

EVALUATION OF STATE AND LOCAL EDUCATION PROGRAMS AND POLICIES RESEARCH GRANTS

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REQUEST FOR APPLICATIONS

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PART I GENERAL OVERVIEW

1. REQUEST FOR APPLICATIONS

In this announcement, the Institute of Education Sciences (Institute) invites applications for research projects that will contribute to its research program in Evaluation of State and Local Education Programs and Policies. For the FY 2009 competition, the Institute will consider only applications that meet the requirements outlined below under Part II Evaluation of State and Local Education Programs and Policies and Part III Requirements for the Proposed Research.

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

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. 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

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>.

Table 1: FY 2009 Research and Training Grant Topics

National Center for Education Research

1. Research Grant Topics
 - 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
2. Research Training Grant Topics
 - Postdoctoral Research Training Program
 - Predoctoral Research Training Program
3. National Research and Development Center Topics
 - Center on Teacher Effectiveness
 - Center on Rural Education
 - Center on Turning Around Chronically Low Achieving Schools
4. Statistical and Research Methodology in Education
5. Evaluation of State and Local Education Programs and Policies

National Center for Special Education Research

1. Research Grant Topics
 - Early Intervention and Early Childhood Special Education
 - Reading, Writing, and Language Development
 - Mathematics and Science Education
 - Social and Behavioral Outcomes to Support Learning
 - Transition Outcomes for Special Education Secondary Students
 - Cognition and Student Learning in Special Education
 - Teacher Quality
 - Related Services
 - Systemic Interventions and Policies for Special Education
 - Autism Spectrum Disorders
2. Research Training Grant Topics
 - Postdoctoral Special Education Research Training

PART II

EVALUATION OF STATE AND LOCAL EDUCATION PROGRAMS AND POLICIES

3. PURPOSE

Through the research program in Evaluation of State and Local Education Programs and Policies (State and Local Evaluation), the Institute will provide support for rigorous evaluations of state or local education programs or policies implemented by State or local education agencies.

4. BACKGROUND

A. Becoming a Learning Society

Educating children and youth to become productive, contributing members of the society is arguably one of the most important responsibilities of any community. Across our nation, school and district leaders and staff, along with state and national decision-makers, are working hard to strengthen the education of our young people. The Institute believes that improving education depends in large part on using evidence generated from rigorous research to make education decisions. However, education practice in our nation has not benefited greatly from research.

One striking fact is that the complex world of education—unlike defense, health care, or industrial production—does not rest on a strong research base. In no other field are personal experience and ideology so frequently relied on to make policy choices, and in no other field is the research base so inadequate and little used. (National Research Council, 1999, p. 1)

The Institute recognizes that evidence-based answers for all of the decisions that education decision-makers and practitioners must make every day do not yet exist. Furthermore, education leaders cannot always wait for scientists to provide answers. One solution for this dilemma is for the education system to integrate rigorous research and evaluation into the core of its activities. The Institute believes that the education system needs to be at the forefront of a *learning society*—a society that plans and invests in learning how to improve its education programs by turning to rigorous evidence when it is available, and by insisting that when we cannot wait for evidence of efficacy that the program or policy we decide to implement *be evaluated as part of the implementation*.

In evaluations of the effectiveness of education interventions, one group typically receives the target intervention (i.e., treatment condition), and another group serves as the comparison or control group. In education evaluations, individuals in the comparison group almost always receive some kind of treatment; rarely is the comparison group a "no-treatment" control. When a State or district implements a new program for which there is little or no rigorous evidence of the effectiveness of the intervention, the education decision-makers are, in some sense, hypothesizing that the new program is better than the existing practice (sometimes referred to as "business-as-usual") for improving student outcomes. Is this a valid hypothesis or assumption? Maybe, but maybe not. The only way to be certain is to embed a rigorous evaluation into the implementation of the new program.

Making rigorous evaluation of programs a standard education practice will enable educators to improve specific programs and ultimately lead to higher quality education programs in general. Through rigorous evaluations of education programs and practices, we can distinguish between those programs that produce the desired outcomes and those that don't; identify the particular groups (e.g., types of students, teachers, or schools) for which a program works; and determine which aspects of programs need to be modified in order to achieve the desired outcomes. For example, rigorous evaluations have shown that *Check & Connect*, a dropout prevention program, reduces dropout rates (Sinclair, et al., 1998; Sinclair et al., 2005). On the Institute's What Works Clearinghouse website (<http://whatworks.ed.gov>), readers will find reports on the effects of over 90 education interventions.¹

¹ Based on information downloaded from <http://whatworks.ed.gov> on February 26, 2008.

The intervention reports are based on findings from rigorous evaluations, and many of these reports record positive impacts on student outcomes.

Determining which programs produce positive effects is essential for improving education. However, the Institute also believes that it is important to discover when programs do not produce the desired outcomes. Over the past 5 years, the Institute has found that when the effectiveness of education programs and policies is compared to business-as-usual or other practices in rigorous evaluations, the difference in student outcomes between participants receiving the intervention and those in the comparison group is sometimes negligible (e.g., Dynarski, et al., 2007; Dynarski, et al., 2004; Ricciuti, et al., 2004; Wolf, et al., 2007).

States and districts can use the results of rigorous evaluations to identify and maintain successful policies and programs while redesigning or terminating ineffective ones, thereby making the best use of their resources. Rigorous evaluations can identify ways to improve successful interventions. For example, the evaluation of the federal Early Reading First program to improve preschool children's literacy and language skills found positive impacts on students' print and letter knowledge and none of the feared negative impacts on social-emotional skills. In addition, it also identified the need for greater attention on improving children's oral language and phonological awareness.²

If "new" is not necessarily "better" and "good" programs could become even more effective, then it behooves us to evaluate the effects of programs on their intended outcomes (e.g., math achievement, graduation completion rates) when the new programs are implemented. Only appropriate empirical evaluation can sift the wheat from the chaff and identify those programs that do in fact improve student outcomes. The Institute believes that substantial improvements in student outcomes can be achieved if state and local education agencies rigorously evaluate their education programs and policies. To this end, the Institute will provide resources to conduct rigorous evaluations of State and local education programs and policies.

B. Implementing Rigorous Evaluations

The methodological requirements for the evaluations are detailed in Part III Requirements of the Proposed Research. Through the State and Local Evaluation research program, the Institute intends to fund research projects that yield unbiased estimates of the degree to which an intervention has an impact on the outcomes of interest in relation to the program or practice to which it is being compared. In this section, we provide examples of how an evaluation might be incorporated into the implementation of an intervention program. These examples should be viewed simply as illustrations of possible designs; other experimental and quasi-experimental designs that substantially minimize selection bias or allow it to be modeled may be employed.³ For state and local education agencies that have not previously conducted rigorous evaluations that meet requirements detailed in Part III Requirements of the Proposed Research, the Institute strongly recommends that they partner with experienced researchers who have conducted impact evaluations.

a. Regression discontinuity designs

One approach to rigorously evaluating an intervention is to employ a regression discontinuity design (<http://www.socialresearchmethods.net/kb/quasird.php>). In this section, we provide an example of a regression discontinuity design in the context of universal pre-kindergarten programs.

²Jackson, R., McCoy, A., Pistorino, C., Wilkinson, A., Burghardt, J., Clark, M., Ross C., Schochet, P., & Swank, P. (2007). *National Evaluation of Early Reading First: Final Report*, U.S. Department of Education, Institute of Education Sciences, Washington, DC: U.S. Government Printing Office. Downloaded on January 31, 2008, from <http://ies.ed.gov/ncee/pubs/20074007/index.asp>.

³ For more information, see Shadish, W. R., Cook, T. D., and Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston: Houghton Mifflin Company.

Many states are implementing or considering universal prekindergarten programs. Oklahoma established a universal pre-kindergarten program in 1998. Under it, districts were free to implement prekindergarten programs with state support and parents were free to enroll their four-year-olds. By 2002, 91 percent of the state's districts and 63 percent of the state's four-year-olds were participating. Rigorously evaluating the effectiveness of a universal prekindergarten program can be difficult. Experimental comparisons in which some children are randomly assigned to have access to the program and others do not have access to it would violate the universality of the program. Non-experimental comparisons of students in the program with those who did not attend can be biased because the factors behind why some families choose to enroll their children and others do not can also affect student outcomes, such as assessments of school readiness. In such a comparison, any difference in outcomes between prekindergarten and non-prekindergarten students might be due to the program or to the family factors involved in the enrollment choice and the two cannot be separated.

One way to overcome problems with non-experimental comparisons is to use a regression discontinuity design. Gormley, Gayer, Phillips and Dawson (2005) employed a regression discontinuity design to evaluate the prekindergarten program in the Tulsa school district. In Oklahoma children must turn four by September 1 to enter prekindergarten, otherwise they must wait until the next year. September 1, 1997 became the cut point that was used to divide children into a treatment and comparison groups. Gormley and colleagues compared child readiness for those four-year-old students who in 2002-03 had been born on or before September 1, 1997, and had completed prekindergarten (the treatment group) versus those born after September 1, 1997, and were just starting prekindergarten (the comparison group). At the beginning of the school year when the treatment group was entering kindergarten and the comparison group was entering prekindergarten, both groups took 3 subtests on the Woodcock-Johnson Achievement tests and their scores were used to estimate a difference in test score for students below and above the September 1st cut point. Such students were considered statistically similar except that one group received prekindergarten and the other had not because selection into the two groups was solely dependent on birth date. The authors found that for students selected to attend prekindergarten, the program increased their school readiness. As a result, the Tulsa school district obtained a convincing finding on the value of its prekindergarten program with little inconvenience to the program.

Regression discontinuity designs are also appropriate for situations in which schools (or teachers) are eligible for a program (intervention) based on some quantitative criterion score. For example, consider programs that are intended for high-poverty schools. To utilize a regression discontinuity design, there must be a quantitative criterion by which schools are identified high-poverty or not high-poverty schools; for example, high-poverty might be defined as some percentage of students eligible for free or reduced-price lunch. Outcomes for students in schools above this cut point and thereby eligible for the performance program can be compared to their counterparts in schools falling below the cut point because their selection into these two groups is solely determined by their score. One caution regarding utilization of regression discontinuity designs is that they typically require larger sample sizes relative to randomized controlled trials to achieve the same statistical power to detect the effects of the intervention.

b. Random assignment coupled with a staggered roll-out of a program

Another approach to evaluating an intervention rigorously is to employ random assignment of districts, schools, or classrooms to the new intervention or to continue with current practice. Lotteries are often used to assign participants to treatment and control groups because they are seen as fair. Lotteries are especially useful for randomly assigning groups to these two conditions in situations where participants have to apply to receive an intervention but resources are not sufficient to provide the program to all. For example, in the Career Academies Evaluation, about twice as many students applied to participate in a Career Academy as the programs were able to serve. Using a lottery, a little more than half of the students were accepted for admission to a Career Academy. The remaining students did not receive places in a Career Academy but were able to participate in other programs in their high school or school

district. For students who were most at-risk for dropping out of school, those who participated in Career Academies were less likely to drop-out of school (Kemple & Snipes, 2000).

Randomized control trials may face resistance from stakeholders who would like to see all eligible participants receive the intervention in expectation of its benefits. If sufficient resources will be available to provide the intervention to everyone, a staggered roll-out of the program or policy can create a comparison group that will receive the intervention in the near future while also allowing a district or state to more easily manage the implementation of the intervention. For example, if a new intervention program is deployed for one-third of a state's districts each year over a three year period and the districts take part in a lottery to determine when each will receive it, then in Year 1, one-third of the districts can be the treatment group and the remaining districts are the control group. In the second year, the second group joins the treatment group, and the control group is the one-third of the districts not yet receiving the intervention. In the third year, all districts are participating.

Spencer, Noll and Cassidy (2005) describe a private foundation's monetary incentive program for higher achieving students from poor families that paid a monthly stipend to students as long as students kept their high school grades up. Although the foundation wanted to evaluate the impact of its program, it did not want to prevent eligible students or schools from taking part. The evaluation used a staged design in which all eligible students who applied were enrolled in the program but 40% were randomly assigned to begin it in the second year thereby converting them into a comparison group for the first year. Randomization was done at the student-level rather than school-level in order to maintain the foundation's relationship with all the schools. Five hundred and thirty-four students from Grades 9 through 11 from families earning a maximum of 130% of the poverty line enrolled in the program. Students who maintained grades of As and Bs in major subjects (or one C offset by an A) received a monthly stipend of \$50 for ninth graders, \$55 for tenth graders and \$60 for eleventh graders. Students whose grades dropped below the requirements had their stipends halted until their grades once again made them eligible. At the end of Year 1, treatment students were found to have higher grades than control students.

c. Random assignment coupled with variation in treatment conditions

Another approach to employing random assignment designs is to utilize random assignment when everyone will receive some variation of the intervention. In the following example, the Charlotte-Mecklenburg school district wanted to promote parental involvement in the district's school choice program and increase parents' attention to the academic quality of the schools chosen (Hastings, Van Weelden, and Weinstein, 2007). District leaders decided to test three approaches to providing information to parents. In Condition 1 (basic condition), each family received a "choice book" containing descriptive information about what each school provided to students, how to apply to the program, and how the lottery process worked.⁴ In Condition 2, parents received a one-page list of the previous year's average standardized test scores for the student's eligible schools, along with the choice book. In Condition 3, parents received the test score information plus the odds of admission to each eligible school based on the previous year's admissions, along with the choice book. Within grade blocks (pre-kindergarten, 5th grade and 8th grade) students were randomly assigned within school into one of the three conditions.

Almost 17,000 students attending schools serving low to middle income students took part in the evaluation to see if the additional information (Conditions 2 and 3) would affect families' participation in the choice program. The district found that results depended on whether the students were attending a

⁴ The district was divided into choice zones. Students had a guaranteed space in their home school but if unsatisfied with that school, their family could apply for student admission to eligible schools inside their choice zone and receive free transportation to that school. Families could immediately chose their home school or first apply to up to three eligible schools (in rank order) they would prefer their child to attend. When oversubscribed, eligible schools used lotteries to admit applying students and the losers attended their home school.

school that had not been compliant under the No Child Left Behind legislation for two years. Families with students attending such schools showed no effects from the intervention (possibly because they were already receiving similar information from the district as a requirement of NCLB and/or possibly those who would have taken part in the choice program already had done so under this stimulus). However, families with children in schools that had met NCLB requirements in previous years did show effects from the intervention. Receiving the standardized test information increased the percent of families trying to get their students into an eligible school (rather than their home school) as their first choice (marginally significant), significantly increased the number of eligible schools they chose, and significantly increased the test score difference between their first choice school and their home school. Receiving the test information and odds of admission information also increased the test score difference between first choice and home schools. Adding the odds information also uncovered a difference in the behavior of lower income and higher-income families. Lower income families chose higher-performing schools with lower odds of admission while the higher income families increased their choice of somewhat lower performing schools with higher odds of admission.

d. Interrupted time series designs

When assignment to treatment condition cannot be determined through a lottery nor by using a cut-off score, well-designed and implemented quasi-experimental designs can be used to evaluate intervention programs. For example, in cases where prior years of school/district level achievement data are available before a program or policy is implemented, an interrupted time series could be conducted (Shadish, Cook, and Campbell, 2002). The trend in achievement data from before the implementation of the new program is compared to the trend after implementation. Differences in the level and slope of achievement between the two periods are linked to the new program. How strongly they can be linked depends on the validity of the design. Other events (e.g., other programs, changes in achievement measures) occurring around the time of the intervention might also have led to increases in achievement as could changes in the make-up of the treatment or control group. When a program is implemented swiftly and widely the breakpoint is much clearer and the difference in trend easier to establish than if the intervention is slowly implemented over a longer period. Adding features to the design can increase validity, leading to greater confidence in the causality of the results. A no-treatment comparison group can be tracked over the same time period to see if its achievement rises after the time of implementation (this would help identify other factors that could be involved in the observed gain in the treatment group). Another strategy is for researchers to track the change in the trend of an outcome that is not expected to be affected by the program but is conceptually related to achievement. Its change in trend should *not* be similar to that of achievement if the intervention is the actual cause of the gain in achievement. Other techniques include stopping the intervention at a known time or switching the intervention and comparison groups. In both cases, the trends for each group should change appropriately if the intervention is causing them. Interrupted time series analyses often make use of many data points; education data sets, however, may not have lots of data points for student achievement data. By including the additional design features, short interrupted time series studies may be possible.

Short-interrupted time-series analyses have been used to evaluate whole school reform programs for schools serving at risk student populations (Bloom, et al. 2001; Bloom, 1999; Kemple & Herlihy 2004; Kemple, Herlihy, & Smith 2005). In Philadelphia, a school reform program known as Talent Development High School was implemented in five neighborhood high schools with an initial focus on the ninth grade. Because the schools had chosen to adopt the program, random assignment could not be used; researchers chose instead to conduct a short-interrupted-time series analysis using school district attendance and transcript records (Kemple & Herlihy 2004; Kemple, Herlihy, & Smith 2005). Three years of student data from before implementation of the program were collected and five years of data from after implementation were collected at each school. A baseline trend was estimated from the pre-implementation data and used to predict future attendance, credits earned (total and for specific academic subjects), grade promotion, and performance on the eleventh grade state assessment. The five years of post-implementation data were used to calculate the actual values of these outcomes. The

predicted outcomes were subtracted from the actual outcomes to give a measure of the impact of the program. In addition, similar data from six other neighborhood high schools that had not adopted the program were collected. These comparison schools were chosen because they closely matched the treatment schools on racial/ethnic composition, ninth grade promotion rates, average test scores, and attendance rates during the pre-implementation period. Their data were used to calculate any gains in actual outcomes above those of the predicted outcomes (just as had been done for the treatment schools). These gains could reflect the impact of district-level policies and programs that had nothing to do with the high school reform program. Finally, the difference in the treatment and control schools' impacts (the difference between the actual minus the predicted gains for the treatment versus control group) was calculated to determine if there was a statistically significant impact that could be ascribed to Talent Development High School. An impact was found for first time ninth grade students (but not ninth grade repeaters) including higher attendance rates, credits earned, and promotion rates.

PART III REQUIREMENTS OF THE PROPOSED RESEARCH

5. GENERAL REQUIREMENTS OF THE PROPOSED RESEARCH

A. Basic Requirements

a. Applying to multiple competitions or topics

Applicants may submit proposals to more than one of the Institute's 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.

B. Requirements for the Proposed Evaluation Project

The Institute intends to fund rigorous evaluations to determine the overall impact of fully developed education programs or policies implemented under typical conditions by a state or consortium of districts and to determine the impact across a variety of conditions (e.g., different student populations, different types of schools). By *overall impact*, the Institute means the degree to which an intervention on average has a net positive impact on the outcomes of interest in relation to the program or practice to which it is being compared. By referring to *impact across a variety of conditions*, the Institute conveys the expectation that sub-group analyses of different student populations, types of schools, and other potential moderating conditions will be conducted to determine if interventions produce positive impacts for some groups or under some conditions. By *fully developed*, the Institute means interventions that are ready to be implemented by schools or districts – that is, all of the materials, manuals, and other supports are ready to be distributed to and used by schools or districts. By *typical conditions*, the Institute means that the program or policy is implemented without special support by developers of the intervention or the research team, for example, to improve the fidelity of the implementation of the intervention.

a. Purpose of the evaluation

First, the Institute intends the State and Local Evaluation research program to support the evaluation of education programs and policies that are selected and implemented by states and local education agencies, rather than evaluations of interventions that are selected by researchers from agencies outside of state or local education agencies (e.g., institutions of higher education, research firms).

Second, the implementation of the chosen intervention(s) must be at sufficient scale to ensure appropriate generalizability of the findings. There should be sufficient numbers of students, schools, or districts to allow for subgroup analyses of the impact on specific student populations and analyses of moderating conditions that may affect the impact of the intervention.

Third, through the State and Local Evaluation research program, the Institute intends to invest in the evaluation of interventions that substantially modify or differ from existing practices. The modest interventions that states and districts make on an ongoing basis, such as adopting the latest version of textbooks or making minor adjustments to teacher certification systems, are not the targets of this research program. The Institute will also consider applications to evaluate an intervention that is already an existing practice but is innovative, has not yet been evaluated, and is not yet universal.

Fourth, the Institute is most interested in interventions that could be transferred to other districts and states.

b. Requirements for the proposed intervention

To be considered for State and Local Evaluation awards, applicants must provide a description of the intervention and a clear rationale for the *practical* importance of the intervention. Specifically, applicants should address five topics: (1) What are the components of the intervention? (2) What is the theory of change for the intervention? (3) What outcomes are addressed by the intervention? (4) Is the intervention to be widely applied? (5) Is the intervention designed so that it is feasible for other states or districts to adopt the intervention should an evaluation show that the intervention improves the intended outcomes?

(i) Description of the intervention.

Under this research program, interventions are limited to those that are delivered through state or local education agencies. Evaluation of postsecondary interventions to provide under-prepared students with skills needed to succeed in college is permissible as long as the proposed intervention and evaluation meet the requirements detailed in Part III Requirements of the Proposed Research.

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 program that the comparison group will receive or experience, 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.

(ii) Theory of change.

Applicants must describe the theory of change on which the intervention is based. That is, applicants should describe what the intervention is expected to change that will ultimately result in improved student outcomes (e.g., school readiness, grades, achievement test scores, high school graduation). For example, a State might implement a program to provide incentives to recruit master teachers to teach at chronically low-performing schools. The theory of change might be that (a) monetary incentives will increase the number of master teachers who are willing to leave their current schools to teach at low-performing schools; (b) master teachers will provide coaching that will enhance instruction of other teachers in the school; and (c) enhanced instruction will lead to better student outcomes.

(iii) Student outcomes.

This program is limited to interventions that are intended to improve student outcomes (school readiness, grades, achievement on state exams, high school graduation rates, enrollment in postsecondary education) directly (e.g., tutoring program for low-achieving students) or indirectly (e.g., incentives to retain effective teachers in hard-to-staff schools are posited to improve directly the quality of instruction and indirectly to improve student outcomes). Although the Institute is interested only in programs that are intended to improve student outcomes, the Institute recognizes that oftentimes systemic changes (e.g., introducing changes in pension vesting or work rules for teachers) are intended to affect proximal outcomes (e.g., reduction in teacher turnover rates) that are posited to indirectly, and over a number of years, improve student outcomes. In such cases, applicants should provide a compelling rationale to justify not

collecting student outcomes and identify measures of the proximal outcomes that the intervention is hypothesized to change directly and that have been shown in other research to be associated with student outcomes (e.g., whether schools are staffed with novice teachers versus teachers with a few years of experience).

(iv) Wide implementation.

Applicants must show that the policy or program is being or will be implemented state-wide or district-wide. If the evaluation is of an intervention to be implemented in the near future, applicants must provide evidence that it will indeed be implemented. This may include, for example, new state laws or regulations, appropriation of targeted funds, and the establishment of new authorities for implementation and oversight.

(v) Feasibility of implementation by other education entities.

The intervention must be developed to the point where it is ready to be implemented across the state or district. In cases where a specified program will be implemented, the applicant should provide evidence that such a program is ready to go or will be ready by the required date. In cases where a policy will mandate change, the applicant should show that the change can be made either under current conditions or through conditions created by the new policy. Evidence from implementation of similar interventions in other locales or from prior research studies can be provided to support feasibility of implementation.

c. Implementation of the intervention

The State and Local Evaluation awards are to evaluate interventions implemented by States and districts rather than interventions implemented by outside organizations. Thus, implementation should be through state and district offices and by (or overseen by) state and district personnel.

In addition, the evaluation should determine if programs implemented under these conditions are effective in a variety of settings across a range of education contexts. The applicant should detail the conditions under which the intervention will be implemented and detail the procedures that will be used to capture the conditions and identify critical variables that affect the success of a given intervention.

d. Significance of the project

By describing (a) the intervention, (b) the scale of its proposed implementation, (c) the justification for the likelihood of the intervention producing educationally meaningful effects, (d) the feasibility of implementation of the intervention, (e) the affordability of the intervention, and (f) who is responsible for implementing the intervention, the applicant is addressing the significance of their proposed project.

e. Methodological requirements

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.⁵

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.

(iv) Power.

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

Many evaluations of education interventions are designed so that clusters or groups of students (e.g., grouped by class, school, or district), 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.)⁶ Strong applications will include empirical justification for the intraclass correlation and anticipated effect size used in the power analysis.

⁵ For additional information on describing procedures for randomization, see the What Works Clearinghouse document, *Evidence Standards for Reviewing Studies* (p. 6), available at http://www.whatworks.ed.gov/reviewprocess/study_standards_final.pdf.

⁶ For more information, see Donner, A., & Klar, N. (2000). *Design and Analysis of Cluster Randomization Trials in Health Research*. New York: Oxford University Press; Murray, D. M. (1998). *Design and Analysis of Group-Randomized Trials*. New York: Oxford University Press; W.T. Grant Foundation & University of Michigan, http://sitemaker.umich.edu/group-based/optimal_design_software.

(v) Measures.

Applicants must include relevant measures of outcomes that are of practical interest to schools. For student outcomes, these could be standardized measures of student achievement, state end-of-course exams, attendance, tardiness, drop-out rates, or graduation rates. For interventions that are intended to directly affect teachers, these measures could be measures of mobility, service in hard to staff schools, or knowledge of instructionally relevant content. The applicant should provide information on the reliability, validity, and appropriateness of proposed measures. In strong applications, investigators will make clear that the skills or content the intervention is designed to address are captured in the various measures that are proposed. The Institute recommends that, where possible, states and districts incorporate the use of administrative data (e.g., state achievement test data, data on grades, drop-out rates, high school graduation rates, teacher mobility) in the evaluation.

Applicants should clearly identify how the proposed measures align with the proposed intervention's theory of change.

(vi) 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.

(vii) Comparison group.

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* hypotheses about 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.

The Institute expects evaluations funded through this program 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). The research 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, and 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.

(x) Cost analysis.

Applications will include a Cost-Feasibility analysis to assess the financial costs of program implementation and assist states, districts and 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 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.⁷

f. Personnel

Competitive applicants will have research teams that collectively demonstrate expertise in: (a) the relevant content area (e.g., reading, finance, teacher quality); (b) the type of intervention proposed (e.g., program or 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 states and districts that have not conducted rigorous evaluations of the type described in this Request for Applications, the Institute strongly encourages states and districts to involve researchers who have conducted such evaluations in the design and implementation of the evaluation and analysis of data. Involvement of such researchers should begin with the development of the proposal.

All proposals to the competition must include the involvement of state or local education agencies. Because the intervention selected for evaluation is determined by a state or consortium of districts, the Institute expects that state and/or district personnel will have a significant role in the evaluation.

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.

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 and distributors 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 and data analyses to individuals who are *not* part of the organization that developed or distributes the intervention.

h. Awards

The scope of State and Local Evaluation projects may vary greatly. A smaller project might involve several schools within a large urban school district. A larger project might involve large numbers of students, many schools, and several school districts within a state.

Typical awards for projects 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. Awards depend in part on the number of sites and cost of data collection. The size of the award depends on the scope of the project.

Funds available through this program must be used solely for purposes of the evaluation. **Funds must not be used to support the implementation of the intervention (e.g., purchase curriculum, provide salary support for teachers).**

⁷ For additional information on how to calculate the costs of a program or conduct an economic evaluation, applicants might refer to Levin, H.M., & McEwan, P.J. (2001). *Cost-Effectiveness Analysis*. 2nd Ed. Thousand Oaks, CA: Sage Publications.

PART IV GENERAL SUBMISSION AND REVIEW INFORMATION

6. MECHANISM OF SUPPORT

The Institute intends to award grants pursuant to this request for applications. The maximum award length is five years.

7. 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 program described in this announcement, awards pursuant to this request for applications are contingent upon the availability of funds and the receipt of a sufficient number of meritorious applications. The number of projects funded depends upon the number of high quality applications. The Institute does not have plans to award a specific number of grants under this competition.

8. 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.

9. 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.

10. 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.

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.

11. 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;
- 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.

12. 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: August 4, 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 Evaluation of State and Local Education Programs and Policies Request for Applications, applicants must search on: **CFDA 84.305**.

b. Evaluation of State and Local Education Programs and Policies Application Instructions and Application Package

The Grants.gov search on CFDA 84.305 will yield more than one application package. For the Evaluation of State and Local Education Programs and Policies Request for Applications, applicants must download the package marked:

CFDA 84-305E2009-1 Evaluation of State and Local Education Programs and Policies Application Instructions and Application Package.

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. Only CFDA 84-305E2009-1 can be used to apply to this competition.

13. 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.

14. 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 "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>.

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) Brief description of the purpose (e.g., to develop and document the feasibility of an intervention);
- (3) Brief description of the setting in which the research will be conducted (e.g., rural school districts in Alabama);
- (4) Brief description of the population(s) from which the participants of the study will be sampled (age groups, race/ethnicity, SES);
- (5) Brief description of the intervention to be evaluated;
- (6) Brief description of the control or comparison condition (e.g., what will participants in the control condition experience);
- (7) Brief description of the primary research method;
- (8) Brief description of measures and key outcomes; and
- (9) 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 Edition* (American Psychological Association, 2001).

d. Content

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

The project narrative must include four sections: (a) Significance, (b) Project Narrative, (c) Personnel, and (d) Resources. Information to be included in each of these sections is detailed in Part III Requirements of the Proposed Research.

E. Bibliography and References Cited

a. Submission

The section will be submitted as a .PDF attachment.

b. Page limitations and format requirements

There are no limitations to the number of pages in the bibliography. The bibliography must adhere to the margin, format, and font size requirements described in section 14.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 14.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 9 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 14.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".)

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 10 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

The Appendix A is limited to 15 pages. It must adhere to the margin, format, and font size requirements described in section 14.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 B is limited to 10 pages. The Appendix B must adhere to the margin, format, and font size requirements described in section 14.B. General Format Requirements.

c. Content

The purpose of Appendix B is to allow applicants to include examples of curriculum material, computer screens, test items, or other materials used in the intervention. 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, the theoretical rationale for the intervention, or details regarding the implementation or use of the intervention) 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) ED 80-0014 (if applicable)-Lower Tier Certification
- (4) SF-LLL (if applicable) - Disclosure of Lobbying Activities
- (5) 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> by August 4, 2008, which details the information about the Human Subjects narrative, if applicable, that is required to be submitted with the application.

15. 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.

16. 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.

17. REVIEW CRITERIA FOR SCIENTIFIC MERIT

The purpose of Institute-supported research is to contribute to the solution of education problems and to provide reliable information about the education practices that support learning and improve academic achievement and access to education for all students. Reviewers for all applications will be expected to assess the following aspects of an application in order to judge the likelihood that the proposed research will have a substantial impact on the pursuit of that goal. Information pertinent to each of these criteria is also described in Part III Requirements of the Proposed Research.

A. Significance

Does the applicant provide a compelling rationale for the significance of the project as defined in the project significance section?

B. Research Plan

Does the applicant meet the requirements described in the methodological requirements section?

C. Personnel

Does the description of the personnel make it apparent that the principal investigator, project director, and other key personnel possess the 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?

18. RECEIPT AND START DATE SCHEDULE

A. Letter of Intent Receipt Date:	July 10, 2008
B. Application Deadline Date:	October 2, 2008
C. Earliest Anticipated Start Date:	July 1, 2009

19. 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

20. INQUIRIES MAY BE SENT TO:

Dr. Allen Ruby
Institute of Education Sciences
555 New Jersey Avenue, NW
Washington, DC 20208

Email: Allen.Ruby@ed.gov

Telephone: (202) 219-1591

21. 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.

22. APPLICABLE REGULATIONS

The Education Department General Administrative Regulations (EDGAR) in 34 CFR parts 74, 77, 80, 81, 82, 84, 85, 86 (part 86 applies only to institutions of higher education), 97, 98, and 99. In addition 34 CFR part 75 is applicable, except for the provisions in 34 CFR 75.100, 75.101(b), 75.102, 75.103, 75.105, 75.109(a), 75.200, 75.201, 75.209, 75.210, 75.211, 75.217, 75.219, 75.220, 75.221, 75.222, and 75.230.

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