th>
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<th>Application Package Available on Grants.gov</th>
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Actual deadlines and availability of the application package on Grants.gov will be announced in the Federal Register and on the Institute's website.

Although the Institute accepts applications for most programs in both June and October, some programs receive applications only once each year.

Grant Program and Receipt of Applications

- Education Research Programs: June and October
- Special Education Research Programs: June and October
- Postdoctoral Education Research Training: June only
- Postdoctoral Special Education Research Training: June only
- Statistical and Research Methodology in Education: June only
- Evaluation of State and Local Education Programs and Policies: June and October

Competitions for the Predoctoral Interdisciplinary Research Training Programs in the Education Sciences, National Research and Development Centers, and Special Education Research and Development Centers occur on an irregular basis. Announcements of new competitions for these programs are posted in the Federal Register early in the calendar year (January/February) with application deadlines in October. Interested applicants are also encouraged to subscribe to IES Newsflash to receive information about future competitions.
PART I GENERAL OVERVIEW

1. REQUEST FOR APPLICATIONS
In this announcement, the Institute of Education Sciences (Institute) describes the research grant programs that are funded through the National Center for Education Research. Separate announcements are available on the Institute's website that pertain to the predoctoral and postdoctoral research training programs, evaluation of state and local education policies and programs research program, and national research and development centers funded through the 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/ncser).

The Institute invites applications for research projects that will contribute to its education research programs in Reading and Writing; Mathematics and Science Education; Cognition and Student Learning; Teacher Quality - Reading and Writing; Teacher Quality - Mathematics and Science Education; Social and Behavioral Context for Academic Learning; Education Leadership; Education Policy, Finance, and Systems; Early Childhood Programs and Policies; Middle and High School Reform; Interventions for Struggling Adolescent and Adult Readers and Writers; Postsecondary Education; and Education Technology. For the FY 2009 competition, the Institute will consider only applications that meet the requirements outlined below under Part II Research Grant Topics and Part III Requirements of the Proposed Research.

2. OVERVIEW OF THE INSTITUTE'S RESEARCH PROGRAMS
The Institute's over-arching priority is research that contributes to improved academic achievement for all students, and particularly for those whose education prospects are hindered by inadequate education services and conditions associated with poverty, race/ethnicity, limited English proficiency, disability, and family circumstance.

With academic achievement as the major priority, the Institute focuses on outcomes that differ by periods of education. In the infancy and preschool period, the outcomes of interest are those that enhance readiness for schooling (e.g., language skills) and developmental outcomes for infants and toddlers with disabilities. In kindergarten through 12th grade, the core academic outcomes of reading and writing (including reading and writing in the disciplines), mathematics, and science are emphasized, as well as the behaviors and social skills that support learning in school and successful transitions to employment, independent living, and post-secondary education. At the post-secondary level, the focus is on enrollment in and completion of programs that prepare students for successful careers and lives. The same outcomes are emphasized for students with disabilities across each of these periods, and include the functional outcomes that improve educational and transitional results. The acquisition of basic skills by adults with low levels of education is also a priority.

In conducting research on academic outcomes, the Institute concentrates on conditions within the control of the education system, with the aim of identifying, developing, and validating effective education programs, practices, policies, and approaches as well as understanding the factors that influence variation in their effectiveness such as implementation. Conditions that are of highest priority to the Institute are in the areas of curriculum, instruction, assessment (including the identification of students with disabilities), the quality of the education workforce, and the systems and policies that affect these conditions and their interrelationships (for example, accountability systems, delivery mechanisms including technology, and policies that support the ability of parents to improve educational results for their children through such means as choice of education services and provision of school-related learning opportunities in the home).
In this section, the Institute describes the overall framework for its research grant programs. Specific information on the research topics described in this announcement may be found in the sections pertaining to each education research program:

- Reading and Writing
- Mathematics and Science Education
- Cognition and Student Learning
- Teacher Quality – Reading and Writing
- Teacher Quality – Mathematics and Science Education
- Social and Behavioral Context for Academic Learning
- Education Leadership
- Education Policy, Finance, and Systems
- Early Childhood Programs and Policies
- Middle and High School Reform
- Interventions for Struggling Adolescent and Adult Readers and Writers
- Postsecondary Education
- Education Technology

The Institute addresses the educational needs of typically developing students through its Education Research programs and the needs of students with disabilities through its Special Education Research programs. Both the Education Research and the Special Education Research programs are organized by outcomes (e.g., reading, mathematics), type of education condition (e.g., curriculum and instruction; teacher quality; administration, systems, and policy), grade level, and research goals.

A. Outcomes
The Institute's research programs focus on improvement of the following education outcomes: (a) readiness for schooling (pre-reading, pre-writing, early mathematics and science knowledge and skills, and social development); (b) academic outcomes in reading, writing, mathematics, and science; (c) student behavior and social interactions within schools that affect the learning of academic content; (d) skills that support independent living for students with significant disabilities; and (e) educational attainment (high school graduation, enrollment in and completion of post-secondary education).

B. Conditions
In general, each of the Institute's research programs focuses on a particular type of condition (e.g., curriculum and instruction) that may affect one or more of the outcomes listed previously (e.g., reading). The Institute's research programs are listed below according to the primary condition that is the focus of the program.

a. Curriculum and instruction
Several of the Institute's programs focus on the development and evaluation of curricula and instructional approaches. These programs include: (a) Reading and Writing; (b) Mathematics and Science Education; (c) Cognition and Student Learning; (d) Social and Behavioral Context for Academic Learning; (e) Early Childhood Programs and Policies; (f) Interventions for Struggling Adolescent and Adult Readers and Writers; and (g) Education Technology.

b. Quality of the education workforce
A second condition that affects student learning and achievement is the quality of teachers and education leaders (e.g., principals, superintendents). The Institute funds research on how to improve teacher quality and education leadership through its programs on (a) Teacher Quality – Reading and Writing; (b) Teacher Quality – Mathematics and Science Education, (c) Education Leadership, and (d) Education Technology.

c. Administration, systems, and policy

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A third approach to improving student outcomes is to identify systemic differences in the ways in which schools and districts are led, organized, managed, and operated that may be directly or indirectly linked to student outcomes. The Institute takes this approach in its programs on (a) Education Policy, Finance, and Systems; (b) Early Childhood Programs and Policies; (c) Middle and High School Reform; and (d) Postsecondary Education.

Applicants should be aware that some of the Institute's programs cover multiple conditions. For example, the following programs cover multiple conditions: (a) Early Childhood Programs and Policies; and (b) Education Technology.

C. Grade Levels
The Institute's research programs also specify the ages or grade levels covered in the research program. The specific grades vary across research programs and within each research program, and grades may vary across the research goals. In general, the Institute supports research for (a) prekindergarten and kindergarten, (b) elementary school, (c) middle school, (d) high school, (e) post-secondary education, (f) vocational education, and (g) adult education. In addition, the Institute supports research on infants and toddlers with disabilities.

D. Research Goals
The Institute has established five research goals for its research programs. Within each research program one or more of the goals may apply: (a) Goal One – identify existing programs, practices, and policies that may have an impact on student outcomes and the factors that may mediate or moderate the effects of these programs, practices, and policies; (b) Goal Two – develop programs, practices, and policies that are theoretically and empirically based; (c) Goal Three – evaluate the efficacy of fully developed programs, practices, and policies; (d) Goal Four – evaluate the impact of programs, practices, and policies implemented at scale; and (e) Goal Five – develop and/or validate data and measurement systems and tools.

For a list of the Institute's FY 2009 research and training grant topics – including grant competitions through the Institute's National Center for Education Research and National Center for Special Education Research, please see Table 1 below. Funding announcements for these competitions may be downloaded from the Institute's website at http://ies.ed.gov.
PART II RESEARCH GRANT TOPICS

For FY 2009, the Institute's National Center for Education Research is accepting applications for research grants on June 26, 2008, and October 2, 2008. In this section, the Institute describes the 13 research grant topics.

Across its research programs, the National Center for Education Research is particularly interested in interventions for students who are from low income backgrounds and/or racial, ethnic, and linguistic minority groups that have underachieved academically, but will consider applications that focus on other populations if the results are likely to be applicable across socioeconomic, racial, ethnic, and linguistic categories.

13. INTERVENTIONS FOR STRUGGLING ADOLESCENT AND ADULT READERS AND WRITERS
Program Officer: Dr. Elizabeth Albro (202-219-2148; Elizabeth.Albro@ed.gov)

A. Purpose
Through its Research on Interventions for Struggling Adolescent and Adult Readers and Writers (Adolescent/Adult Readers/Writers) grants program, the Institute intends to contribute to the improvement of reading and writing skills among struggling adolescent and adult readers and writers by (1) identifying curriculum and instructional practices that are associated with better reading or writing outcomes, as well as mediators and moderators of the relations between these practices and reading or writing outcomes; (2) developing curricula and instructional practices for teaching reading or writing to struggling adolescent and adult readers and writers, or for addressing the underlying causes of their reading or writing difficulties; (3) evaluating the efficacy of curricula and instructional practices for improving reading or writing skills of struggling adolescent or adult readers and writers; (4) evaluating the impact of reading or writing curricula and instructional practices for struggling adolescent and adult readers and writers when implemented at scale; and (5) developing and validating assessments that can be used in instructional settings to support instruction.

The long-term outcome of this program will be an array of tools and strategies (e.g., assessments, instructional approaches) that have been documented to be effective for improving the reading and writing skills of struggling adolescent and adult readers and writers.

B. Background
The Institute created its Adolescent/Adult Readers/Writers research program to call attention to the need for rigorous research to develop and evaluate interventions to improve the reading and writing skills of adolescents and adults. In previous years, researchers interested in submitting reading or writing research proposals that targeted adolescents or adults could have submitted to the research on Reading and Writing program. However, the low response in terms of numbers of applications that focused on adolescent or adult readers/writers suggested that we needed to do something else to draw more attention to the need for research in this area. Hence, we created a separate Adolescent/Adult Readers/Writers research program. In the past two years we received a substantial increase in the numbers of reading and writing applications that focus on the needs of adolescents and adults who have difficulty reading or writing and are continuing the program.

A significant number of adolescent and adult readers are not able to read well enough to make sense of short passages, much less the longer stretches of text that most readers are expected to understand.
everyday. According to the 2007 National Assessment of Educational Progress (NAEP), 26 percent of eighth graders cannot read at the basic level; on the 2005 NAEP, 27 percent of twelfth graders could not read at the basic level. That is, when reading grade-appropriate text, these adolescents cannot extract the general meaning or make obvious connections between the text and their own experiences, or make simple inferences from the text. In other words, they cannot understand what they have read. Studies show that adolescents who are struggling readers are at high risk of dropping out of high school, graduating unprepared for college, and having limited opportunities in the workforce (National Center for Education Statistics, 2003).

Although the research base on the basic components of literacy and strategies to help young children learn to read is strong, much less research has examined how to identify, prevent, and remediate reading difficulties in middle and high school students (Snow, Burns, & Griffin, 1998). Some middle and high school students struggle with basic reading skills, such as decoding and word recognition. Other adolescent students have learned basic reading skills, but continue to struggle with vocabulary, fluency, and comprehension.

Similarly, the 2003 National Assessment of Adult Literacy finds that 14 percent of adults have no more than the most simple and concrete literacy skills. These adults are able to sign their names and can locate information in short prose texts, but are unable to read and understand material presented in pamphlets or newspaper articles. Another 29 percent of the adult population demonstrates basic prose literacy skills, but cannot perform moderately challenging literacy activities, such as summarizing a text. Given the increasing need for literacy in the workplace (Barton, 2000), it is unsurprising that more than half of adults with below basic literacy levels are unemployed. In addition, adults with a basic mastery of prose literacy skills also confront challenges in the workplace. Approximately 38 percent of such individuals are currently unemployed.

Given that substantial numbers of adolescents and adults struggle with the basic tasks of reading and writing, the Institute requests applications targeting the development and evaluation of reading and writing interventions and assessments designed for struggling adolescent and adult readers. By struggling adolescent readers and writers, the Institute means those middle or high school students who have not been identified with disabilities, but whose reading or writing skills are at least two years below grade level. By struggling adult readers and writers, the Institute refers to adults whose reading and writing skills prevent them from carrying out simple daily tasks. Struggling adolescent and adult readers/writers typically have received reading and writing instruction during their schooling, but continue to perform below grade-level expectations. The Institute is particularly interested in research efforts targeting adolescents and adults who may able to read and/or write, but whose performance level impedes their success either in the classroom or workplace. Adolescent students may not qualify for special education services, but their performance levels indicate a need for additional reading and/or writing instruction.

Through this program, the Institute intends to support research on the development and evaluation of interventions that are appropriate for use in middle and high school and/or adult basic education programs for native English speakers and for English language learners. Appropriate interventions include curricula, instructional approaches, and training teachers or para-professionals who provide instruction for struggling adolescent or adult readers and writers.

In addition to supporting the identification, development, and evaluation of curricula and instructional approaches for struggling adolescent and adult readers and writers, the Institute intends for the Adolescent/Adult Readers/Writers program to address the need to develop and validate reading and writing measurement tools for classroom assessments to be used for instructional purposes (e.g., progress monitoring). To improve reading and writing skills, instruction may need to be tailored to the sources of difficulty that individual students experience. An ideal learning environment might involve regular and frequent assessment of skills, and the possibility of individualized instruction for students.
based on the particular source of their difficulties. Through Goal Five, the Institute intends to support
the development of diagnostic assessments in reading and writing and assessments to monitor progress
in reading and writing.

C. Specific Requirements
For the FY 2009 Interventions for Struggling Adolescent and Adult Readers and Writers topic, applicants
must submit under either Goal One or Goal Two or Goal Three or Goal Four or Goal Five. More details
on the requirements for each goal are listed in Part III Requirements of the Proposed Research. Here,
specific requirements that apply to applications to the Interventions for Struggling Adolescent and Adult
Readers and Writers topic are described.

Under the Adolescent/Adult Readers/Writers program, applications must address:
• reading or writing curricula for teaching reading or writing to struggling adolescent and adult
readers and writers or for addressing the underlying causes of their reading or writing
difficulties;
• instructional approaches for teaching reading or writing to struggling adolescent and adult
readers and writers or for addressing the underlying causes of their reading or writing
difficulties;
• training for teachers or para-professionals who provide instruction to struggling adolescent or
adult readers and writers; or
• reading or writing assessments to support instruction intended for use with adolescent and adult
readers and writers.

Researchers who are interested in identifying underlying or component processes of reading or writing
and the relations of these processes to proficiency in reading or writing should refer to the Cognition and
Student Learning research program.

14. POSTSECONDARY EDUCATION
Program Officer: Dr. Ram Singh (202-219-2025; Ram.Singh@ed.gov)

A. Purpose
The Institute intends for the Postsecondary Education research program to address five goals: (1)
identifying policies, programs or practices that are associated with improving access to, persistence in, or
completion of postsecondary education; (2) developing new programs, practices, or policies that are
intended to improve access to, persistence in, or completion of, postsecondary education; (3) evaluating
the efficacy of programs, practices, or policies that are intended to improve access to, persistence in, or
completion of postsecondary education; (4) providing evidence on the effectiveness of programs,
practices, or policies for improving access to, persistence in, or completion of, postsecondary education
when they are implemented at scale; and (5) developing and validating assessments of cognitive (e.g.,
problem-solving, creativity, writing) and social cognitive (e.g., communication and interpersonal) skills
that are outcomes of postsecondary education.

B. Background
Improving participation and persistence in postsecondary education is a national concern, especially for
high-risk students. According to the National Center for Education Statistics, there are substantial gaps
across income groups in the percentages of high school graduates who enrolled in college the fall
semester after high school graduation: 53 percent of students from low income families, 58 percent from
middle income families, and 80 percent from upper income families. Similarly, there are differences
across racial and ethnic groups in the percentages of high school graduates who enroll in college right
after high school graduation: 66 percent of White students, 58 percent of African American students,
and 59 percent of Hispanic students. Moreover, there continue to be gaps across income groups in the
proportions of students who graduate from college or persist in college five years after their initial
enrollment: 61 percent from low income families, 65 percent from middle income families, and 71

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percent from upper income families (Horn & Berger, 2004). Across racial and ethnic groups, the five-year graduation or persistence rate also varies: 55 percent for African American students, 77 percent for Asian/Pacific Islander students, 60 percent for Hispanic students, 59 percent for Native American students, and 66 percent for White students.

Through the Postsecondary Research program, the Institute supports research to improve postsecondary access and completion by identifying programs, practices, and policies that are effective for improving access to or persistence in postsecondary education. In recent years, a number of innovative programs for improving access to postsecondary education have been implemented. For example, the California State University system has partnered with California's Department of Education and State Board of Education to develop the Early Assessment Program for high school students. Through the Early Assessment Program, students in Grade 11 are assessed in English and mathematics to determine their readiness for college-level coursework. Students can use the results of the test to identify skills that they need to work on during their senior year in order to be better prepared for college. Nationwide, many school systems offer dual enrollment or “early college” high school programs that allow a wide range of students to earn a high school diploma while progressing toward an associate degree or certificate. Innovative dropout recovery programs such as Diploma Plus, and Portland Community College’s Gateway to College program specifically use dual enrollment to reconnect out-of-school youth with a formal education. However, little rigorous research exists to evaluate the impact such programs have on college enrollment and persistence.

Institutions of higher education have implemented a variety of programs and practices to improve student retention. Many institutions have courses or workshops that focus on building the skills of under-prepared students (e.g., developmental mathematics courses, study skills courses, workshops designed to improve students' general test-taking or note-taking skills). Some programs target freshmen in their first two semesters; other programs may be designed as intensive programs the summer prior to the freshman year. The Institute encourages applications to test the effectiveness of such programs on students' grades, retention, and graduation. Some institutions have policies designed to identify and provide support to students who are struggling early on. Such policies include mandatory roll-taking policies that require (a) instructors to contact students' advisors when students miss a specified number of classes, and (b) advisors to follow-up with students, or policies that require instructors to inform advisors early in the semester if the student is failing so that advisors can be proactive about providing assistance to struggling students. The Institute invites applications to examine the impact of such programs on student retention and graduation.

The Institute encourages research on interventions to provide students and parents with information that may be related to students' choices regarding whether to go to college and where to go to college. According to the National Center for Education Statistics, both high school students and their parents are likely to markedly overestimate the cost of tuition and fees for one year of college (Horn, Chen, & Chapman, 2003). Further, among households in the lowest income groups, parents are more likely to report that they are not able to estimate the cost of tuition and among those who do estimate the cost, they are less likely to be within 25 percent of the actual average tuition cost for the type of institution in their state that their student wanted to attend. A number of different types of programs (e.g., parent education, counselors, websites) address students' and parents' access to information about college and planning ahead for college. The Institute encourages research to evaluate the impact of such programs on student enrollment.

A number of states have implemented merit-based scholarship programs intended to provide students with an incentive to perform well in high school and attend college. For example, in 1993, Georgia introduced the Georgia Hope Scholarship program, which covers tuition, allowable mandatory fees, and a book allowance in public colleges to Georgia high school graduates with a B average or better, or a voucher of equal value for students who choose to attend private college. Continued receipt of the scholarship is contingent upon satisfactory academic progress. The introduction of the program was
associated with increases in four-year public and private college attendance among young adults residing in Georgia (Cornwell, Mustard, & Sridhar, 2005). The Institute is interested in supporting rigorous evaluations of such programs.

The high cost of attending college continues to be an important issue in postsecondary education. According to the College Board, in the 2005-2006 academic year, annual prices for undergraduate tuition, fees, room, and board were estimated to be over $12,000 at four-year public colleges and $29,000 at four-year private colleges; for the same year, undergraduates at two-year public institutions on average spent approximately $2,200 a year for tuition and fees (College Board, 2005). The Institute invites applications to examine the complex relations between student financial aid programs (including federal, state, and private sources), and access to and completion of postsecondary education. Because financial aid comes from multiple sources, we encourage research on the interactions of aid programs (e.g., how institutions package available sources of financial aid to eligible students) and their subsequent effects on access to and completion of postsecondary education.

Policymakers and higher education administrators seek answers to practical questions regarding the relative impact – both costs and benefits – of alternative approaches to student financial aid on access to and completion of postsecondary education for a wide range of student groups (e.g., traditional, nontraditional, economically disadvantaged). Applicants might consider, for example, the impact of loan financing or loan forgiveness on college completion of at-risk students, or whether extending grant aid eligibility to high school students would spur development of dual enrollment programs and increase college enrollment of at-risk students. As another example, investigators might compare the impact of student financial aid policies (e.g., alternative methods for calculating student financial aid eligibility, the use of merit versus need based criteria for student financial aid) on access to and completion of postsecondary education. Applicants might also examine how the interactions of student financial aid and student support services affect access to and completion of postsecondary education. All 50 states offer tax-deferred plans for saving for college (529 plans) and some states have college saving plans that guarantee full-tuition payment in the future. Who is utilizing these programs? What is the impact of such programs on access to postsecondary education? The Institute also invites rigorous research on new and existing federal and state financial aid programs intending to encourage students from low income families to prepare for, enroll in, and succeed in postsecondary education.

Finally, many colleges and universities have implemented assessments of students' college-level reading, writing, mathematics, and critical thinking skills in order to provide feedback for the improvement of their general education curriculum or for accreditation and accountability purposes. For example, the Measure of Academic Proficiency and Progress by ETS and the Collegiate Assessment of Academic Proficiency by ACT are two commercially available assessments for institutions of higher education. The Institute invites applications to examine the validity and utility of widely used assessments like these. What do these types of assessments predict? What are their effects on institutions and on students? Applications to develop and/or validate such instruments are appropriate for Goal Five under this topic. Individuals interested in examining the impact of the use of assessments on students or institutions, or the relation between implementation of the assessments and student/institutional outcomes, should consider Goals One, Two, or Three (e.g., does a university's requirement of a writing exit exam influence students' writing proficiency?).

C. Specific Requirements
For the FY 2009 Postsecondary Education Research topic, applicants must submit under either Goal One or Goal Two or Goal Three or Goal Four or Goal Five. More details on the requirements for each goal are listed in Part III Requirements of the Proposed Research. Here, specific requirements that apply to applications to the Postsecondary Education Research topic are described.
• interventions implemented at the high school or postsecondary level that are intended to increase access to postsecondary education, support the transition from high school into postsecondary education, improve the persistence of students in postsecondary education, or the completion of postsecondary education; or
• measures of learning at the postsecondary level (e.g., college-level proficiencies in reading, writing, critical thinking, and mathematics) to be used by institutions of higher education to assess what students have learned in college.
PART III REQUIREMENTS OF THE PROPOSED RESEARCH

16. GENERAL REQUIREMENTS OF THE PROPOSED RESEARCH

A. NEW THIS YEAR
The Institute has modified requirements for Goals One and Two and encourages applicants who are familiar with previous Requests for Applications to read carefully through these sections.

B. BASIC REQUIREMENTS
a. Resubmissions
Applicants who intend to revise and resubmit a proposal that was submitted to one of the Institute’s previous competitions but that was not funded must indicate on the application form that their FY 2009 proposal is a revised proposal. Their prior reviews will be sent to this year’s reviewers along with their proposal. Applicants should indicate the revisions that were made to the proposal on the basis of the prior reviews using no more than 3 pages of Appendix A.

b. Applying to a topic
Applicants must submit their proposal to one of the specific topics described in Part II Research Grant Topics.

c. Applying to multiple topics
Applicants may submit proposals to more than one of the Institute’s FY 2009 competitions or topics. In addition, within a particular competition or topic, 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 topics or to multiple goals in the same topic or to multiple competitions). If the Institute determines prior to panel review that an applicant has submitted the same proposal or very similar proposals to multiple topics within or across 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 topics within or across competitions and if the proposal is determined to be worthy of funding, the Institute will select the topic under which the proposal will be funded.

Applicants who submit a proposal for the June 26, 2008 deadline may not submit the same or a very similar proposal to the October 2, 2008 deadline.

d. Applying to a particular goal within a topic
For the FY 2009 Education Research Grants Programs, applicants must submit under either Goal One or Goal Two or Goal Three or Goal Four or Goal Five. The numbering of goals is consistent across the Institute’s research programs. Each goal has specific requirements that are described in the following section.

e. Determining which goal is most appropriate for the proposed project
Applicants should read carefully the requirements for each Goal and the examples of appropriate projects under each Goal. The Institute strongly encourages potential applicants to contact the relevant program officer listed in Section 31 if they have any questions regarding the appropriateness of a particular project for submission under a specific goal.
C. Requirements for Goal One (Identification Projects)

Because the requirements for Goal One are essentially the same across the Institute's research grant topics, a generic description is used in the funding announcement. Consequently, the examples provided may not apply to a particular topic.

a. Purpose of Goal One (Identification)
Through all of its research programs that include the Identification goal (Goal One), the Institute is interested in the (1) identification of programs and practices that may be associated with better educational outcomes; (2) examination of factors and conditions that may mediate or moderate the relations between student outcomes and these programs and practices; and (3) identification of malleable factors predictive of achievement and potentially amenable to intervention.

For Goal One, a number of methodological approaches are appropriate. One approach is to conduct secondary data analyses of multivariate data, such as longitudinal individual student data that exist in a number of federal-, state-, and district-level databases. Using existing longitudinal data sets, investigators are able to capitalize on natural variation (e.g., students receiving different math curricula) or discontinuities in education practices (e.g., when a new policy is implemented). Longitudinal data may also be used to identify predictor variables for relevant outcomes that are malleable and a potential target for intervention. For example, Duncan and colleagues (2007) conducted secondary regression analyses on six longitudinal data sets to identify early predictors of reading and math achievement in school. By including beginning of kindergarten academic, socioemotional, and attention skills in one model, they were able to estimate the relative effects of these factors on later school achievement.

The strongest approaches to statistical modeling of multivariate data involve testing two or more models of relationships using the same data. Because multivariate analyses cannot fully adjust for selection biases and the effects of variables that were not measured or were not measured well, they are seldom sufficient to support strong causal conclusions about what works. However, when two or more models of relationships among variables are tested with the same data, it may be possible to determine that one is more plausible than another. That, in turn, can direct future efforts in avenues that are more likely to be productive. Under Goal One, the Institute does not support secondary data analyses to determine the effect of interventions. Applicants interested in secondary data analyses using approaches such as interrupted time series analyses, regression discontinuity designs, or other quasi-experimental designs to determine the effect of an intervention should refer to Goal 3 or Goal 4.

Another approach for identifying promising practices or malleable factors predictive of achievement and potentially amenable to intervention is through the use of meta-analysis of the statistical and descriptive information reported in existing studies when sufficient numbers of studies are available to support a probing meta-analysis. Such meta-analyses are sensitive to issues that potentially affect or moderate the results, such as quality of the research design (e.g., Wilson, et al., 2003), and type of implementation (e.g., Lipsey, 1999; Weisz et al., 1995; Wilson et al., 2003). For Goal One applications, meta-analysis of intervention studies must be clearly directed toward identification of the characteristics of education practices or programs that are associated with the most positive outcomes, as well as moderators or mediators of those effects, or focus on the identification of factors that are

6 By type of implementation, the Institute refers to a distinction in the literature between research and demonstration projects versus routine implementation by appropriate practitioners. Research and demonstration projects are those in which the implementation is either delivered by the researcher or the researcher provides support for the implementation beyond what would be typically available if school leaders decided to implement the intervention apart from involvement in any study. Routine implementation is implementation by practitioners that is comparable to what would happen if they were using intervention apart from involvement in a study.

predictive of the most positive outcomes and potentially amenable to intervention. Such meta-analyses go beyond a simple identification of the mean effect found in studies to determine moderators of the effects such as breaking out the effects of (a) specific types of intervention within the broad intervention category that is the focus of the meta-analysis (e.g., Graham & Perin, 2007); (b) variations of a particular intervention (e.g., Cepeda, et al., 2006); (c) age or grade level subgroups (e.g., Wilson, et al., 2003); and (d) relevant population subgroups (e.g., Wilson, et al., 2003). Meta-analysis of correlational relationships can be used to identify the most positive causal mediators of outcomes (e.g., Fan & Chen, 2001; La Paro & Pianta, 2000). For example, Najaka, Gottfredson, and Wilson (2002) conducted a meta-analysis to examine the strength of various predictors (e.g., social skills) to problem behavior in school and determined that bonding to school was the strongest predictor of problem behaviors. Based on this information, researchers might refine existing interventions intended to reduce problem behaviors by developing components that target improving students' relational ties to school.

The Institute does not intend to support meta-analyses to draw conclusions about the efficacy or effectiveness of particular interventions or types of interventions. Through the What Works Clearinghouse, the Institute supports activities to summarize evaluations of specific interventions.

As an alternative to secondary data analyses or meta-analyses, applicants may propose a small scale, descriptive study with primary data collection in which they attempt to identify associations between desired outcomes (e.g., student achievement, graduation rate, teacher retention) based on differences in observed education practices. For example, a researcher might propose to conduct detailed, quantifiable observational measures of instructional practices (types of instruction, frequency, duration, under what circumstances), and then use the instructional data in conjunction with child characteristics to predict subsequent student performance. The objective here is to identify what type or combinations of instructional activities are associated with better student outcomes and for which students.

Evidence obtained through a Goal One project of the association between exposure to a program, practice, or policy and better student outcomes has the possibility of being used to support a subsequent application for a Goal Two (Development) or Goal Three (Efficacy) project.

b. Significance of the project
By addressing the theoretical and empirical rationale for the study and the practical importance of the intervention (e.g., program, practice) that will be examined, Goal One applicants are addressing the significance of their proposal.

c. Methodological requirements
For all applications, including those submitted under Goal One, the proposed research design must be appropriate for answering the research questions or hypotheses that are posed.

(i) Research questions.
Applicants should pose clear, concise hypotheses or research questions.

(ii) Database.
Applicants proposing secondary data analyses should describe clearly the database(s) to be used in the investigation including information on sample characteristics, variables to be used, and ability to ensure access to the database if the applicant does not already have access to it. The database should be described in sufficient detail so that reviewers will be able to judge whether or not the proposed analyses may be conducted with the database. If multiple databases will be linked to conduct analyses, applicants should provide sufficient detail for reviewers to be able to

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judge the feasibility of the plan. If the applicant does not currently have access to the databases needed for the study, the applicant should provide sufficient documentation (e.g., letters of agreement) to assure reviewers that access can be obtained and the project can be carried out in a timely fashion.

The applicant should describe the primary outcome measures to be used, including reliability and validity. In particular, applicants should provide sufficient information on the construct validity of the proposed measures. For example, if the applicant proposes to use a state database from which the primary outcome measure will be performance on a reading or mathematics achievement measure, the applicant should detail the standardized measure from which the reading or mathematics scores are derived.

Applicants proposing meta-analysis should describe clearly the criteria for including or excluding studies and their rationale, the search procedures for ensuring that a high proportion of the eligible published and unpublished studies will be located and retrieved, the coding scheme and procedures that will be used to extract data from the respective studies, and the procedures for ensuring the reliability of the coding. The applicant should demonstrate that sufficient numbers of studies are available to support the meta-analysis and that the relevant information is reported frequently enough and in a form that allows an adequate database to be constructed. The effect size statistics to be used should be clearly defined along with the associated weighting function, procedures for handling outliers, and any adjustments to be applied (e.g., reliability corrections).

(iii) **Primary data collection.**
Applicants may propose a Goal One project in which the primary focus is on the collection and analysis of original data. The applicant should carefully describe the sample, measures (including reliability and validity), and procedures proposed for the primary data collection. Because Goal One projects must be designed to predict student outcomes, if observational data are collected, applicants should describe how the data would be collected (e.g., procedures for maintaining inter-observer reliability), coded, and quantified to allow quantitative analyses predicting the relation between what was observed and student outcomes.

Applicants may also propose to collect original data as a supplement to be used with an existing longitudinal database in order to answer the question of interest. In such cases, applicants should describe the sample and how the sample is related to or links to the proposed secondary database, the measures to be used (including information on the reliability and validity of the proposed instruments), and data collection procedures.

(iv) **Data analysis.**
The applicant must include detailed descriptions of data analysis procedures. Because predictor variables relevant to education outcomes (e.g., student, teacher, or district characteristics) often covary, the Institute expects investigators to utilize the most appropriate state-of-the-art analytic techniques to isolate the possible effects of variables of interest. Analytic strategies should allow investigators to examine mediators and moderators of programs and practices. The relation between hypotheses, measures, independent and dependent variables should be well specified. Strong applications will include an explicit discussion of how exclusion from testing, or missing data, will be handled within the statistical analyses. Strong applications will propose an approach for comparing hypotheses or models of relationships among variables.

d. **Personnel**
Competitive applicants will have research teams that collectively demonstrate expertise in: (a) the relevant student outcome (e.g., reading, mathematics, student behaviors); (b) the type of intervention under investigation (e.g., curriculum, program, policy); (c) implementation of, and analysis of results.
from, the research design that will be employed; and (d) working with teachers, schools, or other education delivery settings that will be employed if original data will be collected.

e. Resources
Competitive applicants will have access to institutional resources that adequately support research.

f. Awards
Typical awards for projects at this level are $100,000 to $350,000 (total cost = direct + indirect costs) per year. For applicants proposing to do primarily secondary data analysis, the maximum duration of the award is 2 years. Applicants proposing to do short-term longitudinal studies may request up to 2 additional years (i.e., the maximum duration of the award is 4 years) and additional funds, but must justify the need for the additional time and funding. The size of the award depends on the scope of the project.

D. Requirements for Goal Two (Development Projects)
Because the requirements for Goal Two are essentially the same across the Institute’s research grant topics, a generic description is used in the funding announcement. Consequently, the examples provided may not apply to a particular topic.

a. Purpose of Goal Two (Development)
Through all of its research programs that include the Development goal (Goal Two), the Institute intends to support the development of education interventions—curricula, instructional approaches, technology, and programs. The Institute stresses that Goal Two applications are about development, rather than demonstrations of the efficacy of an intervention. Under Goal Two, the Institute does not intend to support applications that propose to allocate substantial resources for testing the effect of the proposed intervention. For example, under Goal Two, the Institute does not intend to support applications in which the researcher proposes to spend one year developing the intervention and the second and third years testing the effect of the intervention in a significant number of classrooms or schools. Instead, applicants who have an intervention that could be tested for efficacy should apply to Goal Three.

From the Institute’s standpoint, a funded development project would be successful if at the end of a two- to three-year development award, the investigators had a fully developed version of the proposed intervention, including prototypes of all materials and products necessary for implementation of the intervention in authentic education delivery settings, and pilot data addressing the feasibility of its implementation in an authentic education delivery setting and the promise of the intervention for generating outcomes the intervention is designed to effect. Feasibility of implementation might be addressed, for example, with data demonstrating that an intervention intended to increase student time on task does so for samples of students exposed to the intervention in the development context. Alternatively, it might be addressed with observational and survey data on the use of the fully developed intervention in a few test sites in authentic education delivery settings like those for which the intervention is intended. The promise of the intervention for achieving outcomes could be addressed, for example, by demonstrating better outcomes for participants with successive iterations of the intervention, better outcomes associated with more participant exposure to the intervention, normatively rare outcomes consistent with the goals of the intervention, post-intervention scores on an outcome measure that are substantially higher than pre-intervention scores on that measure, or data demonstrating that implementation of the intervention is associated with changes in activities and behaviors that are consistent with the theory of change underlying the intervention. The Institute anticipates that investigators with successful development projects would submit proposals to subsequent competitions for Goal Three (Efficacy) awards. The pilot data on feasibility of implementation and promise of positive outcomes to be collected under a Goal Two (Development) award are intended to help the Institute and its reviewers determine whether it would be appropriate to fund a proposal to examine the efficacy of the intervention.
b. Requirements for the proposed intervention

Under Goal Two, the Institute invites applications to develop new interventions or further develop interventions that are in the early stages of development (e.g., those that do not have an entire program or product ready to evaluate). It is important for applicants to provide a strong rationale to support the development of the proposed intervention. In essence, applicants are answering the question: Why is the proposed intervention likely to produce better student outcomes relative to current education practices?

(i) Context for the proposed intervention.
In strong applications, researchers provide context for the proposed intervention by including data on, or reviewing research describing, the attributes of typical existing practices. Understanding the shortcomings of current practice contributes to the rationale for the proposed intervention.

(ii) Theory of change.
Applicants should clearly describe the intervention and the theory of change for the intervention. For example, how do the features or components of the intervention relate to each other temporally (or operationally), pedagogically, and theoretically (e.g., why does A lead to B)? Applicants should provide a strong theoretical and empirical justification for the design and sequencing of the features or components of the intervention. When applicants clearly describe the theory of change that guides the intervention and the specific features making up the intervention, reviewers are better able to evaluate (a) the relation between the theoretical and empirical foundation for the intervention and the intervention (e.g., is the proposed intervention a reasonable operationalization of the theory?) and (b) the relation between the intervention and the outcome measures (e.g., do the proposed measures tap the constructs that the intervention is intended to address?)

Applicants should explain why the proposed intervention is likely to produce substantially better student outcomes relative to current practice. In addition to providing a clear description of the intervention – particularly, the unique features of the intervention (“active ingredients”) that are hypothesized to produce the desired improvement in student outcomes – applicants should describe typical existing practices. A comparison of the proposed intervention with typical practice helps reviewers determine if the proposed intervention has the potential to produce substantially better student outcomes because it is sufficiently different from current practices and has “active ingredients” that appear on the basis of theoretical or empirical reasons to be powerful agents for improving student learning.

(iii) Practical importance.
In the rationale to support the proposed intervention, applicants should address the practical importance of the proposed intervention. For example, when the proposed intervention is fully developed, will it have the potential to improve student outcomes in educationally meaningful increments, if it were implemented over the course of a semester or school year? Would the proposed intervention be both affordable for schools and easily implemented by schools (e.g., not involve major adjustments to normal school schedules)?

c. Significance of the project
By describing (a) the intervention (e.g., features, components) and the theory of change for the intervention, (b) the theoretical and empirical support for the proposed intervention, and (c) the practical importance of the intervention, Goal Two applicants are addressing aspects of the significance of their proposal.

d. Methodological requirements
For all applications, including those submitted under Goal Two, the proposed research design must be appropriate for answering the research questions or hypotheses that are posed.

The primary purpose of Goal Two projects is the development of interventions. For Goal Two projects, applicants must clearly address the proposed methods for developing the intervention and testing the feasibility of implementation of the prototype in an authentic education delivery setting. Applicants should describe the systematic process they will use to collect empirical data that will provide feedback for refining the intervention. A major objective of Goal Two projects is to refine and improve upon the initial version of the intervention by implementing it, or components of it, observing its functioning, and making necessary adjustments in the design of the intervention so that it functions more as intended.

Strong applications include clear descriptions of the development activities so that reviewers will understand (a) what will be developed, (b) how it will be developed, and (c) when the development will take place. Applicants should describe what they would measure or observe to determine whether the intervention is working as intended when they are testing the feasibility of successive versions of the intervention. A useful by-product of such testing is a set of fidelity of intervention measures that could be used if the intervention were evaluated in an efficacy trial (see Goal Three).

A timeline that delineates the iterative process of drafting and revising the intervention (e.g., features or components of the intervention, procedures, training activities, and materials) is often a simple way of showing reviewers how research activities will feed into subsequent development (refinement) activities, so that information can be used to make decisions and improvements. A variety of methodological strategies may be employed during this phase. For Development projects, reviewers need to understand the iterative development process to be used in the design and refinement of the proposed intervention.

By the end of a Goal Two project, the Institute expects investigators to have a fully developed intervention and pilot data that address the feasibility of implementing the intervention in authentic education delivery settings as well as the promise of the intervention for generating outcomes the intervention is designed to effect. Feasibility of implementation might be addressed, for example, with evidence demonstrating that the intervention can be implemented with fidelity in a few authentic education delivery settings that represent the type of settings (e.g., classrooms) for which the intervention is intended. Feasibility should be demonstrated on a small sample of users (e.g., teachers, students) who are like those for whom the product is intended and should show that they can utilize or implement the intervention in the way that the developer intends the intervention to be implemented. The promise of the intervention for achieving the intended outcomes could include evidence that performance on outcome measures is progressing in the appropriate direction (e.g., students' post-intervention scores on a curriculum-based test are substantially higher than pre-intervention scores) or data demonstrating that implementation of the intervention is associated with changes in activities and behaviors that are consistent with the theory of change underlying the intervention. Whatever pilot data are proposed, applicants should be aware that (a) no more than 25 percent of the funds may be used to support the collection of pilot data and (b) the review of methodological requirements will focus on methods for developing the intervention as detailed below. The pilot data are not intended to be a test of the efficacy of the intervention.

(i) **Sample.**
The applicant should define, as completely as possible, the samples and settings that will be used to assess the feasibility and usability of the intervention.

(ii) **Research plan.**
The applicant must provide a detailed research plan in which they describe the proposed procedures for developing the intervention. Strong applications will include clear descriptions of: (a) what needs to be developed; (b) the procedures for developing the intervention; and (c) the
procedures (including sample, measures, and procedures for analyzing data) for determining if the intervention is functioning as intended (e.g., Does the software program crash when students use it? Are the activities planned for a particular lesson do-able within the allotted time?). Applicants should describe the iterative development process to be used in the design and refinement of the proposed intervention, and plans for acquiring evidence about the operation of the intervention according to the theory of change that they describe. The number of times a component or intervention is revised, implemented, observed, and revised depends on the complexity of the intervention and its implementation. 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 (or component) is operating; (c) how they will use the data they collect to revise the intervention; and (d) what criteria they will use to determine if the intervention (or component) operates as intended.

(iii) **Measures.**
Goal Two projects typically rely on the collection of process data that can help the researcher refine the intervention and provide insight into the feasibility and usability of the proposed intervention in authentic education delivery settings. Applicants should clearly describe (a) what needs to be observed in order to determine if the intervention is operating as intended and (b) how those observations will be collected. Observational, survey, or qualitative methodologies are encouraged to identify conditions that hinder implementation of the intervention.

e. **Personnel**
Competitive applicants will have research teams that collectively demonstrate expertise in: (a) the relevant content area (e.g., reading, mathematics, student behaviors); (b) type of intervention to be developed; (c) implementation of, and analysis of results from, the research design that will be employed; and (d) working with schools and other education delivery settings.

An applicant may be or may involve *for-profit entities* in the project. Involvement of the commercial developer or distributor must not jeopardize the objectivity of the research.

f. **Resources**
Competitive applicants will have access to institutional resources that adequately support research.

g. **Additional Considerations**
Applicants who previously held or currently hold development (Goal Two) grants with the Institute should describe the results and outcomes of those grants to date. They should indicate whether what was developed has been (or is being) evaluated for efficacy (Goal Three) and if results are available, what the results of those efficacy evaluations have been. In general, the Institute intends to support researchers under Goal Two who can demonstrate their ability to develop interventions that can be used in the field and tested for efficacy. However, the Institute recognizes that there are situations in which researchers may appropriately apply for a second development award to further develop or extend an intervention that was the focus of a previous development project. In such cases, the applicant should also provide a compelling rationale of the need for a second development award.

h. **Awards**
Typical awards for projects at this level are $150,000 to $500,000 (total cost = direct + indirect costs) per year. Development projects are for a maximum of 3 years. Development costs vary according to the type of intervention that is proposed. Larger awards will be considered. In all cases, the size of the award depends on the scope of the project.

Under Goal Two, no more than 25 percent of the total funds may be used for collection of pilot data.
E. Requirements for Goal Three (Efficacy and Replication Projects)

Because the requirements for Goal Three are essentially the same across the Institute's research grant topics, a generic description is used in the funding announcement. Consequently, the examples provided may not apply to a particular topic.

Under Goal Three, the Institute requests proposals to test the efficacy of fully developed interventions. By efficacy, the Institute means the degree to which an intervention has a net positive impact on the outcomes of interest in relation to the program or practice to which it is being compared.

a. Purpose of Goal Three (Efficacy and Replication)

Through all of its research programs that include the Efficacy and Replication goal (Goal Three), the Institute intends to fund efficacy trials to determine whether or not fully-developed interventions – programs, practices, and policies – are effective under specified conditions (e.g., urban schools with a high turnover rate among teachers), and with specific types of students (e.g., English language learners). Results from efficacy projects have less generalizability than results from effectiveness (scale-up) evaluations under Goal Four. The limited generalizability can arise both from the lack of a full range of types of settings and participants in the study, as well as through the intensive involvement of the developers and researchers in the implementation of the intervention. A well-designed efficacy trial provides evidence on whether an intervention can work, but not whether it would work if deployed widely. Under Goal Three, applicants may propose an efficacy trial to determine if an intervention will work under specific conditions or a replication trial to determine if an intervention shown to produce a net positive impact in one setting will produce a net positive impact under different conditions (e.g., with a different population of students).

Applicants should use the efficacy and replication trials to determine the conditions, if any, under which an intervention produces meaningful improvement of academic outcomes. For example, if a research team hypothesized that a variation in the delivery of the program would improve the impact of an intervention, the team might propose to randomly assign: (a) one-third of the classrooms to the basic intervention; (b) one third of the classrooms to the variation; and (c) one-third of the classrooms to continue with standard district practices.

Also of interest to the Institute are proposals to compare the impact of two interventions that are based on different theoretical models. In such cases, the purpose might be to compare the efficacy of two well-developed approaches to improving student learning. One advantage to this approach is that, relative to designs in which the comparison group experiences whatever the school or district currently provides (but see the discussion of “business-as-usual” treatments below), the investigator should have better knowledge of the critical components of each intervention and can attempt to create two conditions in which, for example, instruction varies on a number of critical components.

From the Institute's standpoint, a funded Efficacy/Replication project would be methodologically successful if at the end of the grant period, the investigators had rigorously evaluated the impact of a clearly specified intervention on relevant student outcomes and under clearly described conditions using a research design that meets (without reservation) the Institute's What Works Clearinghouse standards (http://whatworks.ed.gov), whether or not the intervention is found to improve student outcomes relative to the comparison condition. The Institute would consider methodologically successful projects to be pragmatically successful if the rigorous evaluation determined that the intervention has a net positive impact on student outcomes in relation to the program or practice to which it is being compared.

b. Requirements for the proposed intervention

Interventions appropriate for study under Goal Three are (1) interventions that are fully developed, have evidence of their feasibility for use in authentic education delivery settings, and empirical evidence of the potential efficacy of the intervention and (2) interventions that are already widely used but have not been rigorously evaluated. Also appropriate for Goal Three applications are proposals to replicate the
efficacy of an intervention in a different setting. For instance, in a previous study, the applicant could have demonstrated the efficacy of an intervention in a small random assignment trial in an urban school district, and a reasonable next step would be to replicate these findings in a rural school district.

(i) **Interventions are ready to be evaluated.**
Applicants must have an intervention that is fully developed and ready to be evaluated. Applicants who intend to devote a significant part of the project period to developing new components or materials for the intervention or new delivery approaches should apply to Goal Two. Goal Three projects are limited to those interventions that are fully developed.

(ii) **Rationale for interventions that are already in wide use.**
Applicants must provide a compelling rationale that justifies the Institute's investment in the evaluation of the proposed intervention. As justification for the evaluation of an intervention that is already in wide use, the Institute will accept conceptual arguments of the importance of evaluating the proposed intervention because of its relevance to public policy or current education practice as would be judged by practitioners and policymakers. For example, the proposed intervention may already be widely used but have not been rigorously evaluated (e.g., a commercially distributed program, a specific education policy). To support this argument, applicants might include documentation of the widespread use of the program to justify the proposed efficacy evaluation. By widespread use, the Institute means used across multiple states or in the majority of districts in a single large state or in the majority of schools in two or more large districts. Typically, interventions that fall in this category are commercially produced and distributed.

(iii) **Rationale for interventions that are not in wide use.**
Applicants must provide a compelling rationale that justifies the Institute's investment in the evaluation of the proposed intervention. Applicants must provide evidence that the intervention can be implemented in authentic education delivery settings – that is, evidence of the feasibility and usability of the proposed intervention in authentic education delivery settings. Applicants should provide a strong rationale justifying the investment in the evaluation of the proposed intervention by including, for example, information on (a) the theoretical foundation on which the intervention was developed, (b) research on related interventions or components of the proposed interventions; or (c) empirical evidence of the potential effect of the proposed intervention based on pilot data. Appropriate pilot data include, but are not limited to, evidence of the feasibility of implementation of the intervention and data on outcomes for participants in the intervention that are consistent with the intended effect of the intervention, for example, change scores from pretest to posttest in the direction and magnitude that the intervention is designed to generate.

In essence, the applicant needs to address the question: Why is this intervention likely to produce better student outcomes relative to current practice? In addition, applicants should address the practical importance of the proposed intervention. For example, is the intervention sufficiently comprehensive to improve student outcomes on end-of-year assessments? Is there evidence indicating that the proposed intervention is sufficiently different from current practices to potentially improve student outcomes relative to current practices?

(iv) **Theory of change.**
Applicants should clearly present the theory of change for the proposed intervention by describing the features or components of the intervention and how they relate to each other and to the intended outcomes both temporally (or operationally) and theoretically (e.g., why A leads to B). When applicants clearly describe the model that guides the intervention and the intervention itself (e.g., specific features or components of the intervention), reviewers are better able to evaluate the relation between the theoretical and empirical foundation for the
intervention and the intervention (e.g., is the proposed intervention a reasonable operationalization of the theory?). Reviewers are also better able to evaluate the relation between the intervention and the outcome measures (e.g., do the proposed measures tap the constructs that the intervention is intended to address?).

Some interventions are designed to affect the teaching and learning environment and indirectly affect student outcomes. In such cases, it is important for applicants to be clear in their theory of change to identify the mediators that the intervention is designed to affect and through which student outcomes are intended to be improved.

Strong applications will also include detailed descriptions of what the comparison group experiences. By clearly describing the intervention and the comparable treatment that the comparison group will receive, reviewers are better able to judge whether the intervention is sufficiently different from the comparison treatment so that one might reasonably expect a difference in student outcomes. In addition, reviewers are better able to determine if the proposed fidelity measures and observations of the comparison group are sufficiently comprehensive and sensitive to identify and document critical differences between what the intervention and comparison groups receive.

c. **Significance of the project**
By describing (a) the intervention (e.g., features, components) and the theory of change for the intervention, (b) the theoretical and empirical support for the proposed intervention, and (c) the practical importance of the intervention, Goal Three applicants are addressing aspects of the significance of their proposal.

d. **Methodological requirements**
For all applications including those submitted under Goal Three, the proposed research design must be appropriate for answering the research questions or hypotheses that are posed.

(i) **Research questions.**
Applicants should pose clear, concise hypotheses or research questions.

(ii) **Sample.**
The applicant should define, as completely as possible, the sample to be selected and sampling procedures to be employed for the proposed study, including justification for exclusion and inclusion criteria. Additionally, the applicant should describe strategies to increase the likelihood that participants will remain in the study over the course of the evaluation (i.e., reduce attrition).

(iii) **Research design.**
The applicant must provide a detailed research design. 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. When a randomized trial is used, the applicant should clearly state the unit of randomization (e.g., students, classroom, teacher, or school); choice of randomizing unit or units should be grounded in a theoretical framework. Applicants should explain the procedures for assignment of groups (e.g., schools) or participants to treatment and comparison conditions.9

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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. 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. A well-designed quasi-experiment is one that reduces substantially the potential influence of selection bias on membership in the intervention or comparison group. This involves demonstrating equivalence between the intervention and comparison groups at program entry on the variables that are to be measured as program outcomes (e.g., student achievement scores), or obtaining such equivalence through statistical procedures such as propensity score balancing or regression. It also involves demonstrating equivalence or removing statistically the effects of other variables on which the groups may differ and that may affect intended outcomes of the program being evaluated (e.g., demographic variables, experience and level of training of teachers, motivation of students). Finally, it involves a design for the initial selection of the intervention and comparison groups that minimizes selection bias or allows it to be modeled. For example, a very weak quasi-experimental design that would not be acceptable as evidence of program efficacy would populate the intervention condition with teachers who volunteered for the program to be evaluated, and would select comparison teachers who had the opportunity to volunteer but did not. In contrast, an acceptable design would select teachers in one particular geographical area of a city to be in the intervention, whereas teachers in another geographical area, known to be demographically similar, would be selected to be in the comparison condition. In the former case, self-selection into the intervention is very likely to reflect motivation and other factors that will affect outcomes of interest and that will be impossible to equate across the two groups. In the latter case, the geographical differences between the participants in the two groups would ideally be unrelated to outcomes of interest, and in any case, could be measured and controlled for statistically.

(iv) Power.

Applicants should clearly address the power of the evaluation design to detect a reasonably expected and minimally important effect. When justifying what constitutes a reasonably expected effect, applicants should indicate clearly (e.g., including the statistical formula) how the effect size was calculated.

Many evaluations of education interventions are designed so that clusters or groups of students, rather than individual students, are randomly assigned to treatment and comparison conditions. In such cases, the power of the design depends in part on the degree to which the observations of individuals within groups are correlated with each other on the outcomes of interest. For determining the sample size, applicants need to consider the number of clusters, the number of individuals within clusters, the potential adjustment from covariates, the desired effect, the intraclass correlation (i.e., the variance between clusters relative to the total variance between and within clusters), and the desired power of the design (note, other factors may also affect the determination of sample size, such as using one-tailed vs. two-tailed tests, repeated observations, attrition of participants, etc.). Strong applications will include empirical justification for the intraclass correlation and anticipated effect size used in the power analysis.

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Measures.

Measures of student outcomes may include researcher developed measures and other measures that are closely aligned with the proposed intervention. However, applicants must also include relevant measures of student outcomes that are of practical interest to educators. For example, proposals to evaluate interventions to improve academic outcomes should include measures such as grades, standardized measures of student achievement, or state end-of-course exams. Proposals to evaluate interventions to improve behavioral outcomes should include practical measures of behaviors that are relevant to schools, such as attendance, tardiness, drop-out rates, disciplinary actions, or graduation rates. The applicant should provide information on the reliability, validity, and appropriateness of proposed measures. In strong applications, investigators will make clear how the skills or content the intervention is designed to address are captured in the various measures that are proposed.

Some interventions are designed to change directly the teaching and learning environment and indirectly affect student outcomes. In such cases, applicants must provide measures of student outcomes, as well as measures of the primary mediators (i.e., proximal outcomes).

Fidelity of implementation of the intervention.

The applicant should specify how the implementation of the intervention would be documented and measured. In strong applications, investigators will make clear how the fidelity measures capture the critical features of the intervention. Investigators should propose research designs that permit the identification and assessment of factors impacting the fidelity of implementation.

Comparison group, where applicable.

Comparisons of interventions against other conditions are only meaningful to the extent that one can tell what the comparison group receives or experiences. Applicants should compare intervention and comparison groups on the implementation of critical features of the intervention so that, for example, if there is no observed difference between intervention and comparison student outcomes, they can determine if key elements of the intervention were also provided in the comparison condition (i.e., a lack of distinction between the intervention treatment and the comparison treatment).

In evaluations of education interventions, individuals in the comparison group typically receive some kind of treatment; rarely is the comparison group a "no-treatment" control. For some evaluations, the primary question is whether the treatment is more effective than a particular alternative treatment. In such instances, the comparison group receives a well-defined treatment that is usually an important comparison to the target intervention for theoretical or pragmatic reasons. In other cases, the primary question is whether the treatment is more effective than what is generally available and utilized in schools. In such cases, the comparison group might receive what is sometimes called "business-as-usual." That is, the comparison group receives whatever the school or district is currently using or doing in a particular area. Business-as-usual generally refers to situations in which the standard or frequent practice across the nation is a relatively undefined education treatment. However, business-as-usual may also refer to situations in which a branded intervention (e.g., a published curriculum or program) is implemented with no more support from the developers of the program than would be available under normal conditions. In either case, using a business-as-usual comparison group is acceptable. When business-as-usual is one or another branded intervention, applicants should specify the treatment or treatments received in the comparison group. In all cases, applicants should account for the ways in which what happens in the comparison group is important to understanding the net impact of the experimental treatment. As noted in the preceding
paragraph, in strong applications, investigators propose strategies and measures for comparing the intervention and comparison groups on key features of the intervention.

The purpose here is to obtain information useful for post hoc explanations of why the experimental treatment does or does not improve student learning relative to the counterfactual.

Finally, the applicant should describe strategies they intend to use to avoid contamination between treatment and comparison groups. Applicants do not necessarily need to randomize at the school level to avoid contamination between groups. Applicants should explain and justify their strategies for reducing contamination.

(viii) Mediating and moderating variables.

In efficacy studies, the Institute expects researchers to 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 the intervention. Mediating and moderating variables that are measured in the intervention condition that are also likely to affect outcomes in the comparison condition should be measured in the comparison condition (e.g., student time-on-task, teacher experience/time in position).

The evaluation should be designed to account for sources of variation in outcomes across settings (i.e., to account for what might otherwise be part of the error variance). Applicants should provide a theoretical rationale to justify the inclusion (or exclusion) of factors/variables in the design of the evaluation that have been found to affect the success of education programs (e.g., teacher experience, fidelity of implementation, characteristics of the student population).

Efficacy and replication evaluations should demonstrate the conditions and critical variables that affect the success of a given intervention. The most scalable interventions are those that can produce the desired effects across a range of education contexts.

(ix) Data analysis.

All proposals must include detailed descriptions of data analysis procedures. For quantitative data, specific statistical procedures should be described. The relation between hypotheses, measures, independent and dependent variables should be clear. For qualitative data, the specific methods used to index, summarize, and interpret data should be delineated.

Most evaluations of education interventions involve clustering of students in classes and schools and require the effects of such clustering to be accounted for in the analyses, even when individuals are randomly assigned to condition. Such circumstances generally require specialized multilevel statistical analyses using computer programs designed for such purposes. Strong applications will provide sufficient detail for reviewers to judge the appropriateness of the data analysis strategy. For random assignment studies, applicants need to be aware that typically the primary unit of analysis is the unit of random assignment.

e. Personnel

Competitive applicants will have research teams that collectively demonstrate expertise in: (a) the relevant content area (e.g., reading, mathematics, student behaviors); (b) the type of intervention being evaluated (e.g., curriculum, teacher professional development, policy); (c) implementation of, and analysis of results from, the research design that will be employed; and (d) working with schools and other education delivery settings.

For Goal Three projects, an applicant may be or may involve developers or distributors (including for-profit entities) in the project, from having them as full partners in its proposal to using off-the-shelf
training materials without involvement of the developer or distributor. Involvement of the developer or distributor must not jeopardize the objectivity of the evaluation.

f. Resources
Competitive applicants will have access to institutional resources that adequately support research activities and access to schools in which to conduct the research. Strong applications will document the availability and cooperation of the schools or other education delivery settings that will be required to carry out the research proposed in the application via a letter of support from the education organization.

g. Awards
Typical awards for projects at this level will be $250,000 to $750,000 (total cost = direct + indirect costs) per year for a maximum of 4 years. Larger budgets will be considered if a compelling case can be made for such support. The size of the award depends on the scope of the project.

F. Requirements for Goal Four (Scale-up Evaluations)
Because the requirements for Goal Four are essentially the same across the Institute's research grant topics, a generic description is used in the funding announcement. Consequently, the examples provided may not apply to a particular topic.

a. Purpose of Goal Four (Scale-up)
Through all of its research programs that include the Scale-up Evaluations goal (Goal Four), the Institute intends to support effectiveness evaluations of interventions - programs, practices, and policies - to determine whether or not fully developed interventions are effective when they are implemented under conditions that would be typical if a school district or other education delivery setting were to implement them (i.e., without special support from the developer or the research team) across a variety of conditions (e.g., different student populations, different types of schools). The key differences between Scale-up Evaluations (Goal Four) and Efficacy Evaluations (Goal Three), as the Institute uses these terms, have to do with the delivery of the intervention and the diversity of the sample. Scale-up Evaluations require that the intervention be implemented at a distance from the researcher/developer of the intervention. That is, the researchers must not be heavily involved in making the intervention work. The intervention must be implemented in the school or other authentic education setting, as it would be if the school, or entity, had purchased and implemented the intervention on its own without any involvement in a research study. Second, Scale-up Evaluations require sufficient diversity in the sample of schools, classrooms, or students to ensure appropriate generalizability. Scale-up Evaluations typically require a larger sample than an Efficacy Evaluation. For Scale-up Evaluations, the primary question of interest is, "Does this intervention produce a net positive increase in student learning and achievement relative to the control group?" As is true for Goal Three studies, for Goal Four studies, depending on the research question of interest, the control group may receive a well-defined alternative treatment, or may receive whatever programs and practices are already currently available and utilized by schools (business-as-usual control group). Finally, the Institute invests in Scale-up Evaluations for interventions that have strong prior evidence of the efficacy of the intervention.

b. Requirements for the proposed intervention
To be considered for Goal Four awards, applicants must provide a clear rationale for the practical importance of the intervention. Applicants should address three questions related to practical importance. (1) Is the intervention likely to produce educationally meaningful effects on outcomes that are important to educational achievement (e.g., grades, achievement test scores) and, therefore, are of interest to parents, teachers, and education decision makers? (2) Is the intervention reasonably affordable to schools and other education delivery entities? (3) Is the intervention designed so that it is feasible for schools and other education delivery entities to implement the intervention? In addition, applicants should clearly describe the components of the intervention. Interventions appropriate for
study under Goal Four are interventions that are fully developed and have strong evidence of the efficacy of the program on a limited scale.

(i) **Strong evidence of educationally meaningful effects.**

Applicants must provide strong evidence of the efficacy of the program as implemented on a small scale to justify the proposal to conduct a large-scale evaluation of the effectiveness of the intervention. As an example of strong evidence of efficacy, an applicant might describe the results of two or more small scale, rigorously conducted evaluations using random assignment to intervention and comparison conditions in which the efficacy of the intervention is demonstrated with different populations (e.g., urban and rural school districts). Alternatively, a single efficacy evaluation might have involved schools from more than one district and included a diverse population of teachers and students and alone could constitute sufficient evidence of the efficacy of the intervention. Importantly, the evidence of efficacy must be based on the results of randomized field trials, or well-designed quasi-experimental evaluations.

Evidence for efficacy from single-subject experimental designs would involve multiple studies in different settings that demonstrate causal effects.

Strong applications will include information on the size and statistical significance of the effects that were obtained through efficacy trials. Effect sizes and confidence limits should typically be calculated based on a unit of analysis that is the same as the unit of random assignment. For example, the results of an efficacy trial in which classrooms were assigned to conditions should be analyzed based on classroom means rather than results from individual students. Applicants should indicate clearly (e.g., including the statistical formula) how the effect size was calculated when they use effect sizes as part of the rationale for justifying their intervention. Furthermore, information on effect sizes is more useful to reviewers when sufficient context for interpreting the effect sizes is provided.

(ii) **Feasible implementation.**

The materials, training procedures, organizational arrangements, and all other aspects of the intervention must be developed to the point where the intervention is ready to be implemented under real-world circumstances in a real-world way. Strong applications will provide reviewers with sufficient information to evaluate whether implementation of the intervention is feasible for schools and other education entities under normal conditions (i.e., without any support from the researchers or developers of the intervention that would not typically be available to entities wanting to implement the intervention outside of a research study). For example, applicants might include results from prior efficacy trials indicating the degree of support provided for the implementation of the intervention and the level of fidelity attained across classrooms or schools.

(iii) **Description of the intervention.**

All applicants should clearly describe the intervention (e.g., features, components). When applicants clearly describe the intervention, reviewers are better able to evaluate the relation between the intervention and the outcome measures (e.g., do the proposed measures tap the constructs that the intervention is intended to address?). Strong applications will also include detailed descriptions of what the comparison group experiences. By clearly describing the components of the intervention and the comparable treatment (e.g., training program) that the comparison group will receive, reviewers are better able to judge whether (a) the intervention is sufficiently different from the comparison treatment so that one might reasonably expect a difference in student outcomes, and (b) fidelity measures and observations of the comparison group are sufficiently comprehensive and sensitive to identify and document critical differences between the intervention and comparison conditions.
Applicants may use Appendix B to include up to 10 pages of examples of materials to be used by participants (e.g., training materials for teachers, computer screens depicting how information is presented to students, examples of test items for a proposed assessment). Applicants should be aware that all narrative text describing the theoretical background, empirical support, components of the proposed intervention, or any other aspect of the proposal must be included within the 25-page project narrative. The only materials that are allowed in Appendix B are examples of the materials that are used by or presented to participants in the intervention or assessment.

c. Implementation of the intervention
One goal of scale-up evaluations of interventions is to determine if programs are effective when the developers of the program do not provide any more support than would be available under normal conditions. That is, the program should be implemented as it would be if the schools or other entities that are delivering the program were to obtain the program on their own and decide to use it apart from participation in any research and evaluation study. A second goal is to determine if programs implemented under these conditions are effective in a variety of settings. Interventions that are effective at scale are those that can produce the desired effects across a range of education contexts. For Goal Four, the applicant should detail the conditions under which the intervention will be implemented— including explicitly detailing what involvement the researcher/developer will have in the implementation of the intervention and justifying this level of involvement — and provide procedures that will capture the conditions and critical variables that affect the success of a given intervention.

d. Significance of project
By addressing the implementation of the intervention and the requirements for the intervention, Goal Four applicants are addressing the significance of their proposal.

e. Methodological requirements
For all applications, including those submitted under Goal Four, the proposed research design must be appropriate for answering the research questions or hypotheses that are posed.

For Goal Four projects, all of the methodological requirements listed under Goal Three apply to Goal Four projects.

In addition to the Goal Three methodological requirements, for Goal Four projects, strong applications will include a Cost-Feasibility analysis to assess the financial costs of program implementation and assist schools in understanding whether implementation of the program is practicable given their available resources. Data should be collected on the monetary expenditures for the resources that are required to implement the program. Financial costs for personnel, facilities, equipment, materials, and other relevant inputs should be included. Annual costs should be assessed to adequately reflect expenditures across the lifespan of the program. The Institute is not asking applicants to conduct an economic evaluation of the program (e.g., cost-benefit, cost-utility, or cost-effectiveness analyses), although applicants may propose such evaluation activities if desired.12

f. Personnel
Competitive applicants will have research teams that collectively demonstrate expertise in: (a) the relevant content area (e.g., reading, mathematics, student behaviors); (b) the type of intervention proposed (e.g., program, practice, policy); (c) implementation of, and analysis of results from, the

research design that will be employed; and (d) working with schools and other education delivery settings.

An applicant may involve developers or distributors *(including for-profit entities)* of the intervention in the project, from having the developers as full partners in its proposal to using off-the-shelf teacher training materials without involvement of the developer or publisher. However, involvement of the developer or distributor must not jeopardize the objectivity of the evaluation. Strong applications will carefully describe the role, if any, of the developer/distributor in the intervention. Developers may not provide any training or support for the implementation that is not normally available to users of the intervention. Applicants should describe how objectivity in the evaluation would be maintained. Strong applications will assign responsibility for random assignment to condition, data collection, and data analyses to individuals who were not involved in the development of the intervention and are not involved in the distribution of the intervention.

g. **Resources**
Competitive applicants will have access to institutional resources that adequately support research activities and access to schools in which to conduct the research. Strong applications will document the availability and cooperation of the schools or other education delivery settings that will be required to carry out the research proposed in the application via a letter of support from the education organization.

h. **Awards**
The scope of Goal Four projects may vary. A smaller project might involve several schools within a large urban school district in which student populations vary in terms of SES, race, and ethnicity. A larger project might involve large numbers of students in several school districts in different geographical areas.

Typical awards for projects at this level will be $500,000 to $1,200,000 (total cost = direct + indirect costs) per year for a maximum of 5 years. Larger budgets will be considered if a compelling case can be made for such support. The size of the award depends on the scope of the project.

G. **Requirements for Goal Five (Measurement Projects)**
Here, the Institute specifies the requirements for Goal Five projects for all topics except Education Policy, Finance, and Systems. Requirements for Goal 5 applications under the Policy/Systems topic are detailed in the specific requirements section for that topic (Part II.10.C.b).

a. **Purpose of Goal Five (Measurement)**
Applications appropriate for consideration under Goal Five are: (a) proposals to develop and validate new assessments; (b) proposals to adapt and/or validate existing assessments; (c) proposals to adapt and/or validate assessments originally designed and used for research purposes for broader use in instructional settings; (d) proposals to develop or test new techniques for assessment or analysis of assessment data in the context of state accountability standards and systems; and (e) proposals to develop assessments used to certify or assess professionals (e.g., teachers, related service providers) and/or validate such assessments against student outcomes. Proposed assessments must meet the specific requirements detailed under the topic to which the proposal is submitted.

Under Goal Five, the Institute intends to support research on assessments intended for use by practitioners for purposes of screening, diagnosis, progress monitoring, outcome assessment, and assessments of teachers and education leaders.

(i) **Screening.**
Screening involves brief assessments conducted with all children at the beginning of the school year and targets skills that are strongly predictive of important future outcomes. The goal of
screening is to identify children who are at risk of failure and likely to need additional or alternative forms of instruction either to supplement or supplant conventional instruction.

(ii) Diagnosis.
Diagnosis refers to more in-depth assessment of strengths and weaknesses in a particular domain, and should not be confused with assessment for the purpose of labeling children with disabilities. The goal of diagnostic assessment is to provide teachers with a profile of skills and deficits to guide instruction.

(iii) Progress monitoring.
Progress monitoring is assessment of students' performance on critical criterion performance skills a minimum of three times a year but typically more frequently (e.g., weekly, monthly, or quarterly) using alternate forms of a test. The purpose of progress monitoring is to estimate rates of improvement, to identify children who are not demonstrating adequate progress and, therefore, require supplementary instruction. Progress monitoring assessment provides information on a student's performance on an ongoing basis (e.g., weekly data on whether students are benefiting from a particular type of instruction). This information can be used to compare different types of instruction for a particular child on a frequent basis.

Under Goal 5, applicants may propose to develop and/or validate a progress-monitoring instrument. Applicants who want to test whether implementation of a progress monitoring system or instrument improves student outcomes must apply under the appropriate intervention evaluation goal (Goal 3 or Goal 4).

(iv) Outcome assessment.
Outcome assessment is designed to determine if students have achieved or not achieved grade-level performance or if their performance has improved or not improved.

(v) Assessments of teachers and education leaders.
Under the Early Childhood, Teacher Quality, and Education Leadership research topics, applicants may propose to develop assessments of teacher practices and validate them against student outcomes, as well as to develop and/or validate assessments used to certify professionals (e.g., teacher certification exams).

b. Requirements for the proposed assessment

(i) Rationale.
Applicants should provide a compelling rationale to support the development of the proposed assessment. Reviewers will consider (a) the strength of the theoretical foundation for the proposed assessment, (b) the existing empirical evidence supporting the proposed assessment, and (c) whether the proposed assessment duplicates existing assessments. In developing these assessments, researchers should keep in mind the pragmatic constraints (e.g., number of students, limited class time, time required to train teachers to use the assessments, costs) that teachers and administrators will consider to determine whether the instrument is a viable option for use in classrooms and other education delivery settings.

(ii) Description of the assessment.
Applications should provide sufficient description of the proposed assessment and how it could be utilized within education delivery settings for reviewers to judge the practicality of the proposed assessment for instructional purposes. Applicants should clearly describe the components of the assessment (e.g., specific knowledge and skills that the instrument is designed to tap) in sufficient detail to allow reviewers to evaluate relations between the theoretical and empirical foundations for the assessment and the assessment itself (e.g., does the proposed assessment capture critical skills?), and whether the proposed assessment will
meet the needs for which it is intended. Applications to examine the use of assessments for accountability purposes should provide sufficient description of the proposed assessment instrument or technique in the context of state and federal accountability policies so that reviewers are able to judge the merits and feasibility of the proposed research on assessment for accountability.

Applicants may use Appendix B to include up to 10 pages of examples of materials to be used by participants (e.g., training materials for teachers, computer screens depicting how information is presented to students, examples of test items for a proposed assessment). Applicants should be aware that all narrative text describing the theoretical background, empirical support, components of the proposed assessment, or any other aspect of the proposal must be included within the 25-page project narrative. The only materials that are allowed in Appendix B are examples of the materials that are used by or presented to participants in the assessment.

c. **Significance of project**

By describing the theoretical and empirical support for the proposed assessment, the practical utility of the assessment, and the components of the assessment, applicants are addressing aspects of the significance of their proposal.

d. **Methodological requirements**

For all applications, including those submitted under Goal Five, the proposed research design must be appropriate for answering the research questions or hypotheses that are posed. There are two aspects of the research methodology that applicants must clearly address: (a) the proposed methods for developing the assessment, and (b) the proposed research methods for obtaining evidence of the validity and reliability of the instrument.

(i) **Assessment development.**

Applicants must detail the proposed procedures for developing the assessment. Strong applications will include descriptions of: (a) the procedures for determining the constructs that will be "tapped" by the instrument; (b) the procedures for selecting items to be used in the assessment, including assessing difficulty of selected items, and obtaining representative responses to items; and (c) the process for determining the administrative procedures for conducting the assessment (e.g., mode of administration, inclusion/exclusion of individual test takers, and whether make-ups or alternative administrative conditions will be allowed). Applicants should describe the process they will use to collect empirical data that will provide feedback for refining specific components of the assessment. **Applicants should describe the iterative development process to be used in the design and refinement of the proposed measurement tool.**

(ii) **Assessment evaluation.**

Applicants must clearly describe the research plans for determining the validity and reliability of the instrument. Applicants should describe the characteristics, size, and analytic adequacy of samples to be used in each study, including justification for exclusion and inclusion criteria. Applicants should describe detailed planned analytic methods (e.g., statistical and/or psychometric models), plans for treatment of missing responses, and criteria for interpreting results.

Applicants proposing to use existing datasets (e.g., state or local student achievement databases) to validate an assessment should explicitly address how exclusion from testing, or missing data, will be handled within the statistical analysis. If multiple data sets will be linked for the proposed analyses, applicants should provide sufficient detail for reviewers to judge the feasibility of the plan.
Applicants proposing to collect original data should carefully describe the sample, measures (including reliability and validity), and procedures proposed for the primary data collection. If observational data are collected, applicants should describe how the data would be collected (e.g., procedures for maintaining inter-observer reliability), coded, and analyzed.

Applicants proposing to develop and/or validate assessments of teachers, education leaders, or education systems must validate the assessments against student outcomes.

e. Personnel
Competitive applicants will have research teams that collectively demonstrate expertise in (a) content area, (b) assessment, (c) implementation of, and analysis of results from, the research design that will be employed, and (d) working with teachers, schools, or other education delivery settings in which the proposed assessment might be used.

f. Resources
Competitive applicants will have access to institutional resources that adequately support research activities and access to schools in which to conduct the research. Applicants should also demonstrate access to statistical and measurement resources and technical expertise needed for developing and studying assessment instruments and techniques.

g. Awards
Typical awards under Goal Five will be $150,000 to $400,000 (total cost = direct + indirect costs) per year for up to 4 years. Larger budgets will be considered if a compelling case can be made for such support. The size of award depends on the scope of the project.
PART IV GENERAL SUBMISSION AND REVIEW INFORMATION

17. MECHANISM OF SUPPORT
The Institute intends to award grants pursuant to this request for applications. The maximum length of the award period varies by goal. The maximum award length for each goal ranges from two to five years. Please see details for each goal in Part III Requirements of the Proposed Research section of the announcement.

18. FUNDING AVAILABLE
The size of the award depends on the scope of the project. Please see specific details in Part III Requirements of the Proposed Research section of the announcement. Although the plans of the Institute include the research programs (topics) 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 number of projects funded under a specific topic and goal depends upon the number of high quality applications submitted to that topic and goal. The Institute does not have plans to award a specific number of grants under each particular topic and goal.

19. 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.

20. 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 project 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 project. The role of this person is primarily for communication purposes on the scientific and related budgetary aspects of the project and should be listed as the Principal Investigator. All other Principal Investigators should be listed as Co-Principal Investigators.

21. 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. The Institute asks IES-funded investigators to submit voluntarily to the Educational Resources Information Center (ERIC) an electronic version of the author's final manuscript upon acceptance for publication in a peer-reviewed journal, resulting from research supported, in whole or in part, by the Institute. The author's final manuscript is defined as the final version accepted for journal publication, and includes all modifications from the peer review process.

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

The Institute anticipates that the majority of the research funded under this announcement will be conducted in field settings. Hence, the applicant is reminded to apply its negotiated off-campus indirect cost rate, as directed by the terms of the applicant's negotiated agreement.
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.

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.

22. LETTER OF INTENT

A. Content
A letter indicating an applicant’s intent to submit an application is optional, but encouraged, for each application. The letter of intent form must be submitted electronically by the date listed in this document, using the instructions provided at: https://ies.constellagroup.com.

The letter of intent should include:
- Descriptive title;
- Topic and goal that the applicant will address;
- Brief description of the proposed project;
- Name, institutional affiliation, address, telephone number and e-mail address of the principal investigator(s);
- Name and institutional affiliation of any key collaborators and contractors;
- Duration of the proposed project;
- Estimated budget request for each year; and
- Total budget request.

B. Format and Page Limitation
The project description should be single-spaced and should not exceed one page (about 3,500 characters). Although the letter of intent is optional, is not binding, and does not enter into the review of a subsequent application, the information that it contains allows Institute staff to estimate the potential workload to plan the review.

23. APPLICATION PACKAGE AVAILABLE ON GRANTS.GOV

A. Date Application Package is Available on Grants.gov
The application form approved for use in the competitions specified in this RFA is the government-wide SF424 Research and Related (R&R) Form (OMB Number 4040-0001).

Application forms and instructions for the electronic submission of applications will be available for the programs of research listed in this RFA from http://www.Grants.gov/ by the following dates:

<table>
<thead>
<tr>
<th>Season</th>
<th>Available Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer</td>
<td>April 28, 2008</td>
</tr>
<tr>
<td>Fall</td>
<td>August 4, 2008</td>
</tr>
</tbody>
</table>

Posted on February 29, 2008
B. **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 Instructions and Application Package. For the Education Research Request for Applications, applicants must search on: **CFDA 84.305**.

b. **Education Research Application Instructions and Application Package**

The Grants.gov search on CFDA 84.305 will yield more than one application package. For the Education Research Request for Applications (i.e., the research topics listed in this Request for Applications), applicants will be able to download packages marked:

- CFDA 84-305A2009-1 Education Research Application Instructions and Application Package (June 2008 deadline) and
- CFDA 84-305A2009-2 Education Research Application Instructions and Application Package (October 2008 deadline).

An applicant must download the application package designated for the competition and deadline date to which the applicant wishes to apply or the application will be submitted to the wrong competition. Although the two packages are similar, only CFDA 84-305A2009-1 can be used to apply in June and only CFDA 84-305A2009-2 can be used to apply in October.

24. **SUBMISSION PROCESS AND DEADLINE**

Applications must be submitted electronically by 4:30 p.m., Washington, DC time on the application deadline date, using the ED standard forms 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.

25. **APPLICATION CONTENT AND FORMATTING REQUIREMENTS**

A. **Overview**

All of the instructions and requirements regarding (a) submission of the application, (b) application page limits, (c) acceptable format, and (d) necessary attachments (.PDF files) will be provided in the Application Instructions document for this competition that can be found under the "For Applicants -- Apply for Grants" link of Grants.gov. Also, all of the required forms will be provided in the Application Package that accompanies the Application Instructions.

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) biographical sketches of senior/key personnel, (e) narrative budget justification (f) subaward budgets, (g) Appendix A, (h) Appendix B, (i) human subjects narrative, and (j) additional forms. The instructions below will be reiterated in the Application Instructions document for this competition, which will be available, as noted above, under the "For Applicants -- Apply for Grants" link of Grants.gov.

B. **General Format Requirements**

Margin, format, and font size requirements apply to the project summary, project narrative, bibliography, biographical sketches, narrative budget justification, Appendix A, and Appendix B. 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. **It is very important that applicants review carefully the**

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*Posted on February 29, 2008*
"Application Format Requirements" outlined in the *Fiscal Year 2009 Application Package Highlights*, which will be part of the application instructions, to be available on [http://www.Grants.gov](http://www.Grants.gov).

**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 project summary/abstract will be submitted as a .PDF attachment.

**b. Page limitations and format requirements**
The project summary/abstract is limited to 1 single-spaced page and must adhere to the margin, format, and font size requirements above.

**c. Content**
The project summary/abstract should include:

1. Title of the project;
2. The RFA topic and goal under which the applicant is applying (e.g., Teacher Quality, Goal 2);
3. Brief description of the purpose (e.g., to develop and document the feasibility of an intervention);
4. Brief description of the setting in which the research will be conducted (e.g., rural school districts in Alabama);
(5) Brief description of the population(s) from which the participants of the study(ies) will be sampled (age groups, race/ethnicity, SES);
(6) If applicable, brief description of the intervention or assessment to be developed or evaluated or validated;
(7) If applicable, brief description of the control or comparison condition (e.g., what will participants in the control condition experience);
(8) Brief description of the primary research method;
(9) If applicable, brief description of measures and key outcomes; and
(10) If applicable, brief description of the data analytic strategy.

Please see the website http://ies.ed.gov/ncer/projects/ for examples of project summaries/abstracts.

D. Project Narrative
   a. Submission
      The project narrative will be submitted as a .PDF attachment.

   b. Page limitations and format requirements
      The project narrative is limited to 25 single-spaced pages for all applicants. The 25-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.

   c. Format for citing references in text
      To ensure that all applicants have the same amount of available space in which to describe their projects 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, 5th Ed. (American Psychological Association, 2001).

   d. Content
      Incorporating the requirements outlined under the section on Requirements of the Proposed Research, and the requirements listed under the relevant research grant topic, the project narrative provides the majority of the information on which reviewers will evaluate the proposal.

      The project narrative must include four sections: (a) Significance, (b) Research Plan, (c) Personnel, and (d) Resources. Information to be included in each of these sections is detailed in Part III: Requirements of the Proposed Research and in specific requirements subsections for each research topic in Part II: Research Grant Topics.

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 IV.2.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. **Biographical Sketches of Senior/Key Personnel**
   a. **Submission**
The section will be submitted as a .PDF attachment.

   b. **Page limitations and format requirements**
   A biographical sketch should be provided for the principal investigator and other key personnel. **Each biographical sketch (e.g., abbreviated curriculum vitae) is limited to 4 pages.** The biographical sketch must adhere to the margin, format, and font size requirements described in section IV.25.B. General Format Requirements.

   c. **Content**
Each biographical sketch should include information sufficient to demonstrate that personnel possess training and expertise commensurate with their duties (e.g., publications, grants, relevant research experience) and have adequate time devoted to the project to carry out their duties. Applicants are reminded to review information in section IV.20 Designation of Principal Investigator.

d. **List of current and pending grants**
Applicants should provide a list of all current and pending grants along with the proportion of the individual’s time allocated to each project for the principal investigator and other key personnel for the project. This information is to be provided as a table attached to the biographical sketch (i.e., a fifth page).

G. **Narrative Budget Justification**
   a. **Submission**
The section will be submitted as a .PDF attachment.

   b. **Page limitations and format requirements**
   There are no page limitations for the narrative budget justification. The narrative budget justification must adhere to the margin, format, and font size requirements described in section IV.25.B. General Format Requirements.

   c. **Content**
The narrative budget justification should provide sufficient detail to allow reviewers to judge whether reasonable costs have been attributed to the project. The budget justification should correspond to the itemized breakdown of project costs that is provided in the Research & Related Budget (SF 424) Sections A & B; C, D, &E; and F-K. It should include the time commitments 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 purchase, supplies, travel 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).

   For those applications that include a subaward(s) for work conducted at collaborating institutions, the narrative should also provide the details about the subaward(s). Include the actual subaward budgets as a separate attachment. (See below "Subaward Budget").

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d. **Indirect cost rate**
Applicants should use their institution's federal indirect cost rate and use the off-campus indirect cost rate where appropriate (see instructions under Section IV.21 Special Requirements). If less than 75 percent of total indirect costs are based on application of the off-campus rate, the applicant should provide a detailed justification.

H. **Subaward Budget**
   a. **Submission**
   The section will be submitted as a .PDF attachment.

   b. **Page limitations and format requirements**
   To allow applicants to enter subaward budget information in accordance with a prescribed format (R&R Subaward Budget), an Excel spreadsheet will be provided at:

   http://ies.ed.gov/funding/

   Applicants will download and complete the spreadsheet in Excel format, convert it to a .PDF file, and then upload it as an attachment. There are no page limitations to the spreadsheet.

   c. **Content**
   For applications that include a subaward(s) for work conducted at collaborating institutions, applicants must submit an itemized budget spreadsheet for each subaward for each project year. As noted above, the details of the subaward costs should be included in the Narrative Budget Justification.

I. **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 25.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. In addition, in the case of a resubmission, the applicant may use up to 3 pages of the appendix to describe the ways in which the revised proposal is responsive to prior reviewer feedback. 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 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.
J. Appendix B (Optional)
   a. Submission
      If applicable, Appendix B should be included at the end of the 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. The Appendix B must adhere to the margin, format, and font size requirements described in section 25.B. General Format Requirements.
   c. Content
      Appendix B applies to applications under all topics in this RFA. The purpose of Appendix B is to allow applicants who are proposing to develop, evaluate, or validate an intervention or assessment to include examples of curriculum material, computer screens, test items, or other materials used in the intervention or assessment. 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 (e.g., descriptions of research that supports the use of the intervention/assessment, the theoretical rationale for the intervention/assessment, or details regarding the implementation or use of the intervention/assessment) must be included in the 25-page research narrative.

K. Research on Human Subjects
   a. Submission
      This section will be submitted as a .PDF attachment.
   b. Requirements
      If an applicant proposes research activities involving human subjects at any time during the proposed project period, either at the applicant organization or at any other performance site or collaborating institution, then the applicant must provide either a human subjects "exempt research narrative" or a "nonexempt research narrative" and upload this narrative as instructed in the Fiscal Year 2009 Application Package Highlights. See the U.S. Department of Education’s web page for detailed information about the protection of human subjects in research: http://www.ed.gov/policy/fund/guid/humansub/overview.html.

L. Additional Forms
   Please note that applicants selected for funding will be required to submit the following certifications and assurances before a grant is issued:

   (1) SF 424B-Assurances-Non-Construction Programs
   (2) Grants.gov Lobbying Form
   (3) SF-LLL (if applicable) - Disclosure of Lobbying Activities
   (4) Protection of Human Research Subjects assurance and/or Institutional Review Board certification, as appropriate*

   *Refer to the Fiscal Year 2009 Application Package for New Grants, available on http://www.Grants.gov, which details the information about the Human Subjects narrative, if applicable, that is required to be submitted with the application.

26. APPLICATION PROCESSING
   Applications must be received by 4:30 pm, 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.
27. 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 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, 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.

28. 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 above in Part III Requirements of the Proposed Research and in the section of the relevant research grant topic.

A. Significance
Does the applicant provide a compelling rationale for the significance of the project as defined in the Significance of Project section for the Goal under which the applicant is submitting the proposal?

B. Research Plan
Does the applicant meet the requirements described in the methodological requirements section for the Goal under which the applicant is submitting the proposal?

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

D. 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?

29. RECEIPT AND START DATE SCHEDULE

A. Letter of Intent Receipt Dates:
Summer Application Letter of Intent
Fall Application Letter of Intent

April 28, 2008
July 10, 2008

Posted on February 29, 2008
B. Application Deadline Dates:

- Summer Application Deadline Date: June 26, 2008
- Fall Application Deadline Date: October 2, 2008

C. Earliest Anticipated Start Date:

- For Summer Application: March 1, 2009
- For Fall Application: July 1, 2009

30. 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

31. INQUIRIES MAY BE SENT TO:

A. Reading and Writing
Dr. Emily Doolittle
Institute of Education Sciences
555 New Jersey Avenue, NW
Washington, DC  20208

Email: Emily.Doolittle@ed.gov
Telephone: (202) 219-1201

B. Mathematics and Science Education
Dr. Christina Chhin
Institute of Education Sciences
555 New Jersey Avenue, NW
Washington, DC  20208

Email: Christina.Chhin@ed.gov
Telephone: (202) 219-2280

C. Cognition and Student Learning
Dr. Carol O'Donnell
Institute of Education Sciences
555 New Jersey Avenue, NW
Washington, DC  20208

Email: Carol.ODonnell@ed.gov
Telephone: (202) 208-3749

D. Teacher Quality (Reading and Writing and Mathematics and Science Education)
Dr. Harold Himmelfarb
Institute of Education Sciences
555 New Jersey Avenue, NW
Washington, DC  20208

Email: Harold.Himmelfarb@ed.gov

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E. Social and Behavioral Context for Academic Learning
Dr. Emily Doolittle
Institute of Education Sciences
555 New Jersey Avenue, NW
Washington, DC 20208

Email: Emily.Doolittle@ed.gov
Telephone: (202) 219-1201

F. Education Leadership
Dr. Katina Stapleton
Institute of Education Sciences
555 New Jersey Avenue, NW
Washington, DC 20208

Email: Katina.Stapleton@ed.gov
Telephone: (202) 219-2154

G. Education Policy, Finance, and Systems
Dr. Katina Stapleton
Institute of Education Sciences
555 New Jersey Avenue, NW
Washington, DC 20208

Email: Katina.Stapleton@ed.gov
Telephone: (202) 219-2154

H. Early Childhood Programs and Policies
Dr. Caroline Ebanks
Institute of Education Sciences
555 New Jersey Avenue, NW
Washington, DC 20208

Email: Caroline.Ebanks@ed.gov
Telephone: (202) 219-1410

I. Middle and High School Reform
Dr. David Sweet
Institute of Education Sciences
555 New Jersey Avenue, NW
Washington, DC 20208

Email: David.Sweet@ed.gov
Telephone: (202) 219-1748

J. Interventions for Struggling Adolescent and Adult Readers and Writers
Dr. Elizabeth Albro
Institute of Education Sciences
555 New Jersey Avenue, NW
Washington, DC 20208
32. 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.

33. 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.

34. REFERENCES


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